

Linux Standard Base C++ Specification 4.0

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Foreword

This is version 4.0 of the Linux Standard Base C++ Specification. This specification is part of a family of specifications under the general title "Linux Standard Base". Developers of applications or implementations interested in using the LSB trademark should see the Linux Foundation Certification Policy for details.

Introduction

The LSB defines a binary interface for application programs that are compiled and packaged for LSB-conforming implementations on many different hardware architectures. Since a binary specification shall include information specific to the computer processor architecture for which it is intended, it is not possible for a single document to specify the interface for all possible LSB-conforming implementations. Therefore, the LSB is a family of specifications, rather than a single one.

This document should be used in conjunction with the documents it references. This document enumerates the system components it includes, but descriptions of those components may be included entirely or partly in this document, partly in other documents, or entirely in other reference documents. For example, the section that describes system service routines includes a list of the system routines supported in this interface, formal declarations of the data structures they use that are visible to applications, and a pointer to the underlying referenced specification for information about the syntax and semantics of each call. Only those routines not described in standards referenced by this document, or extensions to those standards, are described in the detail. Information referenced in this way is as much a part of this document as is the information explicitly included here.

The specification carries a version number of either the form $x.y$ or $x.y.z$. This version number carries the following meaning:

- The first number (x) is the major version number. All versions with the same major version number should share binary compatibility. Any addition or deletion of a new library results in a new version number. Interfaces marked as deprecated may be removed from the specification at a major version change.
- The second number (y) is the minor version number. Individual interfaces may be added if all certified implementations already had that (previously undocumented) interface. Interfaces may be marked as deprecated at a minor version change. Other minor changes may be permitted at the discretion of the LSB workgroup.
- The third number (z), if present, is the editorial level. Only editorial changes should be included in such versions.

Since this specification is a descriptive Application Binary Interface, and not a source level API specification, it is not possible to make a guarantee of 100% backward compatibility between major releases. However, it is the intent that those parts of the binary interface that are visible in the source level API will remain backward compatible from version to version, except where a feature marked as "Deprecated" in one release may be removed from a future release.

Implementors are strongly encouraged to make use of symbol versioning to permit simultaneous support of applications conforming to different releases of this specification.

I Introductory Elements

1 Scope

1.1 General

The Linux Standard Base (LSB) defines a system interface for compiled applications and a minimal environment for support of installation scripts. Its purpose is to enable a uniform industry standard environment for high-volume applications conforming to the LSB.

These specifications are composed of two basic parts: A common specification ("LSB-generic" or "generic LSB"), ISO/IEC 23360 Part 1, describing those parts of the interface that remain constant across all implementations of the LSB, and an architecture-specific part ("LSB-arch" or "archLSB") describing the parts of the interface that vary by processor architecture. Together, the LSB-generic and the relevant architecture-specific part of ISO/IEC 23360 for a single hardware architecture provide a complete interface specification for compiled application programs on systems that share a common hardware architecture.

ISO/IEC 23360 Part 1, the LSB-generic document, should be used in conjunction with an architecture-specific part. Whenever a section of the LSB-generic specification is supplemented by architecture-specific information, the LSB-generic document includes a reference to the architecture part. Architecture-specific parts of ISO/IEC 23360 may also contain additional information that is not referenced in the LSB-generic document.

The LSB contains both a set of Application Program Interfaces (APIs) and Application Binary Interfaces (ABIs). APIs may appear in the source code of portable applications, while the compiled binary of that application may use the larger set of ABIs. A conforming implementation provides all of the ABIs listed here. The compilation system may replace (e.g. by macro definition) certain APIs with calls to one or more of the underlying binary interfaces, and may insert calls to binary interfaces as needed.

The LSB is primarily a binary interface definition. Not all of the source level APIs available to applications may be contained in this specification.

1.2 Module Specific Scope

This is the C++ module of the Linux Standards Base (LSB). This module supplements the core interfaces by providing system interfaces, libraries, and a run-time environment for applications built using the C++ programming language. These interfaces provide low-level support for the core constructs of the language, and implement the standard base C++ libraries.

Interfaces described in this module are presented in terms of C++; the binary interfaces will use encoded or mangled versions of the names.

2 Normative References

The specifications listed below are referenced in whole or in part by this module of the Linux Standard Base. In this specification, where only a particular section of one of these references is identified, then the normative reference is to that section alone, and the rest of the referenced document is informative.

Table 2-1 Normative References

Name	Title	URL
ISO/IEC 23360 Part 1	ISO/IEC 23360:2005 Linux Standard Base - Part 1 Generic Specification	http://www.linuxbase.org/spec/
ISO C (1999)	ISO/IEC 9899: 1999, Programming Languages --C	
ISO POSIX (2003)	ISO/IEC 9945-1:2003 Information technology -- Portable Operating System Interface (POSIX) -- Part 1: Base Definitions ISO/IEC 9945-2:2003 Information technology -- Portable Operating System Interface (POSIX) -- Part 2: Sys- tem Interfaces ISO/IEC 9945-3:2003 Information technology -- Portable Operating System Interface (POSIX) -- Part 3: Shell and Utilities ISO/IEC 9945-4:2003 Information technology -- Portable Operating System Interface (POSIX) -- Part 4: Ratio- nale Including Technical Cor. 1: 2004	http://www.unix.org/ version3/
ISO/IEC 14882: 2003 C++ Language	ISO/IEC 14882: 2003 Programming languages --C++	
Itanium™ C++ ABI	Itanium™ C++ ABI (Revision 1.83)	http://refspecs.linux- foundation.org/cxxabi- 1.83.html

3 Requirements

3.1 Relevant Libraries

The libraries listed in [Table 3-1](#) shall be available on a Linux Standard Base system, with the specified runtime names.

Table 3-1 Standard Library Names

Library	Runtime Name
libstdcxx	libstdc++.so.6

These libraries will be in an implementation-defined directory which the dynamic linker shall search by default.

3.2 LSB Implementation Conformance

An implementation shall satisfy the following requirements:

- The implementation shall implement fully the architecture described in the hardware manual for the target processor architecture.
- The implementation shall be capable of executing compiled applications having the format and using the system interfaces described in this document.
- The implementation shall provide libraries containing the interfaces specified by this document, and shall provide a dynamic linking mechanism that allows these interfaces to be attached to applications at runtime. All the interfaces shall behave as specified in this document.
- The map of virtual memory provided by the implementation shall conform to the requirements of this document.
- The implementation's low-level behavior with respect to function call linkage, system traps, signals, and other such activities shall conform to the formats described in this document.
- The implementation shall provide all of the mandatory interfaces in their entirety.
- The implementation may provide one or more of the optional interfaces. Each optional interface that is provided shall be provided in its entirety. The product documentation shall state which optional interfaces are provided.
- The implementation shall provide all files and utilities specified as part of this document in the format defined here and in other referenced documents. All commands and utilities shall behave as required by this document. The implementation shall also provide all mandatory components of an application's runtime environment that are included or referenced in this document.
- The implementation, when provided with standard data formats and values at a named interface, shall provide the behavior defined for those values and data formats at that interface. However, a conforming implementation may consist of components which are separately packaged and/or sold. For example, a vendor of a conforming implementation might sell the hardware, operating system, and windowing system as separately packaged items.
- The implementation may provide additional interfaces with different names. It may also provide additional behavior corresponding to data values outside

the standard ranges, for standard named interfaces.

3.3 LSB Application Conformance

An application shall satisfy the following requirements:

- Its executable files are either shell scripts or object files in the format defined for the Object File Format system interface.
- Its object files participate in dynamic linking as defined in the Program Loading and Linking System interface.
- It employs only the instructions, traps, and other low-level facilities defined in the Low-Level System interface as being for use by applications.
- If it requires any optional interface defined in this document in order to be installed or to execute successfully, the requirement for that optional interface is stated in the application's documentation.
- It does not use any interface or data format that is not required to be provided by a conforming implementation, unless:
 - If such an interface or data format is supplied by another application through direct invocation of that application during execution, that application is in turn an LSB conforming application.
 - The use of that interface or data format, as well as its source, is identified in the documentation of the application.
- It shall not use any values for a named interface that are reserved for vendor extensions.

A strictly conforming application does not require or use any interface, facility, or implementation-defined extension that is not defined in this document in order to be installed or to execute successfully.

4 Definitions

For the purposes of this document, the following definitions, as specified in the *ISO/IEC Directives, Part 2, 2001, 4th Edition*, apply:

can

be able to; there is a possibility of; it is possible to

cannot

be unable to; there is no possibility of; it is not possible to

may

is permitted; is allowed; is permissible

need not

it is not required that; no...is required

shall

is to; is required to; it is required that; has to; only...is permitted; it is necessary

shall not

is not allowed [permitted] [acceptable] [permissible]; is required to be not; is required that...be not; is not to be

should

it is recommended that; ought to

should not

it is not recommended that; ought not to

5 Terminology

For the purposes of this document, the following terms apply:

archLSB

The architectural part of the LSB Specification which describes the specific parts of the interface that are platform specific. The archLSB is complementary to the gLSB.

Binary Standard

The total set of interfaces that are available to be used in the compiled binary code of a conforming application.

gLSB

The common part of the LSB Specification that describes those parts of the interface that remain constant across all hardware implementations of the LSB.

implementation-defined

Describes a value or behavior that is not defined by this document but is selected by an implementor. The value or behavior may vary among implementations that conform to this document. An application should not rely on the existence of the value or behavior. An application that relies on such a value or behavior cannot be assured to be portable across conforming implementations. The implementor shall document such a value or behavior so that it can be used correctly by an application.

Shell Script

A file that is read by an interpreter (e.g., awk). The first line of the shell script includes a reference to its interpreter binary.

Source Standard

The set of interfaces that are available to be used in the source code of a conforming application.

undefined

Describes the nature of a value or behavior not defined by this document which results from use of an invalid program construct or invalid data input. The value or behavior may vary among implementations that conform to this document. An application should not rely on the existence or validity of the value or behavior. An application that relies on any particular value or behavior cannot be assured to be portable across conforming implementations.

unspecified

Describes the nature of a value or behavior not specified by this document which results from use of a valid program construct or valid data input. The value or behavior may vary among implementations that conform to this document. An application should not rely on the existence or validity of the value or behavior. An application that relies on any particular value or behavior cannot be assured to be portable across conforming

5 Terminology

implementations.

Other terms and definitions used in this document shall have the same meaning as defined in Chapter 3 of the Base Definitions volume of [ISO POSIX \(2003\)](#).

6 Documentation Conventions

Throughout this document, the following typographic conventions are used:

function()

the name of a function

command

the name of a command or utility

CONSTANT

a constant value

parameter

a parameter

variable

a variable

Throughout this specification, several tables of interfaces are presented. Each entry in these tables has the following format:

name

the name of the interface

(symver)

An optional symbol version identifier, if required.

[refno]

A reference number indexing the table of referenced specifications that follows this table.

For example,

forkpty(GLIBC_2.0) [SUSv3]

refers to the interface named `forkpty()` with symbol version `GLIBC_2.0` that is defined in the SUSv3 reference.

Note: For symbols with versions which differ between architectures, the symbol versions are defined in the architecture specific parts of ISO/IEC 23360 only.

II Low Level System Information

7 C++ Class Representations

7.1 C++ Data Representation

Support for the C++ language shall be as specified in [Itanium™ C++ ABI](#).

Note: This document, although containing a few architecture specific matters, is written as a generic specification, to be usable by C++ implementations on a variety of architectures.

This section provides additional information to supplement [Itanium™ C++ ABI](#). Many of the definitions in that document are made in terms of C++. This section provides addition explanations using C terms to avoid self-referential problems.

7.1.1 Class Representation

An object file generated by the compilation process for a C++ program shall contain several closely related internal objects, or Class Components, to represent each C++ Class. Such objects are not a visible part of the source code. [Table 7-1](#) describes these Class Components at a high level.

Table 7-1 Class Components

Object	Contains
Class Data	All non-static Class members
Virtual Table	Information needed to dispatch virtual functions, access virtual base class subobjects and to access the RTTI information
RTTI	Run-Time Type Information used by the typeid and dynamic_cast operators, and exception handlers
Typeinfo Name	String representation of Class name
Construction Virtual Table	Information needed during construction and destruction of Classes with non-trivial inheritance relationships.
VTT	A table of virtual table pointers which holds the addresses of construction and non-construction virtual tables.

7.1.1.1 Virtual Table

Virtual tables are specified in Section 2.5.3 of [Itanium™ C++ ABI](#).

Of the various categories of virtual table described in that specification, Category 1 (Leaf) is further described in [Figure 7-1](#) and Category 2 (Non-virtual bases only) is further described in [Figure 7-2](#). LSB conforming systems shall support these categories.

```
struct {
    ptrdiff_t      baseobject;
    const char     *typeinfo;
```

```

        fptr          virtfuncs[0];
    };

```

Figure 7-1 Category 1 Virtual Table

```

struct {
    unsigned long   vcalloffset;
    ptrdiff_t      baseobject;
    const char     *typeinfo;
    fptr           virtfuncs[0];
};

```

Figure 7-2 Category 2 Virtual Table

This specification describes requirements for virtual tables of C++ classes using tables of the following form:

Table 7-2 Primary vtable for K (example)

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for K
vfunc[0]:	K::~K()
vfunc[1]:	K::~K()
vfunc[2]:	K::m1(int*)
vfunc[3]:	X::m2()
vfunc[4]:	<u>__cxa_pure_virtual()</u>
vfunc[5]:	NULL or X::m4(int)

Each row starting from 'vfunc[i]:' refers to a vtable entry 'vfunc[i]' of a class K, which is an entry for a virtual function A::m, where A is a base class of the class K as described in the [Itanium™ C++ ABI](#). This specification requires implementations to interpret the vtable entry information in the following way:

1. A conforming implementation shall contain a vtable of the class K in the specified shared library;
 2. The corresponding entry of this vtable 'vfunc[i]' shall be an entry for the virtual function A::m;
 3. If the second column of the row contains __cxa_pure_virtual() the corresponding vtable entry of a LSB-conforming implementation shall contain __cxa_pure_virtual() or 'Y::m', where Y is the class K, the class A or a base class of the class K derived from the class A.¹
- 1 In this case virtual function A::m in class K is considered to be specified as pure virtual by this specification.
4. If the second column of the row contains 'X::m' the corresponding vtable entry of a LSB-conforming implementation shall contain 'Y::m', where Y is the class K, the class X or a base class of the class K derived from the class X.
 5. If the second column of the row contains 'NULL or X::m' the corresponding vtable entry of a LSB-conforming implementation shall contain NULL or 'Y::m', where Y is the class K, the class X or a base class of the class K derived from the class X.²
- 2 In this case virtual function A::m in class K is considered to be specified as inline by this

specification.

An application may use any non-pure virtual function specified in this specification, and can expect the specified behavior irrespective of which particular method implements this functionality. An application may not use inline virtual functions at the binary level since its vtable entry may be NULL.

7.1.1.2 Run-Time Type Information

Each type used in a C++ program has a data structure associated with it that provide information about the type which is used at runtime. This Run Time Type Information (RTTI) is defined in section 2.9.5 in [Itanium™ C++ ABI](#). Additional details about the layout of this data is provided here.

```
struct {
    void      *basevtable;
    char      *name;
};
```

Figure 7-3 Run-Time Type Information Prefix

```
struct {
    void      *basevtable;
    char      *name;
    void      *basetypeinfo[0];
};
```

Figure 7-4 Run-Time Type Information For Classes with no base class

```
struct {
    void      *basevtable;
    char      *name;
    void      *basetype;
    void      *basetypeinfo[0];
};
```

Figure 7-5 Run-Time Type Information for Classes with a single base class

```
struct base_type_info {
    char      *base_type;
    unsigned long offset_flags;
};

struct {
    void      *basevtable;
    char      *name;
    unsigned int   flags;
    unsigned int   base_count;
    struct base_type_info base_info[0];
};
```

Figure 7-6 Run-Time Type Information for classes with multiple inheritance

```
struct {
    void      *basevtable;
    char      *name;
    unsigned int   flags;
    void      *pointee;
    void      *basetypeinfo[0];
};
```

Figure 7-7 Run-Time Type Information for pointer types

```
struct {
    void      *basevtable;
    char      *name;
```

```
unsigned int    flags;
void      *pointee;
void      *context;
void      *basetypeinfo[0];
};
```

Figure 7-8 Run-Time Type Information for pointer to member types

8 Symbol Mapping

This chapter defines how names are mapped from the source symbol to the object symbol.

8.1 Symbol Mapping

Symbols in a source program are translated by the compilation system into symbols that exist in the object file. The rules for this translation are defined here.

8.1.1 C++ Language

External symbol names in a C++ object file shall be encoded according to the "name mangling" rules described in the [Itanium™ C++ ABI](#).

III Base Libraries

9 Libraries

An LSB-conforming implementation shall support some base libraries which provide interfaces for accessing the operating system, processor and other hardware in the system.

9.1 Interfaces for libstdc++

[Table 9-1](#) defines the library name and shared object name for the libstdc++ library

Table 9-1 libstdc++ Definition

Library:	libstdc++
SONAME:	libstdc++.so.6

Unless stated otherwise, all symbols are in the `std::` namespace.

The behavior of the interfaces in this library is specified by the following specifications:

- [CXXABI] [Itanium™ C++ ABI](#)
- [ISOCXX] [ISO/IEC 14882: 2003 C++ Language](#)
- [LSB] [ISO/IEC 23360 Part 1](#)

9.1.1 C++ Runtime Support

9.1.1.1 Interfaces for C++ Runtime Support

An LSB conforming implementation shall provide the generic methods for C++ Runtime Support specified in [Table 9-2](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-2 libstdc++ - C++ Runtime Support Function Interfaces

<code>_gnu_cxx::__atomic_add(int volatile*, int)(GLIBCXX_3.4)</code>	[CXXABI]
<code>_gnu_cxx::__exchange_and_add(int volatile*, int)(GLIBCXX_3.4)</code>	[CXXABI]
<code>_gnu_cxx::__verbose_terminate_handler()(CXXABI_1.3)</code>	[CXXABI]
<code>unexpected()(GLIBCXX_3.4)</code>	[ISOCXX]
<code>set_terminate(void (*)())(GLIBCXX_3.4)</code>	[ISOCXX]
<code>set_unexpected(void (*)())(GLIBCXX_3.4)</code>	[ISOCXX]
<code>set_new_handler(void (*)())(GLIBCXX_3.4)</code>	[ISOCXX]
<code>_throw_bad_cast()(GLIBCXX_3.4)</code>	[ISOCXX]
<code>_throw_bad_alloc()(GLIBCXX_3.4)</code>	[ISOCXX]
<code>_throw_bad_typeid()(GLIBCXX_3.4)</code>	[ISOCXX]
<code>uncaught_exception()(GLIBCXX_3.4)</code>	[ISOCXX]
<code>_throw_ios_failure(char const*)(GLIBCXX_3.4)</code>	[ISOCXX]
<code>_throw_logic_error(char const*)(GLIBCXX_3.4)</code>	[ISOCXX]
<code>_throw_range_error(char const*)(GLIBCXX_3.4)</code>	[ISOCXX]
<code>_throw_domain_error(char const*)(GLIBCXX_3.4)</code>	[ISOCXX]
<code>_throw_length_error(char const*)(GLIBCXX_3.4)</code>	[ISOCXX]

__throw_out_of_range(char const*)(GLIBCXX_3.4)	[ISOCXX]
__throw_bad_exception()(GLIBCXX_3.4)	[ISOCXX]
__throw_runtime_error(char const*)(GLIBCXX_3.4)	[ISOCXX]
__throw_overflow_error(char const*)(GLIBCXX_3.4)	[ISOCXX]
__throw_underflow_error(char const*)(GLIBCXX_3.4)	[ISOCXX]
__throw_invalid_argument(char const*)(GLIBCXX_3.4)	[ISOCXX]
terminate()(GLIBCXX_3.4)	[ISOCXX]
operator delete[](void*)(GLIBCXX_3.4)	[ISOCXX]
operator delete[](void*, nothrow_t const&)(GLIBCXX_3.4)	[ISOCXX]
operator delete(void*)(GLIBCXX_3.4)	[ISOCXX]
operator delete(void*, nothrow_t const&)(GLIBCXX_3.4)	[ISOCXX]
__cxa_allocate_exception(CXXABI_1.3)	[CXXABI]
__cxa_bad_cast(CXXABI_1.3)	[CXXABI]
__cxa_bad_typeid(CXXABI_1.3)	[CXXABI]
__cxa_begin_catch(CXXABI_1.3)	[CXXABI]
__cxa_call_unexpected(CXXABI_1.3)	[CXXABI]
__cxa_current_exception_type(CXXABI_1.3)	[CXXABI]
__cxa_demangle(CXXABI_1.3)	[CXXABI]
__cxa_end_catch(CXXABI_1.3)	[CXXABI]
__cxa_free_exception(CXXABI_1.3)	[CXXABI]
__cxa_get_exception_ptr(CXXABI_1.3.1)	[CXXABI]
__cxa_get_globals(CXXABI_1.3)	[CXXABI]
__cxa_get_globals_fast(CXXABI_1.3)	[CXXABI]
__cxa_guard_abort(CXXABI_1.3)	[CXXABI]
__cxa_guard_acquire(CXXABI_1.3)	[CXXABI]
__cxa_guard_release(CXXABI_1.3)	[CXXABI]
__cxa_pure_virtual(CXXABI_1.3)	[CXXABI]
__cxa_rethrow(CXXABI_1.3)	[CXXABI]
__cxa_throw(CXXABI_1.3)	[CXXABI]
__cxa_vec_cctor(CXXABI_1.3)	[CXXABI]
__cxa_vec_cleanup(CXXABI_1.3)	[CXXABI]
__cxa_vec_ctor(CXXABI_1.3)	[CXXABI]
__cxa_vec_delete(CXXABI_1.3)	[CXXABI]
__cxa_vec_delete2(CXXABI_1.3)	[CXXABI]
__cxa_vec_delete3(CXXABI_1.3)	[CXXABI]
__cxa_vec_dtor(CXXABI_1.3)	[CXXABI]
__cxa_vec_new(CXXABI_1.3)	[CXXABI]
__cxa_vec_new2(CXXABI_1.3)	[CXXABI]
__cxa_vec_new3(CXXABI_1.3)	[CXXABI]
__dynamic_cast(CXXABI_1.3)	[CXXABI]

__gxx_personality_v0(CXXABI_1.3) [CXXABI]

An LSB conforming implementation shall provide the generic data interfaces for C++ Runtime Support specified in [Table 9-3](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-3 libstdcxx - C++ Runtime Support Data Interfaces

cin(GLIBCXX_3.4) [ISOCXX]
cerr(GLIBCXX_3.4) [ISOCXX]
clog(GLIBCXX_3.4) [ISOCXX]
cout(GLIBCXX_3.4) [ISOCXX]
wcin(GLIBCXX_3.4) [ISOCXX]
wcerr(GLIBCXX_3.4) [ISOCXX]
wclog(GLIBCXX_3.4) [ISOCXX]
wcout(GLIBCXX_3.4) [ISOCXX]
nothrow(GLIBCXX_3.4) [ISOCXX]

9.1.2 C++ type descriptors for built-in types

9.1.2.1 Interfaces for C++ type descriptors for built-in types

No external methods are defined for libstdcxx - C++ type descriptors for built-in types in this part of the specification. See also the relevant architecture specific part of this specification.

An LSB conforming implementation shall provide the generic data interfaces for C++ type descriptors for built-in types specified in [Table 9-4](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-4 libstdcxx - C++ type descriptors for built-in types Data Interfaces

typeinfo for signed char const*(CXXABI_1.3) [CXXABI]
typeinfo for bool const*(CXXABI_1.3) [CXXABI]
typeinfo for char const*(CXXABI_1.3) [CXXABI]
typeinfo for double const*(CXXABI_1.3) [CXXABI]
typeinfo for long double const*(CXXABI_1.3) [CXXABI]
typeinfo for float const*(CXXABI_1.3) [CXXABI]
typeinfo for unsigned char const*(CXXABI_1.3) [CXXABI]
typeinfo for int const*(CXXABI_1.3) [CXXABI]
typeinfo for unsigned int const*(CXXABI_1.3) [CXXABI]
typeinfo for long const*(CXXABI_1.3) [CXXABI]
typeinfo for unsigned long const*(CXXABI_1.3) [CXXABI]
typeinfo for short const*(CXXABI_1.3) [CXXABI]
typeinfo for unsigned short const*(CXXABI_1.3) [CXXABI]
typeinfo for void const*(CXXABI_1.3) [CXXABI]
typeinfo for wchar_t const*(CXXABI_1.3) [CXXABI]
typeinfo for long long const*(CXXABI_1.3) [CXXABI]

typeinfo for unsigned long long const*(CXXABI_1.3) [CXXABI]
typeinfo for signed char*(CXXABI_1.3) [CXXABI]
typeinfo for bool*(CXXABI_1.3) [CXXABI]
typeinfo for char*(CXXABI_1.3) [CXXABI]
typeinfo for double*(CXXABI_1.3) [CXXABI]
typeinfo for long double*(CXXABI_1.3) [CXXABI]
typeinfo for float*(CXXABI_1.3) [CXXABI]
typeinfo for unsigned char*(CXXABI_1.3) [CXXABI]
typeinfo for int*(CXXABI_1.3) [CXXABI]
typeinfo for unsigned int*(CXXABI_1.3) [CXXABI]
typeinfo for long*(CXXABI_1.3) [CXXABI]
typeinfo for unsigned long*(CXXABI_1.3) [CXXABI]
typeinfo for short*(CXXABI_1.3) [CXXABI]
typeinfo for unsigned short*(CXXABI_1.3) [CXXABI]
typeinfo for void*(CXXABI_1.3) [CXXABI]
typeinfo for wchar_t*(CXXABI_1.3) [CXXABI]
typeinfo for long long*(CXXABI_1.3) [CXXABI]
typeinfo for unsigned long long*(CXXABI_1.3) [CXXABI]
typeinfo for signed char(CXXABI_1.3) [CXXABI]
typeinfo for bool(CXXABI_1.3) [CXXABI]
typeinfo for char(CXXABI_1.3) [CXXABI]
typeinfo for double(CXXABI_1.3) [CXXABI]
typeinfo for long double(CXXABI_1.3) [CXXABI]
typeinfo for float(CXXABI_1.3) [CXXABI]
typeinfo for unsigned char(CXXABI_1.3) [CXXABI]
typeinfo for int(CXXABI_1.3) [CXXABI]
typeinfo for unsigned int(CXXABI_1.3) [CXXABI]
typeinfo for long(CXXABI_1.3) [CXXABI]
typeinfo for unsigned long(CXXABI_1.3) [CXXABI]
typeinfo for short(CXXABI_1.3) [CXXABI]
typeinfo for unsigned short(CXXABI_1.3) [CXXABI]
typeinfo for void(CXXABI_1.3) [CXXABI]
typeinfo for wchar_t(CXXABI_1.3) [CXXABI]
typeinfo for long long(CXXABI_1.3) [CXXABI]
typeinfo for unsigned long long(CXXABI_1.3) [CXXABI]
typeinfo name for signed char const*(CXXABI_1.3) [CXXABI]
typeinfo name for bool const*(CXXABI_1.3) [CXXABI]
typeinfo name for char const*(CXXABI_1.3) [CXXABI]
typeinfo name for double const*(CXXABI_1.3) [CXXABI]
typeinfo name for long double const*(CXXABI_1.3) [CXXABI]

typeinfo name for float const*(CXXABI_1.3) [CXXABI]
typeinfo name for unsigned char const*(CXXABI_1.3) [CXXABI]
typeinfo name for int const*(CXXABI_1.3) [CXXABI]
typeinfo name for unsigned int const*(CXXABI_1.3) [CXXABI]
typeinfo name for long const*(CXXABI_1.3) [CXXABI]
typeinfo name for unsigned long const*(CXXABI_1.3) [CXXABI]
typeinfo name for short const*(CXXABI_1.3) [CXXABI]
typeinfo name for unsigned short const*(CXXABI_1.3) [CXXABI]
typeinfo name for void const*(CXXABI_1.3) [CXXABI]
typeinfo name for wchar_t const*(CXXABI_1.3) [CXXABI]
typeinfo name for long long const*(CXXABI_1.3) [CXXABI]
typeinfo name for unsigned long long const*(CXXABI_1.3) [CXXABI]
typeinfo name for signed char*(CXXABI_1.3) [CXXABI]
typeinfo name for bool*(CXXABI_1.3) [CXXABI]
typeinfo name for char*(CXXABI_1.3) [CXXABI]
typeinfo name for double*(CXXABI_1.3) [CXXABI]
typeinfo name for long double*(CXXABI_1.3) [CXXABI]
typeinfo name for float*(CXXABI_1.3) [CXXABI]
typeinfo name for unsigned char*(CXXABI_1.3) [CXXABI]
typeinfo name for int*(CXXABI_1.3) [CXXABI]
typeinfo name for unsigned int*(CXXABI_1.3) [CXXABI]
typeinfo name for long*(CXXABI_1.3) [CXXABI]
typeinfo name for unsigned long*(CXXABI_1.3) [CXXABI]
typeinfo name for short*(CXXABI_1.3) [CXXABI]
typeinfo name for unsigned short*(CXXABI_1.3) [CXXABI]
typeinfo name for void*(CXXABI_1.3) [CXXABI]
typeinfo name for wchar_t*(CXXABI_1.3) [CXXABI]
typeinfo name for long long*(CXXABI_1.3) [CXXABI]
typeinfo name for unsigned long long*(CXXABI_1.3) [CXXABI]
typeinfo name for signed char(CXXABI_1.3) [CXXABI]
typeinfo name for bool(CXXABI_1.3) [CXXABI]
typeinfo name for char(CXXABI_1.3) [CXXABI]
typeinfo name for double(CXXABI_1.3) [CXXABI]
typeinfo name for long double(CXXABI_1.3) [CXXABI]
typeinfo name for float(CXXABI_1.3) [CXXABI]
typeinfo name for unsigned char(CXXABI_1.3) [CXXABI]
typeinfo name for int(CXXABI_1.3) [CXXABI]
typeinfo name for unsigned int(CXXABI_1.3) [CXXABI]
typeinfo name for long(CXXABI_1.3) [CXXABI]
typeinfo name for unsigned long(CXXABI_1.3) [CXXABI]

typeinfo name for short(CXXABI_1.3) [CXXABI]
typeinfo name for unsigned short(CXXABI_1.3) [CXXABI]
typeinfo name for void(CXXABI_1.3) [CXXABI]
typeinfo name for wchar_t(CXXABI_1.3) [CXXABI]
typeinfo name for long long(CXXABI_1.3) [CXXABI]
typeinfo name for unsigned long long(CXXABI_1.3) [CXXABI]

9.1.3 C++ _Rb_tree

9.1.3.1 Interfaces for C++ _Rb_tree

An LSB conforming implementation shall provide the generic methods for C++ _Rb_tree specified in [Table 9-5](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-5 libstdcxx - C++ _Rb_tree Function Interfaces

_Rb_tree_decrement(_Rb_tree_node_base const*)(GLIBCXX_3.4) [LSB]
_Rb_tree_decrement(_Rb_tree_node_base*)(GLIBCXX_3.4) [LSB]
_Rb_tree_increment(_Rb_tree_node_base const*)(GLIBCXX_3.4) [LSB]
_Rb_tree_increment(_Rb_tree_node_base*)(GLIBCXX_3.4) [LSB]
_Rb_tree_black_count(_Rb_tree_node_base const*, _Rb_tree_node_base const*)(GLIBCXX_3.4) [LSB]
_Rb_tree_rotate_left(_Rb_tree_node_base*, _Rb_tree_node_base*&)(GLIBCXX_3.4) [LSB]
_Rb_tree_rotate_right(_Rb_tree_node_base*, _Rb_tree_node_base*&)(GLIBCXX_3.4) [LSB]
_Rb_tree_rebalance_for_erase(_Rb_tree_node_base*, _Rb_tree_node_base&)(GLIBCXX_3.4) [LSB]
_Rb_tree_insert_and_rebalance(bool, _Rb_tree_node_base*, _Rb_tree_node_base*, _Rb_tree_node_base&)(GLIBCXX_3.4) [LSB]

9.1.4 Class type_info

9.1.4.1 Class data for type_info

The virtual table for the std::type_info class is described by [Table 9-6](#)

Table 9-6 Primary vtable for type_info

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for type_info
vfunc[0]:	type_info::~type_info()
vfunc[1]:	type_info::~type_info()
vfunc[2]:	type_info::__is_pointer_p() const
vfunc[3]:	type_info::__is_function_p() const
vfunc[4]:	type_info::__do_catch(type_info const*, void**, unsigned int) const

vfunc[5]:	type_info::__do_upcast(__cxxabiv1::__class_type_info const*, void**) const
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The Run Time Type Information for the std::type_info class is described by [Table 9-7](#)

Table 9-7 typeinfo for type_info

Base Vtable	vtable for __cxxabiv1::__class_type_info
Name	typeinfo name for type_info

9.1.4.2 Interfaces for Class type_info

An LSB conforming implementation shall provide the generic methods for Class std::type_info specified in [Table 9-8](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-8 libstdc++ - Class type_info Function Interfaces

type_info::__do_catch(type_info const*, void**, unsigned int) const(GLIBCXX_3.4) [ISOCXX]
type_info::__do_upcast(__cxxabiv1::__class_type_info const*, void**) const(GLIBCXX_3.4) [ISOCXX]
type_info::__is_pointer_p() const(GLIBCXX_3.4) [ISOCXX]
type_info::__is_function_p() const(GLIBCXX_3.4) [ISOCXX]
type_info::~type_info()(GLIBCXX_3.4) [ISOCXX]
type_info::~type_info()(GLIBCXX_3.4) [ISOCXX]
type_info::~type_info()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::type_info specified in [Table 9-9](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-9 libstdc++ - Class type_info Data Interfaces

typeinfo for type_info(GLIBCXX_3.4) [CXXABI]
typeinfo name for type_info(GLIBCXX_3.4) [CXXABI]
vtable for type_info(GLIBCXX_3.4) [CXXABI]

9.1.5 Class __cxxabiv1::__enum_type_info

9.1.5.1 Class data for __cxxabiv1::__enum_type_info

The virtual table for the __cxxabiv1::__enum_type_info class is described by [Table 9-10](#)

Table 9-10 Primary vtable for __cxxabiv1::__enum_type_info

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for __cxxabiv1::__enum_type_info

vfunc[0]:	<code>__cxxabiv1::__enum_type_info::~_enum_type_info()</code>
vfunc[1]:	<code>__cxxabiv1::__enum_type_info::~_enum_type_info()</code>
vfunc[2]:	<code>type_info::is_pointer_p() const</code>
vfunc[3]:	<code>type_info::is_function_p() const</code>
vfunc[4]:	<code>type_info::do_catch(type_info const*, void**, unsigned int) const</code>
vfunc[5]:	<code>type_info::do_upcast(__cxxabiv1::__class_type_info const*, void**) const</code>

The Run Time Type Information for the `__cxxabiv1::__enum_type_info` class is described by [Table 9-11](#)

Table 9-11 typeinfo for `__cxxabiv1::__enum_type_info`

Base Vtable	vtable for <code>__cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for <code>__cxxabiv1::__enum_type_info</code>

9.1.5.2 Interfaces for Class `__cxxabiv1::__enum_type_info`

An LSB conforming implementation shall provide the generic methods for Class `__cxxabiv1::__enum_type_info` specified in [Table 9-12](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-12 libstdcxx - Class `__cxxabiv1::__enum_type_info` Function Interfaces

<code>__cxxabiv1::__enum_type_info::~_enum_type_info()</code> (CXXABI_1.3) [CXXABI]
<code>__cxxabiv1::__enum_type_info::~_enum_type_info()</code> (CXXABI_1.3) [CXXABI]
<code>__cxxabiv1::__enum_type_info::~_enum_type_info()</code> (CXXABI_1.3) [CXXABI]

An LSB conforming implementation shall provide the generic data interfaces for Class `__cxxabiv1::__enum_type_info` specified in [Table 9-13](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-13 libstdcxx - Class `__cxxabiv1::__enum_type_info` Data Interfaces

typeinfo for <code>__cxxabiv1::__enum_type_info</code> (CXXABI_1.3) [CXXABI]
typeinfo name for <code>__cxxabiv1::__enum_type_info</code> (CXXABI_1.3) [CXXABI]
vtable for <code>__cxxabiv1::__enum_type_info</code> (CXXABI_1.3) [CXXABI]

9.1.6 Class `__cxxabiv1::__array_type_info`

9.1.6.1 Class data for `__cxxabiv1::__array_type_info`

The virtual table for the `__cxxabiv1::__array_type_info` class is described by

[Table 9-14](#)

Table 9-14 Primary vtable for __cxxabiv1::__array_type_info

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for __cxxabiv1::__array_type_info
vfunc[0]:	__cxxabiv1::__array_type_info::~__array_type_info()
vfunc[1]:	__cxxabiv1::__array_type_info::~__array_type_info()
vfunc[2]:	type_info::__is_pointer_p() const
vfunc[3]:	type_info::__is_function_p() const
vfunc[4]:	type_info::__do_catch(type_info const*, void**, unsigned int) const
vfunc[5]:	type_info::__do_upcast(__cxxabiv1::__class_type_info const*, void**) const

The Run Time Type Information for the __cxxabiv1::__array_type_info class is described by [Table 9-15](#)

Table 9-15 typeinfo for __cxxabiv1::__array_type_info

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for __cxxabiv1::__array_type_info

9.1.6.2 Interfaces for Class __cxxabiv1::__array_type_info

An LSB conforming implementation shall provide the generic methods for Class __cxxabiv1::__array_type_info specified in [Table 9-16](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-16 libstdcxx - Class __cxxabiv1::__array_type_info Function Interfaces

__cxxabiv1::__array_type_info::~__array_type_info()(CXXABI_1.3) [CXXABI]
__cxxabiv1::__array_type_info::~__array_type_info()(CXXABI_1.3) [CXXABI]
__cxxabiv1::__array_type_info::~__array_type_info()(CXXABI_1.3) [CXXABI]

An LSB conforming implementation shall provide the generic data interfaces for Class __cxxabiv1::__array_type_info specified in [Table 9-17](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-17 libstdcxx - Class __cxxabiv1::__array_type_info Data Interfaces

typeinfo for __cxxabiv1::__array_type_info(CXXABI_1.3) [CXXABI]
typeinfo name for __cxxabiv1::__array_type_info(CXXABI_1.3) [CXXABI]
vtable for __cxxabiv1::__array_type_info(CXXABI_1.3) [CXXABI]

9.1.7 Class __cxxabiv1::__class_type_info

9.1.7.1 Class data for __cxxabiv1::__class_type_info

The virtual table for the __cxxabiv1::__class_type_info class is described by [Table 9-18](#)

Table 9-18 Primary vtable for __cxxabiv1::__class_type_info

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for __cxxabiv1::__class_type_info
vfunc[0]:	__cxxabiv1::__class_type_info::~class_type_info()
vfunc[1]:	__cxxabiv1::__class_type_info::~class_type_info()
vfunc[2]:	type_info::is_pointer_p() const
vfunc[3]:	type_info::is_function_p() const
vfunc[4]:	__cxxabiv1::__class_type_info::do_catch(type_info const*, void**, unsigned int) const
vfunc[5]:	__cxxabiv1::__class_type_info::do_upcast(__cxxabiv1::__class_type_info const*, void**) const
vfunc[6]:	__cxxabiv1::__class_type_info::do_upcast(__cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info::upcast_result&) const

The Run Time Type Information for the __cxxabiv1::__class_type_info class is described by [Table 9-19](#)

Table 9-19 typeinfo for __cxxabiv1::__class_type_info

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for __cxxabiv1::__class_type_info

9.1.7.2 Interfaces for Class __cxxabiv1::__class_type_info

An LSB conforming implementation shall provide the generic methods for Class __cxxabiv1::__class_type_info specified in [Table 9-20](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-20 libstdcxx - Class __cxxabiv1::__class_type_info Function Interfaces

__cxxabiv1::__class_type_info::~class_type_info()(CXXABI_1.3) [CXXABI]
__cxxabiv1::__class_type_info::~class_type_info()(CXXABI_1.3) [CXXABI]
__cxxabiv1::__class_type_info::~class_type_info()(CXXABI_1.3) [CXXABI]

<code>__cxxabiv1::__class_type_info::__do_catch(type_info const*, void**, unsigned int) const(CXXABI_1.3)</code> [CXXABI]
<code>__cxxabiv1::__class_type_info::__do_upcast(__cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info::__upcast_result&) const(CXXABI_1.3)</code> [CXXABI]
<code>__cxxabiv1::__class_type_info::__do_upcast(__cxxabiv1::__class_type_info const*, void**) const(CXXABI_1.3)</code> [CXXABI]

An LSB conforming implementation shall provide the generic data interfaces for Class `__cxxabiv1::__class_type_info` specified in [Table 9-21](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-21 libstdcxx - Class `__cxxabiv1::__class_type_info` Data Interfaces

<code>typeinfo for __cxxabiv1::__class_type_info(CXXABI_1.3)</code> [CXXABI]
<code>typeinfo name for __cxxabiv1::__class_type_info(CXXABI_1.3)</code> [CXXABI]
<code>vtable for __cxxabiv1::__class_type_info(CXXABI_1.3)</code> [CXXABI]

9.1.8 Class `__cxxabiv1::__pbase_type_info`

9.1.8.1 Class data for `__cxxabiv1::__pbase_type_info`

The virtual table for the `__cxxabiv1::__pbase_type_info` class is described by [Table 9-22](#)

Table 9-22 Primary vtable for `__cxxabiv1::__pbase_type_info`

Base Offset	0
Virtual Base Offset	0
RTTI	<code>typeinfo for __cxxabiv1::__pbase_type_info</code>
vfunc[0]:	<code>__cxxabiv1::__pbase_type_info::~__pbase_type_info()</code>
vfunc[1]:	<code>__cxxabiv1::__pbase_type_info::~__pbase_type_info()</code>
vfunc[2]:	<code>type_info::__is_pointer_p() const</code>
vfunc[3]:	<code>type_info::__is_function_p() const</code>
vfunc[4]:	<code>__cxxabiv1::__pbase_type_info::__do_catch(type_info const*, void**, unsigned int) const</code>
vfunc[5]:	<code>type_info::__do_upcast(__cxxabiv1::__class_type_info const*, void**) const</code>
vfunc[6]:	<code>__cxxabiv1::__pbase_type_info::__pointer_catch(__cxxabiv1::__pbase_type_info const*, void**, unsigned int) const</code>

The Run Time Type Information for the `__cxxabiv1::__pbase_type_info` class is described by [Table 9-23](#)

Table 9-23 typeinfo for __cxxabiv1::__pbase_type_info

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for __cxxabiv1::__pbase_type_info

9.1.8.2 Interfaces for Class __cxxabiv1::__pbase_type_info

An LSB conforming implementation shall provide the generic methods for Class __cxxabiv1::__pbase_type_info specified in [Table 9-24](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-24 libstdcxx - Class __cxxabiv1::__pbase_type_info Function Interfaces

__cxxabiv1::__pbase_type_info::~__pbase_type_info()(CXXABI_1.3) [CXXABI]
__cxxabiv1::__pbase_type_info::~__pbase_type_info()(CXXABI_1.3) [CXXABI]
__cxxabiv1::__pbase_type_info::~__pbase_type_info()(CXXABI_1.3) [CXXABI]
__cxxabiv1::__pbase_type_info::__do_catch(type_info const*, void**, unsigned int) const(CXXABI_1.3) [CXXABI]
__cxxabiv1::__pbase_type_info::__pointer_catch(__cxxabiv1::__pbase_type_info const*, void**, unsigned int) const(CXXABI_1.3) [CXXABI]

An LSB conforming implementation shall provide the generic data interfaces for Class __cxxabiv1::__pbase_type_info specified in [Table 9-25](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-25 libstdcxx - Class __cxxabiv1::__pbase_type_info Data Interfaces

typeinfo for __cxxabiv1::__pbase_type_info(CXXABI_1.3) [CXXABI]
typeinfo name for __cxxabiv1::__pbase_type_info(CXXABI_1.3) [CXXABI]
vtable for __cxxabiv1::__pbase_type_info(CXXABI_1.3) [CXXABI]

9.1.9 Class __cxxabiv1::__pointer_type_info

9.1.9.1 Class data for __cxxabiv1::__pointer_type_info

The virtual table for the __cxxabiv1::__pointer_type_info class is described by [Table 9-26](#)

Table 9-26 Primary vtable for __cxxabiv1::__pointer_type_info

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for __cxxabiv1::__pointer_type_info
vfunc[0]:	__cxxabiv1::__pointer_type_info::~__pointer_type_info()
vfunc[1]:	__cxxabiv1::__pointer_type_info::~__pointer_type_info()

vfunc[2]:	<code>__cxxabiv1::__pointer_type_info::__is_pointer_p() const</code>
vfunc[3]:	<code>type_info::__is_function_p() const</code>
vfunc[4]:	<code>__cxxabiv1::__pbase_type_info::__do_catch(type_info const*, void**, unsigned int) const</code>
vfunc[5]:	<code>type_info::__do_upcast(__cxxabiv1::__class_type_info const*, void**) const</code>
vfunc[6]:	<code>__cxxabiv1::__pointer_type_info::__pointer_catch(__cxxabiv1::__pbase_type_info const*, void**, unsigned int) const</code>

The Run Time Type Information for the `__cxxabiv1::__pointer_type_info` class is described by [Table 9-27](#)

Table 9-27 typeinfo for `__cxxabiv1::__pointer_type_info`

Base Vtable	vtable for <code>__cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for <code>__cxxabiv1::__pointer_type_info</code>

9.1.9.2 Interfaces for Class `__cxxabiv1::__pointer_type_info`

An LSB conforming implementation shall provide the generic methods for Class `__cxxabiv1::__pointer_type_info` specified in [Table 9-28](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-28 libstdc++ - Class `__cxxabiv1::__pointer_type_info` Function Interfaces

<code>__cxxabiv1::__pointer_type_info::~__pointer_type_info()</code> (CXXABI_1.3) [CXXABI]
<code>__cxxabiv1::__pointer_type_info::~__pointer_type_info()</code> (CXXABI_1.3) [CXXABI]
<code>__cxxabiv1::__pointer_type_info::~__pointer_type_info()</code> (CXXABI_1.3) [CXXABI]
<code>__cxxabiv1::__pointer_type_info::__is_pointer_p() const</code> (CXXABI_1.3) [CXXABI]
<code>__cxxabiv1::__pointer_type_info::__pointer_catch(__cxxabiv1::__pbase_type_info const*, void**, unsigned int) const</code> (CXXABI_1.3) [CXXABI]

An LSB conforming implementation shall provide the generic data interfaces for Class `__cxxabiv1::__pointer_type_info` specified in [Table 9-29](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-29 libstdc++ - Class `__cxxabiv1::__pointer_type_info` Data Interfaces

typeinfo for <code>__cxxabiv1::__pointer_type_info</code> (CXXABI_1.3) [CXXABI]
typeinfo name for <code>__cxxabiv1::__pointer_type_info</code> (CXXABI_1.3) [CXXABI]

vtable for __cxxabiv1::__pointer_type_info(CXXABI_1.3) [CXXABI]

9.1.10 Class __cxxabiv1::__function_type_info

9.1.10.1 Class data for __cxxabiv1::__function_type_info

The virtual table for the __cxxabiv1::__function_type_info class is described by [Table 9-30](#)

Table 9-30 Primary vtable for __cxxabiv1::__function_type_info

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for __cxxabiv1::__function_type_info
vfunc[0]:	__cxxabiv1::__function_type_info::~__function_type_info()
vfunc[1]:	__cxxabiv1::__function_type_info::~__function_type_info()
vfunc[2]:	type_info::__is_pointer_p() const
vfunc[3]:	__cxxabiv1::__function_type_info::__is_function_p() const
vfunc[4]:	type_info::__do_catch(type_info const*, void**, unsigned int) const
vfunc[5]:	type_info::__do_upcast(__cxxabiv1::__class_type_info const*, void**) const

The Run Time Type Information for the __cxxabiv1::__function_type_info class is described by [Table 9-31](#)

Table 9-31 typeinfo for __cxxabiv1::__function_type_info

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for __cxxabiv1::__function_type_info

9.1.10.2 Interfaces for Class __cxxabiv1::__function_type_info

An LSB conforming implementation shall provide the generic methods for Class __cxxabiv1::__function_type_info specified in [Table 9-32](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-32 libstdcxx - Class __cxxabiv1::__function_type_info Function Interfaces

__cxxabiv1::__function_type_info::~__function_type_info()(CXXABI_1.3) [CXXABI]
__cxxabiv1::__function_type_info::~__function_type_info()(CXXABI_1.3) [CXXABI]
__cxxabiv1::__function_type_info::~__function_type_info()(CXXABI_1.3) [CXXABI]

<code>__cxxabiv1::__function_type_info::__is_function_p() const(CXXABI_1.3)</code>
[CXXABI]

An LSB conforming implementation shall provide the generic data interfaces for Class `__cxxabiv1::__function_type_info` specified in [Table 9-33](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-33 libstdc++ - Class `__cxxabiv1::__function_type_info` Data Interfaces

<code>typeinfo for __cxxabiv1::__function_type_info(CXXABI_1.3)</code>
[CXXABI]
<code>typeinfo name for __cxxabiv1::__function_type_info(CXXABI_1.3)</code>
[CXXABI]
<code>vtable for __cxxabiv1::__function_type_info(CXXABI_1.3)</code>
[CXXABI]

9.1.11 Class `__cxxabiv1::__si_class_type_info`

9.1.11.1 Class data for `__cxxabiv1::__si_class_type_info`

The virtual table for the `__cxxabiv1::__si_class_type_info` class is described by [Table 9-34](#)

Table 9-34 Primary vtable for `__cxxabiv1::__si_class_type_info`

Base Offset	0
Virtual Base Offset	0
RTTI	<code>typeinfo for __cxxabiv1::__si_class_type_info</code>
vfunc[0]:	<code>__cxxabiv1::__si_class_type_info::~_si_class_type_info()</code>
vfunc[1]:	<code>__cxxabiv1::__si_class_type_info::~_si_class_type_info()</code>
vfunc[2]:	<code>type_info::__is_pointer_p() const</code>
vfunc[3]:	<code>type_info::__is_function_p() const</code>
vfunc[4]:	<code>__cxxabiv1::__class_type_info::__do_catch(type_info const*, void**, unsigned int) const</code>
vfunc[5]:	<code>__cxxabiv1::__class_type_info::__do_upcast(__cxxabiv1::__class_type_info const*, void**) const</code>
vfunc[6]:	<code>__cxxabiv1::__si_class_type_info::__do_upcast(__cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info::__upcast_result&) const</code>

The Run Time Type Information for the `__cxxabiv1::__si_class_type_info` class is described by [Table 9-35](#)

Table 9-35 typeinfo for `__cxxabiv1::__si_class_type_info`

Base Vtable	<code>vtable for __cxxabiv1::__si_class_type_info</code>
Name	<code>typeinfo name for</code>

	<code>__cxxabiv1::__si_class_type_info</code>
--	---

9.1.11.2 Interfaces for Class `__cxxabiv1::__si_class_type_info`

An LSB conforming implementation shall provide the generic methods for Class `__cxxabiv1::__si_class_type_info` specified in [Table 9-36](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-36 libstdcxx - Class `__cxxabiv1::__si_class_type_info` Function Interfaces

<code>__cxxabiv1::__si_class_type_info::~si_class_type_info()</code> (CXXABI_1.3) [CXXABI]
<code>__cxxabiv1::__si_class_type_info::~si_class_type_info()</code> (CXXABI_1.3) [CXXABI]
<code>__cxxabiv1::__si_class_type_info::~si_class_type_info()</code> (CXXABI_1.3) [CXXABI]
<code>__cxxabiv1::__si_class_type_info::__do_upcast(__cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info::__upcast_result&)</code> const(CXXABI_1.3) [CXXABI]

An LSB conforming implementation shall provide the generic data interfaces for Class `__cxxabiv1::__si_class_type_info` specified in [Table 9-37](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-37 libstdcxx - Class `__cxxabiv1::__si_class_type_info` Data Interfaces

typeinfo for <code>__cxxabiv1::__si_class_type_info</code> (CXXABI_1.3) [CXXABI]
typeinfo name for <code>__cxxabiv1::__si_class_type_info</code> (CXXABI_1.3) [CXXABI]
vtable for <code>__cxxabiv1::__si_class_type_info</code> (CXXABI_1.3) [CXXABI]

9.1.12 Class `__cxxabiv1::__vmi_class_type_info`

9.1.12.1 Class data for `__cxxabiv1::__vmi_class_type_info`

The virtual table for the `__cxxabiv1::__vmi_class_type_info` class is described by [Table 9-38](#)

Table 9-38 Primary vtable for `__cxxabiv1::__vmi_class_type_info`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>__cxxabiv1::__vmi_class_type_info</code>
vfunc[0]:	<code>__cxxabiv1::__vmi_class_type_info::~vmi_class_type_info()</code>
vfunc[1]:	<code>__cxxabiv1::__vmi_class_type_info::~vmi_class_type_info()</code>
vfunc[2]:	<code>type_info::__is_pointer_p() const</code>
vfunc[3]:	<code>type_info::__is_function_p() const</code>
vfunc[4]:	<code>__cxxabiv1::__class_type_info::__do_catch(type_info const*, void**,</code>

	unsigned int) const
vfunc[5]:	<code>__cxxabiv1::__class_type_info::__do_upcast(__cxxabiv1::__class_type_info const*, void**) const</code>
vfunc[6]:	<code>__cxxabiv1::__vmi_class_type_info::__do_upcast(__cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info::__upcast_result&) const</code>

The Run Time Type Information for the `__cxxabiv1::__vmi_class_type_info` class is described by [Table 9-39](#)

Table 9-39 typeinfo for `__cxxabiv1::__vmi_class_type_info`

Base Vtable	vtable for <code>__cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for <code>__cxxabiv1::__vmi_class_type_info</code>

9.1.12.2 Interfaces for Class `__cxxabiv1::__vmi_class_type_info`

An LSB conforming implementation shall provide the generic methods for Class `__cxxabiv1::__vmi_class_type_info` specified in [Table 9-40](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-40 libstdcxx - Class `__cxxabiv1::__vmi_class_type_info` Function Interfaces

<code>__cxxabiv1::__vmi_class_type_info::~__vmi_class_type_info()</code> (CXXABI_1.3) [CXXABI]
<code>__cxxabiv1::__vmi_class_type_info::~__vmi_class_type_info()</code> (CXXABI_1.3) [CXXABI]
<code>__cxxabiv1::__vmi_class_type_info::~__vmi_class_type_info()</code> (CXXABI_1.3) [CXXABI]
<code>__cxxabiv1::__vmi_class_type_info::__do_upcast(__cxxabiv1::__class_type_info const*, void const*, __cxxabiv1::__class_type_info::__upcast_result&) const</code> (CXXABI_1.3) [CXXABI]

An LSB conforming implementation shall provide the generic data interfaces for Class `__cxxabiv1::__vmi_class_type_info` specified in [Table 9-41](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-41 libstdcxx - Class `__cxxabiv1::__vmi_class_type_info` Data Interfaces

typeinfo for <code>__cxxabiv1::__vmi_class_type_info</code> (CXXABI_1.3) [CXXABI]
typeinfo name for <code>__cxxabiv1::__vmi_class_type_info</code> (CXXABI_1.3) [CXXABI]
vtable for <code>__cxxabiv1::__vmi_class_type_info</code> (CXXABI_1.3) [CXXABI]

9.1.13 Class `__cxxabiv1::__fundamental_type_info`

9.1.13.1 Class data for `__cxxabiv1::__fundamental_type_info`

The virtual table for the `__cxxabiv1::__fundamental_type_info` class is described by [Table 9-42](#)

Table 9-42 Primary vtable for `__cxxabiv1::__fundamental_type_info`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>__cxxabiv1::__fundamental_type_info</code>
vfunc[0]:	<code>__cxxabiv1::__fundamental_type_info::~__fundamental_type_info()</code>
vfunc[1]:	<code>__cxxabiv1::__fundamental_type_info::~__fundamental_type_info()</code>
vfunc[2]:	<code>type_info::is_pointer_p() const</code>
vfunc[3]:	<code>type_info::is_function_p() const</code>
vfunc[4]:	<code>type_info::do_catch(type_info const*, void**, unsigned int) const</code>
vfunc[5]:	<code>type_info::do_upcast(__cxxabiv1::__class_type_info const*, void**) const</code>

The Run Time Type Information for the `__cxxabiv1::__fundamental_type_info` class is described by [Table 9-43](#)

Table 9-43 typeinfo for `__cxxabiv1::__fundamental_type_info`

Base Vtable	vtable for <code>__cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for <code>__cxxabiv1::__fundamental_type_info</code>

9.1.13.2 Interfaces for Class `__cxxabiv1::__fundamental_type_info`

An LSB conforming implementation shall provide the generic methods for Class `__cxxabiv1::__fundamental_type_info` specified in [Table 9-44](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-44 libstdc++ - Class `__cxxabiv1::__fundamental_type_info` Function Interfaces

<code>__cxxabiv1::__fundamental_type_info::~__fundamental_type_info()</code> (CXXABI_1.3) [CXXABI]
<code>__cxxabiv1::__fundamental_type_info::~__fundamental_type_info()</code> (CXXABI_1.3) [CXXABI]
<code>__cxxabiv1::__fundamental_type_info::~__fundamental_type_info()</code> (CXXABI_1.3) [CXXABI]

An LSB conforming implementation shall provide the generic data interfaces for Class `_cxxabiv1::__fundamental_type_info` specified in [Table 9-45](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-45 libstdcxx - Class `_cxxabiv1::__fundamental_type_info` Data Interfaces

typeinfo for <code>_cxxabiv1::__fundamental_type_info(CXXABI_1.3)</code> [CXXABI]
typeinfo name for <code>_cxxabiv1::__fundamental_type_info(CXXABI_1.3)</code> [CXXABI]
vtable for <code>_cxxabiv1::__fundamental_type_info(CXXABI_1.3)</code> [CXXABI]

9.1.14 Class

`_cxxabiv1::__pointer_to_member_type_info`

9.1.14.1 Class data for `_cxxabiv1::__pointer_to_member_type_info`

The virtual table for the `_cxxabiv1::__pointer_to_member_type_info` class is described by [Table 9-46](#)

Table 9-46 Primary vtable for `_cxxabiv1::__pointer_to_member_type_info`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>_cxxabiv1::__pointer_to_member_type_info</code>
vfunc[0]:	<code>_cxxabiv1::__pointer_to_member_type_info::~__pointer_to_member_type_info()</code>
vfunc[1]:	<code>_cxxabiv1::__pointer_to_member_type_info::~__pointer_to_member_type_info()</code>
vfunc[2]:	<code>type_info::__is_pointer_p() const</code>
vfunc[3]:	<code>type_info::__is_function_p() const</code>
vfunc[4]:	<code>_cxxabiv1::__pbase_type_info::__do_catch(type_info const*, void**, unsigned int) const</code>
vfunc[5]:	<code>type_info::__do_upcast(_cxxabiv1::__class_type_info const*, void**) const</code>
vfunc[6]:	<code>_cxxabiv1::__pointer_to_member_type_info::__pointer_catch(_cxxabiv1::__pbase_type_info const*, void**, unsigned int) const</code>

The Run Time Type Information for the `_cxxabiv1::__pointer_to_member_type_info` class is described by [Table 9-47](#)

Table 9-47 typeinfo for `_cxxabiv1::__pointer_to_member_type_info`

Base Vtable	vtable for
-------------	------------

	<code>__cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for <code>__cxxabiv1::__pointer_to_member_type_info</code>

9.1.14.2 Interfaces for Class

`__cxxabiv1::__pointer_to_member_type_info`

An LSB conforming implementation shall provide the generic methods for Class `__cxxabiv1::__pointer_to_member_type_info` specified in [Table 9-48](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-48 libstdcxx - Class `__cxxabiv1::__pointer_to_member_type_info` Function Interfaces

<code>__cxxabiv1::__pointer_to_member_type_info::~__pointer_to_member_type_info()</code> (CXXABI_1.3) [CXXABI]
<code>__cxxabiv1::__pointer_to_member_type_info::~__pointer_to_member_type_info()</code> (CXXABI_1.3) [CXXABI]
<code>__cxxabiv1::__pointer_to_member_type_info::~__pointer_to_member_type_info()</code> (CXXABI_1.3) [CXXABI]
<code>__cxxabiv1::__pointer_to_member_type_info::__pointer_catch(__cxxabiv1::__pbase_type_info const*, void**, unsigned int) const</code> (CXXABI_1.3) [CXXABI]

An LSB conforming implementation shall provide the generic data interfaces for Class `__cxxabiv1::__pointer_to_member_type_info` specified in [Table 9-49](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-49 libstdcxx - Class `__cxxabiv1::__pointer_to_member_type_info` Data Interfaces

typeinfo for <code>__cxxabiv1::__pointer_to_member_type_info</code> (CXXABI_1.3) [CXXABI]
typeinfo name for <code>__cxxabiv1::__pointer_to_member_type_info</code> (CXXABI_1.3) [CXXABI]
vtable for <code>__cxxabiv1::__pointer_to_member_type_info</code> (CXXABI_1.3) [CXXABI]

9.1.15 Class `__gnu_cxx::stdio_filebuf<char, char_traits<char> >`

`9.1.15.1 Interfaces for Class __gnu_cxx::stdio_filebuf<char, char_traits<char> >`

No external methods are defined for libstdcxx - Class `__gnu_cxx::stdio_filebuf<char, std::char_traits<char> >` in this part of the specification. See also the relevant architecture specific part of this specification.

An LSB conforming implementation shall provide the generic data interfaces for Class `__gnu_cxx::stdio_filebuf<char, std::char_traits<char> >` specified in [Table 9-50](#), with the full mandatory functionality as described in the referenced under-

lying specification.

Table 9-50 libstdcxx - Class `__gnu_cxx::stdio_filebuf<char, char_traits<char>>` Data Interfaces

typeinfo for <code>__gnu_cxx::stdio_filebuf<char, char_traits<char>></code> (GLIBCXX_3.4) [CXXABI]
typeinfo name for <code>__gnu_cxx::stdio_filebuf<char, char_traits<char>></code> (GLIBCXX_3.4) [CXXABI]

9.1.16 Class `__gnu_cxx::stdio_filebuf<wchar_t, char_traits<wchar_t>>`

9.1.16.1 Interfaces for Class `__gnu_cxx::stdio_filebuf<wchar_t, char_traits<wchar_t>>`

No external methods are defined for libstdcxx - Class `__gnu_cxx::stdio_filebuf<wchar_t, std::char_traits<wchar_t>>` in this part of the specification. See also the relevant architecture specific part of this specification.

An LSB conforming implementation shall provide the generic data interfaces for Class `__gnu_cxx::stdio_filebuf<wchar_t, std::char_traits<wchar_t>>` specified in [Table 9-51](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-51 libstdcxx - Class `__gnu_cxx::stdio_filebuf<wchar_t, char_traits<wchar_t>>` Data Interfaces

typeinfo for <code>__gnu_cxx::stdio_filebuf<wchar_t, char_traits<wchar_t>></code> (GLIBCXX_3.4) [CXXABI]
typeinfo name for <code>__gnu_cxx::stdio_filebuf<wchar_t, char_traits<wchar_t>></code> (GLIBCXX_3.4) [CXXABI]

9.1.17 Class `__gnu_cxx::__pool_alloc_base`

9.1.17.1 Interfaces for Class `__gnu_cxx::__pool_alloc_base`

An LSB conforming implementation shall provide the generic methods for Class `__gnu_cxx::__pool_alloc_base` specified in [Table 9-52](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-52 libstdcxx - Class `__gnu_cxx::__pool_alloc_base` Function Interfaces

<code>__gnu_cxx::__pool_alloc_base::M_get_mutex()</code> (GLIBCXX_3.4.2) [LSB]
--

9.1.18 Class `__gnu_cxx::stdio_sync_filebuf<char, char_traits<char>>`

9.1.18.1 Class data for `__gnu_cxx::stdio_sync_filebuf<char, char_traits<char>>`

The virtual table for the `__gnu_cxx::stdio_sync_filebuf<char, std::char_traits<char>>` class is described by [Table 9-53](#)

Table 9-53 Primary vtable for `__gnu_cxx::stdio_sync_filebuf<char, char_traits<char>>`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>__gnu_cxx::stdio_sync_filebuf<char, char_traits<char>></code>
vfunc[0]:	<code>__gnu_cxx::stdio_sync_filebuf<char, char_traits<char>>::~stdio_sync_filebuf()</code>
vfunc[1]:	<code>__gnu_cxx::stdio_sync_filebuf<char, char_traits<char>>::~stdio_sync_filebuf()</code>
vfunc[2]:	<code>basic_streambuf<char, char_traits<char>>::imbue(locale const&)</code>
vfunc[3]:	See The Architecture Specific Specification
vfunc[4]:	See The Architecture Specific Specification
vfunc[5]:	<code>__gnu_cxx::stdio_sync_filebuf<char, char_traits<char>>::seekpos(fpos<__mbstate_t>, _Ios_Openmode)</code>
vfunc[6]:	<code>__gnu_cxx::stdio_sync_filebuf<char, char_traits<char>>::sync()</code>
vfunc[7]:	<code>basic_streambuf<char, char_traits<char>>::showmany()</code>
vfunc[8]:	See The Architecture Specific Specification
vfunc[9]:	<code>__gnu_cxx::stdio_sync_filebuf<char, char_traits<char>>::underflow()</code>
vfunc[10]:	<code>__gnu_cxx::stdio_sync_filebuf<char, char_traits<char>>::uflow()</code>
vfunc[11]:	<code>__gnu_cxx::stdio_sync_filebuf<char, char_traits<char>>::pbackfail(int)</code>
vfunc[12]:	See The Architecture Specific Specification
vfunc[13]:	<code>__gnu_cxx::stdio_sync_filebuf<char, char_traits<char>>::overflow(int)</code>

9.1.18.2 Interfaces for Class `__gnu_cxx::stdio_sync_filebuf<char, char_traits<char>>`

An LSB conforming implementation shall provide the generic methods for Class `__gnu_cxx::stdio_sync_filebuf<char, std::char_traits<char>>` specified in [Table 9-54](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-54 libstdc++ - Class `__gnu_cxx::stdio_sync_filebuf<char, char_traits<char>>` Function Interfaces

<code>__gnu_cxx::stdio_sync_filebuf<char, char_traits<char>>::file()</code> (GLIBCXX_3.4.2) [LSB]
--

An LSB conforming implementation shall provide the generic data interfaces for Class `__gnu_cxx::stdio_sync_filebuf<char, std::char_traits<char>>` specified in [Table 9-55](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-55 libstdc++ - Class `__gnu_cxx::stdio_sync_filebuf<char, char_traits<char>>` Data Interfaces

typeinfo for <code>__gnu_cxx::stdio_sync_filebuf<char, char_traits<char>></code> (GLIBCXX_3.4) [CXXABI]

typeinfo name for <code>__gnu_cxx::stdio_sync_filebuf<char, char_traits<char>></code> (GLIBCXX_3.4) [CXXABI]
--

vtable for <code>__gnu_cxx::stdio_sync_filebuf<char, char_traits<char>></code> (GLIBCXX_3.4) [CXXABI]

9.1.19 Class `__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t>>`

9.1.19.1 Class data for `__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t>>`

The virtual table for the `__gnu_cxx::stdio_sync_filebuf<wchar_t, std::char_traits<wchar_t>>` class is described by [Table 9-56](#)

Table 9-56 Primary vtable for `__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t>>`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t>></code>
vfunc[0]:	<code>__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t>>::~stdio_sync_filebuf()</code>
vfunc[1]:	<code>__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t>>::~stdio_sync_filebuf()</code>
vfunc[2]:	<code>basic_streambuf<wchar_t, char_traits<wchar_t>>::imbue(locale const&)</code>
vfunc[3]:	See The Architecture Specific Specification
vfunc[4]:	See The Architecture Specific Specification
vfunc[5]:	<code>__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t>>::file()</code>

	<code>r_t, char_traits<wchar_t>>::seekpos(fpos<__mbstate_t>, _Ios_Openmode)</code>
vfunc[6]:	<code>__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t>>::sync()</code>
vfunc[7]:	<code>basic_streambuf<wchar_t, char_traits<wchar_t>>::showmany()</code>
vfunc[8]:	See The Architecture Specific Specification
vfunc[9]:	<code>__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t>>::underflow()</code>
vfunc[10]:	<code>__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t>>::uflow()</code>
vfunc[11]:	<code>__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t>>::pbackfail(unsigned int)</code>
vfunc[12]:	See The Architecture Specific Specification
vfunc[13]:	<code>__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t>>::overflow(unsigned int)</code>

9.1.19.2 Interfaces for Class

`__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t>>`

An LSB conforming implementation shall provide the generic methods for Class `__gnu_cxx::stdio_sync_filebuf<wchar_t, std::char_traits<wchar_t>>` specified in [Table 9-57](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-57 libstdcxx - Class `__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t>>` Function Interfaces

<code>__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t>>::file()</code> (GLIBCXX_3.4.2) [LSB]
--

An LSB conforming implementation shall provide the generic data interfaces for Class `__gnu_cxx::stdio_sync_filebuf<wchar_t, std::char_traits<wchar_t>>` specified in [Table 9-58](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-58 libstdcxx - Class `__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t>>` Data Interfaces

typeinfo for <code>__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t>></code> (GLIBCXX_3.4) [CXXABI]

typeinfo name for <code>__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t>></code> (GLIBCXX_3.4) [CXXABI]
--

vtable for <code>__gnu_cxx::stdio_sync_filebuf<wchar_t, char_traits<wchar_t>></code> (GLIBCXX_3.4) [CXXABI]

9.1.20 Class exception

9.1.20.1 Class data for exception

The virtual table for the std::exception class is described by [Table 9-59](#)

Table 9-59 Primary vtable for exception

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for exception
vfunc[0]:	exception::~exception()
vfunc[1]:	exception::~exception()
vfunc[2]:	exception::what() const

The Run Time Type Information for the std::exception class is described by [Table 9-60](#)

Table 9-60 typeinfo for exception

Base Vtable	vtable for <code>_cxxabiv1::__class_type_info</code>
Name	typeinfo name for exception

9.1.20.2 Interfaces for Class exception

An LSB conforming implementation shall provide the generic methods for Class std::exception specified in [Table 9-61](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-61 libstdcxx - Class exception Function Interfaces

exception::what() const(GLIBCXX_3.4) [ISO CXX]
exception::~exception()(GLIBCXX_3.4) [ISO CXX]
exception::~exception()(GLIBCXX_3.4) [ISO CXX]
exception::~exception()(GLIBCXX_3.4) [ISO CXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::exception specified in [Table 9-62](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-62 libstdcxx - Class exception Data Interfaces

typeinfo for exception(GLIBCXX_3.4) [CXXABI]
typeinfo name for exception(GLIBCXX_3.4) [CXXABI]
vtable for exception(GLIBCXX_3.4) [CXXABI]

9.1.21 Class bad_typeid

9.1.21.1 Class data for bad_typeid

The virtual table for the std::bad_typeid class is described by [Table 9-63](#)

Table 9-63 Primary vtable for bad_typeid

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for bad_typeid
vfunc[0]:	bad_typeid::~bad_typeid()
vfunc[1]:	bad_typeid::~bad_typeid()
vfunc[2]:	exception::what() const

The Run Time Type Information for the std::bad_typeid class is described by [Table 9-64](#)

Table 9-64 typeinfo for bad_typeid

Base Vtable	vtable for _cxxabiv1::_si_class_type_info
Name	typeinfo name for bad_typeid

9.1.21.2 Interfaces for Class bad_typeid

An LSB conforming implementation shall provide the generic methods for Class std::bad_typeid specified in [Table 9-65](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-65 libstdc++ - Class bad_typeid Function Interfaces

bad_typeid::~bad_typeid()(GLIBCXX_3.4) [ISOCXX]
bad_typeid::~bad_typeid()(GLIBCXX_3.4) [ISOCXX]
bad_typeid::~bad_typeid()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::bad_typeid specified in [Table 9-66](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-66 libstdc++ - Class bad_typeid Data Interfaces

typeinfo for bad_typeid(GLIBCXX_3.4) [CXXABI]
typeinfo name for bad_typeid(GLIBCXX_3.4) [CXXABI]
vtable for bad_typeid(GLIBCXX_3.4) [CXXABI]

9.1.22 Class logic_error

9.1.22.1 Class data for logic_error

The virtual table for the std::logic_error class is described by [Table 9-67](#)

Table 9-67 Primary vtable for logic_error

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for logic_error
vfunc[0]:	logic_error::~logic_error()
vfunc[1]:	logic_error::~logic_error()
vfunc[2]:	logic_error::what() const

The Run Time Type Information for the std::logic_error class is described by [Table 9-68](#)

Table 9-68 typeinfo for logic_error

Base Vtable	vtable for _cxxabiv1:: _si_class_type_info
Name	typeinfo name for logic_error

9.1.22.2 Interfaces for Class logic_error

An LSB conforming implementation shall provide the generic methods for Class std::logic_error specified in [Table 9-69](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-69 libstdc++ - Class logic_error Function Interfaces

logic_error::what() const(GLIBCXX_3.4) [ISOCXX]
logic_error::logic_error(basic_string<char, char_traits<char>, allocator<char> > const&)(GLIBCXX_3.4) [ISOCXX]
logic_error::logic_error(basic_string<char, char_traits<char>, allocator<char> > const&)(GLIBCXX_3.4) [ISOCXX]
logic_error::~logic_error()(GLIBCXX_3.4) [ISOCXX]
logic_error::~logic_error()(GLIBCXX_3.4) [ISOCXX]
logic_error::~logic_error()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::logic_error specified in [Table 9-70](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-70 libstdc++ - Class logic_error Data Interfaces

typeinfo for logic_error(GLIBCXX_3.4) [CXXABI]
typeinfo name for logic_error(GLIBCXX_3.4) [CXXABI]
vtable for logic_error(GLIBCXX_3.4) [CXXABI]

9.1.23 Class range_error

9.1.23.1 Class data for range_error

The virtual table for the std::range_error class is described by [Table 9-71](#)

Table 9-71 Primary vtable for range_error

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for range_error
vfunc[0]:	range_error::~range_error()
vfunc[1]:	range_error::~range_error()
vfunc[2]:	runtime_error::what() const

The Run Time Type Information for the std::range_error class is described by [Table 9-72](#)

Table 9-72 typeinfo for range_error

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for range_error

9.1.23.2 Interfaces for Class range_error

An LSB conforming implementation shall provide the generic methods for Class std::range_error specified in [Table 9-73](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-73 libstdc++ - Class range_error Function Interfaces

range_error::range_error(basic_string<char, char_traits<char>, allocator<char> > const&)(GLIBCXX_3.4) [ISOCXX]
range_error::range_error(basic_string<char, char_traits<char>, allocator<char> > const&)(GLIBCXX_3.4) [ISOCXX]
range_error::~range_error()(GLIBCXX_3.4) [ISOCXX]
range_error::~range_error()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::range_error specified in [Table 9-74](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-74 libstdc++ - Class range_error Data Interfaces

typeinfo for range_error(GLIBCXX_3.4) [CXXABI]
typeinfo name for range_error(GLIBCXX_3.4) [CXXABI]
vtable for range_error(GLIBCXX_3.4) [CXXABI]

9.1.24 Class domain_error

9.1.24.1 Class data for domain_error

The virtual table for the std::domain_error class is described by [Table 9-75](#)

Table 9-75 Primary vtable for domain_error

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for domain_error
vfunc[0]:	domain_error::~domain_error()
vfunc[1]:	domain_error::~domain_error()
vfunc[2]:	logic_error::what() const

The Run Time Type Information for the std::domain_error class is described by [Table 9-76](#)

Table 9-76 typeinfo for domain_error

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for domain_error

9.1.24.2 Interfaces for Class domain_error

An LSB conforming implementation shall provide the generic methods for Class std::domain_error specified in [Table 9-77](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-77 libstdc++ - Class domain_error Function Interfaces

domain_error::domain_error(basic_string<char, char_traits<char>, allocator<char> > const&)(GLIBCXX_3.4) [ISO CXX]
domain_error::domain_error(basic_string<char, char_traits<char>, allocator<char> > const&)(GLIBCXX_3.4) [ISO CXX]
domain_error::~domain_error()(GLIBCXX_3.4) [ISO CXX]
domain_error::~domain_error()(GLIBCXX_3.4) [ISO CXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::domain_error specified in [Table 9-78](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-78 libstdc++ - Class domain_error Data Interfaces

typeinfo for domain_error(GLIBCXX_3.4) [CXXABI]
typeinfo name for domain_error(GLIBCXX_3.4) [CXXABI]
vtable for domain_error(GLIBCXX_3.4) [CXXABI]

9.1.25 Class length_error

9.1.25.1 Class data for length_error

The virtual table for the std::length_error class is described by [Table 9-79](#)

Table 9-79 Primary vtable for length_error

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for length_error
vfunc[0]:	length_error::~length_error()
vfunc[1]:	length_error::~length_error()
vfunc[2]:	logic_error::what() const

The Run Time Type Information for the std::length_error class is described by [Table 9-80](#)

Table 9-80 typeinfo for length_error

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for length_error

9.1.25.2 Interfaces for Class length_error

An LSB conforming implementation shall provide the generic methods for Class std::length_error specified in [Table 9-81](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-81 libstdc++ - Class length_error Function Interfaces

length_error::length_error(basic_string<char, char_traits<char>, allocator<char> > const&)(GLIBCXX_3.4) [ISOCXX]
length_error::length_error(basic_string<char, char_traits<char>, allocator<char> > const&)(GLIBCXX_3.4) [ISOCXX]
length_error::~length_error()(GLIBCXX_3.4) [ISOCXX]
length_error::~length_error()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::length_error specified in [Table 9-82](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-82 libstdc++ - Class length_error Data Interfaces

typeinfo for length_error(GLIBCXX_3.4) [CXXABI]
typeinfo name for length_error(GLIBCXX_3.4) [CXXABI]
vtable for length_error(GLIBCXX_3.4) [CXXABI]

9.1.26 Class out_of_range

9.1.26.1 Class data for out_of_range

The virtual table for the std::out_of_range class is described by [Table 9-83](#)

Table 9-83 Primary vtable for out_of_range

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for out_of_range
vfunc[0]:	out_of_range::~out_of_range()
vfunc[1]:	out_of_range::~out_of_range()
vfunc[2]:	logic_error::what() const

The Run Time Type Information for the std::out_of_range class is described by [Table 9-84](#)

Table 9-84 typeinfo for out_of_range

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for out_of_range

9.1.26.2 Interfaces for Class out_of_range

An LSB conforming implementation shall provide the generic methods for Class std::out_of_range specified in [Table 9-85](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-85 libstdc++ - Class out_of_range Function Interfaces

out_of_range::out_of_range(basic_string<char, char_traits<char>, allocator<char> > const&)(GLIBCXX_3.4) [ISOCXX]
out_of_range::out_of_range(basic_string<char, char_traits<char>,

allocator<char> > const&)(GLIBCXX_3.4) [ISOCXX]
out_of_range::~out_of_range()(GLIBCXX_3.4) [ISOCXX]
out_of_range::~out_of_range()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::out_of_range specified in [Table 9-86](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-86 libstdcxx - Class out_of_range Data Interfaces

typeinfo for out_of_range(GLIBCXX_3.4) [CXXABI]
typeinfo name for out_of_range(GLIBCXX_3.4) [CXXABI]
vtable for out_of_range(GLIBCXX_3.4) [CXXABI]

9.1.27 Class bad_exception

9.1.27.1 Class data for bad_exception

The virtual table for the std::bad_exception class is described by [Table 9-87](#)

Table 9-87 Primary vtable for bad_exception

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for bad_exception
vfunc[0]:	bad_exception::~bad_exception()
vfunc[1]:	bad_exception::~bad_exception()
vfunc[2]:	exception::what() const

The Run Time Type Information for the std::bad_exception class is described by [Table 9-88](#)

Table 9-88 typeinfo for bad_exception

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for bad_exception

9.1.27.2 Interfaces for Class bad_exception

An LSB conforming implementation shall provide the generic methods for Class std::bad_exception specified in [Table 9-89](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-89 libstdcxx - Class bad_exception Function Interfaces

bad_exception::~bad_exception()(GLIBCXX_3.4) [ISOCXX]
bad_exception::~bad_exception()(GLIBCXX_3.4) [ISOCXX]
bad_exception::~bad_exception()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::bad_exception specified in [Table 9-90](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-90 libstdc++ - Class bad_exception Data Interfaces

typeinfo for bad_exception(GLIBCXX_3.4) [CXXABI]
typeinfo name for bad_exception(GLIBCXX_3.4) [CXXABI]
vtable for bad_exception(GLIBCXX_3.4) [CXXABI]

9.1.28 Class runtime_error

9.1.28.1 Class data for runtime_error

The virtual table for the std::runtime_error class is described by [Table 9-91](#)

Table 9-91 Primary vtable for runtime_error

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for runtime_error
vfunc[0]:	runtime_error::~runtime_error()
vfunc[1]:	runtime_error::~runtime_error()
vfunc[2]:	runtime_error::what() const

The Run Time Type Information for the std::runtime_error class is described by [Table 9-92](#)

Table 9-92 typeinfo for runtime_error

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for runtime_error

9.1.28.2 Interfaces for Class runtime_error

An LSB conforming implementation shall provide the generic methods for Class std::runtime_error specified in [Table 9-93](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-93 libstdc++ - Class runtime_error Function Interfaces

runtime_error::what() const(GLIBCXX_3.4) [ISOCXX]
runtime_error::runtime_error(basic_string<char, char_traits<char>, allocator<char> > const&)(GLIBCXX_3.4) [ISOCXX]
runtime_error::runtime_error(basic_string<char, char_traits<char>, allocator<char> > const&)(GLIBCXX_3.4) [ISOCXX]
runtime_error::~runtime_error()(GLIBCXX_3.4) [ISOCXX]
runtime_error::~runtime_error()(GLIBCXX_3.4) [ISOCXX]
runtime_error::~runtime_error()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::runtime_error specified in [Table 9-94](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-94 libstdc++ - Class runtime_error Data Interfaces

typeinfo for runtime_error(GLIBCXX_3.4) [CXXABI]
--

typeinfo name for runtime_error(GLIBCXX_3.4) [CXXABI]
vtable for runtime_error(GLIBCXX_3.4) [CXXABI]

9.1.29 Class overflow_error

9.1.29.1 Class data for overflow_error

The virtual table for the std::overflow_error class is described by [Table 9-95](#)

Table 9-95 Primary vtable for overflow_error

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for overflow_error
vfunc[0]:	overflow_error::~overflow_error()
vfunc[1]:	overflow_error::~overflow_error()
vfunc[2]:	runtime_error::what() const

The Run Time Type Information for the std::overflow_error class is described by [Table 9-96](#)

Table 9-96 typeinfo for overflow_error

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for overflow_error

9.1.29.2 Interfaces for Class overflow_error

An LSB conforming implementation shall provide the generic methods for Class std::overflow_error specified in [Table 9-97](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-97 libstdc++ - Class overflow_error Function Interfaces

overflow_error::overflow_error(basic_string<char, char_traits<char>, allocator<char> > const&)(GLIBCXX_3.4) [ISOCXX]
overflow_error::overflow_error(basic_string<char, char_traits<char>, allocator<char> > const&)(GLIBCXX_3.4) [ISOCXX]
overflow_error::~overflow_error()(GLIBCXX_3.4) [ISOCXX]
overflow_error::~overflow_error()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::overflow_error specified in [Table 9-98](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-98 libstdc++ - Class overflow_error Data Interfaces

typeinfo for overflow_error(GLIBCXX_3.4) [CXXABI]
typeinfo name for overflow_error(GLIBCXX_3.4) [CXXABI]
vtable for overflow_error(GLIBCXX_3.4) [CXXABI]

9.1.30 Class underflow_error

9.1.30.1 Class data for underflow_error

The virtual table for the std::underflow_error class is described by [Table 9-99](#)

Table 9-99 Primary vtable for underflow_error

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for underflow_error
vfunc[0]:	underflow_error::~underflow_error())
vfunc[1]:	underflow_error::~underflow_error())
vfunc[2]:	runtime_error::what() const

The Run Time Type Information for the std::underflow_error class is described by [Table 9-100](#)

Table 9-100 typeinfo for underflow_error

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for underflow_error

9.1.30.2 Interfaces for Class underflow_error

An LSB conforming implementation shall provide the generic methods for Class std::underflow_error specified in [Table 9-101](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-101 libstdc++ - Class underflow_error Function Interfaces

underflow_error::underflow_error(basic_string<char, char_traits<char>, allocator<char> > const&)(GLIBCXX_3.4) [ISOCXX]
underflow_error::underflow_error(basic_string<char, char_traits<char>, allocator<char> > const&)(GLIBCXX_3.4) [ISOCXX]
underflow_error::~underflow_error()(GLIBCXX_3.4) [ISOCXX]
underflow_error::~underflow_error()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::underflow_error specified in [Table 9-102](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-102 libstdc++ - Class underflow_error Data Interfaces

typeinfo for underflow_error(GLIBCXX_3.4) [CXXABI]
typeinfo name for underflow_error(GLIBCXX_3.4) [CXXABI]
vtable for underflow_error(GLIBCXX_3.4) [CXXABI]

9.1.31 Class invalid_argument

9.1.31.1 Class data for invalid_argument

The virtual table for the std::invalid_argument class is described by [Table 9-103](#)

Table 9-103 Primary vtable for invalid_argument

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for invalid_argument
vfunc[0]:	invalid_argument::~invalid_argument()
vfunc[1]:	invalid_argument::~invalid_argument()
vfunc[2]:	logic_error::what() const

The Run Time Type Information for the std::invalid_argument class is described by [Table 9-104](#)

Table 9-104 typeinfo for invalid_argument

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for invalid_argument

9.1.31.2 Interfaces for Class invalid_argument

An LSB conforming implementation shall provide the generic methods for Class std::invalid_argument specified in [Table 9-105](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-105 libstdc++ - Class invalid_argument Function Interfaces

invalid_argument::invalid_argument(basic_string<char, char_traits<char>, allocator<char> > const&)(GLIBCXX_3.4) [ISOCXX]
invalid_argument::invalid_argument(basic_string<char, char_traits<char>, allocator<char> > const&)(GLIBCXX_3.4) [ISOCXX]
invalid_argument::~invalid_argument()(GLIBCXX_3.4) [ISOCXX]
invalid_argument::~invalid_argument()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::invalid_argument specified in [Table 9-106](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-106 libstdc++ - Class invalid_argument Data Interfaces

typeinfo for invalid_argument(GLIBCXX_3.4) [CXXABI]
typeinfo name for invalid_argument(GLIBCXX_3.4) [CXXABI]
vtable for invalid_argument(GLIBCXX_3.4) [CXXABI]

9.1.32 Class `bad_cast`

9.1.32.1 Class data for `bad_cast`

The virtual table for the `std::bad_cast` class is described by [Table 9-107](#)

Table 9-107 Primary vtable for `bad_cast`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>bad_cast</code>
vfunc[0]:	<code>bad_cast::~bad_cast()</code>
vfunc[1]:	<code>bad_cast::~bad_cast()</code>
vfunc[2]:	<code>exception::what() const</code>

The Run Time Type Information for the `std::bad_cast` class is described by [Table 9-108](#)

Table 9-108 typeinfo for `bad_cast`

Base Vtable	vtable for <code>_cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for <code>bad_cast</code>

9.1.32.2 Interfaces for Class `bad_cast`

An LSB conforming implementation shall provide the generic methods for Class `std::bad_cast` specified in [Table 9-109](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-109 libstdc++ - Class `bad_cast` Function Interfaces

<code>bad_cast::~bad_cast()(GLIBCXX_3.4)</code> [ISOCXX]
<code>bad_cast::~bad_cast()(GLIBCXX_3.4)</code> [ISOCXX]
<code>bad_cast::~bad_cast()(GLIBCXX_3.4)</code> [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class `std::bad_cast` specified in [Table 9-110](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-110 libstdc++ - Class `bad_cast` Data Interfaces

<code>typeinfo for bad_cast(GLIBCXX_3.4)</code> [CXXABI]
<code>typeinfo name for bad_cast(GLIBCXX_3.4)</code> [CXXABI]
<code>vtable for bad_cast(GLIBCXX_3.4)</code> [CXXABI]

9.1.33 Class `bad_alloc`

9.1.33.1 Class data for `bad_alloc`

The virtual table for the `std::bad_alloc` class is described by [Table 9-111](#)

Table 9-111 Primary vtable for `bad_alloc`

Base Offset	0
-------------	---

Virtual Base Offset	0
RTTI	typeinfo for bad_alloc
vfunc[0]:	bad_alloc::~bad_alloc()
vfunc[1]:	bad_alloc::~bad_alloc()
vfunc[2]:	exception::what() const

The Run Time Type Information for the std::bad_alloc class is described by [Table 9-112](#)

Table 9-112 typeinfo for bad_alloc

Base Vtable	vtable for _cxxabiv1::__si_class_type_info
Name	typeinfo name for bad_alloc

9.1.33.2 Interfaces for Class bad_alloc

An LSB conforming implementation shall provide the generic methods for Class std::bad_alloc specified in [Table 9-113](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-113 libstdc++ - Class bad_alloc Function Interfaces

bad_alloc::~bad_alloc()(GLIBCXX_3.4) [ISOcxx]
bad_alloc::~bad_alloc()(GLIBCXX_3.4) [ISOcxx]
bad_alloc::~bad_alloc()(GLIBCXX_3.4) [ISOcxx]

An LSB conforming implementation shall provide the generic data interfaces for Class std::bad_alloc specified in [Table 9-114](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-114 libstdc++ - Class bad_alloc Data Interfaces

typeinfo for bad_alloc(GLIBCXX_3.4) [Cxxabi]
typeinfo name for bad_alloc(GLIBCXX_3.4) [Cxxabi]
vtable for bad_alloc(GLIBCXX_3.4) [Cxxabi]

9.1.34 struct __numeric_limits_base

9.1.34.1 Interfaces for struct __numeric_limits_base

No external methods are defined for libstdc++ - struct __numeric_limits_base in this part of the specification. See also the relevant architecture specific part of this specification.

An LSB conforming implementation shall provide the generic data interfaces for struct __numeric_limits_base specified in [Table 9-115](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-115 libstdc++ - struct __numeric_limits_base Data Interfaces

__numeric_limits_base::has_denorm(GLIBCXX_3.4) [ISOcxx]
__numeric_limits_base::is_bounded(GLIBCXX_3.4) [ISOcxx]
__numeric_limits_base::is_integer(GLIBCXX_3.4) [ISOcxx]

<code>_numeric_limits_base::round_style(GLIBCXX_3.4)</code>	[ISO CXX]
<code>_numeric_limits_base::has_infinity(GLIBCXX_3.4)</code>	[ISO CXX]
<code>_numeric_limits_base::max_exponent(GLIBCXX_3.4)</code>	[ISO CXX]
<code>_numeric_limits_base::min_exponent(GLIBCXX_3.4)</code>	[ISO CXX]
<code>_numeric_limits_base::has_quiet_NaN(GLIBCXX_3.4)</code>	[ISO CXX]
<code>_numeric_limits_base::is_specialized(GLIBCXX_3.4)</code>	[ISO CXX]
<code>_numeric_limits_base::max_exponent10(GLIBCXX_3.4)</code>	[ISO CXX]
<code>_numeric_limits_base::min_exponent10(GLIBCXX_3.4)</code>	[ISO CXX]
<code>_numeric_limits_base::has_denorm_loss(GLIBCXX_3.4)</code>	[ISO CXX]
<code>_numeric_limits_base::tinyness_before(GLIBCXX_3.4)</code>	[ISO CXX]
<code>_numeric_limits_base::has_signaling_NaN(GLIBCXX_3.4)</code>	[ISO CXX]
<code>_numeric_limits_base::radix(GLIBCXX_3.4)</code>	[ISO CXX]
<code>_numeric_limits_base::traps(GLIBCXX_3.4)</code>	[ISO CXX]
<code>_numeric_limits_base::digits(GLIBCXX_3.4)</code>	[ISO CXX]
<code>_numeric_limits_base::digits10(GLIBCXX_3.4)</code>	[ISO CXX]
<code>_numeric_limits_base::is_exact(GLIBCXX_3.4)</code>	[ISO CXX]
<code>_numeric_limits_base::is_iec559(GLIBCXX_3.4)</code>	[ISO CXX]
<code>_numeric_limits_base::is_modulo(GLIBCXX_3.4)</code>	[ISO CXX]
<code>_numeric_limits_base::is_signed(GLIBCXX_3.4)</code>	[ISO CXX]

9.1.35 struct numeric_limits<long double>

9.1.35.1 Interfaces for struct numeric_limits<long double>

No external methods are defined for libstdc++ - struct numeric_limits<long double> in this part of the specification. See also the relevant architecture specific part of this specification.

An LSB conforming implementation shall provide the generic data interfaces for struct numeric_limits<long double> specified in [Table 9-116](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-116 libstdc++ - struct numeric_limits<long double> Data Interfaces

<code>numeric_limits<long double>::has_denorm(GLIBCXX_3.4)</code>	[ISO CXX]
<code>numeric_limits<long double>::is_bounded(GLIBCXX_3.4)</code>	[ISO CXX]
<code>numeric_limits<long double>::is_integer(GLIBCXX_3.4)</code>	[ISO CXX]
<code>numeric_limits<long double>::round_style(GLIBCXX_3.4)</code>	[ISO CXX]
<code>numeric_limits<long double>::has_infinity(GLIBCXX_3.4)</code>	[ISO CXX]
<code>numeric_limits<long double>::max_exponent(GLIBCXX_3.4)</code>	[ISO CXX]
<code>numeric_limits<long double>::min_exponent(GLIBCXX_3.4)</code>	[ISO CXX]
<code>numeric_limits<long double>::has_quiet_NaN(GLIBCXX_3.4)</code>	[ISO CXX]
<code>numeric_limits<long double>::is_specialized(GLIBCXX_3.4)</code>	[ISO CXX]
<code>numeric_limits<long double>::max_exponent10(GLIBCXX_3.4)</code>	[ISO CXX]
<code>numeric_limits<long double>::min_exponent10(GLIBCXX_3.4)</code>	[ISO CXX]

numeric_limits<long double>::has_denorm_loss(GLIBCXX_3.4) [ISO CXX]
numeric_limits<long double>::tinyness_before(GLIBCXX_3.4) [ISO CXX]
numeric_limits<long double>::has_signaling_NaN(GLIBCXX_3.4) [ISO CXX]
numeric_limits<long double>::radix(GLIBCXX_3.4) [ISO CXX]
numeric_limits<long double>::traps(GLIBCXX_3.4) [ISO CXX]
numeric_limits<long double>::digits(GLIBCXX_3.4) [ISO CXX]
numeric_limits<long double>::digits10(GLIBCXX_3.4) [ISO CXX]
numeric_limits<long double>::is_exact(GLIBCXX_3.4) [ISO CXX]
numeric_limits<long double>::is_iec559(GLIBCXX_3.4) [ISO CXX]
numeric_limits<long double>::is_modulo(GLIBCXX_3.4) [ISO CXX]
numeric_limits<long double>::is_signed(GLIBCXX_3.4) [ISO CXX]

9.1.36 struct numeric_limits<long long>

9.1.36.1 Interfaces for struct numeric_limits<long long>

No external methods are defined for libstdcxx - struct numeric_limits<long long> in this part of the specification. See also the relevant architecture specific part of this specification.

An LSB conforming implementation shall provide the generic data interfaces for struct numeric_limits<long long> specified in [Table 9-117](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-117 libstdcxx - struct numeric_limits<long long> Data Interfaces

numeric_limits<long long>::has_denorm(GLIBCXX_3.4) [ISO CXX]
numeric_limits<long long>::is_bounded(GLIBCXX_3.4) [ISO CXX]
numeric_limits<long long>::is_integer(GLIBCXX_3.4) [ISO CXX]
numeric_limits<long long>::round_style(GLIBCXX_3.4) [ISO CXX]
numeric_limits<long long>::has_infinity(GLIBCXX_3.4) [ISO CXX]
numeric_limits<long long>::max_exponent(GLIBCXX_3.4) [ISO CXX]
numeric_limits<long long>::min_exponent(GLIBCXX_3.4) [ISO CXX]
numeric_limits<long long>::has_quiet_NaN(GLIBCXX_3.4) [ISO CXX]
numeric_limits<long long>::is_specialized(GLIBCXX_3.4) [ISO CXX]
numeric_limits<long long>::max_exponent10(GLIBCXX_3.4) [ISO CXX]
numeric_limits<long long>::min_exponent10(GLIBCXX_3.4) [ISO CXX]
numeric_limits<long long>::has_denorm_loss(GLIBCXX_3.4) [ISO CXX]
numeric_limits<long long>::tinyness_before(GLIBCXX_3.4) [ISO CXX]
numeric_limits<long long>::has_signaling_NaN(GLIBCXX_3.4) [ISO CXX]
numeric_limits<long long>::radix(GLIBCXX_3.4) [ISO CXX]
numeric_limits<long long>::traps(GLIBCXX_3.4) [ISO CXX]
numeric_limits<long long>::digits(GLIBCXX_3.4) [ISO CXX]
numeric_limits<long long>::digits10(GLIBCXX_3.4) [ISO CXX]
numeric_limits<long long>::is_exact(GLIBCXX_3.4) [ISO CXX]

numeric_limits<long long>::is_iec559(GLIBCXX_3.4) [ISOcxx]
numeric_limits<long long>::is_modulo(GLIBCXX_3.4) [ISOcxx]
numeric_limits<long long>::is_signed(GLIBCXX_3.4) [ISOcxx]

9.1.37 struct numeric_limits<unsigned long long>

9.1.37.1 Interfaces for struct numeric_limits<unsigned long long>

No external methods are defined for libstdcxx - struct numeric_limits<unsigned long long> in this part of the specification. See also the relevant architecture specific part of this specification.

An LSB conforming implementation shall provide the generic data interfaces for struct numeric_limits<unsigned long long> specified in [Table 9-118](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-118 libstdcxx - struct numeric_limits<unsigned long long> Data Interfaces

numeric_limits<unsigned long long>::has_denorm(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned long long>::is_bounded(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned long long>::is_integer(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned long long>::round_style(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned long long>::has_INFINITY(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned long long>::max_exponent(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned long long>::min_exponent(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned long long>::has_quiet_NaN(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned long long>::is_specialized(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned long long>::max_exponent10(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned long long>::min_exponent10(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned long long>::has_denorm_loss(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned long long>::tininess_before(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned long long>::has_signaling_NaN(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned long long>::radix(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned long long>::traps(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned long long>::digits(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned long long>::digits10(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned long long>::is_exact(GLIBCXX_3.4) [ISOcxx]

numeric_limits<unsigned long long>::is_iec559(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned long long>::is_modulo(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned long long>::is_signed(GLIBCXX_3.4) [ISOCXX]

9.1.38 struct numeric_limits<float>

9.1.38.1 Interfaces for struct numeric_limits<float>

No external methods are defined for libstdcxx - struct numeric_limits<float> in this part of the specification. See also the relevant architecture specific part of this specification.

An LSB conforming implementation shall provide the generic data interfaces for struct numeric_limits<float> specified in [Table 9-119](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-119 libstdcxx - struct numeric_limits<float> Data Interfaces

numeric_limits<float>::has_denorm(GLIBCXX_3.4) [ISOCXX]
numeric_limits<float>::is_bounded(GLIBCXX_3.4) [ISOCXX]
numeric_limits<float>::is_integer(GLIBCXX_3.4) [ISOCXX]
numeric_limits<float>::round_style(GLIBCXX_3.4) [ISOCXX]
numeric_limits<float>::has_infinity(GLIBCXX_3.4) [ISOCXX]
numeric_limits<float>::max_exponent(GLIBCXX_3.4) [ISOCXX]
numeric_limits<float>::min_exponent(GLIBCXX_3.4) [ISOCXX]
numeric_limits<float>::has_quiet_NaN(GLIBCXX_3.4) [ISOCXX]
numeric_limits<float>::is_specialized(GLIBCXX_3.4) [ISOCXX]
numeric_limits<float>::max_exponent10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<float>::min_exponent10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<float>::has_denorm_loss(GLIBCXX_3.4) [ISOCXX]
numeric_limits<float>::tinyness_before(GLIBCXX_3.4) [ISOCXX]
numeric_limits<float>::has_signaling_NaN(GLIBCXX_3.4) [ISOCXX]
numeric_limits<float>::radix(GLIBCXX_3.4) [ISOCXX]
numeric_limits<float>::traps(GLIBCXX_3.4) [ISOCXX]
numeric_limits<float>::digits(GLIBCXX_3.4) [ISOCXX]
numeric_limits<float>::digits10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<float>::is_exact(GLIBCXX_3.4) [ISOCXX]
numeric_limits<float>::is_iec559(GLIBCXX_3.4) [ISOCXX]
numeric_limits<float>::is_modulo(GLIBCXX_3.4) [ISOCXX]
numeric_limits<float>::is_signed(GLIBCXX_3.4) [ISOCXX]

9.1.39 struct numeric_limits<double>

9.1.39.1 Interfaces for struct numeric_limits<double>

No external methods are defined for libstdcxx - struct numeric_limits<double> in this part of the specification. See also the relevant architecture specific part of this specification.

An LSB conforming implementation shall provide the generic data interfaces for struct numeric_limits<double> specified in [Table 9-120](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-120 libstdcxx - struct numeric_limits<double> Data Interfaces

numeric_limits<double>::has_denorm(GLIBCXX_3.4) [ISOCXX]
numeric_limits<double>::is_bounded(GLIBCXX_3.4) [ISOCXX]
numeric_limits<double>::is_integer(GLIBCXX_3.4) [ISOCXX]
numeric_limits<double>::round_style(GLIBCXX_3.4) [ISOCXX]
numeric_limits<double>::has_infinity(GLIBCXX_3.4) [ISOCXX]
numeric_limits<double>::max_exponent(GLIBCXX_3.4) [ISOCXX]
numeric_limits<double>::min_exponent(GLIBCXX_3.4) [ISOCXX]
numeric_limits<double>::has_quiet_NaN(GLIBCXX_3.4) [ISOCXX]
numeric_limits<double>::is_specialized(GLIBCXX_3.4) [ISOCXX]
numeric_limits<double>::max_exponent10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<double>::min_exponent10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<double>::has_denorm_loss(GLIBCXX_3.4) [ISOCXX]
numeric_limits<double>::tinytess_before(GLIBCXX_3.4) [ISOCXX]
numeric_limits<double>::has_signaling_NaN(GLIBCXX_3.4) [ISOCXX]
numeric_limits<double>::radix(GLIBCXX_3.4) [ISOCXX]
numeric_limits<double>::traps(GLIBCXX_3.4) [ISOCXX]
numeric_limits<double>::digits(GLIBCXX_3.4) [ISOCXX]
numeric_limits<double>::digits10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<double>::is_exact(GLIBCXX_3.4) [ISOCXX]
numeric_limits<double>::is_iec559(GLIBCXX_3.4) [ISOCXX]
numeric_limits<double>::is_modulo(GLIBCXX_3.4) [ISOCXX]
numeric_limits<double>::is_signed(GLIBCXX_3.4) [ISOCXX]

9.1.40 struct numeric_limits<short>

9.1.40.1 Interfaces for struct numeric_limits<short>

No external methods are defined for libstdcxx - struct numeric_limits<short> in this part of the specification. See also the relevant architecture specific part of this specification.

An LSB conforming implementation shall provide the generic data interfaces for struct numeric_limits<short> specified in [Table 9-121](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-121 libstdcxx - struct numeric_limits<short> Data Interfaces

numeric_limits<short>::has_denorm(GLIBCXX_3.4) [ISOCXX]
numeric_limits<short>::is_bounded(GLIBCXX_3.4) [ISOCXX]
numeric_limits<short>::is_integer(GLIBCXX_3.4) [ISOCXX]
numeric_limits<short>::round_style(GLIBCXX_3.4) [ISOCXX]
numeric_limits<short>::has_infinity(GLIBCXX_3.4) [ISOCXX]

numeric_limits<short>::max_exponent(GLIBCXX_3.4) [ISOCXX]
numeric_limits<short>::min_exponent(GLIBCXX_3.4) [ISOCXX]
numeric_limits<short>::has_quiet_NaN(GLIBCXX_3.4) [ISOCXX]
numeric_limits<short>::is_specialized(GLIBCXX_3.4) [ISOCXX]
numeric_limits<short>::max_exponent10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<short>::min_exponent10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<short>::has_denorm_loss(GLIBCXX_3.4) [ISOCXX]
numeric_limits<short>::tinyness_before(GLIBCXX_3.4) [ISOCXX]
numeric_limits<short>::has_signaling_NaN(GLIBCXX_3.4) [ISOCXX]
numeric_limits<short>::radix(GLIBCXX_3.4) [ISOCXX]
numeric_limits<short>::traps(GLIBCXX_3.4) [ISOCXX]
numeric_limits<short>::digits(GLIBCXX_3.4) [ISOCXX]
numeric_limits<short>::digits10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<short>::is_exact(GLIBCXX_3.4) [ISOCXX]
numeric_limits<short>::is_iec559(GLIBCXX_3.4) [ISOCXX]
numeric_limits<short>::is_modulo(GLIBCXX_3.4) [ISOCXX]
numeric_limits<short>::is_signed(GLIBCXX_3.4) [ISOCXX]

9.1.41 struct numeric_limits<unsigned short>

9.1.41.1 Interfaces for struct numeric_limits<unsigned short>

No external methods are defined for libstdcxx - struct numeric_limits<unsigned short> in this part of the specification. See also the relevant architecture specific part of this specification.

An LSB conforming implementation shall provide the generic data interfaces for struct numeric_limits<unsigned short> specified in [Table 9-122](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-122 libstdcxx - struct numeric_limits<unsigned short> Data Interfaces

numeric_limits<unsigned short>::has_denorm(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned short>::is_bounded(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned short>::is_integer(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned short>::round_style(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned short>::has_infinity(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned short>::max_exponent(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned short>::min_exponent(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned short>::has_quiet_NaN(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned short>::is_specialized(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned short>::max_exponent10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned short>::min_exponent10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned short>::has_denorm_loss(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned short>::tinyness_before(GLIBCXX_3.4) [ISOCXX]

numeric_limits<unsigned short>::has_signaling_NaN(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned short>::radix(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned short>::traps(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned short>::digits(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned short>::digits10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned short>::is_exact(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned short>::is_iec559(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned short>::is_modulo(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned short>::is_signed(GLIBCXX_3.4) [ISOCXX]

9.1.42 struct numeric_limits<int>

9.1.42.1 Interfaces for struct numeric_limits<int>

No external methods are defined for libstdcxx - struct numeric_limits<int> in this part of the specification. See also the relevant architecture specific part of this specification.

An LSB conforming implementation shall provide the generic data interfaces for struct numeric_limits<int> specified in [Table 9-123](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-123 libstdcxx - struct numeric_limits<int> Data Interfaces

numeric_limits<int>::has_denorm(GLIBCXX_3.4) [ISOCXX]
numeric_limits<int>::is_bounded(GLIBCXX_3.4) [ISOCXX]
numeric_limits<int>::is_integer(GLIBCXX_3.4) [ISOCXX]
numeric_limits<int>::round_style(GLIBCXX_3.4) [ISOCXX]
numeric_limits<int>::has_infinity(GLIBCXX_3.4) [ISOCXX]
numeric_limits<int>::max_exponent(GLIBCXX_3.4) [ISOCXX]
numeric_limits<int>::min_exponent(GLIBCXX_3.4) [ISOCXX]
numeric_limits<int>::has_quiet_NaN(GLIBCXX_3.4) [ISOCXX]
numeric_limits<int>::is_specialized(GLIBCXX_3.4) [ISOCXX]
numeric_limits<int>::max_exponent10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<int>::min_exponent10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<int>::has_denorm_loss(GLIBCXX_3.4) [ISOCXX]
numeric_limits<int>::tinytess_before(GLIBCXX_3.4) [ISOCXX]
numeric_limits<int>::has_signaling_NaN(GLIBCXX_3.4) [ISOCXX]
numeric_limits<int>::radix(GLIBCXX_3.4) [ISOCXX]
numeric_limits<int>::traps(GLIBCXX_3.4) [ISOCXX]
numeric_limits<int>::digits(GLIBCXX_3.4) [ISOCXX]
numeric_limits<int>::digits10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<int>::is_exact(GLIBCXX_3.4) [ISOCXX]
numeric_limits<int>::is_iec559(GLIBCXX_3.4) [ISOCXX]
numeric_limits<int>::is_modulo(GLIBCXX_3.4) [ISOCXX]

numeric_limits<int>::is_signed(GLIBCXX_3.4) [ISOCXX]
--

9.1.43 struct numeric_limits<unsigned int>

9.1.43.1 Interfaces for struct numeric_limits<unsigned int>

No external methods are defined for libstdcxx - struct numeric_limits<unsigned int> in this part of the specification. See also the relevant architecture specific part of this specification.

An LSB conforming implementation shall provide the generic data interfaces for struct numeric_limits<unsigned int> specified in [Table 9-124](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-124 libstdcxx - struct numeric_limits<unsigned int> Data Interfaces

numeric_limits<unsigned int>::has_denorm(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned int>::is_bounded(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned int>::is_integer(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned int>::round_style(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned int>::has_infinity(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned int>::max_exponent(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned int>::min_exponent(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned int>::has_quiet_NaN(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned int>::is_specialized(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned int>::max_exponent10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned int>::min_exponent10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned int>::has_denorm_loss(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned int>::tinyness_before(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned int>::has_signaling_NaN(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned int>::radix(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned int>::traps(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned int>::digits(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned int>::digits10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned int>::is_exact(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned int>::is_iec559(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned int>::is_modulo(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned int>::is_signed(GLIBCXX_3.4) [ISOCXX]

9.1.44 struct numeric_limits<long>

9.1.44.1 Interfaces for struct numeric_limits<long>

No external methods are defined for libstdcxx - struct numeric_limits<long> in this part of the specification. See also the relevant architecture specific part of this specification.

An LSB conforming implementation shall provide the generic data interfaces for struct numeric_limits<long> specified in [Table 9-125](#), with the full mandatory

functionality as described in the referenced underlying specification.

Table 9-125 libstdcxx - struct numeric_limits<long> Data Interfaces

numeric_limits<long>::has_denorm(GLIBCXX_3.4) [ISOCXX]
numeric_limits<long>::is_bounded(GLIBCXX_3.4) [ISOCXX]
numeric_limits<long>::is_integer(GLIBCXX_3.4) [ISOCXX]
numeric_limits<long>::round_style(GLIBCXX_3.4) [ISOCXX]
numeric_limits<long>::has_infinity(GLIBCXX_3.4) [ISOCXX]
numeric_limits<long>::max_exponent(GLIBCXX_3.4) [ISOCXX]
numeric_limits<long>::min_exponent(GLIBCXX_3.4) [ISOCXX]
numeric_limits<long>::has_quiet_NaN(GLIBCXX_3.4) [ISOCXX]
numeric_limits<long>::is_specialized(GLIBCXX_3.4) [ISOCXX]
numeric_limits<long>::max_exponent10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<long>::min_exponent10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<long>::has_denorm_loss(GLIBCXX_3.4) [ISOCXX]
numeric_limits<long>::tinytess_before(GLIBCXX_3.4) [ISOCXX]
numeric_limits<long>::has_signaling_NaN(GLIBCXX_3.4) [ISOCXX]
numeric_limits<long>::radix(GLIBCXX_3.4) [ISOCXX]
numeric_limits<long>::traps(GLIBCXX_3.4) [ISOCXX]
numeric_limits<long>::digits(GLIBCXX_3.4) [ISOCXX]
numeric_limits<long>::digits10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<long>::is_exact(GLIBCXX_3.4) [ISOCXX]
numeric_limits<long>::is_iec559(GLIBCXX_3.4) [ISOCXX]
numeric_limits<long>::is_modulo(GLIBCXX_3.4) [ISOCXX]
numeric_limits<long>::is_signed(GLIBCXX_3.4) [ISOCXX]

9.1.45 struct numeric_limits<unsigned long>

9.1.45.1 Interfaces for struct numeric_limits<unsigned long>

No external methods are defined for libstdcxx - struct numeric_limits<unsigned long> in this part of the specification. See also the relevant architecture specific part of this specification.

An LSB conforming implementation shall provide the generic data interfaces for struct numeric_limits<unsigned long> specified in [Table 9-126](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-126 libstdcxx - struct numeric_limits<unsigned long> Data Interfaces

numeric_limits<unsigned long>::has_denorm(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned long>::is_bounded(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned long>::is_integer(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned long>::round_style(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned long>::has_infinity(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned long>::max_exponent(GLIBCXX_3.4) [ISOCXX]

numeric_limits<unsigned long>::min_exponent(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned long>::has_quiet_NaN(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned long>::is_specialized(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned long>::max_exponent10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned long>::min_exponent10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned long>::has_denorm_loss(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned long>::tinyness_before(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned long>::has_signaling_NaN(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned long>::radix(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned long>::traps(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned long>::digits(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned long>::digits10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned long>::is_exact(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned long>::is_iec559(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned long>::is_modulo(GLIBCXX_3.4) [ISOCXX]
numeric_limits<unsigned long>::is_signed(GLIBCXX_3.4) [ISOCXX]

9.1.46 struct numeric_limits<wchar_t>

9.1.46.1 Interfaces for struct numeric_limits<wchar_t>

No external methods are defined for libstdcxx - struct numeric_limits<wchar_t> in this part of the specification. See also the relevant architecture specific part of this specification.

An LSB conforming implementation shall provide the generic data interfaces for struct numeric_limits<wchar_t> specified in [Table 9-127](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-127 libstdcxx - struct numeric_limits<wchar_t> Data Interfaces

numeric_limits<wchar_t>::has_denorm(GLIBCXX_3.4) [ISOCXX]
numeric_limits<wchar_t>::is_bounded(GLIBCXX_3.4) [ISOCXX]
numeric_limits<wchar_t>::is_integer(GLIBCXX_3.4) [ISOCXX]
numeric_limits<wchar_t>::round_style(GLIBCXX_3.4) [ISOCXX]
numeric_limits<wchar_t>::has_infinity(GLIBCXX_3.4) [ISOCXX]
numeric_limits<wchar_t>::max_exponent(GLIBCXX_3.4) [ISOCXX]
numeric_limits<wchar_t>::min_exponent(GLIBCXX_3.4) [ISOCXX]
numeric_limits<wchar_t>::has_quiet_NaN(GLIBCXX_3.4) [ISOCXX]
numeric_limits<wchar_t>::is_specialized(GLIBCXX_3.4) [ISOCXX]
numeric_limits<wchar_t>::max_exponent10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<wchar_t>::min_exponent10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<wchar_t>::has_denorm_loss(GLIBCXX_3.4) [ISOCXX]
numeric_limits<wchar_t>::tinyness_before(GLIBCXX_3.4) [ISOCXX]
numeric_limits<wchar_t>::has_signaling_NaN(GLIBCXX_3.4) [ISOCXX]

numeric_limits<wchar_t>::radix(GLIBCXX_3.4) [ISOcxx]
numeric_limits<wchar_t>::traps(GLIBCXX_3.4) [ISOcxx]
numeric_limits<wchar_t>::digits(GLIBCXX_3.4) [ISOcxx]
numeric_limits<wchar_t>::digits10(GLIBCXX_3.4) [ISOcxx]
numeric_limits<wchar_t>::is_exact(GLIBCXX_3.4) [ISOcxx]
numeric_limits<wchar_t>::is_iec559(GLIBCXX_3.4) [ISOcxx]
numeric_limits<wchar_t>::is_modulo(GLIBCXX_3.4) [ISOcxx]
numeric_limits<wchar_t>::is_signed(GLIBCXX_3.4) [ISOcxx]

9.1.47 struct numeric_limits<unsigned char>

9.1.47.1 Interfaces for struct numeric_limits<unsigned char>

No external methods are defined for libstdcxx - struct numeric_limits<unsigned char> in this part of the specification. See also the relevant architecture specific part of this specification.

An LSB conforming implementation shall provide the generic data interfaces for struct numeric_limits<unsigned char> specified in [Table 9-128](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-128 libstdcxx - struct numeric_limits<unsigned char> Data Interfaces

numeric_limits<unsigned char>::has_denorm(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned char>::is_bounded(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned char>::is_integer(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned char>::round_style(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned char>::has_infinity(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned char>::max_exponent(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned char>::min_exponent(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned char>::has_quiet_NaN(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned char>::is_specialized(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned char>::max_exponent10(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned char>::min_exponent10(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned char>::has_denorm_loss(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned char>::tinyness_before(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned char>::has_signaling_NaN(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned char>::radix(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned char>::traps(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned char>::digits(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned char>::digits10(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned char>::is_exact(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned char>::is_iec559(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned char>::is_modulo(GLIBCXX_3.4) [ISOcxx]
numeric_limits<unsigned char>::is_signed(GLIBCXX_3.4) [ISOcxx]

9.1.48 struct numeric_limits<signed char>

9.1.48.1 Interfaces for struct numeric_limits<signed char>

No external methods are defined for libstdcxx - struct numeric_limits<signed char> in this part of the specification. See also the relevant architecture specific part of this specification.

An LSB conforming implementation shall provide the generic data interfaces for struct numeric_limits<signed char> specified in [Table 9-129](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-129 libstdcxx - struct numeric_limits<signed char> Data Interfaces

numeric_limits<signed char>::has_denorm(GLIBCXX_3.4) [ISOCXX]
numeric_limits<signed char>::is_bounded(GLIBCXX_3.4) [ISOCXX]
numeric_limits<signed char>::is_integer(GLIBCXX_3.4) [ISOCXX]
numeric_limits<signed char>::round_style(GLIBCXX_3.4) [ISOCXX]
numeric_limits<signed char>::has_infinity(GLIBCXX_3.4) [ISOCXX]
numeric_limits<signed char>::max_exponent(GLIBCXX_3.4) [ISOCXX]
numeric_limits<signed char>::min_exponent(GLIBCXX_3.4) [ISOCXX]
numeric_limits<signed char>::has_quiet_NaN(GLIBCXX_3.4) [ISOCXX]
numeric_limits<signed char>::is_specialized(GLIBCXX_3.4) [ISOCXX]
numeric_limits<signed char>::max_exponent10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<signed char>::min_exponent10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<signed char>::has_denorm_loss(GLIBCXX_3.4) [ISOCXX]
numeric_limits<signed char>::tinyness_before(GLIBCXX_3.4) [ISOCXX]
numeric_limits<signed char>::has_signaling_NaN(GLIBCXX_3.4) [ISOCXX]
numeric_limits<signed char>::radix(GLIBCXX_3.4) [ISOCXX]
numeric_limits<signed char>::traps(GLIBCXX_3.4) [ISOCXX]
numeric_limits<signed char>::digits(GLIBCXX_3.4) [ISOCXX]
numeric_limits<signed char>::digits10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<signed char>::is_exact(GLIBCXX_3.4) [ISOCXX]
numeric_limits<signed char>::is_iec559(GLIBCXX_3.4) [ISOCXX]
numeric_limits<signed char>::is_modulo(GLIBCXX_3.4) [ISOCXX]
numeric_limits<signed char>::is_signed(GLIBCXX_3.4) [ISOCXX]

9.1.49 struct numeric_limits<char>

9.1.49.1 Interfaces for struct numeric_limits<char>

No external methods are defined for libstdcxx - struct numeric_limits<char> in this part of the specification. See also the relevant architecture specific part of this specification.

An LSB conforming implementation shall provide the generic data interfaces for struct numeric_limits<char> specified in [Table 9-130](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-130 libstdc++ - struct numeric_limits<char> Data Interfaces

numeric_limits<char>::has_denorm(GLIBCXX_3.4) [ISOCXX]
numeric_limits<char>::is_bounded(GLIBCXX_3.4) [ISOCXX]
numeric_limits<char>::is_integer(GLIBCXX_3.4) [ISOCXX]
numeric_limits<char>::round_style(GLIBCXX_3.4) [ISOCXX]
numeric_limits<char>::has_infinity(GLIBCXX_3.4) [ISOCXX]
numeric_limits<char>::max_exponent(GLIBCXX_3.4) [ISOCXX]
numeric_limits<char>::min_exponent(GLIBCXX_3.4) [ISOCXX]
numeric_limits<char>::has_quiet_NaN(GLIBCXX_3.4) [ISOCXX]
numeric_limits<char>::is_specialized(GLIBCXX_3.4) [ISOCXX]
numeric_limits<char>::max_exponent10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<char>::min_exponent10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<char>::has_denorm_loss(GLIBCXX_3.4) [ISOCXX]
numeric_limits<char>::tinyness_before(GLIBCXX_3.4) [ISOCXX]
numeric_limits<char>::has_signaling_NaN(GLIBCXX_3.4) [ISOCXX]
numeric_limits<char>::radix(GLIBCXX_3.4) [ISOCXX]
numeric_limits<char>::traps(GLIBCXX_3.4) [ISOCXX]
numeric_limits<char>::digits(GLIBCXX_3.4) [ISOCXX]
numeric_limits<char>::digits10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<char>::is_exact(GLIBCXX_3.4) [ISOCXX]
numeric_limits<char>::is_iec559(GLIBCXX_3.4) [ISOCXX]
numeric_limits<char>::is_modulo(GLIBCXX_3.4) [ISOCXX]
numeric_limits<char>::is_signed(GLIBCXX_3.4) [ISOCXX]

9.1.50 struct numeric_limits<bool>

9.1.50.1 Interfaces for struct numeric_limits<bool>

No external methods are defined for libstdc++ - struct numeric_limits<bool> in this part of the specification. See also the relevant architecture specific part of this specification.

An LSB conforming implementation shall provide the generic data interfaces for struct numeric_limits<bool> specified in [Table 9-131](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-131 libstdc++ - struct numeric_limits<bool> Data Interfaces

numeric_limits<bool>::has_denorm(GLIBCXX_3.4) [ISOCXX]
numeric_limits<bool>::is_bounded(GLIBCXX_3.4) [ISOCXX]
numeric_limits<bool>::is_integer(GLIBCXX_3.4) [ISOCXX]
numeric_limits<bool>::round_style(GLIBCXX_3.4) [ISOCXX]
numeric_limits<bool>::has_infinity(GLIBCXX_3.4) [ISOCXX]
numeric_limits<bool>::max_exponent(GLIBCXX_3.4) [ISOCXX]
numeric_limits<bool>::min_exponent(GLIBCXX_3.4) [ISOCXX]
numeric_limits<bool>::has_quiet_NaN(GLIBCXX_3.4) [ISOCXX]

numeric_limits<bool>::is_specialized(GLIBCXX_3.4) [ISOCXX]
numeric_limits<bool>::max_exponent10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<bool>::min_exponent10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<bool>::has_denorm_loss(GLIBCXX_3.4) [ISOCXX]
numeric_limits<bool>::tinyness_before(GLIBCXX_3.4) [ISOCXX]
numeric_limits<bool>::has_signaling_NaN(GLIBCXX_3.4) [ISOCXX]
numeric_limits<bool>::radix(GLIBCXX_3.4) [ISOCXX]
numeric_limits<bool>::traps(GLIBCXX_3.4) [ISOCXX]
numeric_limits<bool>::digits(GLIBCXX_3.4) [ISOCXX]
numeric_limits<bool>::digits10(GLIBCXX_3.4) [ISOCXX]
numeric_limits<bool>::is_exact(GLIBCXX_3.4) [ISOCXX]
numeric_limits<bool>::is_iec559(GLIBCXX_3.4) [ISOCXX]
numeric_limits<bool>::is_modulo(GLIBCXX_3.4) [ISOCXX]
numeric_limits<bool>::is_signed(GLIBCXX_3.4) [ISOCXX]

9.1.51 Class ctype_base

9.1.51.1 Class data for ctype_base

The Run Time Type Information for the std::ctype_base class is described by [Table 9-132](#)

Table 9-132 typeinfo for ctype_base

Base Vtable	vtable for _cxxabiv1::__class_type_info
Name	typeinfo name for ctype_base

9.1.51.2 Interfaces for Class ctype_base

No external methods are defined for libstdc++ - Class std::ctype_base in this part of the specification. See also the relevant architecture specific part of this specification.

An LSB conforming implementation shall provide the generic data interfaces for Class std::ctype_base specified in [Table 9-133](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-133 libstdc++ - Class ctype_base Data Interfaces

ctype_base::alnum(GLIBCXX_3.4) [ISOCXX]
ctype_base::alpha(GLIBCXX_3.4) [ISOCXX]
ctype_base::cntrl(GLIBCXX_3.4) [ISOCXX]
ctype_base::digit(GLIBCXX_3.4) [ISOCXX]
ctype_base::graph(GLIBCXX_3.4) [ISOCXX]
ctype_base::lower(GLIBCXX_3.4) [ISOCXX]
ctype_base::print(GLIBCXX_3.4) [ISOCXX]
ctype_base::punct(GLIBCXX_3.4) [ISOCXX]
ctype_base::space(GLIBCXX_3.4) [ISOCXX]

ctype_base::upper(GLIBCXX_3.4) [ISOCXX]
ctype_base::xdigit(GLIBCXX_3.4) [ISOCXX]
typeinfo for ctype_base(GLIBCXX_3.4) [CXXABI]
typeinfo name for ctype_base(GLIBCXX_3.4) [CXXABI]

9.1.52 Class __ctype_abstract_base<char>

9.1.52.1 Class data for __ctype_abstract_base<char>

The virtual table for the std::__ctype_abstract_base<char> class is described by [Table 9-134](#)

Table 9-134 Primary vtable for __ctype_abstract_base<char>

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for __ctype_abstract_base<char>
vfunc[0]:	NULL or __ctype_abstract_base<char>::~__ctype_abstract_base()
vfunc[1]:	NULL or __ctype_abstract_base<char>::~__ctype_abstract_base()
vfunc[2]:	__cxa_pure_virtual
vfunc[3]:	__cxa_pure_virtual
vfunc[4]:	__cxa_pure_virtual
vfunc[5]:	__cxa_pure_virtual
vfunc[6]:	__cxa_pure_virtual
vfunc[7]:	__cxa_pure_virtual
vfunc[8]:	__cxa_pure_virtual
vfunc[9]:	__cxa_pure_virtual
vfunc[10]:	__cxa_pure_virtual
vfunc[11]:	__cxa_pure_virtual
vfunc[12]:	__cxa_pure_virtual
vfunc[13]:	__cxa_pure_virtual

9.1.52.2 Interfaces for Class __ctype_abstract_base<char>

No external methods are defined for libstdcxx - Class std::__ctype_abstract_base<char> in this part of the specification. See also the relevant architecture specific part of this specification.

An LSB conforming implementation shall provide the generic data interfaces for Class std::__ctype_abstract_base<char> specified in [Table 9-135](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-135 libstdcxx - Class __ctype_abstract_base<char> Data Interfaces

typeinfo for __ctype_abstract_base<char>(GLIBCXX_3.4) [CXXABI]
--

typeinfo name for <code>__ctype_abstract_base<char></code> (GLIBCXX_3.4) [CXXABI]
vtable for <code>__ctype_abstract_base<char></code> (GLIBCXX_3.4) [CXXABI]

9.1.53 Class `__ctype_abstract_base<wchar_t>`

9.1.53.1 Class data for `__ctype_abstract_base<wchar_t>`

The virtual table for the `std::__ctype_abstract_base<wchar_t>` class is described by [Table 9-136](#)

Table 9-136 Primary vtable for `__ctype_abstract_base<wchar_t>`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>__ctype_abstract_base<wchar_t></code>
vfunc[0]:	NULL or <code>__ctype_abstract_base<wchar_t>::~__ctype_abstract_base()</code>
vfunc[1]:	NULL or <code>__ctype_abstract_base<wchar_t>::~__ctype_abstract_base()</code>
vfunc[2]:	<code>_cxa_pure_virtual</code>
vfunc[3]:	<code>_cxa_pure_virtual</code>
vfunc[4]:	<code>_cxa_pure_virtual</code>
vfunc[5]:	<code>_cxa_pure_virtual</code>
vfunc[6]:	<code>_cxa_pure_virtual</code>
vfunc[7]:	<code>_cxa_pure_virtual</code>
vfunc[8]:	<code>_cxa_pure_virtual</code>
vfunc[9]:	<code>_cxa_pure_virtual</code>
vfunc[10]:	<code>_cxa_pure_virtual</code>
vfunc[11]:	<code>_cxa_pure_virtual</code>
vfunc[12]:	<code>_cxa_pure_virtual</code>
vfunc[13]:	<code>_cxa_pure_virtual</code>

9.1.53.2 Interfaces for Class `__ctype_abstract_base<wchar_t>`

No external methods are defined for libstdcxx - Class `std::__ctype_abstract_base<wchar_t>` in this part of the specification. See also the relevant architecture specific part of this specification.

An LSB conforming implementation shall provide the generic data interfaces for Class `std::__ctype_abstract_base<wchar_t>` specified in [Table 9-137](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-137 libstdcxx - Class `__ctype_abstract_base<wchar_t>` Data Interfaces

typeinfo for <code>__ctype_abstract_base<wchar_t></code> (GLIBCXX_3.4) [CXXABI]
typeinfo name for <code>__ctype_abstract_base<wchar_t></code> (GLIBCXX_3.4)

[\[CXXABI\]](#)vtable for `__ctype_abstract_base<wchar_t>(GLIBCXX_3.4)` [\[CXXABI\]](#)

9.1.54 Class `ctype<char>`

9.1.54.1 Class data for `ctype<char>`

The virtual table for the `std::ctype<char>` class is described by [Table 9-138](#)

Table 9-138 Primary vtable for `ctype<char>`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>ctype<char></code>
vfunc[0]:	<code>ctype<char>::~ctype()</code>
vfunc[1]:	<code>ctype<char>::~ctype()</code>
vfunc[2]:	<code>ctype<char>::do_toupper(char) const</code>
vfunc[3]:	<code>ctype<char>::do_toupper(char*, char const*) const</code>
vfunc[4]:	<code>ctype<char>::do_tolower(char) const</code>
vfunc[5]:	<code>ctype<char>::do_tolower(char*, char const*) const</code>
vfunc[6]:	<code>ctype<char>::do_widen(char) const</code>
vfunc[7]:	<code>ctype<char>::do_widen(char const*, char const*, char*) const</code>
vfunc[8]:	<code>ctype<char>::do_narrow(char, char) const</code>
vfunc[9]:	<code>ctype<char>::do_narrow(char const*, char const*, char, char*) const</code>

9.1.54.2 Interfaces for Class `ctype<char>`

An LSB conforming implementation shall provide the generic methods for Class `std::ctype<char>` specified in [Table 9-139](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-139 libstdcxx - Class `ctype<char>` Function Interfaces

<code>ctype<char>::do_tolower(char*, char const*) const(GLIBCXX_3.4)</code> [ISOCXX]
<code>ctype<char>::do_tolower(char) const(GLIBCXX_3.4)</code> [ISOCXX]
<code>ctype<char>::do_toupper(char*, char const*) const(GLIBCXX_3.4)</code> [ISOCXX]
<code>ctype<char>::do_toupper(char) const(GLIBCXX_3.4)</code> [ISOCXX]
<code>ctype<char>::do_widen(char const*, char const*, char*) const(GLIBCXX_3.4)</code> [ISOCXX]
<code>ctype<char>::do_widen(char) const(GLIBCXX_3.4)</code> [ISOCXX]
<code>ctype<char>::do_narrow(char const*, char const*, char, char*) const(GLIBCXX_3.4)</code> [ISOCXX]
<code>ctype<char>::do_narrow(char, char) const(GLIBCXX_3.4)</code> [ISOCXX]
<code>ctype<char>::classic_table()(GLIBCXX_3.4)</code> [ISOCXX]

ctype<char>::~ctype()(GLIBCXX_3.4) [ISOCXX]
ctype<char>::~ctype()(GLIBCXX_3.4) [ISOCXX]
ctype<char>::~ctype()(GLIBCXX_3.4) [ISOCXX]
bool has_facet<ctype<char>>(locale const&)(GLIBCXX_3.4) [ISOCXXI]

An LSB conforming implementation shall provide the generic data interfaces for Class std::ctype<char> specified in [Table 9-140](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-140 libstdcxx - Class ctype<char> Data Interfaces

ctype<char>::table_size(GLIBCXX_3.4) [ISOCXX]
ctype<char>::id(GLIBCXX_3.4) [ISOCXX]
typeinfo for ctype<char>(GLIBCXX_3.4) [CXXABI]
typeinfo name for ctype<char>(GLIBCXX_3.4) [CXXABI]
vtable for ctype<char>(GLIBCXX_3.4) [CXXABI]

9.1.55 Class ctype<wchar_t>

9.1.55.1 Class data for ctype<wchar_t>

The virtual table for the std::ctype<wchar_t> class is described by [Table 9-141](#)

Table 9-141 Primary vtable for ctype<wchar_t>

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for ctype<wchar_t>
vfunc[0]:	ctype<wchar_t>::~ctype()
vfunc[1]:	ctype<wchar_t>::~ctype()
vfunc[2]:	ctype<wchar_t>::do_is(unsigned short, wchar_t) const
vfunc[3]:	ctype<wchar_t>::do_is(wchar_t const*, wchar_t const*, unsigned short*) const
vfunc[4]:	ctype<wchar_t>::do_scan_is(unsigned short, wchar_t const*, wchar_t const*) const
vfunc[5]:	ctype<wchar_t>::do_scan_not(unsigned short, wchar_t const*, wchar_t const*) const
vfunc[6]:	ctype<wchar_t>::do_toupper(wchar_t) const
vfunc[7]:	ctype<wchar_t>::do_toupper(wchar_t*, wchar_t const*) const
vfunc[8]:	ctype<wchar_t>::do_tolower(wchar_t) const
vfunc[9]:	ctype<wchar_t>::do_tolower(wchar_t*, wchar_t const*) const

vfunc[10]:	ctype<wchar_t>::do_widen(char) const
vfunc[11]:	ctype<wchar_t>::do_widen(char const*, char const*, wchar_t*) const
vfunc[12]:	ctype<wchar_t>::do_narrow(wchar_t, char) const
vfunc[13]:	ctype<wchar_t>::do_narrow(wchar_t const*, wchar_t const*, char, char*) const

The Run Time Type Information for the std::ctype<wchar_t> class is described by [Table 9-142](#)

Table 9-142 typeinfo for ctype<wchar_t>

Base Vtable	vtable for <code>_cxxabiv1::_si_class_type_info</code>
Name	typeinfo name for ctype<wchar_t>

9.1.55.2 Interfaces for Class ctype<wchar_t>

An LSB conforming implementation shall provide the generic methods for Class std::ctype<wchar_t> specified in [Table 9-143](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-143 libstdc++ - Class ctype<wchar_t> Function Interfaces

ctype<wchar_t>::do_scan_is(unsigned short, wchar_t const*, wchar_t const*) const(GLIBCXX_3.4) [ISOCXX]
ctype<wchar_t>::do_tolower(wchar_t*, wchar_t const*) const(GLIBCXX_3.4) [ISOCXX]
ctype<wchar_t>::do_tolower(wchar_t) const(GLIBCXX_3.4) [ISOCXX]
ctype<wchar_t>::do_toupper(wchar_t*, wchar_t const*) const(GLIBCXX_3.4) [ISOCXX]
ctype<wchar_t>::do_toupper(wchar_t) const(GLIBCXX_3.4) [ISOCXX]
ctype<wchar_t>::do_scan_not(unsigned short, wchar_t const*, wchar_t const*) const(GLIBCXX_3.4) [ISOCXX]
ctype<wchar_t>::_M_convert_to_wmask(unsigned short) const(GLIBCXX_3.4) [ISOCXX]
ctype<wchar_t>::do_is(wchar_t const*, wchar_t const*, unsigned short*) const(GLIBCXX_3.4) [ISOCXX]
ctype<wchar_t>::do_is(unsigned short, wchar_t) const(GLIBCXX_3.4) [ISOCXX]
ctype<wchar_t>::do_widen(char const*, char const*, wchar_t*) const(GLIBCXX_3.4) [ISOCXX]
ctype<wchar_t>::do_widen(char) const(GLIBCXX_3.4) [ISOCXX]
ctype<wchar_t>::do_narrow(wchar_t const*, wchar_t const*, char, char*) const(GLIBCXX_3.4) [ISOCXX]
ctype<wchar_t>::do_narrow(wchar_t, char) const(GLIBCXX_3.4) [ISOCXX]
ctype<wchar_t>::_M_initialize_ctype()(GLIBCXX_3.4) [ISOCXX]

ctype<wchar_t>::~ctype()(GLIBCXX_3.4) [ISOCXX]
ctype<wchar_t>::~ctype()(GLIBCXX_3.4) [ISOCXX]
ctype<wchar_t>::~ctype()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::ctype<wchar_t> specified in [Table 9-144](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-144 libstdcxx - Class ctype<wchar_t> Data Interfaces

ctype<wchar_t>::id(GLIBCXX_3.4) [ISOCXX]
typeinfo for ctype<wchar_t>(GLIBCXX_3.4) [CXXABI]
typeinfo name for ctype<wchar_t>(GLIBCXX_3.4) [CXXABI]
vtable for ctype<wchar_t>(GLIBCXX_3.4) [CXXABI]

9.1.56 Class ctype_byname<char>

9.1.56.1 Class data for ctype_byname<char>

The virtual table for the std::ctype_byname<char> class is described by [Table 9-145](#)

Table 9-145 Primary vtable for ctype_byname<char>

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for ctype_byname<char>
vfunc[0]:	ctype_byname<char>::~ctype_byname()
vfunc[1]:	ctype_byname<char>::~ctype_byname()
vfunc[2]:	ctype<char>::do_toupper(char) const
vfunc[3]:	ctype<char>::do_toupper(char*, char const*) const
vfunc[4]:	ctype<char>::do_tolower(char) const
vfunc[5]:	ctype<char>::do_tolower(char*, char const*) const
vfunc[6]:	ctype<char>::do_widen(char) const
vfunc[7]:	ctype<char>::do_widen(char const*, char const*, char*) const
vfunc[8]:	ctype<char>::do_narrow(char, char) const
vfunc[9]:	ctype<char>::do_narrow(char const*, char const*, char, char*) const

The Run Time Type Information for the std::ctype_byname<char> class is described by [Table 9-146](#)

Table 9-146 typeinfo for ctype_byname<char>

Base Vtable	vtable for _cxxabiv1::__si_class_type_info
Name	typeinfo name for ctype_byname<char>

9.1.56.2 Interfaces for Class ctype_byname<char>

An LSB conforming implementation shall provide the generic methods for Class std::ctype_byname<char> specified in [Table 9-147](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-147 libstdc++ - Class ctype_byname<char> Function Interfaces

ctype_byname<char>::~ctype_byname()(GLIBCXX_3.4) [ISOCXX]
ctype_byname<char>::~ctype_byname()(GLIBCXX_3.4) [ISOCXX]
ctype_byname<char>::~ctype_byname()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::ctype_byname<char> specified in [Table 9-148](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-148 libstdc++ - Class ctype_byname<char> Data Interfaces

typeinfo for ctype_byname<char>(GLIBCXX_3.4) [CXXABI]
typeinfo name for ctype_byname<char>(GLIBCXX_3.4) [CXXABI]
vtable for ctype_byname<char>(GLIBCXX_3.4) [CXXABI]

9.1.57 Class ctype_byname<wchar_t>

9.1.57.1 Class data for ctype_byname<wchar_t>

The virtual table for the std::ctype_byname<wchar_t> class is described by [Table 9-149](#)

Table 9-149 Primary vtable for ctype_byname<wchar_t>

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for ctype_byname<wchar_t>
vfunc[0]:	ctype_byname<wchar_t>::~ctype_byname()
vfunc[1]:	ctype_byname<wchar_t>::~ctype_byname()
vfunc[2]:	ctype<wchar_t>::do_is(unsigned short, wchar_t) const
vfunc[3]:	ctype<wchar_t>::do_is(wchar_t const*, wchar_t const*, unsigned short*) const
vfunc[4]:	ctype<wchar_t>::do_scan_is(unsigned short, wchar_t const*, wchar_t)

	const*) const
vfunc[5]:	ctype<wchar_t>::do_scan_not(unsigned short, wchar_t const*, wchar_t const*) const
vfunc[6]:	ctype<wchar_t>::do_toupper(wchar_t) const
vfunc[7]:	ctype<wchar_t>::do_toupper(wchar_t*, wchar_t const*) const
vfunc[8]:	ctype<wchar_t>::do_tolower(wchar_t) const
vfunc[9]:	ctype<wchar_t>::do_tolower(wchar_t*, wchar_t const*) const
vfunc[10]:	ctype<wchar_t>::do_widen(char) const
vfunc[11]:	ctype<wchar_t>::do_widen(char const*, char const*, wchar_t*) const
vfunc[12]:	ctype<wchar_t>::do_narrow(wchar_t, char) const
vfunc[13]:	ctype<wchar_t>::do_narrow(wchar_t const*, wchar_t const*, char, char*) const

The Run Time Type Information for the std::ctype_byname<wchar_t> class is described by [Table 9-150](#)

Table 9-150 typeinfo for ctype_byname<wchar_t>

Base Vtable	vtable for _cxxabiv1::__si_class_type_info
Name	typeinfo name for ctype_byname<wchar_t>

9.1.57.2 Interfaces for Class ctype_byname<wchar_t>

An LSB conforming implementation shall provide the generic methods for Class std::ctype_byname<wchar_t> specified in [Table 9-151](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-151 libstdc++ - Class ctype_byname<wchar_t> Function Interfaces

ctype_byname<wchar_t>::~ctype_byname()(GLIBCXX_3.4) [CXXABI]
ctype_byname<wchar_t>::~ctype_byname()(GLIBCXX_3.4) [CXXABI]
ctype_byname<wchar_t>::~ctype_byname()(GLIBCXX_3.4) [CXXABI]

An LSB conforming implementation shall provide the generic data interfaces for Class std::ctype_byname<wchar_t> specified in [Table 9-152](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-152 libstdc++ - Class ctype_byname<wchar_t> Data Interfaces

typeinfo for ctype_byname<wchar_t>(GLIBCXX_3.4) [CXXABI]
typeinfo name for ctype_byname<wchar_t>(GLIBCXX_3.4) [CXXABI]

vtable for ctype_byname<wchar_t>(GLIBCXX_3.4) [CXXABI]
--

9.1.58 Class `basic_string<char, char_traits<char>, allocator<char>` >

9.1.58.1 Interfaces for Class `basic_string<char, char_traits<char>, allocator<char>` >

An LSB conforming implementation shall provide the generic methods for Class `std::basic_string<char, std::char_traits<char>, std::allocator<char> >` specified in [Table 9-153](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-153 libstdcxx - Class `basic_string<char, char_traits<char>, allocator<char>` > Function Interfaces

<code>basic_string<char, char_traits<char>, allocator<char> >::_M_disjunct(char const*) const(GLIBCXX_3.4.5) [ISOCXX]</code>
<code>basic_string<char, char_traits<char>, allocator<char> >::get_allocator() const(GLIBCXX_3.4) [ISOCXX]</code>
<code>basic_string<char, char_traits<char>, allocator<char> >::end() const(GLIBCXX_3.4) [ISOCXX]</code>
<code>basic_string<char, char_traits<char>, allocator<char> >::_Rep::_M_is_leaked() const(GLIBCXX_3.4) [ISOCXX]</code>
<code>basic_string<char, char_traits<char>, allocator<char> >::_Rep::_M_is_shared() const(GLIBCXX_3.4) [ISOCXX]</code>
<code>basic_string<char, char_traits<char>, allocator<char> >::data() const(GLIBCXX_3.4) [ISOCXX]</code>
<code>basic_string<char, char_traits<char>, allocator<char> >::rend() const(GLIBCXX_3.4) [ISOCXX]</code>
<code>basic_string<char, char_traits<char>, allocator<char> >::size() const(GLIBCXX_3.4) [ISOCXX]</code>
<code>basic_string<char, char_traits<char>, allocator<char> >::begin() const(GLIBCXX_3.4) [ISOCXX]</code>
<code>basic_string<char, char_traits<char>, allocator<char> >::c_str() const(GLIBCXX_3.4) [ISOCXX]</code>
<code>basic_string<char, char_traits<char>, allocator<char> >::empty() const(GLIBCXX_3.4) [ISOCXX]</code>
<code>basic_string<char, char_traits<char>, allocator<char> >::_M_rep() const(GLIBCXX_3.4) [ISOCXX]</code>
<code>basic_string<char, char_traits<char>, allocator<char> >::length() const(GLIBCXX_3.4) [ISOCXX]</code>
<code>basic_string<char, char_traits<char>, allocator<char> >::rbegin() const(GLIBCXX_3.4) [ISOCXX]</code>
<code>basic_string<char, char_traits<char>, allocator<char> >::_M_data() const(GLIBCXX_3.4) [ISOCXX]</code>
<code>basic_string<char, char_traits<char>, allocator<char> >::_M_iend() const(GLIBCXX_3.4) [ISOCXX]</code>

basic_string<char, char_traits<char>, allocator<char> >::compare(char const*) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::compare(basic_string<char, char_traits<char>, allocator<char> > const&) const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::capacity() const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::max_size() const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::_M_ibegin() const(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::_Alloc_hider::_Alloc_hider(char*, allocator<char> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::_Alloc_hider::_Alloc_hider(char*, allocator<char> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::_M_leak_hard()(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::_S_empty_rep()(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::_S_copy_chars(char*, __gnu_cxx::__normal_iterator<char const*, basic_string<char, char_traits<char>, allocator<char> > >, __gnu_cxx::__normal_iterator<char const*, basic_string<char, char_traits<char>, allocator<char> > >)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::_S_copy_chars(char*, __gnu_cxx::__normal_iterator<char const*, basic_string<char, char_traits<char>, allocator<char> > >, __gnu_cxx::__normal_iterator<char const*, basic_string<char, char_traits<char>, allocator<char> > >)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::_S_copy_chars(char*, char const*, char const*)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::_S_copy_chars(char*, char*, char*)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::end()(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::_Rep::_M_destroy(allocator<char> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::_Rep::_M_dispose(allocator<char> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::_Rep::_M_refcopy()(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::_Rep::_M_refdata()(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::_Rep::_S_empty_rep()(GLIBCXX_3.4) [ISOCXX]

```

basic_string<char, char_traits<char>, allocator<char>
>::_Rep::_M_set_leaked()(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char>
>::_Rep::_M_set_sharable()(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char>
>::_Rep::_M_grab(allocator<char> const&, allocator<char> const&)
(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::rend()
(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char>>::swap(basic_string<char, char_traits<char>, allocator<char> >&)
(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::begin()
(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::clear()
(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char>
>::erase(__gnu_cxx::__normal_iterator<char*, basic_string<char,
char_traits<char>, allocator<char> >>)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char>
>::erase(__gnu_cxx::__normal_iterator<char*, basic_string<char,
char_traits<char>, allocator<char> >>, __gnu_cxx::__normal_iterator<char*,
basic_string<char, char_traits<char>, allocator<char> >>)(GLIBCXX_3.4)
[ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::append(char const*)
(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char>
>::append(basic_string<char, char_traits<char>, allocator<char> > const&)
(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::assign(char const*)
(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char>
>::assign(basic_string<char, char_traits<char>, allocator<char> > const&)
(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char>
>::insert(__gnu_cxx::__normal_iterator<char*, basic_string<char,
char_traits<char>, allocator<char> >>, char)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::rbegin()
(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::_M_data(char*)
(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::_M_leak()
(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char>
>::replace(__gnu_cxx::__normal_iterator<char*, basic_string<char,
char_traits<char>, allocator<char> >>, __gnu_cxx::__normal_iterator<char*,
basic_string<char, char_traits<char>, allocator<char> >>,

```

`_gnu_cxx::__normal_iterator<char const*, basic_string<char, char_traits<char>, allocator<char> >, _gnu_cxx::__normal_iterator<char const*, basic_string<char, char_traits<char>, allocator<char> > >`
(GLIBCXX 3.4) [ISO CXX]

```
basic_string<char, char_traits<char>, allocator<char>
>::replace(__gnu_cxx::__normal_iterator<char*, basic_string<char,
char_traits<char>, allocator<char> >, __gnu_cxx::__normal_iterator<char*,  

basic_string<char, char_traits<char>, allocator<char> >, char const*)
(GLIBCXX_3.4) [ISO CXX]
```

```
basic_string<char, char_traits<char>, allocator<char>
>::replace(__gnu_cxx::__normal_iterator<char*, basic_string<char,
char_traits<char>, allocator<char> >, __gnu_cxx::__normal_iterator<char*,  

basic_string<char, char_traits<char>, allocator<char> >, char const*, char  

const*)(GLIBCXX_3.4) [ISOcxx]
```

```
basic_string<char, char_traits<char>, allocator<char>
>::replace(__gnu_cxx::__normal_iterator<char*, basic_string<char,
char_traits<char>, allocator<char> >>, __gnu_cxx::__normal_iterator<char*, basic_string<char, char_traits<char>, allocator<char> >>, basic_string<char, char_traits<char>, allocator<char> > const&)(GLIBCXX_3.4) [ISOcxx]
```

```
basic_string<char, char_traits<char>, allocator<char>
>::replace(_gnu_cxx::__normal_iterator<char*, basic_string<char,
char_traits<char>, allocator<char> > , _gnu_cxx::__normal_iterator<char*, basic_string<char, char_traits<char>, allocator<char> > , char*, char*)
(GLIBCXX_3.4) [ISO CXX]
```

```
basic_string<char, char_traits<char>, allocator<char>
>::replace(_gnu_cxx::__normal_iterator<char*, basic_string<char,
char_traits<char>, allocator<char> >, _gnu_cxx::__normal_iterator<char*, basic_string<char, char_traits<char>, allocator<char> >,
_gnu_cxx::__normal_iterator<char*, basic_string<char, char_traits<char>, allocator<char> >, _gnu_cxx::__normal_iterator<char*, basic_string<char, char_traits<char>, allocator<char> >)(GLIBCXX_3.4) [ISOCXX]
```

`basic_string<char, char_traits<char>, allocator<char> >::push_back(char)`
(GLIBCXX_3.4) [\[ISO CXX\]](#)

`basic_string<char, char_traits<char>, allocator<char> >::basic_string(char const*, allocator<char> const&)(GLIBCXX_3.4) [ISOCXX]`

`basic_string<char, char_traits<char>, allocator<char>>::basic_string(allocator<char> const&)(GLIBCXX_3.4) [ISO CXX]`

`basic_string<char, char_traits<char>, allocator<char>>::basic_string(basic_string<char, char_traits<char>, allocator<char> > const&)(GLIBCXX_3.4) [ISOCXX]`

`basic_string<char, char_traits<char>, allocator<char>>::basic_string()`
(GLIBCXX_3.4) [\[ISO CXX\]](#)

```
basic_string<char, char_traits<char>, allocator<char>
>::basic_string<__gnu_cxx::__normal_iterator<char*, basic_string<char,
char_traits<char>, allocator<char>> >
>(__gnu_cxx::__normal_iterator<char*, basic_string<char, char_traits<char>,
allocator<char>> >, __gnu_cxx::__normal_iterator<char*, basic_string<char,
char_traits<char>, allocator<char>> >, allocator<char> const&)
(GLIBCXX_3.4) [ISO CXX]
```

basic_string<char, char_traits<char>, allocator<char>>::basic_string<char const*>(char const*, char const*, allocator<char> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char>>::basic_string<char*>(char*, char*, allocator<char> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char>>::basic_string(char const*, allocator<char> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char>>::basic_string(allocator<char> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char>>::basic_string(basic_string<char, char_traits<char>, allocator<char>> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char>>::basic_string() (GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char>>::basic_string<char const*>(_gnu_cxx::__normal_iterator<char*, basic_string<char, char_traits<char>, allocator<char>> > >(_gnu_cxx::__normal_iterator<char*, basic_string<char, char_traits<char>, allocator<char>> > >, _gnu_cxx::__normal_iterator<char*, basic_string<char, char_traits<char>, allocator<char>> > >, allocator<char> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char>>::basic_string<char const*>(char const*, char const*, allocator<char> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char>>::basic_string<char*>(char*, char*, allocator<char> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char>>::~basic_string() (GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char>>::~basic_string() (GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char>>::operator=(char const*)(GLIBCXX_3.4) [ISOCXXI]
basic_string<char, char_traits<char>, allocator<char>>::operator=(basic_string<char, char_traits<char>, allocator<char>> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char>>::operator=(char)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char>>::operator+=(char const*)(GLIBCXX_3.4) [ISOCXXI]
basic_string<char, char_traits<char>, allocator<char>>::operator+=(basic_string<char, char_traits<char>, allocator<char>> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char>>::operator+=(char)(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for

Class std::basic_string<char, std::char_traits<char>, std::allocator<char> > specified in [Table 9-154](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-154 libstdcxx - Class basic_string<char, char_traits<char>, allocator<char> > Data Interfaces

basic_string<char, char_traits<char>, allocator<char> >::Rep::S_max_size(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::Rep::S_terminal(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::Rep::S_empty_rep_storage(GLIBCXX_3.4) [ISOCXX]
basic_string<char, char_traits<char>, allocator<char> >::npos(GLIBCXX_3.4) [ISOCXX]

9.1.59 Class basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

9.1.59.1 Interfaces for Class basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

An LSB conforming implementation shall provide the generic methods for Class std::basic_string<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t> > specified in [Table 9-155](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-155 libstdcxx - Class basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > Function Interfaces

basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::M_disjunct(wchar_t const*) const(GLIBCXX_3.4.5) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::get_allocator() const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::end() const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::Rep::M_is_leaked() const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::Rep::M_is_shared() const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::data() const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::rend() const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::size() const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::begin() const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::c_str() const(GLIBCXX_3.4) [ISOCXX]

basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::empty() const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::_M_rep() const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::length() const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::rbegin() const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::_M_data() const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::_M_iend() const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::compare(wchar_t const*) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::compare(basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>> const&) const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::capacity() const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::max_size() const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::_M_ibegin() const(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::_Alloc_hider::_Alloc_hider(wchar_t*, allocator<wchar_t> const&) (GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::_Alloc_hider::_Alloc_hider(wchar_t*, allocator<wchar_t> const&) (GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::_M_leak_hard() (GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::_S_empty_rep() (GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::_S_copy_chars(wchar_t*, __gnu_cxx::__normal_iterator<wchar_t const*, basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>> >, __gnu_cxx::__normal_iterator<wchar_t const*, basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>> >)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::_S_copy_chars(wchar_t*, __gnu_cxx::__normal_iterator<wchar_t*, basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>> >, __gnu_cxx::__normal_iterator<wchar_t*, basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>> >)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::_S_copy_chars(wchar_t*, wchar_t const*, wchar_t const*)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>

>::_S_copy_chars(wchar_t*, wchar_t*, wchar_t*)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::end() (GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::_Rep::_M_destroy(allocator<wchar_t> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::_Rep::_M_dispose(allocator<wchar_t> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::_Rep::_M_refcopy()(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::_Rep::_M_refdata()(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::_Rep::_S_empty_rep()(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::_Rep::_M_set_leaked()(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::_Rep::_M_set_sharable()(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::_Rep::_M_grab(allocator<wchar_t> const&, allocator<wchar_t> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::rend() (GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::swap(basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>&)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::begin() (GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::clear() (GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::erase(__gnu_cxx::__normal_iterator<wchar_t*, basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>>)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::erase(__gnu_cxx::__normal_iterator<wchar_t*, basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>>, __gnu_cxx::__normal_iterator<wchar_t*, basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>>)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::append(wchar_t const*)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::append(basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>> const&)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::assign(wchar_t const*)(GLIBCXX_3.4) [ISOCXX]
basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::assign(basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>> >

(GLIBCXX_3.4) [\[ISO CXX\]](#)

An LSB conforming implementation shall provide the generic data interfaces for Class `std::basic_string<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t> >` specified in [Table 9-156](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-156 libstdc++ - Class `basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >` Data Interfaces

<code>basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::Rep::S_max_size(GLIBCXX_3.4)</code> [ISO CXX]
<code>basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::Rep::S_terminal(GLIBCXX_3.4)</code> [ISO CXX]
<code>basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::Rep::S_empty_rep_storage(GLIBCXX_3.4)</code> [ISO CXX]
<code>basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::npos(GLIBCXX_3.4)</code> [ISO CXX]

9.1.60 Class `basic_stringstream<char, char_traits<char>, allocator<char> >`

9.1.60.1 Class data for `basic_stringstream<char, char_traits<char>, allocator<char> >`

The virtual table for the `std::basic_stringstream<char, std::char_traits<char>, std::allocator<char> >` class is described in the relevant architecture specific part of this specification.

The VTT for the `std::basic_stringstream<char, std::char_traits<char>, std::allocator<char> >` class is described by [Table 9-157](#)

Table 9-157 VTT for `basic_stringstream<char, char_traits<char>, allocator<char> >`

VTT Name	<code>_ZTTSt18basic_stringstreamIcSt11char_traitsIcESaIcEE</code>
Number of Entries	10

9.1.60.2 Interfaces for Class `basic_stringstream<char, char_traits<char>, allocator<char> >`

An LSB conforming implementation shall provide the generic methods for Class `std::basic_stringstream<char, std::char_traits<char>, std::allocator<char> >` specified in [Table 9-158](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-158 libstdc++ - Class `basic_stringstream<char, char_traits<char>, allocator<char> >` Function Interfaces

<code>basic_stringstream<char, char_traits<char>, allocator<char> >::str() const(GLIBCXX_3.4)</code> [ISO CXX]
<code>basic_stringstream<char, char_traits<char>, allocator<char> >::rdbuf() const(GLIBCXX_3.4)</code> [ISO CXX]

basic_stringstream<char, char_traits<char>, allocator<char>>::str(basic_string<char, char_traits<char>, allocator<char>> const&) (GLIBCXX_3.4) [ISOCXX]
basic_stringstream<char, char_traits<char>, allocator<char>>::basic_stringstream(basic_string<char, char_traits<char>, allocator<char>> const&, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
basic_stringstream<char, char_traits<char>, allocator<char>>::basic_stringstream(_Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
basic_stringstream<char, char_traits<char>, allocator<char>>::basic_stringstream(basic_string<char, char_traits<char>, allocator<char>> const&, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
basic_stringstream<char, char_traits<char>, allocator<char>>::basic_stringstream(_Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
basic_stringstream<char, char_traits<char>, allocator<char>>::~basic_stringstream()(GLIBCXX_3.4) [ISOCXX]
basic_stringstream<char, char_traits<char>, allocator<char>>::~basic_stringstream()(GLIBCXX_3.4) [ISOCXX]
basic_stringstream<char, char_traits<char>, allocator<char>>::~basic_stringstream()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class `std::basic_stringstream<char, std::char_traits<char>, std::allocator<char>>` specified in [Table 9-159](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-159 libstdcxx - Class `basic_stringstream<char, char_traits<char>, allocator<char>>` Data Interfaces

typeinfo for basic_stringstream<char, char_traits<char>, allocator<char>>(GLIBCXX_3.4) [CXXABI]
typeinfo name for basic_stringstream<char, char_traits<char>, allocator<char>>(GLIBCXX_3.4) [CXXABI]
VTT for basic_stringstream<char, char_traits<char>, allocator<char>>(GLIBCXX_3.4) [CXXABI]
vtable for basic_stringstream<char, char_traits<char>, allocator<char>>(GLIBCXX_3.4) [CXXABI]

9.1.61 Class `basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>`

9.1.61.1 Class data for `basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>`

The virtual table for the `std::basic_stringstream<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t>>` class is described in the relevant architecture specific part of this specification.

The VTT for the `std::basic_stringstream<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t>>` class is described by [Table 9-160](#)

Table 9-160 VTT for `basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>`

VTT Name	<code>_ZTTSt18basic_stringstreamIwSt11char_traitsIwESaIwEE</code>
Number of Entries	10

9.1.61.2 Interfaces for Class `basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>`

An LSB conforming implementation shall provide the generic methods for Class `std::basic_stringstream<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t> >` specified in [Table 9-161](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-161 libstdcxx - Class `basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>` Function Interfaces

<code>basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::str() const(GLIBCXX_3.4)</code> [ISOCXX]
<code>basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::rdbuf() const(GLIBCXX_3.4)</code> [ISOCXX]
<code>basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::str(basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&)(GLIBCXX_3.4)</code> [ISOCXX]
<code>basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::basic_stringstream(basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&, _Ios_Openmode)(GLIBCXX_3.4)</code> [ISOCXX]
<code>basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::basic_stringstream(_Ios_Openmode)(GLIBCXX_3.4)</code> [ISOCXX]
<code>basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::basic_stringstream(basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&, _Ios_Openmode)(GLIBCXX_3.4)</code> [ISOCXX]
<code>basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::basic_stringstream(_Ios_Openmode)(GLIBCXX_3.4)</code> [ISOCXX]
<code>basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::~basic_stringstream()(GLIBCXX_3.4)</code> [ISOCXX]
<code>basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::~basic_stringstream()(GLIBCXX_3.4)</code> [ISOCXX]
<code>basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::~basic_stringstream()(GLIBCXX_3.4)</code> [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class `std::basic_stringstream<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t> >` specified in [Table 9-162](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-162 libstdcxx - Class `basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>` Data Interfaces

<code>typeinfo for basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >(GLIBCXX_3.4)</code> [CXABI]

typeinfo name for basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >(GLIBCXX_3.4) [CXXABI]
--

VTT for basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >(GLIBCXX_3.4) [CXXABI]
--

vtable for basic_stringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >(GLIBCXX_3.4) [CXXABI]

9.1.62 Class basic_istringstream<char, char_traits<char>, allocator<char> >

9.1.62.1 Class data for basic_istringstream<char, char_traits<char>, allocator<char> >

The virtual table for the std::basic_istringstream<char, std::char_traits<char>, std::allocator<char> > class is described in the relevant architecture specific part of this specification.

The VTT for the std::basic_istringstream<char, std::char_traits<char>, std::allocator<char> > class is described by [Table 9-163](#)

Table 9-163 VTT for basic_istringstream<char, char_traits<char>, allocator<char> >

VTT Name	_ZTTSt19basic_istringstreamIcSt11char_traitsIcESaIcEE
Number of Entries	4

9.1.62.2 Interfaces for Class basic_istringstream<char, char_traits<char>, allocator<char> >

An LSB conforming implementation shall provide the generic methods for Class std::basic_istringstream<char, std::char_traits<char>, std::allocator<char> > specified in [Table 9-164](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-164 libstdcxx - Class basic_istringstream<char, char_traits<char>, allocator<char> > Function Interfaces

basic_istringstream<char, char_traits<char>, allocator<char> >::str() const(GLIBCXX_3.4) [ISOCXX]
--

basic_istringstream<char, char_traits<char>, allocator<char> >::rdbuf() const(GLIBCXX_3.4) [ISOCXX]
--

basic_istringstream<char, char_traits<char>, allocator<char> >::str(basic_string<char, char_traits<char>, allocator<char> > const&) (GLIBCXX_3.4) [ISOCXX]

basic_istringstream<char, char_traits<char>, allocator<char> >::basic_istringstream(basic_string<char, char_traits<char>, allocator<char> > const&, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
--

basic_istringstream<char, char_traits<char>, allocator<char> >::basic_istringstream(_Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
--

basic_istringstream<char, char_traits<char>, allocator<char> >::basic_istringstream(basic_string<char, char_traits<char>, allocator<char> > const&, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
--

basic_istringstream<char, char_traits<char>, allocator<char>>::basic_istringstream(_Ios_Openmode)(GLIBCXX_3.4) [ISOcxx]
basic_istringstream<char, char_traits<char>, allocator<char>>::~basic_istringstream()(GLIBCXX_3.4) [ISOcxx]
basic_istringstream<char, char_traits<char>, allocator<char>>::~basic_istringstream()(GLIBCXX_3.4) [ISOcxx]
basic_istringstream<char, char_traits<char>, allocator<char>>::~basic_istringstream()(GLIBCXX_3.4) [ISOcxx]

An LSB conforming implementation shall provide the generic data interfaces for Class std::basic_istringstream<char, std::char_traits<char>, std::allocator<char>> specified in [Table 9-165](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-165 libstdc++ - Class basic_istringstream<char, char_traits<char>, allocator<char> > Data Interfaces

typeinfo for basic_istringstream<char, char_traits<char>, allocator<char>>(GLIBCXX_3.4) [Cxxabi]
typeinfo name for basic_istringstream<char, char_traits<char>, allocator<char>>(GLIBCXX_3.4) [Cxxabi]
VTT for basic_istringstream<char, char_traits<char>, allocator<char>>(GLIBCXX_3.4) [Cxxabi]
vtable for basic_istringstream<char, char_traits<char>, allocator<char>>(GLIBCXX_3.4) [Cxxabi]

9.1.63 Class basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

9.1.63.1 Class data for basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

The virtual table for the std::basic_istringstream<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t>> class is described in the relevant architecture specific part of this specification.

The VTT for the std::basic_istringstream<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t>> class is described by [Table 9-166](#)

Table 9-166 VTT for basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

VTT Name	_ZTTSt19basic_istringstreamIwSt11char_traitsIwESaIwEE
Number of Entries	4

9.1.63.2 Interfaces for Class basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

An LSB conforming implementation shall provide the generic methods for Class std::basic_istringstream<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t>> specified in [Table 9-167](#) with the full mandatory functionality as described in the referenced underlying specification.

Table 9-167 libstdc++ - Class `basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>` Function Interfaces

<code>basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::str() const(GLIBCXX_3.4) [ISOCXX]</code>
<code>basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::rdbuf() const(GLIBCXX_3.4) [ISOCXX]</code>
<code>basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::str(basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>> const&)(GLIBCXX_3.4) [ISOCXX]</code>
<code>basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::basic_istringstream(basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>> const&, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]</code>
<code>basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::basic_istringstream(_Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]</code>
<code>basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::basic_istringstream(basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>> const&, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]</code>
<code>basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::basic_istringstream(_Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]</code>
<code>basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::~basic_istringstream()(GLIBCXX_3.4) [ISOCXX]</code>
<code>basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::~basic_istringstream()(GLIBCXX_3.4) [ISOCXX]</code>
<code>basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::~basic_istringstream()(GLIBCXX_3.4) [ISOCXX]</code>

An LSB conforming implementation shall provide the generic data interfaces for Class `std::basic_istringstream<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t>>` specified in [Table 9-168](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-168 libstdc++ - Class `basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>` Data Interfaces

<code>typeinfo for basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>(GLIBCXX_3.4) [CXABI]</code>
<code>typeinfo name for basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>(GLIBCXX_3.4) [CXABI]</code>
<code>VTT for basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>(GLIBCXX_3.4) [CXABI]</code>
<code>vtable for basic_istringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>(GLIBCXX_3.4) [CXABI]</code>

9.1.64 Class `basic_ostringstream<char, char_traits<char>, allocator<char>`

9.1.64.1 Class data for `basic_ostringstream<char, char_traits<char>, allocator<char>`

The virtual table for the `std::basic_ostringstream<char, std::char_traits<char>, std::allocator<char>>`,

`std::allocator<char>` > class is described in the relevant architecture specific part of this specification.

The VTT for the `std::basic_ostringstream<char, std::char_traits<char>, std::allocator<char>` > class is described by [Table 9-169](#)

Table 9-169 VTT for `basic_ostringstream<char, char_traits<char>, allocator<char>` >

VTT Name	<code>_ZTTSt19basic_ostringstreamIcSt11char_traitsIcESaIcEE</code>
Number of Entries	4

9.1.64.2 Interfaces for Class `basic_ostringstream<char, char_traits<char>, allocator<char>` >

An LSB conforming implementation shall provide the generic methods for Class `std::basic_ostringstream<char, std::char_traits<char>, std::allocator<char>` > specified in [Table 9-170](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-170 libstdc++ - Class `basic_ostringstream<char, char_traits<char>, allocator<char>` > Function Interfaces

<code>basic_ostringstream<char, char_traits<char>, allocator<char></code> >:: <code>str()</code> const(GLIBCXX_3.4) [ISOCXX]
<code>basic_ostringstream<char, char_traits<char>, allocator<char></code> >:: <code>rdbuf()</code> const(GLIBCXX_3.4) [ISOCXX]
<code>basic_ostringstream<char, char_traits<char>, allocator<char></code> >:: <code>str(basic_string<char, char_traits<char>, allocator<char></code> > const&) (GLIBCXX_3.4) [ISOCXX]
<code>basic_ostringstream<char, char_traits<char>, allocator<char></code> >:: <code>basic_ostringstream(basic_string<char, char_traits<char>, allocator<char></code> > const&, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
<code>basic_ostringstream<char, char_traits<char>, allocator<char></code> >:: <code>basic_ostringstream(_Ios_Openmode)(GLIBCXX_3.4)</code> [ISOCXX]
<code>basic_ostringstream<char, char_traits<char>, allocator<char></code> >:: <code>basic_ostringstream(basic_string<char, char_traits<char>, allocator<char></code> > const&, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
<code>basic_ostringstream<char, char_traits<char>, allocator<char></code> >:: <code>basic_ostringstream(_Ios_Openmode)(GLIBCXX_3.4)</code> [ISOCXX]
<code>basic_ostringstream<char, char_traits<char>, allocator<char></code> >:: <code>~basic_ostringstream()</code> (GLIBCXX_3.4) [ISOCXX]
<code>basic_ostringstream<char, char_traits<char>, allocator<char></code> >:: <code>~basic_ostringstream()</code> (GLIBCXX_3.4) [ISOCXX]
<code>basic_ostringstream<char, char_traits<char>, allocator<char></code> >:: <code>~basic_ostringstream()</code> (GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class `std::basic_ostringstream<char, std::char_traits<char>, std::allocator<char>` > specified in [Table 9-171](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-171 libstdc++ - Class basic_ostringstream<char, char_traits<char>, allocator<char> > Data Interfaces

typeinfo for basic_ostringstream<char, char_traits<char>, allocator<char> >(GLIBCXX_3.4) [CXXABI]
typeinfo name for basic_ostringstream<char, char_traits<char>, allocator<char> >(GLIBCXX_3.4) [CXXABI]
VTT for basic_ostringstream<char, char_traits<char>, allocator<char> >(GLIBCXX_3.4) [CXXABI]
vtable for basic_ostringstream<char, char_traits<char>, allocator<char> >(GLIBCXX_3.4) [CXXABI]

9.1.65 Class basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

9.1.65.1 Class data for basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

The virtual table for the std::basic_ostringstream<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t> > class is described in the relevant architecture specific part of this specification.

The VTT for the std::basic_ostringstream<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t> > class is described by [Table 9-172](#)

Table 9-172 VTT for basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

VTT Name	_ZTTSt19basic_ostringstreamIwSt11char_traitsIwESaIwEE
Number of Entries	4

9.1.65.2 Interfaces for Class basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

An LSB conforming implementation shall provide the generic methods for Class std::basic_ostringstream<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t> > specified in [Table 9-173](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-173 libstdc++ - Class basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > Function Interfaces

basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::str() const(GLIBCXX_3.4) [ISOCXX]
basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::rdbuf() const(GLIBCXX_3.4) [ISOCXX]
basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::str(basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&)(GLIBCXX_3.4) [ISOCXX]
basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::basic_ostringstream(basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

>::basic_ostringstream(_Ios_Openmode)(GLIBCXX_3.4) [ISOcxx]
basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::basic_ostringstream(basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>> const&, _Ios_Openmode)(GLIBCXX_3.4) [ISOcxx]
basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::basic_ostringstream(_Ios_Openmode)(GLIBCXX_3.4) [ISOcxx]
basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::~basic_ostringstream()(GLIBCXX_3.4) [ISOcxx]
basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::~basic_ostringstream()(GLIBCXX_3.4) [ISOcxx]
basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::~basic_ostringstream()(GLIBCXX_3.4) [ISOcxx]

An LSB conforming implementation shall provide the generic data interfaces for Class `std::basic_ostringstream<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t>>` specified in [Table 9-174](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-174 libstdcxx - Class `basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>` Data Interfaces

typeinfo for <code>basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>></code> (GLIBCXX_3.4) [Cxxabi]
typeinfo name for <code>basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>></code> (GLIBCXX_3.4) [Cxxabi]
VTT for <code>basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>></code> (GLIBCXX_3.4) [Cxxabi]
vtable for <code>basic_ostringstream<wchar_t, char_traits<wchar_t>, allocator<wchar_t>></code> (GLIBCXX_3.4) [Cxxabi]

9.1.66 Class `basic_stringbuf<char, char_traits<char>, allocator<char>>`

9.1.66.1 Class data for `basic_stringbuf<char, char_traits<char>, allocator<char>>`

The virtual table for the `std::basic_stringbuf<char, std::char_traits<char>, std::allocator<char>>` class is described by [Table 9-175](#)

Table 9-175 Primary vtable for `basic_stringbuf<char, char_traits<char>, allocator<char>>`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>basic_stringbuf<char, char_traits<char>, allocator<char>></code>
vfunc[0]:	<code>basic_stringbuf<char, char_traits<char>, allocator<char>>::~basic_stringbuf()</code>
vfunc[1]:	<code>basic_stringbuf<char,</code>

	<code>char_traits<char>, allocator<char>>::~basic_stringbuf()</code>
vfunc[2]:	<code>basic_streambuf<char, char_traits<char> >::imbue(locale const&)</code>
vfunc[3]:	See The Architecture Specific Specification
vfunc[4]:	See The Architecture Specific Specification
vfunc[5]:	<code>basic_stringbuf<char, char_traits<char>, allocator<char>>::seekpos(fpos<__mbstate_t>, _Ios_Openmode)</code>
vfunc[6]:	<code>basic_streambuf<char, char_traits<char> >::sync()</code>
vfunc[7]:	<code>basic_streambuf<char, char_traits<char> >::showmanyc()</code>
vfunc[8]:	See The Architecture Specific Specification
vfunc[9]:	<code>basic_stringbuf<char, char_traits<char>, allocator<char>>::underflow()</code>
vfunc[10]:	<code>basic_streambuf<char, char_traits<char> >::uflow()</code>
vfunc[11]:	<code>basic_stringbuf<char, char_traits<char>, allocator<char>>::pbackfail(int)</code>
vfunc[12]:	See The Architecture Specific Specification
vfunc[13]:	<code>basic_stringbuf<char, char_traits<char>, allocator<char>>::overflow(int)</code>

The Run Time Type Information for the `std::basic_stringbuf<char, std::char_traits<char>, std::allocator<char> >` class is described by [Table 9-176](#)

Table 9-176 typeinfo for `basic_stringbuf<char, char_traits<char>, allocator<char> >`

Base Vtable	vtable for <code>_cxxabiv1::_si_class_type_info</code>
Name	typeinfo name for <code>basic_stringbuf<char, char_traits<char>, allocator<char> ></code>

9.1.66.2 Interfaces for Class `basic_stringbuf<char, char_traits<char>, allocator<char> >`

An LSB conforming implementation shall provide the generic methods for Class `std::basic_stringbuf<char, std::char_traits<char>, std::allocator<char> >` speci-

fied in [Table 9-177](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-177 libstdcxx - Class basic_stringbuf<char, char_traits<char>, allocator<char> > Function Interfaces

basic_stringbuf<char, char_traits<char>, allocator<char> >::str() const(GLIBCXX_3.4) [ISOCXX]
basic_stringbuf<char, char_traits<char>, allocator<char> >::_M_update_egptr()(GLIBCXX_3.4) [ISOCXX]
basic_stringbuf<char, char_traits<char>, allocator<char> >::_M_stringbuf_init(_Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
basic_stringbuf<char, char_traits<char>, allocator<char> >::str(basic_string<char, char_traits<char>, allocator<char> > const&) (GLIBCXX_3.4) [ISOCXX]
basic_stringbuf<char, char_traits<char>, allocator<char> >::seekpos(fpos<_mbstate_t>, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
basic_stringbuf<char, char_traits<char>, allocator<char> >::overflow(int) (GLIBCXX_3.4) [ISOCXX]
basic_stringbuf<char, char_traits<char>, allocator<char> >::pbackfail(int) (GLIBCXX_3.4) [ISOCXX]
basic_stringbuf<char, char_traits<char>, allocator<char> >::showmanyc() (GLIBCXX_3.4.6) [ISOCXX]
basic_stringbuf<char, char_traits<char>, allocator<char> >::underflow() (GLIBCXX_3.4) [ISOCXX]
basic_stringbuf<char, char_traits<char>, allocator<char> >::basic_stringbuf(basic_string<char, char_traits<char>, allocator<char> > const&, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
basic_stringbuf<char, char_traits<char>, allocator<char> >::basic_stringbuf(_Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
basic_stringbuf<char, char_traits<char>, allocator<char> >::basic_stringbuf(basic_string<char, char_traits<char>, allocator<char> > const&, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
basic_stringbuf<char, char_traits<char>, allocator<char> >::basic_stringbuf(_Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
basic_stringbuf<char, char_traits<char>, allocator<char> >::~basic_stringbuf()(GLIBCXX_3.4) [ISOCXX]
basic_stringbuf<char, char_traits<char>, allocator<char> >::~basic_stringbuf()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::basic_stringbuf<char, std::char_traits<char>, std::allocator<char> > specified in [Table 9-178](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-178 libstdcxx - Class basic_stringbuf<char, char_traits<char>, allocator<char> > Data Interfaces

typeinfo for basic_stringbuf<char, char_traits<char>, allocator<char> >(GLIBCXX_3.4) [CXXABI]

typeinfo name for basic_stringbuf<char, char_traits<char>, allocator<char>>(GLIBCXX_3.4) [CXXABI]

vtable for basic_stringbuf<char, char_traits<char>, allocator<char>>(GLIBCXX_3.4) [CXXABI]
--

9.1.67 Class `basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >`

9.1.67.1 Class data for `basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >`

The virtual table for the `std::basic_stringbuf<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t> >` class is described by [Table 9-179](#)

Table 9-179 Primary vtable for `basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> ></code>
vfunc[0]:	<code>basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::~basic_stringbuf()</code>
vfunc[1]:	<code>basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::~basic_stringbuf()</code>
vfunc[2]:	<code>basic_streambuf<wchar_t, char_traits<wchar_t> >::imbue(locale const&)</code>
vfunc[3]:	See The Architecture Specific Specification
vfunc[4]:	See The Architecture Specific Specification
vfunc[5]:	<code>basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::seekpos(fpos<__mbstate_t>, _Ios_Openmode)</code>
vfunc[6]:	<code>basic_streambuf<wchar_t, char_traits<wchar_t> >::sync()</code>
vfunc[7]:	<code>basic_streambuf<wchar_t, char_traits<wchar_t> >::showmanyc()</code>

vfunc[8]:	See The Architecture Specific Specification
vfunc[9]:	basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::underflow()
vfunc[10]:	basic_streambuf<wchar_t, char_traits<wchar_t>>::uflow()
vfunc[11]:	basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::pbackfail(unsigned int)
vfunc[12]:	See The Architecture Specific Specification
vfunc[13]:	basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::overflow(unsigned int)

The Run Time Type Information for the std::basic_stringbuf<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t> > class is described by [Table 9-180](#)

Table 9-180 typeinfo for basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

Base Vtable	vtable for <code>_cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

9.1.67.2 Interfaces for Class basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >

An LSB conforming implementation shall provide the generic methods for Class std::basic_stringbuf<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t> > specified in [Table 9-181](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-181 libstdcxx - Class basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > Function Interfaces

basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::str() const(GLIBCXX_3.4) [ISOCXX]
basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::_M_update_egptr()(GLIBCXX_3.4) [ISOCXX]
basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::_M_stringbuf_init(_Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t> >::str(basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> const&)(GLIBCXX_3.4) [ISOCXX]

basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::seekpos(fpos<_mbstate_t>, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::overflow(unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::pbackfail(unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::showmany(c)(GLIBCXX_3.4.6) [ISOCXX]
basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::underflow()(GLIBCXX_3.4) [ISOCXX]
basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::basic_stringbuf(basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>> const&, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::basic_stringbuf(_Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::basic_stringbuf(basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>> const&, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::basic_stringbuf(_Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::~basic_stringbuf()(GLIBCXX_3.4) [ISOCXX]
basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>::~basic_stringbuf()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class `std::basic_stringbuf<wchar_t, std::char_traits<wchar_t>, std::allocator<wchar_t>>` specified in [Table 9-182](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-182 libstdcxx - Class `basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>` Data Interfaces

typeinfo for <code>basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t>></code> (GLIBCXX_3.4) [CXABI]
typeinfo name for <code>basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t>></code> (GLIBCXX_3.4) [CXABI]
vtable for <code>basic_stringbuf<wchar_t, char_traits<wchar_t>, allocator<wchar_t>></code> (GLIBCXX_3.4) [CXABI]

9.1.68 Class `basic_iostream<char, char_traits<char>>`

>

9.1.68.1 Class data for `basic_iostream<char, char_traits<char>>`

The virtual table for the `std::basic_iostream<char, std::char_traits<char>>` class is described in the relevant architecture specific part of this specification.

The VTT for the `std::basic_iostream<char, std::char_traits<char>>` class is described by [Table 9-183](#)

Table 9-183 VTT for basic_iostream<char, char_traits<char> >

VTT Name	_ZTTSd
Number of Entries	7

9.1.68.2 Interfaces for Class basic_iostream<char, char_traits<char> >

An LSB conforming implementation shall provide the generic methods for Class std::basic_iostream<char, std::char_traits<char> > specified in [Table 9-184](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-184 libstdcxx - Class basic_iostream<char, char_traits<char> > Function Interfaces

basic_iostream<char, char_traits<char> >::basic_iostream(basic_streambuf<char, char_traits<char> >*)(GLIBCXX_3.4) [ISOCXX]
basic_iostream<char, char_traits<char> >::basic_iostream()(GLIBCXX_3.4) [ISOCXX]
basic_iostream<char, char_traits<char> >::basic_iostream(basic_streambuf<char, char_traits<char> >*)(GLIBCXX_3.4) [ISOCXX]
basic_iostream<char, char_traits<char> >::basic_iostream()(GLIBCXX_3.4) [ISOCXX]
basic_iostream<char, char_traits<char> >::~basic_iostream()(GLIBCXX_3.4) [ISOCXX]
basic_iostream<char, char_traits<char> >::~basic_iostream()(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >& operator><(char_traits<char> >)(basic_istream<char, char_traits<char> >&, signed char*)(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::basic_iostream<char, std::char_traits<char> > specified in [Table 9-185](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-185 libstdcxx - Class basic_iostream<char, char_traits<char> > Data Interfaces

typeinfo for basic_iostream<char, char_traits<char> >(GLIBCXX_3.4) [CXXABI]
typeinfo name for basic_iostream<char, char_traits<char> >(GLIBCXX_3.4) [CXXABI]
VTT for basic_iostream<char, char_traits<char> >(GLIBCXX_3.4) [CXXABI]
vtable for basic_iostream<char, char_traits<char> >(GLIBCXX_3.4) [CXXABI]

9.1.69 Class `basic_iostream<wchar_t, char_traits<wchar_t>>`

9.1.69.1 Class data for `basic_iostream<wchar_t, char_traits<wchar_t>>`

The virtual table for the `std::basic_iostream<wchar_t, std::char_traits<wchar_t>>` class is described in the relevant architecture specific part of this specification.

The VTT for the `std::basic_iostream<wchar_t, std::char_traits<wchar_t>>` class is described by [Table 9-186](#)

Table 9-186 VTT for `basic_iostream<wchar_t, char_traits<wchar_t>>`

VTT Name	<code>_ZTTSt14basic_iostreamIwSt11char_traitsIwEE</code>
Number of Entries	7

9.1.69.2 Interfaces for Class `basic_iostream<wchar_t, char_traits<wchar_t>>`

An LSB conforming implementation shall provide the generic methods for Class `std::basic_iostream<wchar_t, std::char_traits<wchar_t>>` specified in [Table 9-187](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-187 libstdc++ - Class `basic_iostream<wchar_t, char_traits<wchar_t>>` Function Interfaces

<code>basic_iostream<wchar_t, char_traits<wchar_t>>::basic_iostream(basic_streambuf<wchar_t, char_traits<wchar_t>>*)</code> (GLIBCXX_3.4) [ISOCXX]
<code>basic_iostream<wchar_t, char_traits<wchar_t>>::basic_iostream()</code> (GLIBCXX_3.4) [ISOCXX]
<code>basic_iostream<wchar_t, char_traits<wchar_t>>::basic_iostream(basic_streambuf<wchar_t, char_traits<wchar_t>>*)</code> (GLIBCXX_3.4) [ISOCXX]
<code>basic_iostream<wchar_t, char_traits<wchar_t>>::basic_iostream()</code> (GLIBCXX_3.4) [ISOCXX]
<code>basic_iostream<wchar_t, char_traits<wchar_t>>::~basic_iostream()</code> (GLIBCXX_3.4) [ISOCXX]
<code>basic_iostream<wchar_t, char_traits<wchar_t>>::~basic_iostream()</code> (GLIBCXX_3.4) [ISOCXX]
<code>basic_iostream<wchar_t, char_traits<wchar_t>>::~basic_iostream()</code> (GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class `std::basic_iostream<wchar_t, std::char_traits<wchar_t>>` specified in [Table 9-188](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-188 libstdc++ - Class `basic_ostream<wchar_t, char_traits<wchar_t>` > Data Interfaces

typeinfo for <code>basic_ostream<wchar_t, char_traits<wchar_t></code> (GLIBCXX_3.4) [CXXABI]
typeinfo name for <code>basic_ostream<wchar_t, char_traits<wchar_t></code> (GLIBCXX_3.4) [CXXABI]
VTT for <code>basic_ostream<wchar_t, char_traits<wchar_t></code> (GLIBCXX_3.4) [CXXABI]
vtable for <code>basic_ostream<wchar_t, char_traits<wchar_t></code> (GLIBCXX_3.4) [CXXABI]

9.1.70 Class `basic_istream<char, char_traits<char>` >

9.1.70.1 Class data for `basic_istream<char, char_traits<char>` >

The virtual table for the `std::basic_istream<char, std::char_traits<char>` class is described in the relevant architecture specific part of this specification.

The VTT for the `std::basic_istream<char, std::char_traits<char>` class is described by [Table 9-189](#)

Table 9-189 VTT for `basic_istream<char, char_traits<char>` >

VTT Name	_ZTTSi
Number of Entries	2

9.1.70.2 Interfaces for Class `basic_istream<char, char_traits<char>` >

An LSB conforming implementation shall provide the generic methods for Class `std::basic_istream<char, std::char_traits<char>` specified in [Table 9-190](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-190 libstdc++ - Class `basic_istream<char, char_traits<char>` > Function Interfaces

<code>basic_istream<char, char_traits<char></code> :: <code>gcount()</code> const(GLIBCXX_3.4) [ISOCXX]
<code>basic_istream<char, char_traits<char></code> :: <code>sentry::operator bool()</code> const(GLIBCXX_3.4) [ISOCXX]
<code>basic_istream<char, char_traits<char></code> :: <code>get(basic_streambuf<char, char_traits<char> &)</code> (GLIBCXX_3.4) [ISOCXX]
<code>basic_istream<char, char_traits<char></code> :: <code>get(basic_streambuf<char, char_traits<char> &, char)</code> (GLIBCXX_3.4) [ISOCXX]
<code>basic_istream<char, char_traits<char></code> :: <code>get(char &)</code> (GLIBCXX_3.4) [ISOCXX]
<code>basic_istream<char, char_traits<char></code> :: <code>get()</code> (GLIBCXX_3.4) [ISOCXX]
<code>basic_istream<char, char_traits<char></code> :: <code>peek()</code> (GLIBCXX_3.4) [ISOCXX]
<code>basic_istream<char, char_traits<char></code> :: <code>sync()</code> (GLIBCXX_3.4) [ISOCXX]
<code>basic_istream<char, char_traits<char></code> :: <code>seekg(fpos<__mbstate_t>)</code> (GLIBCXX_3.4) [ISOCXX]

basic_istream<char, char_traits<char> >::tellg()(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >::unget()(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >::ignore()(GLIBCXX_3.4.5) [ISOCXX]
basic_istream<char, char_traits<char> >::sentry::sentry(basic_istream<char, char_traits<char> >&, bool)(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >::sentry::sentry(basic_istream<char, char_traits<char> >&, bool)(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >::putback(char)(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >::basic_istream(basic_streambuf<char, char_traits<char> >*)(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >::basic_istream()(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >::basic_istream(basic_streambuf<char, char_traits<char> >*)(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >::basic_istream()(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >::~basic_istream()(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >::~basic_istream()(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >::operator>>(basic_istream<char, char_traits<char> >& (*)(basic_istream<char, char_traits<char> >&)) (GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >::operator>>(ios_base& (*)(ios_base&))(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >::operator>>(basic_ios<char, char_traits<char> >& (*)(basic_ios<char, char_traits<char> >&)) (GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >::operator>>(basic_streambuf<char, char_traits<char> >*)(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >::operator>>(void*&)(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >::operator>>(bool&)(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >::operator>>(double&) (GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >::operator>>(long double&) (GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >::operator>>(float&)(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >::operator>>(int&)(GLIBCXX_3.4)

[\[ISOCXX\]](#)

basic_istream<char, char_traits<char> >::operator>>(unsigned int&)(GLIBCXX_3.4) [\[ISOCXX\]](#)

basic_istream<char, char_traits<char> >::operator>>(long&)(GLIBCXX_3.4) [\[ISOCXX\]](#)

basic_istream<char, char_traits<char> >::operator>>(unsigned long&)(GLIBCXX_3.4) [\[ISOCXX\]](#)

basic_istream<char, char_traits<char> >::operator>>(short&)(GLIBCXX_3.4) [\[ISOCXX\]](#)

basic_istream<char, char_traits<char> >::operator>>(unsigned short&)(GLIBCXX_3.4) [\[ISOCXX\]](#)

basic_istream<char, char_traits<char> >::operator>>(long long&)(GLIBCXX_3.4) [\[ISOCXX\]](#)

basic_istream<char, char_traits<char> >::operator>>(unsigned long long&)(GLIBCXX_3.4) [\[ISOCXX\]](#)

basic_istream<char, char_traits<char> >& ws<char, char_traits<char> >(basic_istream<char, char_traits<char> >&)(GLIBCXX_3.4) [\[ISOCXX\]](#)

basic_istream<char, char_traits<char> >& getline<char, char_traits<char> , allocator<char> >(basic_istream<char, char_traits<char> >&, basic_string<char, char_traits<char> , allocator<char> >&)(GLIBCXX_3.4) [\[ISOCXX\]](#)

basic_istream<char, char_traits<char> >& getline<char, char_traits<char> , allocator<char> >(basic_istream<char, char_traits<char> >&, basic_string<char, char_traits<char> , allocator<char> >&, char)(GLIBCXX_3.4) [\[ISOCXX\]](#)

basic_istream<char, char_traits<char> >& operator>><char_traits<char> >(basic_istream<char, char_traits<char> >&, unsigned char*)(GLIBCXX_3.4) [\[ISOCXX\]](#)

basic_istream<char, char_traits<char> >& operator>><char_traits<char> >(basic_istream<char, char_traits<char> >&, signed char&)(GLIBCXX_3.4) [\[ISOCXX\]](#)

basic_istream<char, char_traits<char> >& operator>><char_traits<char> >(basic_istream<char, char_traits<char> >&, unsigned char&)(GLIBCXX_3.4) [\[ISOCXX\]](#)

basic_istream<char, char_traits<char> >& operator>><char, char_traits<char> >(basic_istream<char, char_traits<char> >&, char*)(GLIBCXX_3.4) [\[ISOCXX\]](#)

basic_istream<char, char_traits<char> >& operator>><char, char_traits<char> >(basic_istream<char, char_traits<char> >&, char&)(GLIBCXX_3.4) [\[ISOCXX\]](#)

basic_istream<char, char_traits<char> >& operator>><char, char_traits<char> >(basic_istream<char, char_traits<char> >&, _Setiosflags)(GLIBCXX_3.4) [\[ISOCXX\]](#)

basic_istream<char, char_traits<char> >& operator>><char, char_traits<char> >(basic_istream<char, char_traits<char> >&, _Setprecision)(GLIBCXX_3.4) [\[ISOCXX\]](#)

basic_istream<char, char_traits<char> >& operator>><char,

char_traits<char> >(basic_istream<char, char_traits<char> >&, _Resetiosflags)(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >& operator>><char, char_traits<char> >(basic_istream<char, char_traits<char> >&, _Setw)(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >& operator>><char, char_traits<char> >(basic_istream<char, char_traits<char> >&, _Setbase)(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >& operator>><char, char_traits<char> >(basic_istream<char, char_traits<char> >&, _Setfill<char>)(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >& operator>><char, char_traits<char>, allocator<char> >(basic_istream<char, char_traits<char> >&, basic_string<char, char_traits<char>, allocator<char> >&)(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >& operator>><double, char, char_traits<char> >(basic_istream<char, char_traits<char> >&, complex<double>&)(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >& operator>><long double, char, char_traits<char> >(basic_istream<char, char_traits<char> >&, complex<long double>&)(GLIBCXX_3.4) [ISOCXX]
basic_istream<char, char_traits<char> >& operator>><float, char, char_traits<char> >(basic_istream<char, char_traits<char> >&, complex<float>&)(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::basic_istream<char, std::char_traits<char> > specified in [Table 9-191](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-191 libstdc++ - Class basic_istream<char, char_traits<char> > Data Interfaces

typeinfo for basic_istream<char, char_traits<char> >(GLIBCXX_3.4) [CXXABI]
typeinfo name for basic_istream<char, char_traits<char> >(GLIBCXX_3.4) [CXXABI]
VTT for basic_istream<char, char_traits<char> >(GLIBCXX_3.4) [CXXABI]
vtable for basic_istream<char, char_traits<char> >(GLIBCXX_3.4) [CXXABI]

9.1.71 Class basic_istream<wchar_t, char_traits<wchar_t> >

9.1.71.1 Class data for basic_istream<wchar_t, char_traits<wchar_t> >

The virtual table for the std::basic_istream<wchar_t, std::char_traits<wchar_t> > class is described in the relevant architecture specific part of this specification.

The VTT for the std::basic_istream<wchar_t, std::char_traits<wchar_t> > class is described by [Table 9-192](#)

Table 9-192 VTT for basic_istream<wchar_t, char_traits<wchar_t> >

VTT Name	_ZTTSt13basic_istreamIwSt11char_traitsIwEE
Number of Entries	2

9.1.71.2 Interfaces for Class basic_istream<wchar_t, char_traits<wchar_t> >

An LSB conforming implementation shall provide the generic methods for Class std::basic_istream<wchar_t, std::char_traits<wchar_t> > specified in [Table 9-193](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-193 libstdcxx - Class basic_istream<wchar_t, char_traits<wchar_t> > Function Interfaces

basic_istream<wchar_t, char_traits<wchar_t> >::gcount() const(GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t> >::sentry::operator bool() const(GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t> >::get(basic_streampbuf<wchar_t, char_traits<wchar_t> >&)(GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t> >::get(basic_streampbuf<wchar_t, char_traits<wchar_t> >&, wchar_t) (GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t> >::get(wchar_t&) (GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t> >::get()(GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t> >::peek()(GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t> >::sync()(GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t> >::seekg(fpos<__mbstate_t>) (GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t> >::tellg()(GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t> >::unget()(GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t> >::ignore()(GLIBCXX_3.4.5) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t> >::sentry::sentry(basic_istream<wchar_t, char_traits<wchar_t> >&, bool) (GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t> >::sentry::sentry(basic_istream<wchar_t, char_traits<wchar_t> >&, bool) (GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t> >::putback(wchar_t)

(GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t>>::basic_istream(basic_streambuf<wchar_t, char_traits<wchar_t>>*) (GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t>>::basic_istream(basic_streambuf<wchar_t, char_traits<wchar_t>>*) (GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t>>::~basic_istream() (GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t>>::~basic_istream() (GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t>>::~basic_istream() (GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t>>::operator>>(basic_istream<wchar_t, char_traits<wchar_t>>& (*)(basic_istream<wchar_t, char_traits<wchar_t>>&))(GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t>>::operator>>(ios_base& (*)(ios_base&))(GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t>>::operator>>(basic_ios<wchar_t, char_traits<wchar_t>>& (*)(basic_ios<wchar_t, char_traits<wchar_t>>&))(GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t>>::operator>>(basic_streambuf<wchar_t, char_traits<wchar_t>>*) (GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t>>::operator>>(void*&) (GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t>>::operator>>(bool&) (GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t>>::operator>>(double&) (GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t>>::operator>>(long double&) (GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t>>::operator>>(float&) (GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t>>::operator>>(int&) (GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t>>::operator>>(unsigned int&) (GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t>>::operator>>(long&) (GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t>>::operator>>(unsigned long&)(GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t>>::operator>>(short&) (GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t>>::operator>>(unsigned short&)(GLIBCXX_3.4) [ISOCXX]

<code>_Setfill<wchar_t>)(GLIBCXX_3.4) [ISOcxx]</code>

<code>basic_istream<wchar_t, char_traits<wchar_t> >& operator>><wchar_t, char_traits<wchar_t>, allocator<wchar_t> >(basic_istream<wchar_t, char_traits<wchar_t> >&, basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> &)(GLIBCXX_3.4) [ISOcxx]</code>

An LSB conforming implementation shall provide the generic data interfaces for Class `std::basic_istream<wchar_t, std::char_traits<wchar_t> >` specified in [Table 9-194](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-194 libstdc++ - Class `basic_istream<wchar_t, char_traits<wchar_t> >` Data Interfaces

<code>typeinfo for basic_istream<wchar_t, char_traits<wchar_t> >(GLIBCXX_3.4) [Cxxabi]</code>

<code>typeinfo name for basic_istream<wchar_t, char_traits<wchar_t> >(GLIBCXX_3.4) [Cxxabi]</code>
--

<code>VTT for basic_istream<wchar_t, char_traits<wchar_t> >(GLIBCXX_3.4) [Cxxabi]</code>
--

<code>vtable for basic_istream<wchar_t, char_traits<wchar_t> >(GLIBCXX_3.4) [Cxxabi]</code>

9.1.72 Class `istreambuf_iterator<wchar_t, char_traits<wchar_t> >`

9.1.72.1 Interfaces for Class `istreambuf_iterator<wchar_t, char_traits<wchar_t> >`

An LSB conforming implementation shall provide the generic methods for Class `std::istreambuf_iterator<wchar_t, std::char_traits<wchar_t> >` specified in [Table 9-195](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-195 libstdc++ - Class `istreambuf_iterator<wchar_t, char_traits<wchar_t> >` Function Interfaces

<code>istreambuf_iterator<wchar_t, char_traits<wchar_t> >::operator++()</code> (GLIBCXX_3.4.5) [ISOcxx]
--

9.1.73 Class `istreambuf_iterator<char, char_traits<char> >`

9.1.73.1 Interfaces for Class `istreambuf_iterator<char, char_traits<char> >`

An LSB conforming implementation shall provide the generic methods for Class `std::istreambuf_iterator<char, std::char_traits<char> >` specified in [Table 9-196](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-196 libstdc++ - Class istreambuf_iterator<char, char_traits<char> > Function Interfaces

istreambuf_iterator<char, char_traits<char> >::operator++()(GLIBCXX_3.4.5) [ISOcxx]
--

9.1.74 Class basic_ostream<char, char_traits<char> >

9.1.74.1 Class data for basic_ostream<char, char_traits<char> >

The virtual table for the std::basic_ostream<char, std::char_traits<char> > class is described in the relevant architecture specific part of this specification.

The VTT for the std::basic_ostream<char, std::char_traits<char> > class is described by [Table 9-197](#)

Table 9-197 VTT for basic_ostream<char, char_traits<char> >

VTT Name	ZTTSO
Number of Entries	2

9.1.74.2 Interfaces for Class basic_ostream<char, char_traits<char> >

An LSB conforming implementation shall provide the generic methods for Class std::basic_ostream<char, std::char_traits<char> > specified in [Table 9-198](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-198 libstdc++ - Class basic_ostream<char, char_traits<char> > Function Interfaces

basic_ostream<char, char_traits<char> >::sentry::operator bool() const(GLIBCXX_3.4) [ISOcxx]
basic_ostream<char, char_traits<char> >::put(char)(GLIBCXX_3.4) [ISOcxx]
basic_ostream<char, char_traits<char> >::flush()(GLIBCXX_3.4) [ISOcxx]
basic_ostream<char, char_traits<char> >::seekp(fpos<__mbstate_t>) (GLIBCXX_3.4) [ISOcxx]
basic_ostream<char, char_traits<char> >::tellp()(GLIBCXX_3.4) [ISOcxx]
basic_ostream<char, char_traits<char> >::sentry::sentry(basic_ostream<char, char_traits<char> >&)(GLIBCXX_3.4) [ISOcxx]
basic_ostream<char, char_traits<char> >::sentry::sentry(basic_ostream<char, char_traits<char> >&)(GLIBCXX_3.4) [ISOcxx]
basic_ostream<char, char_traits<char> >::sentry::~sentry()(GLIBCXX_3.4) [ISOcxx]
basic_ostream<char, char_traits<char> >::sentry::~sentry()(GLIBCXX_3.4) [ISOcxx]
basic_ostream<char, char_traits<char> >::basic_ostream(basic_streambuf<char, char_traits<char> >*)(GLIBCXX_3.4) [ISOcxx]
basic_ostream<char, char_traits<char> >::basic_ostream()(GLIBCXX_3.4) [ISOcxx]

basic_ostream<char, char_traits<char>>::basic_ostream(basic_streambuf<char, char_traits<char>>*)(GLIBCXX_3.4) [ISOCXX]
basic_ostream<char, char_traits<char>>::basic_ostream()(GLIBCXX_3.4) [ISOCXX]
basic_ostream<char, char_traits<char>>::~basic_ostream()(GLIBCXX_3.4) [ISOCXX]
basic_ostream<char, char_traits<char>>::~basic_ostream()(GLIBCXX_3.4) [ISOCXX]
basic_ostream<char, char_traits<char>>::~basic_ostream()(GLIBCXX_3.4) [ISOCXX]
basic_ostream<char, char_traits<char>>::operator<<(basic_ostream<char, char_traits<char>>& (*)(basic_ostream<char, char_traits<char>>&)) (GLIBCXX_3.4) [ISOCXX]
basic_ostream<char, char_traits<char>>::operator<<(ios_base& (*)(ios_base&))(GLIBCXX_3.4) [ISOCXX]
basic_ostream<char, char_traits<char>>::operator<<(basic_ios<char, char_traits<char>>& (*)(basic_ios<char, char_traits<char>>&)) (GLIBCXX_3.4) [ISOCXX]
basic_ostream<char, char_traits<char>>::operator<<(void const*)(GLIBCXX_3.4) [ISOCXX]
basic_ostream<char, char_traits<char>>::operator<<(basic_streambuf<char, char_traits<char>>*)(GLIBCXX_3.4) [ISOCXX]
basic_ostream<char, char_traits<char>>::operator<<(bool)(GLIBCXX_3.4) [ISOCXX]
basic_ostream<char, char_traits<char>>::operator<<(double)(GLIBCXX_3.4) [ISOCXX]
basic_ostream<char, char_traits<char>>::operator<<(long double)(GLIBCXX_3.4) [ISOCXX]
basic_ostream<char, char_traits<char>>::operator<<(float)(GLIBCXX_3.4) [ISOCXX]
basic_ostream<char, char_traits<char>>::operator<<(int)(GLIBCXX_3.4) [ISOCXX]
basic_ostream<char, char_traits<char>>::operator<<(unsigned int)(GLIBCXX_3.4) [ISOCXX]
basic_ostream<char, char_traits<char>>::operator<<(long)(GLIBCXX_3.4) [ISOCXX]
basic_ostream<char, char_traits<char>>::operator<<(unsigned long)(GLIBCXX_3.4) [ISOCXX]
basic_ostream<char, char_traits<char>>::operator<<(short)(GLIBCXX_3.4) [ISOCXX]
basic_ostream<char, char_traits<char>>::operator<<(unsigned short)(GLIBCXX_3.4) [ISOCXX]
basic_ostream<char, char_traits<char>>::operator<<(long long)(GLIBCXX_3.4) [ISOCXX]
basic_ostream<char, char_traits<char>>::operator<<(unsigned long long)

char_traits<char> >(basic_ostream<char, char_traits<char> >&, complex<double> const&)(GLIBCXX_3.4) [ISOCXX]
basic_ostream<char, char_traits<char> >& operator<< <long double, char, char_traits<char> >(basic_ostream<char, char_traits<char> >&, complex<long double> const&)(GLIBCXX_3.4) [ISOCXX]
basic_ostream<char, char_traits<char> >& operator<< <float, char, char_traits<char> >(basic_ostream<char, char_traits<char> >&, complex<float> const&)(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::basic_ostream<char, std::char_traits<char> > specified in [Table 9-199](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-199 libstdcxx - Class basic_ostream<char, char_traits<char> > Data Interfaces

typeinfo for basic_ostream<char, char_traits<char> >(GLIBCXX_3.4) [CXXABI]
typeinfo name for basic_ostream<char, char_traits<char> >(GLIBCXX_3.4) [CXXABI]
VTT for basic_ostream<char, char_traits<char> >(GLIBCXX_3.4) [CXXABI]
vtable for basic_ostream<char, char_traits<char> >(GLIBCXX_3.4) [CXXABI]

9.1.75 Class basic_ostream<wchar_t, char_traits<wchar_t> >

9.1.75.1 Class data for basic_ostream<wchar_t, char_traits<wchar_t> >

The virtual table for the std::basic_ostream<wchar_t, std::char_traits<wchar_t> > class is described in the relevant architecture specific part of this specification.

The VTT for the std::basic_ostream<wchar_t, std::char_traits<wchar_t> > class is described by [Table 9-200](#)

Table 9-200 VTT for basic_ostream<wchar_t, char_traits<wchar_t> >

VTT Name	_ZTTSt13basic_ostreamIwSt11char_traitsIwEE
Number of Entries	2

9.1.75.2 Interfaces for Class basic_ostream<wchar_t, char_traits<wchar_t> >

An LSB conforming implementation shall provide the generic methods for Class std::basic_ostream<wchar_t, std::char_traits<wchar_t> > specified in [Table 9-201](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-201 libstdcxx - Class basic_ostream<wchar_t, char_traits<wchar_t> > Function Interfaces

basic_ostream<wchar_t, char_traits<wchar_t> >::sentry::operator bool()
--

const(GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::put(wchar_t) (GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::flush()(GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::seekp(fpos<__mbstate_t>) (GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::tellp()(GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::sentry::sentry(basic_ostream<wchar_t, char_traits<wchar_t>>&) (GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::sentry::sentry(basic_ostream<wchar_t, char_traits<wchar_t>>&) (GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::sentry::~sentry() (GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::sentry::~sentry() (GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::basic_ostream(basic_streambuf<wchar_t, char_traits<wchar_t>>*) (GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::basic_ostream(basic_streambuf<wchar_t, char_traits<wchar_t>>*) (GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::~basic_ostream() (GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::~basic_ostream() (GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::~basic_ostream() (GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::operator<<(basic_ostream<wchar_t, char_traits<wchar_t>>& (*)) (basic_ostream<wchar_t, char_traits<wchar_t>>&)(GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::operator<<(ios_base& (*)) (ios_base&)(GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::operator<<(basic_ios<wchar_t, char_traits<wchar_t>>& (*)) (basic_ios<wchar_t, char_traits<wchar_t>>&)(GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::operator<<(void const*)><> (GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::operator<<(basic_streambuf<wchar_t, char_traits<wchar_t>>*) (GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::operator<<(bool)

(GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::operator<<(double) (GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::operator<<(long double) (GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::operator<<(float) (GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::operator<<(int) (GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::operator<<(unsigned int) (GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::operator<<(long) (GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::operator<<(unsigned long) (GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::operator<<(short) (GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::operator<<(unsigned short) (GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::operator<<(long long) (GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::operator<<(unsigned long long) (GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>& endl<wchar_t, char_traits<wchar_t>>(basic_ostream<wchar_t, char_traits<wchar_t>>&) (GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>& ends<wchar_t, char_traits<wchar_t>>(basic_ostream<wchar_t, char_traits<wchar_t>>&) (GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>& flush<wchar_t, char_traits<wchar_t>>(basic_ostream<wchar_t, char_traits<wchar_t>>&) (GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>& operator<<<double, wchar_t, char_traits<wchar_t>>(basic_ostream<wchar_t, char_traits<wchar_t>>&, complex<double> const&)(GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>& operator<<<long double, wchar_t, char_traits<wchar_t>>(basic_ostream<wchar_t, char_traits<wchar_t>>&, complex<long double> const&)(GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>& operator<<<float, wchar_t, char_traits<wchar_t>>(basic_ostream<wchar_t, char_traits<wchar_t>>&, complex<float> const&)(GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>& operator<<<wchar_t, char_traits<wchar_t>>(basic_ostream<wchar_t, char_traits<wchar_t>>&, wchar_t const*)(GLIBCXX_3.4) [ISOCXX]

basic_ostream<wchar_t, char_traits<wchar_t>>& operator<< <wchar_t, char_traits<wchar_t>>(basic_ostream<wchar_t, char_traits<wchar_t>>&, char const*)(GLIBCXX_3.4) [ISO CXX]
basic_ostream<wchar_t, char_traits<wchar_t>>& operator<< <wchar_t, char_traits<wchar_t>>(basic_ostream<wchar_t, char_traits<wchar_t>>&, wchar_t)(GLIBCXX_3.4) [ISO CXX]
basic_ostream<wchar_t, char_traits<wchar_t>>& operator<< <wchar_t, char_traits<wchar_t>>(basic_ostream<wchar_t, char_traits<wchar_t>>&, _Setiosflags)(GLIBCXX_3.4) [ISO CXX]
basic_ostream<wchar_t, char_traits<wchar_t>>& operator<< <wchar_t, char_traits<wchar_t>>(basic_ostream<wchar_t, char_traits<wchar_t>>&, _Setprecision)(GLIBCXX_3.4) [ISO CXX]
basic_ostream<wchar_t, char_traits<wchar_t>>& operator<< <wchar_t, char_traits<wchar_t>>(basic_ostream<wchar_t, char_traits<wchar_t>>&, _Resetiosflags)(GLIBCXX_3.4) [ISO CXX]
basic_ostream<wchar_t, char_traits<wchar_t>>& operator<< <wchar_t, char_traits<wchar_t>>(basic_ostream<wchar_t, char_traits<wchar_t>>&, _Resetw)(GLIBCXX_3.4) [ISO CXX]
basic_ostream<wchar_t, char_traits<wchar_t>>& operator<< <wchar_t, char_traits<wchar_t>>(basic_ostream<wchar_t, char_traits<wchar_t>>&, _Setbase)(GLIBCXX_3.4) [ISO CXX]
basic_ostream<wchar_t, char_traits<wchar_t>>& operator<< <wchar_t, char_traits<wchar_t>>(basic_ostream<wchar_t, char_traits<wchar_t>>&, _Setfill<wchar_t>)(GLIBCXX_3.4) [ISO CXX]
basic_ostream<wchar_t, char_traits<wchar_t>>& operator<< <wchar_t, char_traits<wchar_t>>(basic_ostream<wchar_t, char_traits<wchar_t>>&, char)(GLIBCXX_3.4) [ISO CXX]
basic_ostream<wchar_t, char_traits<wchar_t>>& operator<< <wchar_t, char_traits<wchar_t>, allocator<wchar_t>>(basic_ostream<wchar_t, char_traits<wchar_t>>&, basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&)(GLIBCXX_3.4) [ISO CXX]

An LSB conforming implementation shall provide the generic data interfaces for Class `std::basic_ostream<wchar_t, std::char_traits<wchar_t>>` specified in [Table 9-202](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-202 libstdcxx - Class `basic_ostream<wchar_t, char_traits<wchar_t>>` Data Interfaces

typeinfo for <code>basic_ostream<wchar_t, char_traits<wchar_t>></code> (GLIBCXX_3.4) [CXXABI]
typeinfo name for <code>basic_ostream<wchar_t, char_traits<wchar_t>></code> (GLIBCXX_3.4) [CXXABI]
VTT for <code>basic_ostream<wchar_t, char_traits<wchar_t>></code> (GLIBCXX_3.4) [CXXABI]
vtable for <code>basic_ostream<wchar_t, char_traits<wchar_t>></code> (GLIBCXX_3.4) [CXXABI]

9.1.76 Class `basic_fstream<char, char_traits<char>>`

9.1.76.1 Class data for `basic_fstream<char, char_traits<char>>`

The virtual table for the `std::basic_fstream<char, std::char_traits<char>>` class is described in the relevant architecture specific part of this specification.

The VTT for the `std::basic_fstream<char, std::char_traits<char>>` class is described by [Table 9-203](#)

Table 9-203 VTT for `basic_fstream<char, char_traits<char>>`

VTT Name	<code>_ZTTSt13basic_fstreamIcSt11char_traitsIcEE</code>
Number of Entries	10

9.1.76.2 Interfaces for Class `basic_fstream<char, char_traits<char>>`

>

An LSB conforming implementation shall provide the generic methods for Class `std::basic_fstream<char, std::char_traits<char>>` specified in [Table 9-204](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-204 libstdcxx - Class `basic_fstream<char, char_traits<char>>` Function Interfaces

<code>basic_fstream<char, char_traits<char>>::rdbuf() const(GLIBCXX_3.4) [ISOcxx]</code>
<code>basic_fstream<char, char_traits<char>>::is_open() const(GLIBCXX_3.4.5) [ISOcxx]</code>
<code>basic_fstream<char, char_traits<char>>::open(char const*, _Ios_Openmode) (GLIBCXX_3.4) [ISOcxx]</code>
<code>basic_fstream<char, char_traits<char>>::close()(GLIBCXX_3.4) [ISOcxx]</code>
<code>basic_fstream<char, char_traits<char>>::is_open()(GLIBCXX_3.4) [ISOcxx]</code>
<code>basic_fstream<char, char_traits<char>>::basic_fstream(char const*, _Ios_Openmode)(GLIBCXX_3.4) [ISOcxx]</code>
<code>basic_fstream<char, char_traits<char>>::basic_fstream()(GLIBCXX_3.4) [ISOcxx]</code>
<code>basic_fstream<char, char_traits<char>>::basic_fstream(char const*, _Ios_Openmode)(GLIBCXX_3.4) [ISOcxx]</code>
<code>basic_fstream<char, char_traits<char>>::basic_fstream()(GLIBCXX_3.4) [ISOcxx]</code>
<code>basic_fstream<char, char_traits<char>>::~basic_fstream()(GLIBCXX_3.4) [ISOcxx]</code>
<code>basic_fstream<char, char_traits<char>>::~basic_fstream()(GLIBCXX_3.4) [ISOcxx]</code>
<code>basic_fstream<char, char_traits<char>>::~basic_fstream()(GLIBCXX_3.4) [ISOcxx]</code>

An LSB conforming implementation shall provide the generic data interfaces for Class `std::basic_fstream<char, std::char_traits<char>>` specified in [Table 9-205](#),

with the full mandatory functionality as described in the referenced underlying specification.

Table 9-205 libstdcxx - Class `basic_fstream<char, char_traits<char>>` Data Interfaces

typeinfo for <code>basic_fstream<char, char_traits<char>></code> (GLIBCXX_3.4) [CXXABI]
typeinfo name for <code>basic_fstream<char, char_traits<char>></code> (GLIBCXX_3.4) [CXXABI]
VTT for <code>basic_fstream<char, char_traits<char>></code> (GLIBCXX_3.4) [CXXABI]
vtable for <code>basic_fstream<char, char_traits<char>></code> (GLIBCXX_3.4) [CXXABI]

9.1.77 Class `basic_fstream<wchar_t, char_traits<wchar_t>>`

9.1.77.1 Class data for `basic_fstream<wchar_t, char_traits<wchar_t>>`

The virtual table for the `std::basic_fstream<wchar_t, std::char_traits<wchar_t>>` class is described in the relevant architecture specific part of this specification.

The VTT for the `std::basic_fstream<wchar_t, std::char_traits<wchar_t>>` class is described by [Table 9-206](#)

Table 9-206 VTT for `basic_fstream<wchar_t, char_traits<wchar_t>>`

VTT Name	_ZTTSt13basic_fstreamIwSt11char_traitsIwEE
Number of Entries	10

9.1.77.2 Interfaces for Class `basic_fstream<wchar_t, char_traits<wchar_t>>`

An LSB conforming implementation shall provide the generic methods for Class `std::basic_fstream<wchar_t, std::char_traits<wchar_t>>` specified in [Table 9-207](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-207 libstdcxx - Class `basic_fstream<wchar_t, char_traits<wchar_t>>` Function Interfaces

<code>basic_fstream<wchar_t, char_traits<wchar_t>>::rdbuf()</code> const(GLIBCXX_3.4) [ISOCXX]
<code>basic_fstream<wchar_t, char_traits<wchar_t>>::is_open()</code> const(GLIBCXX_3.4.5) [ISOCXX]
<code>basic_fstream<wchar_t, char_traits<wchar_t>>::open(char const*, _Ios_Openmode)(GLIBCXX_3.4)</code> [ISOCXX]
<code>basic_fstream<wchar_t, char_traits<wchar_t>>::close()(GLIBCXX_3.4)</code> [ISOCXX]
<code>basic_fstream<wchar_t, char_traits<wchar_t>>::is_open()(GLIBCXX_3.4)</code> [ISOCXX]
<code>basic_fstream<wchar_t, char_traits<wchar_t>>::basic_fstream(char const*, _Ios_Openmode)(GLIBCXX_3.4)</code> [ISOCXX]

basic_fstream<wchar_t, char_traits<wchar_t>>::basic_fstream() (GLIBCXX_3.4) [ISOcxx]
basic_fstream<wchar_t, char_traits<wchar_t>>::basic_fstream(char const*, _Ios_Openmode)(GLIBCXX_3.4) [ISOcxx]
basic_fstream<wchar_t, char_traits<wchar_t>>::basic_fstream() (GLIBCXX_3.4) [ISOcxx]
basic_fstream<wchar_t, char_traits<wchar_t>>::~basic_fstream() (GLIBCXX_3.4) [ISOcxx]
basic_fstream<wchar_t, char_traits<wchar_t>>::~basic_fstream() (GLIBCXX_3.4) [ISOcxx]
basic_fstream<wchar_t, char_traits<wchar_t>>::~basic_fstream() (GLIBCXX_3.4) [ISOcxx]

An LSB conforming implementation shall provide the generic data interfaces for Class std::basic_fstream<wchar_t, std::char_traits<wchar_t>> specified in [Table 9-208](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-208 libstdcxx - Class basic_fstream<wchar_t, char_traits<wchar_t>> Data Interfaces

typeinfo for basic_fstream<wchar_t, char_traits<wchar_t>>(GLIBCXX_3.4) [Cxxabi]
typeinfo name for basic_fstream<wchar_t, char_traits<wchar_t>>(GLIBCXX_3.4) [Cxxabi]
VTT for basic_fstream<wchar_t, char_traits<wchar_t>>(GLIBCXX_3.4) [Cxxabi]
vtable for basic_fstream<wchar_t, char_traits<wchar_t>>(GLIBCXX_3.4) [Cxxabi]

9.1.78 Class basic_ifstream<char, char_traits<char>>

>

9.1.78.1 Class data for basic_ifstream<char, char_traits<char>>

The virtual table for the std::basic_ifstream<char, std::char_traits<char>> class is described in the relevant architecture specific part of this specification.

The VTT for the std::basic_ifstream<char, std::char_traits<char>> class is described by [Table 9-209](#)

Table 9-209 VTT for basic_ifstream<char, char_traits<char>>

VTT Name	_ZTTSt14basic_ifstreamIcSt11char_traitsIcEE
Number of Entries	4

9.1.78.2 Interfaces for Class basic_ifstream<char, char_traits<char>>

>

An LSB conforming implementation shall provide the generic methods for Class std::basic_ifstream<char, std::char_traits<char>> specified in [Table 9-210](#), with the full mandatory functionality as described in the referenced underlying spec-

ification.

Table 9-210 libstdcxx - Class `basic_ifstream<char, char_traits<char>>` Function Interfaces

basic_ifstream<char, char_traits<char>>::rdbuf() const(GLIBCXX_3.4) [ISOcxx]
basic_ifstream<char, char_traits<char>>::is_open() const(GLIBCXX_3.4.5) [ISOcxx]
basic_ifstream<char, char_traits<char>>::open(char const*, _Ios_Openmode)(GLIBCXX_3.4) [ISOcxx]
basic_ifstream<char, char_traits<char>>::close()(GLIBCXX_3.4) [ISOcxx]
basic_ifstream<char, char_traits<char>>::is_open()(GLIBCXX_3.4) [ISOcxx]
basic_ifstream<char, char_traits<char>>::basic_ifstream(char const*, _Ios_Openmode)(GLIBCXX_3.4) [ISOcxx]
basic_ifstream<char, char_traits<char>>::basic_ifstream()(GLIBCXX_3.4) [ISOcxx]
basic_ifstream<char, char_traits<char>>::basic_ifstream(char const*, _Ios_Openmode)(GLIBCXX_3.4) [ISOcxx]
basic_ifstream<char, char_traits<char>>::basic_ifstream()(GLIBCXX_3.4) [ISOcxx]
basic_ifstream<char, char_traits<char>>::~basic_ifstream()(GLIBCXX_3.4) [ISOcxx]
basic_ifstream<char, char_traits<char>>::~basic_ifstream()(GLIBCXX_3.4) [ISOcxx]
basic_ifstream<char, char_traits<char>>::~basic_ifstream()(GLIBCXX_3.4) [ISOcxx]

An LSB conforming implementation shall provide the generic data interfaces for Class std::basic_ifstream<char, std::char_traits<char>> specified in [Table 9-211](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-211 libstdcxx - Class `basic_ifstream<char, char_traits<char>>` Data Interfaces

typeinfo for basic_ifstream<char, char_traits<char>>(GLIBCXX_3.4) [Cxxabi]
typeinfo name for basic_ifstream<char, char_traits<char>>(GLIBCXX_3.4) [Cxxabi]
VTT for basic_ifstream<char, char_traits<char>>(GLIBCXX_3.4) [Cxxabi]
vtable for basic_ifstream<char, char_traits<char>>(GLIBCXX_3.4) [Cxxabi]

9.1.79 Class `basic_ifstream<wchar_t, char_traits<wchar_t>>`

9.1.79.1 Class data for `basic_ifstream<wchar_t, char_traits<wchar_t>>`

The virtual table for the std::basic_ifstream<wchar_t, std::char_traits<wchar_t>>

> class is described in the relevant architecture specific part of this specification.
The VTT for the `std::basic_ifstream<wchar_t, std::char_traits<wchar_t>>` class is described by [Table 9-212](#)

Table 9-212 VTT for basic_ifstream<wchar_t, char_traits<wchar_t>>

VTT Name	<code>_ZTTSt14basic_ifstreamIwSt11char_traitsIwEE</code>
Number of Entries	4

9.1.79.2 Interfaces for Class basic_ifstream<wchar_t, char_traits<wchar_t>>

An LSB conforming implementation shall provide the generic methods for Class `std::basic_ifstream<wchar_t, std::char_traits<wchar_t>>` specified in [Table 9-213](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-213 libstdc++ - Class basic_ifstream<wchar_t, char_traits<wchar_t>> Function Interfaces

<code>basic_ifstream<wchar_t, char_traits<wchar_t>>::rdbuf()</code> const(GLIBCXX_3.4) [ISOCXX]
<code>basic_ifstream<wchar_t, char_traits<wchar_t>>::is_open()</code> const(GLIBCXX_3.4.5) [ISOCXX]
<code>basic_ifstream<wchar_t, char_traits<wchar_t>>::open(char const*, _Ios_Openmode)(GLIBCXX_3.4)</code> [ISOCXX]
<code>basic_ifstream<wchar_t, char_traits<wchar_t>>::close()(GLIBCXX_3.4)</code> [ISOCXX]
<code>basic_ifstream<wchar_t, char_traits<wchar_t>>::is_open()(GLIBCXX_3.4)</code> [ISOCXX]
<code>basic_ifstream<wchar_t, char_traits<wchar_t>>::basic_ifstream(char const*, _Ios_Openmode)(GLIBCXX_3.4)</code> [ISOCXX]
<code>basic_ifstream<wchar_t, char_traits<wchar_t>>::basic_ifstream()</code> (GLIBCXX_3.4) [ISOCXX]
<code>basic_ifstream<wchar_t, char_traits<wchar_t>>::basic_ifstream(char const*, _Ios_Openmode)(GLIBCXX_3.4)</code> [ISOCXX]
<code>basic_ifstream<wchar_t, char_traits<wchar_t>>::basic_ifstream()</code> (GLIBCXX_3.4) [ISOCXX]
<code>basic_ifstream<wchar_t, char_traits<wchar_t>>::~basic_ifstream()</code> (GLIBCXX_3.4) [ISOCXX]
<code>basic_ifstream<wchar_t, char_traits<wchar_t>>::~basic_ifstream()</code> (GLIBCXX_3.4) [ISOCXX]
<code>basic_ifstream<wchar_t, char_traits<wchar_t>>::~basic_ifstream()</code> (GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class `std::basic_ifstream<wchar_t, std::char_traits<wchar_t>>` specified in [Table 9-214](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-214 libstdcxx - Class basic_ifstream<wchar_t, char_traits<wchar_t> > Data Interfaces

typeinfo for basic_ifstream<wchar_t, char_traits<wchar_t> >(GLIBCXX_3.4) [CXXABI]
typeinfo for basic_streambuf<wchar_t, char_traits<wchar_t> >(GLIBCXX_3.4) [CXXABI]
typeinfo name for basic_ifstream<wchar_t, char_traits<wchar_t> >(GLIBCXX_3.4) [CXXABI]
typeinfo name for basic_streambuf<wchar_t, char_traits<wchar_t> >(GLIBCXX_3.4) [CXXABI]
VTT for basic_ifstream<wchar_t, char_traits<wchar_t> >(GLIBCXX_3.4) [CXXABI]
vtable for basic_ifstream<wchar_t, char_traits<wchar_t> >(GLIBCXX_3.4) [CXXABI]
vtable for basic_streambuf<wchar_t, char_traits<wchar_t> >(GLIBCXX_3.4) [CXXABI]

9.1.80 Class basic_ofstream<char, char_traits<char> >

>

9.1.80.1 Class data for basic_ofstream<char, char_traits<char> >

The virtual table for the std::basic_ofstream<char, std::char_traits<char> > class is described in the relevant architecture specific part of this specification.

The VTT for the std::basic_ofstream<char, std::char_traits<char> > class is described by [Table 9-215](#)

Table 9-215 VTT for basic_ofstream<char, char_traits<char> >

VTT Name	_ZTTSt14basic_ofstreamIcSt11char_traitsIcEE
Number of Entries	4

9.1.80.2 Interfaces for Class basic_ofstream<char, char_traits<char> >

An LSB conforming implementation shall provide the generic methods for Class std::basic_ofstream<char, std::char_traits<char> > specified in [Table 9-216](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-216 libstdcxx - Class basic_ofstream<char, char_traits<char> > Function Interfaces

basic_ofstream<char, char_traits<char> >::rdbuf() const(GLIBCXX_3.4) [ISOCXX]
basic_ofstream<char, char_traits<char> >::is_open() const(GLIBCXX_3.4.5) [ISOCXX]
basic_ofstream<char, char_traits<char> >::open(char const*, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
basic_ofstream<char, char_traits<char> >::close()(GLIBCXX_3.4) [ISOCXX]

basic_ofstream<char, char_traits<char>>::is_open()(GLIBCXX_3.4) [ISOcxx]
basic_ofstream<char, char_traits<char>>::basic_ofstream(char const*, _Ios_Openmode)(GLIBCXX_3.4) [ISOcxx]
basic_ofstream<char, char_traits<char>>::basic_ofstream()(GLIBCXX_3.4) [ISOcxx]
basic_ofstream<char, char_traits<char>>::basic_ofstream(char const*, _Ios_Openmode)(GLIBCXX_3.4) [ISOcxx]
basic_ofstream<char, char_traits<char>>::basic_ofstream()(GLIBCXX_3.4) [ISOcxx]
basic_ofstream<char, char_traits<char>>::~basic_ofstream()(GLIBCXX_3.4) [ISOcxx]
basic_ofstream<char, char_traits<char>>::~basic_ofstream()(GLIBCXX_3.4) [ISOcxx]
basic_ofstream<char, char_traits<char>>::~basic_ofstream()(GLIBCXX_3.4) [ISOcxx]

An LSB conforming implementation shall provide the generic data interfaces for Class std::basic_ofstream<char, std::char_traits<char>> specified in [Table 9-217](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-217 libstdcxx - Class basic_ofstream<char, char_traits<char>> Data Interfaces

typeinfo for basic_ofstream<char, char_traits<char>>(GLIBCXX_3.4) [Cxxabi]
typeinfo name for basic_ofstream<char, char_traits<char>>(GLIBCXX_3.4) [Cxxabi]
VTT for basic_ofstream<char, char_traits<char>>(GLIBCXX_3.4) [Cxxabi]
vtable for basic_ofstream<char, char_traits<char>>(GLIBCXX_3.4) [Cxxabi]

9.1.81 Class basic_ofstream<wchar_t, char_traits<wchar_t>>

9.1.81.1 Class data for basic_ofstream<wchar_t, char_traits<wchar_t>>

The virtual table for the std::basic_ofstream<wchar_t, std::char_traits<wchar_t>> class is described in the relevant architecture specific part of this specification.

The VTT for the std::basic_ofstream<wchar_t, std::char_traits<wchar_t>> class is described by [Table 9-218](#)

Table 9-218 VTT for basic_ofstream<wchar_t, char_traits<wchar_t>>

VTT Name	_ZTTSt14basic_ofstreamIwSt11char_traitsIwEE
Number of Entries	4

9.1.81.2 Interfaces for Class `basic_ofstream<wchar_t, char_traits<wchar_t>>`

An LSB conforming implementation shall provide the generic methods for Class `std::basic_ofstream<wchar_t, std::char_traits<wchar_t>>` specified in [Table 9-219](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-219 libstdc++ - Class `basic_ofstream<wchar_t, char_traits<wchar_t>>` Function Interfaces

<code>basic_ofstream<wchar_t, char_traits<wchar_t>>::rdbuf()</code> const(GLIBCXX_3.4) [ISOCXX]
<code>basic_ofstream<wchar_t, char_traits<wchar_t>>::is_open()</code> const(GLIBCXX_3.4.5) [ISOCXX]
<code>basic_ofstream<wchar_t, char_traits<wchar_t>>::open(char const*, _Ios_Openmode)(GLIBCXX_3.4)</code> [ISOCXX]
<code>basic_ofstream<wchar_t, char_traits<wchar_t>>::close()(GLIBCXX_3.4)</code> [ISOCXX]
<code>basic_ofstream<wchar_t, char_traits<wchar_t>>::is_open()(GLIBCXX_3.4)</code> [ISOCXX]
<code>basic_ofstream<wchar_t, char_traits<wchar_t>>::basic_ofstream(char const*, _Ios_Openmode)(GLIBCXX_3.4)</code> [ISOCXX]
<code>basic_ofstream<wchar_t, char_traits<wchar_t>>::basic_ofstream()(GLIBCXX_3.4)</code> [ISOCXX]
<code>basic_ofstream<wchar_t, char_traits<wchar_t>>::basic_ofstream(char const*, _Ios_Openmode)(GLIBCXX_3.4)</code> [ISOCXX]
<code>basic_ofstream<wchar_t, char_traits<wchar_t>>::basic_ofstream()(GLIBCXX_3.4)</code> [ISOCXX]
<code>basic_ofstream<wchar_t, char_traits<wchar_t>>::~basic_ofstream()(GLIBCXX_3.4)</code> [ISOCXX]
<code>basic_ofstream<wchar_t, char_traits<wchar_t>>::~basic_ofstream()(GLIBCXX_3.4)</code> [ISOCXX]
<code>basic_ofstream<wchar_t, char_traits<wchar_t>>::~basic_ofstream()(GLIBCXX_3.4)</code> [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class `std::basic_ofstream<wchar_t, std::char_traits<wchar_t>>` specified in [Table 9-220](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-220 libstdc++ - Class `basic_ofstream<wchar_t, char_traits<wchar_t>>` Data Interfaces

<code>typeinfo for basic_ofstream<wchar_t, char_traits<wchar_t>>(GLIBCXX_3.4)</code> [CXXABI]
<code>typeinfo name for basic_ofstream<wchar_t, char_traits<wchar_t>>(GLIBCXX_3.4)</code> [CXXABI]
<code>VTT for basic_ofstream<wchar_t, char_traits<wchar_t>>(GLIBCXX_3.4)</code> [CXXABI]
<code>vtable for basic_ofstream<wchar_t, char_traits<wchar_t>>(GLIBCXX_3.4)</code>

[CXXABI]

9.1.82 Class `basic_streambuf<char, char_traits<char> >`

9.1.82.1 Class data for `basic_streambuf<char, char_traits<char> >`

The virtual table for the `std::basic_streambuf<char, std::char_traits<char> >` class is described by [Table 9-221](#)

Table 9-221 Primary vtable for `basic_streambuf<char, char_traits<char> >`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>basic_streambuf<char, char_traits<char> ></code>
vfunc[0]:	<code>basic_streambuf<char, char_traits<char> >::~basic_streambuf()</code>
vfunc[1]:	<code>basic_streambuf<char, char_traits<char> >::~basic_streambuf()</code>
vfunc[2]:	<code>basic_streambuf<char, char_traits<char> >::imbue(locale const&)</code>
vfunc[3]:	See The Architecture Specific Specification
vfunc[4]:	See The Architecture Specific Specification
vfunc[5]:	<code>basic_streambuf<char, char_traits<char> >::seekpos(fpos<__mbstate_t>, _Ios_Openmode)</code>
vfunc[6]:	<code>basic_streambuf<char, char_traits<char> >::sync()</code>
vfunc[7]:	<code>basic_streambuf<char, char_traits<char> >::showmanyc()</code>
vfunc[8]:	See The Architecture Specific Specification
vfunc[9]:	<code>basic_streambuf<char, char_traits<char> >::underflow()</code>
vfunc[10]:	<code>basic_streambuf<char, char_traits<char> >::uflow()</code>
vfunc[11]:	<code>basic_streambuf<char, char_traits<char> >::pbackfail(int)</code>
vfunc[12]:	See The Architecture Specific Specification
vfunc[13]:	<code>basic_streambuf<char,</code>

	char_traits<char> >::overflow(int)
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The Run Time Type Information for the std::basic_streambuf<char, std::char_traits<char> > class is described by [Table 9-222](#)

Table 9-222 typeinfo for basic_streambuf<char, char_traits<char> >

Base Vtable	vtable for __cxxabiv1::__class_type_info
Name	typeinfo name for basic_streambuf<char, char_traits<char> >

9.1.82.2 Interfaces for Class basic_streambuf<char, char_traits<char> >

An LSB conforming implementation shall provide the generic methods for Class std::basic_streambuf<char, std::char_traits<char> > specified in [Table 9-223](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-223 libstdc++ - Class basic_streambuf<char, char_traits<char> > Function Interfaces

basic_streambuf<char, char_traits<char> >::gptr() const(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::pptr() const(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::eback() const(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::egptr() const(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::eptr() const(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::pbase() const(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::getloc() const(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::pubseekpos(fpos<__mbstate_t>, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::setg(char*, char*, char*) (GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::setp(char*, char*)(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::sync()(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::gbump(int)(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::imbue(locale const&)(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::pbump(int)(GLIBCXX_3.4)

[ISOCXX]
basic_streambuf<char, char_traits<char> >::sgetc()(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::sputc(char)(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::uflow()(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::sbumpc()(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::snextc()(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::pubsync()(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::seekpos(fpos<__mbstate_t>, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::sungetc()(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::in_avail()(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::overflow(int)(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::pubimbue(locale const&)(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::pbackfail(int)(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::showmany(c)(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::sputbackc(char)(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::underflow()(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::basic_streambuf(basic_streambuf<char, char_traits<char> > const&)(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::basic_streambuf()(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::basic_streambuf(basic_streambuf<char, char_traits<char> > const&)(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::basic_streambuf()(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::~basic_streambuf()(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::~basic_streambuf()(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::~basic_streambuf()(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<char, char_traits<char> >::operator=(basic_streambuf<char,

<code>char_traits<char> > const&)(GLIBCXX_3.4) [ISOCXX]</code>

An LSB conforming implementation shall provide the generic data interfaces for Class `std::basic_streambuf<char, std::char_traits<char> >` specified in [Table 9-224](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-224 libstdc++ - Class `basic_streambuf<char, char_traits<char> >` Data Interfaces

typeinfo for <code>basic_streambuf<char, char_traits<char> ></code> (GLIBCXX_3.4) [CXXABI]
typeinfo name for <code>basic_streambuf<char, char_traits<char> ></code> (GLIBCXX_3.4) [CXXABI]
vtable for <code>basic_streambuf<char, char_traits<char> ></code> (GLIBCXX_3.4) [CXXABI]

9.1.83 Class `basic_streambuf<wchar_t, char_traits<wchar_t> >`

9.1.83.1 Class data for `basic_streambuf<wchar_t, char_traits<wchar_t> >`

The virtual table for the `std::basic_streambuf<wchar_t, std::char_traits<wchar_t> >` class is described by [Table 9-225](#)

Table 9-225 Primary vtable for `basic_streambuf<wchar_t, char_traits<wchar_t> >`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>basic_streambuf<wchar_t, char_traits<wchar_t> ></code>
vfunc[0]:	<code>basic_streambuf<wchar_t, char_traits<wchar_t> >::~basic_streambuf()</code>
vfunc[1]:	<code>basic_streambuf<wchar_t, char_traits<wchar_t> >::~basic_streambuf()</code>
vfunc[2]:	<code>basic_streambuf<wchar_t, char_traits<wchar_t> >::imbue(locale const&)</code>
vfunc[3]:	See The Architecture Specific Specification
vfunc[4]:	See The Architecture Specific Specification
vfunc[5]:	<code>basic_streambuf<wchar_t, char_traits<wchar_t> >::seekpos(fpos<__mbstate_t>, _Ios_Openmode)</code>

vfunc[6]:	basic_streambuf<wchar_t, char_traits<wchar_t>>::sync()
vfunc[7]:	basic_streambuf<wchar_t, char_traits<wchar_t>>::showmany()
vfunc[8]:	See The Architecture Specific Specification
vfunc[9]:	basic_streambuf<wchar_t, char_traits<wchar_t>>::underflow()
vfunc[10]:	basic_streambuf<wchar_t, char_traits<wchar_t>>::uflow()
vfunc[11]:	basic_streambuf<wchar_t, char_traits<wchar_t>>::pbackfail(unsigned int)
vfunc[12]:	See The Architecture Specific Specification
vfunc[13]:	basic_streambuf<wchar_t, char_traits<wchar_t>>::overflow(unsigned int)

The Run Time Type Information for the `std::basic_streambuf<wchar_t, std::char_traits<wchar_t>>` class is described by [Table 9-226](#)

Table 9-226 typeinfo for basic_streambuf<wchar_t, char_traits<wchar_t>>

Base Vtable	vtable for <code>_cxxabiv1::__class_type_info</code>
Name	typeinfo name for <code>basic_streambuf<wchar_t, char_traits<wchar_t>></code>

9.1.83.2 Interfaces for Class `basic_streambuf<wchar_t, char_traits<wchar_t>>`

An LSB conforming implementation shall provide the generic methods for Class `std::basic_streambuf<wchar_t, std::char_traits<wchar_t>>` specified in [Table 9-227](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-227 libstdc++ - Class `basic_streambuf<wchar_t, char_traits<wchar_t>>` Function Interfaces

<code>basic_streambuf<wchar_t, char_traits<wchar_t>>::gptr()</code> const(GLIBCXX_3.4) [ISOCXX]
<code>basic_streambuf<wchar_t, char_traits<wchar_t>>::pptr()</code> const(GLIBCXX_3.4) [ISOCXX]
<code>basic_streambuf<wchar_t, char_traits<wchar_t>>::eback()</code> const(GLIBCXX_3.4) [ISOCXX]
<code>basic_streambuf<wchar_t, char_traits<wchar_t>>::egptr()</code> const(GLIBCXX_3.4) [ISOCXX]
<code>basic_streambuf<wchar_t, char_traits<wchar_t>>::eptr()</code>

const(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t> >::pbase() const(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t> >::getloc() const(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t> >::pubseekpos(fpos<__mbstate_t>, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t> >::setg(wchar_t*, wchar_t*, wchar_t*)(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t> >::setp(wchar_t*, wchar_t*) (GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t> >::sync()(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t> >::gbump(int) (GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t> >::imbue(locale const&) (GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t> >::pbump(int) (GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t> >::sgetc()(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t> >::sputc(wchar_t) (GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t> >::uflow()(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t> >::sbumpc()(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t> >::snextc()(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t> >::pubsync()(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t> >::seekpos(fpos<__mbstate_t>, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t> >::sungetc()(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t> >::in_avail()(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t> >::overflow(unsigned int) (GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t> >::pubimbue(locale const&) (GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t> >::pbackfail(unsigned int) (GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t> >::showmanyc() (GLIBCXX_3.4) [ISOCXX]

basic_streambuf<wchar_t, char_traits<wchar_t>>::sputbackc(wchar_t) (GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t>>::underflow() (GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t>> >::basic_streambuf(basic_streambuf<wchar_t, char_traits<wchar_t>> const&)(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t>>::basic_streambuf() (GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t>>::basic_streambuf() >::basic_streambuf(basic_streambuf<wchar_t, char_traits<wchar_t>> const&)(GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t>>::basic_streambuf() (GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t>>::~basic_streambuf() (GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t>>::~basic_streambuf() (GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t>>::~basic_streambuf() (GLIBCXX_3.4) [ISOCXX]
basic_streambuf<wchar_t, char_traits<wchar_t>>::operator=(basic_streambuf<wchar_t, char_traits<wchar_t>> const&) (GLIBCXX_3.4) [ISOCXX]

9.1.84 Class basic_filebuf<char, char_traits<char> >

9.1.84.1 Class data for basic_filebuf<char, char_traits<char> >

The virtual table for the std::basic_filebuf<char, std::char_traits<char> > class is described by [Table 9-228](#)

Table 9-228 Primary vtable for basic_filebuf<char, char_traits<char> >

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for basic_filebuf<char, char_traits<char> >
vfunc[0]:	basic_filebuf<char, char_traits<char> >::~basic_filebuf()
vfunc[1]:	basic_filebuf<char, char_traits<char> >::~basic_filebuf()
vfunc[2]:	basic_filebuf<char, char_traits<char> >::imbue(locale const&)
vfunc[3]:	See The Architecture Specific Specification
vfunc[4]:	See The Architecture Specific Specification
vfunc[5]:	basic_filebuf<char, char_traits<char> >

	>::seekpos(fpos<__mbstate_t>, _Ios_Openmode)
vfunc[6]:	basic_filebuf<char, char_traits<char>>::sync()
vfunc[7]:	basic_filebuf<char, char_traits<char>>::showmany()
vfunc[8]:	See The Architecture Specific Specification
vfunc[9]:	basic_filebuf<char, char_traits<char>>::underflow()
vfunc[10]:	basic_streambuf<char, char_traits<char>>::uflow()
vfunc[11]:	basic_filebuf<char, char_traits<char>>::pbackfail(int)
vfunc[12]:	See The Architecture Specific Specification
vfunc[13]:	basic_filebuf<char, char_traits<char>>::overflow(int)

The Run Time Type Information for the std::basic_filebuf<char, std::char_traits<char> > class is described by [Table 9-229](#)

Table 9-229 typeinfo for basic_filebuf<char, char_traits<char> >

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for basic_filebuf<char, char_traits<char> >

9.1.84.2 Interfaces for Class basic_filebuf<char, char_traits<char> >

An LSB conforming implementation shall provide the generic methods for Class std::basic_filebuf<char, std::char_traits<char> > specified in [Table 9-230](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-230 libstdc++ - Class basic_filebuf<char, char_traits<char> > Function Interfaces

basic_filebuf<char, char_traits<char>>::is_open() const(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<char, char_traits<char>>::_M_create_pback()(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<char, char_traits<char>>::_M_destroy_pback()(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<char, char_traits<char>>::_M_terminate_output() (GLIBCXX_3.4) [ISOCXX]
basic_filebuf<char, char_traits<char>>::_M_destroy_internal_buffer() (GLIBCXX_3.4) [ISOCXX]

basic_filebuf<char, char_traits<char>>::_M_allocate_internal_buffer() (GLIBCXX_3.4) [ISOCXX]
basic_filebuf<char, char_traits<char>>::open(char const*, _Ios_Openmode) (GLIBCXX_3.4) [ISOCXX]
basic_filebuf<char, char_traits<char>>::sync()(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<char, char_traits<char>>::close()(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<char, char_traits<char>>::imbue(locale const&)(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<char, char_traits<char>>::seekpos(fpos<__mbstate_t>, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<char, char_traits<char>>::overflow(int)(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<char, char_traits<char>>::pbackfail(int)(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<char, char_traits<char>>::showmanyc()(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<char, char_traits<char>>::underflow()(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<char, char_traits<char>>::basic_filebuf()(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<char, char_traits<char>>::basic_filebuf()(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<char, char_traits<char>>::~basic_filebuf()(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<char, char_traits<char>>::~basic_filebuf()(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<char, char_traits<char>>::~basic_filebuf()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::basic_filebuf<char, std::char_traits<char>> specified in [Table 9-231](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-231 libstdcxx - Class basic_filebuf<char, char_traits<char>> Data Interfaces

typeinfo for basic_filebuf<char, char_traits<char>>(GLIBCXX_3.4) [CXXABI]
typeinfo name for basic_filebuf<char, char_traits<char>>(GLIBCXX_3.4) [CXXABI]
vtable for basic_filebuf<char, char_traits<char>>(GLIBCXX_3.4) [CXXABI]

9.1.85 Class `basic_filebuf<wchar_t, char_traits<wchar_t>>`

9.1.85.1 Class data for `basic_filebuf<wchar_t, char_traits<wchar_t>>`

The virtual table for the `std::basic_filebuf<wchar_t, std::char_traits<wchar_t>>` class is described by [Table 9-232](#)

Table 9-232 Primary vtable for `basic_filebuf<wchar_t, char_traits<wchar_t>>`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>basic_filebuf<wchar_t, char_traits<wchar_t>></code>
vfunc[0]:	<code>basic_filebuf<wchar_t, char_traits<wchar_t>>::~basic_filebuf()</code>
vfunc[1]:	<code>basic_filebuf<wchar_t, char_traits<wchar_t>>::~basic_filebuf()</code>
vfunc[2]:	<code>basic_filebuf<wchar_t, char_traits<wchar_t>>::imbue(locale const&)</code>
vfunc[3]:	See The Architecture Specific Specification
vfunc[4]:	See The Architecture Specific Specification
vfunc[5]:	<code>basic_filebuf<wchar_t, char_traits<wchar_t>>::seekpos(fpos<__mbstate_t>, _Ios_Openmode)</code>
vfunc[6]:	<code>basic_filebuf<wchar_t, char_traits<wchar_t>>::sync()</code>
vfunc[7]:	<code>basic_filebuf<wchar_t, char_traits<wchar_t>>::showmany()</code>
vfunc[8]:	See The Architecture Specific Specification
vfunc[9]:	<code>basic_filebuf<wchar_t, char_traits<wchar_t>>::underflow()</code>
vfunc[10]:	<code>basic_streambuf<wchar_t, char_traits<wchar_t>>::uflow()</code>
vfunc[11]:	<code>basic_filebuf<wchar_t, char_traits<wchar_t>>::pbackfail(unsigned int)</code>
vfunc[12]:	See The Architecture Specific Specification

vfunc[13]:	basic_filebuf<wchar_t, char_traits<wchar_t> >::overflow(unsigned int)
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The Run Time Type Information for the std::basic_filebuf<wchar_t, std::char_traits<wchar_t>> class is described by [Table 9-233](#)

Table 9-233 typeinfo for basic_filebuf<wchar_t, char_traits<wchar_t>>

Base Vtable	vtable for <code>_cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for <code>basic_filebuf<wchar_t, char_traits<wchar_t>></code>

9.1.85.2 Interfaces for Class basic_filebuf<wchar_t, char_traits<wchar_t>>

An LSB conforming implementation shall provide the generic methods for Class std::basic_filebuf<wchar_t, std::char_traits<wchar_t>> specified in [Table 9-234](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-234 libstdc++ - Class basic_filebuf<wchar_t, char_traits<wchar_t>> Function Interfaces

basic_filebuf<wchar_t, char_traits<wchar_t>>::is_open() const(GLIBCXX_3.4) [ISOCXX]	
basic_filebuf<wchar_t, char_traits<wchar_t>>::_M_create_pback() (GLIBCXX_3.4) [ISOCXX]	
basic_filebuf<wchar_t, char_traits<wchar_t>>::_M_destroy_pback() (GLIBCXX_3.4) [ISOCXX]	
basic_filebuf<wchar_t, char_traits<wchar_t>>::_M_terminate_output() (GLIBCXX_3.4) [ISOCXX]	
basic_filebuf<wchar_t, char_traits<wchar_t>>::_M_destroy_internal_buffer() (GLIBCXX_3.4) [ISOCXX]	
basic_filebuf<wchar_t, char_traits<wchar_t>>::_M_allocate_internal_buffer() (GLIBCXX_3.4) [ISOCXX]	
basic_filebuf<wchar_t, char_traits<wchar_t>>::open(char const*, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]	
basic_filebuf<wchar_t, char_traits<wchar_t>>::sync()(GLIBCXX_3.4) [ISOCXX]	
basic_filebuf<wchar_t, char_traits<wchar_t>>::close()(GLIBCXX_3.4) [ISOCXX]	
basic_filebuf<wchar_t, char_traits<wchar_t>>::imbue(locale const&) (GLIBCXX_3.4) [ISOCXX]	
basic_filebuf<wchar_t, char_traits<wchar_t>>::seekpos(fpos<__mbstate_t>, _Ios_Openmode)(GLIBCXX_3.4) [ISOCXX]	
basic_filebuf<wchar_t, char_traits<wchar_t>>::overflow(unsigned int) (GLIBCXX_3.4) [ISOCXX]	
basic_filebuf<wchar_t, char_traits<wchar_t>>::pbackfail(unsigned int)	

(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<wchar_t, char_traits<wchar_t>>::showmany()
(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<wchar_t, char_traits<wchar_t>>::underflow()
(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<wchar_t, char_traits<wchar_t>>::basic_filebuf()
(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<wchar_t, char_traits<wchar_t>>::basic_filebuf()
(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<wchar_t, char_traits<wchar_t>>::~basic_filebuf()
(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<wchar_t, char_traits<wchar_t>>::~basic_filebuf()
(GLIBCXX_3.4) [ISOCXX]
basic_filebuf<wchar_t, char_traits<wchar_t>>::~basic_filebuf()
(GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t>>::basic_istream()
(GLIBCXX_3.4) [ISOCXX]
basic_istream<wchar_t, char_traits<wchar_t>>::basic_istream()
(GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::basic_ostream()
(GLIBCXX_3.4) [ISOCXX]
basic_ostream<wchar_t, char_traits<wchar_t>>::basic_ostream()
(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::basic_filebuf<wchar_t, std::char_traits<wchar_t>> specified in [Table 9-235](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-235 libstdcxx - Class basic_filebuf<wchar_t, char_traits<wchar_t>> Data Interfaces

typeinfo for basic_filebuf<wchar_t, char_traits<wchar_t>>(GLIBCXX_3.4) [CXXABI]
typeinfo name for basic_filebuf<wchar_t, char_traits<wchar_t>>(GLIBCXX_3.4) [CXXABI]
vtable for basic_filebuf<wchar_t, char_traits<wchar_t>>(GLIBCXX_3.4) [CXXABI]

9.1.86 Class ios_base

9.1.86.1 Class data for ios_base

The virtual table for the std::ios_base class is described by [Table 9-236](#)

Table 9-236 Primary vtable for ios_base

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for ios_base

vfunc[0]:	ios_base::~ios_base()
vfunc[1]:	ios_base::~ios_base()

The Run Time Type Information for the std::ios_base class is described by [Table 9-237](#)

Table 9-237 typeinfo for ios_base

Base Vtable	vtable for __cxxabiv1::__class_type_info
Name	typeinfo name for ios_base

9.1.86.2 Interfaces for Class ios_base

An LSB conforming implementation shall provide the generic methods for Class std::ios_base specified in [Table 9-238](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-238 libstdc++ - Class ios_base Function Interfaces

ios_base::_M_grow_words(int, bool)(GLIBCXX_3.4) [ISOCXX]
ios_base::sync_with_stdio(bool)(GLIBCXX_3.4) [ISOCXX]
ios_base::_M_call_callbacks(ios_base::event)(GLIBCXX_3.4.6) [ISOCXX]
ios_base::register_callback(void (*) (ios_base::event, ios_base&, int), int)(GLIBCXX_3.4) [ISOCXX]
ios_base::_M_dispose_callbacks()(GLIBCXX_3.4.6) [ISOCXX]
ios_base::Init::Init()(GLIBCXX_3.4) [ISOCXX]
ios_base::Init::Init()(GLIBCXX_3.4) [ISOCXX]
ios_base::Init::~Init()(GLIBCXX_3.4) [ISOCXX]
ios_base::Init::~Init()(GLIBCXX_3.4) [ISOCXX]
ios_base::imbue(locale const&)(GLIBCXX_3.4) [ISOCXX]
ios_base::xalloc()(GLIBCXX_3.4) [ISOCXX]
ios_base::_M_init()(GLIBCXX_3.4) [ISOCXX]
ios_base::failure::failure(basic_string<char, char_traits<char>, allocator<char> > const&)(GLIBCXX_3.4) [ISOCXX]
ios_base::failure::failure(basic_string<char, char_traits<char>, allocator<char> > const&)(GLIBCXX_3.4) [ISOCXX]
ios_base::failure::~failure()(GLIBCXX_3.4) [ISOCXX]
ios_base::failure::~failure()(GLIBCXX_3.4) [ISOCXX]
ios_base::failure::~failure()(GLIBCXX_3.4) [ISOCXX]
ios_base::ios_base()(GLIBCXX_3.4) [ISOCXX]
ios_base::ios_base()(GLIBCXX_3.4) [ISOCXX]
ios_base::~ios_base()(GLIBCXX_3.4) [ISOCXX]
ios_base::~ios_base()(GLIBCXX_3.4) [ISOCXX]
ios_base::~ios_base()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::ios_base specified in [Table 9-239](#), with the full mandatory functional-

ity as described in the referenced underlying specification.

Table 9-239 libstdcxx - Class ios_base Data Interfaces

ios_base::floatfield(GLIBCXX_3.4) [ISOCXX]
ios_base::scientific(GLIBCXX_3.4) [ISOCXX]
ios_base::adjustfield(GLIBCXX_3.4) [ISOCXX]
ios_base::in(GLIBCXX_3.4) [ISOCXX]
ios_base::app(GLIBCXX_3.4) [ISOCXX]
ios_base::ate(GLIBCXX_3.4) [ISOCXX]
ios_base::beg(GLIBCXX_3.4) [ISOCXX]
ios_base::cur(GLIBCXX_3.4) [ISOCXX]
ios_base::dec(GLIBCXX_3.4) [ISOCXX]
ios_base::end(GLIBCXX_3.4) [ISOCXX]
ios_base::hex(GLIBCXX_3.4) [ISOCXX]
ios_base::oct(GLIBCXX_3.4) [ISOCXX]
ios_base::out(GLIBCXX_3.4) [ISOCXX]
ios_base::left(GLIBCXX_3.4) [ISOCXX]
ios_base::fixed(GLIBCXX_3.4) [ISOCXX]
ios_base::right(GLIBCXX_3.4) [ISOCXX]
ios_base::trunc(GLIBCXX_3.4) [ISOCXX]
ios_base::badbit(GLIBCXX_3.4) [ISOCXX]
ios_base::binary(GLIBCXX_3.4) [ISOCXX]
ios_base::eofbit(GLIBCXX_3.4) [ISOCXX]
ios_base::skipws(GLIBCXX_3.4) [ISOCXX]
ios_base::failbit(GLIBCXX_3.4) [ISOCXX]
ios_base::goodbit(GLIBCXX_3.4) [ISOCXX]
ios_base::showpos(GLIBCXX_3.4) [ISOCXX]
ios_base::unitbuf(GLIBCXX_3.4) [ISOCXX]
ios_base::internal(GLIBCXX_3.4) [ISOCXX]
ios_base::showbase(GLIBCXX_3.4) [ISOCXX]
ios_base::basefield(GLIBCXX_3.4) [ISOCXX]
ios_base::boolalpha(GLIBCXX_3.4) [ISOCXX]
ios_base::showpoint(GLIBCXX_3.4) [ISOCXX]
ios_base::uppercase(GLIBCXX_3.4) [ISOCXX]
typeinfo for ios_base(GLIBCXX_3.4) [CXXABI]
typeinfo name for ios_base(GLIBCXX_3.4) [CXXABI]
vtable for ios_base(GLIBCXX_3.4) [CXXABI]

9.1.87 Class basic_ios<char, char_traits<char> >

9.1.87.1 Class data for basic_ios<char, char_traits<char> >

The virtual table for the std::basic_ios<char, std::char_traits<char> > class is de-

scribed by [Table 9-240](#)

Table 9-240 Primary vtable for basic_ios<char, char_traits<char> >

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for basic_ios<char, char_traits<char> >
vfunc[0]:	basic_ios<char, char_traits<char> >::~basic_ios()
vfunc[1]:	basic_ios<char, char_traits<char> >::~basic_ios()

9.1.87.2 Interfaces for Class basic_ios<char, char_traits<char> >

An LSB conforming implementation shall provide the generic methods for Class std::basic_ios<char, std::char_traits<char> > specified in [Table 9-241](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-241 libstdcxx - Class basic_ios<char, char_traits<char> > Function Interfaces

basic_ios<char, char_traits<char> >::exceptions() const(GLIBCXX_3.4) [ISOCXX]
basic_ios<char, char_traits<char> >::bad() const(GLIBCXX_3.4) [ISOCXX]
basic_ios<char, char_traits<char> >::eof() const(GLIBCXX_3.4) [ISOCXX]
basic_ios<char, char_traits<char> >::tie() const(GLIBCXX_3.4) [ISOCXX]
basic_ios<char, char_traits<char> >::fail() const(GLIBCXX_3.4) [ISOCXX]
basic_ios<char, char_traits<char> >::fill() const(GLIBCXX_3.4) [ISOCXX]
basic_ios<char, char_traits<char> >::good() const(GLIBCXX_3.4) [ISOCXX]
basic_ios<char, char_traits<char> >::rdbuf() const(GLIBCXX_3.4) [ISOCXX]
basic_ios<char, char_traits<char> >::widen(char) const(GLIBCXX_3.4) [ISOCXX]
basic_ios<char, char_traits<char> >::narrow(char, char) const(GLIBCXX_3.4) [ISOCXX]
basic_ios<char, char_traits<char> >::rdstate() const(GLIBCXX_3.4) [ISOCXX]
basic_ios<char, char_traits<char> >::operator void*() const(GLIBCXX_3.4) [ISOCXX]
basic_ios<char, char_traits<char> >::operator!() const(GLIBCXX_3.4) [ISOCXX]
basic_ios<char, char_traits<char> >::exceptions(_Ios_Iostate)(GLIBCXX_3.4) [ISOCXX]
basic_ios<char, char_traits<char> >::_M_setstate(_Ios_Iostate)(GLIBCXX_3.4) [ISOCXX]
basic_ios<char, char_traits<char> >::tie(basic_ostream<char, char_traits<char> >*)(GLIBCXX_3.4) [ISOCXX]
basic_ios<char, char_traits<char> >::fill(char)(GLIBCXX_3.4) [ISOCXX]
basic_ios<char, char_traits<char> >::init(basic_streambuf<char,

char_traits<char> >*)(GLIBCXX_3.4) [ISOCXX]
basic_ios<char, char_traits<char> >::clear(_Ios_Iostate)(GLIBCXX_3.4) [ISOCXX]
basic_ios<char, char_traits<char> >::imbue(locale const&)(GLIBCXX_3.4) [ISOCXX]
basic_ios<char, char_traits<char> >::rdbuf(basic_streambuf<char, char_traits<char> >*)(GLIBCXX_3.4) [ISOCXX]
basic_ios<char, char_traits<char> >::copyfmt(basic_ios<char, char_traits<char> > const&)(GLIBCXX_3.4) [ISOCXX]
basic_ios<char, char_traits<char> >::setstate(_Ios_Iostate)(GLIBCXX_3.4) [ISOCXX]
basic_ios<char, char_traits<char> >::basic_ios(basic_streambuf<char, char_traits<char> >*)(GLIBCXX_3.4) [ISOCXX]
basic_ios<char, char_traits<char> >::basic_ios()(GLIBCXX_3.4) [ISOCXX]
basic_ios<char, char_traits<char> >::basic_ios(basic_streambuf<char, char_traits<char> >*)(GLIBCXX_3.4) [ISOCXX]
basic_ios<char, char_traits<char> >::basic_ios()(GLIBCXX_3.4) [ISOCXX]
basic_ios<char, char_traits<char> >::~basic_ios()(GLIBCXX_3.4) [ISOCXX]
basic_ios<char, char_traits<char> >::~basic_ios()(GLIBCXX_3.4) [ISOCXX]
basic_ios<char, char_traits<char> >::~basic_ios()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::basic_ios<char, std::char_traits<char> > specified in [Table 9-242](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-242 libstdc++ - Class basic_ios<char, char_traits<char> > Data Interfaces

typeinfo for basic_ios<char, char_traits<char> >(GLIBCXX_3.4) [CXXABI]
typeinfo name for basic_ios<char, char_traits<char> >(GLIBCXX_3.4) [CXXABI]
vtable for basic_ios<char, char_traits<char> >(GLIBCXX_3.4) [CXXABI]

9.1.88 Class basic_ios<wchar_t, char_traits<wchar_t> >

9.1.88.1 Class data for basic_ios<wchar_t, char_traits<wchar_t> >

The virtual table for the std::basic_ios<wchar_t, std::char_traits<wchar_t> > class is described by [Table 9-243](#)

Table 9-243 Primary vtable for basic_ios<wchar_t, char_traits<wchar_t> >

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for basic_ios<wchar_t, char_traits<wchar_t> >
vfunc[0]:	basic_ios<wchar_t,

	char_traits<wchar_t> >::~basic_ios()
vfunc[1]:	basic_ios<wchar_t>, char_traits<wchar_t> >::~basic_ios()

The Run Time Type Information for the std::basic_ios<wchar_t, std::char_traits<wchar_t>> class is described by [Table 9-244](#)

Table 9-244 typeinfo for basic_ios<wchar_t, char_traits<wchar_t>>

Base Vtable	vtable for __cxxabiv1::__si_class_type_info	
Name	typeinfo name for basic_ios<wchar_t, char_traits<wchar_t>>	
flags:	8	
basetype:	typeinfo for ios_base	

9.1.88.2 Interfaces for Class basic_ios<wchar_t, char_traits<wchar_t>>

An LSB conforming implementation shall provide the generic methods for Class std::basic_ios<wchar_t, std::char_traits<wchar_t>> specified in [Table 9-245](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-245 libstdc++ - Class basic_ios<wchar_t, char_traits<wchar_t>> Function Interfaces

basic_ios<wchar_t, char_traits<wchar_t>>::exceptions() const(GLIBCXX_3.4) [ISO CXX]
basic_ios<wchar_t, char_traits<wchar_t>>::bad() const(GLIBCXX_3.4) [ISO CXX]
basic_ios<wchar_t, char_traits<wchar_t>>::eof() const(GLIBCXX_3.4) [ISO CXX]
basic_ios<wchar_t, char_traits<wchar_t>>::tie() const(GLIBCXX_3.4) [ISO CXX]
basic_ios<wchar_t, char_traits<wchar_t>>::fail() const(GLIBCXX_3.4) [ISO CXX]
basic_ios<wchar_t, char_traits<wchar_t>>::fill() const(GLIBCXX_3.4) [ISO CXX]
basic_ios<wchar_t, char_traits<wchar_t>>::good() const(GLIBCXX_3.4) [ISO CXX]
basic_ios<wchar_t, char_traits<wchar_t>>::rdbuf() const(GLIBCXX_3.4) [ISO CXX]
basic_ios<wchar_t, char_traits<wchar_t>>::widen(char) const(GLIBCXX_3.4) [ISO CXX]
basic_ios<wchar_t, char_traits<wchar_t>>::narrow(wchar_t, char) const(GLIBCXX_3.4) [ISO CXX]
basic_ios<wchar_t, char_traits<wchar_t>>::rdstate() const(GLIBCXX_3.4)

[ISOCXX]
basic_ios<wchar_t, char_traits<wchar_t>>::operator void*() const(GLIBCXX_3.4) [ISOCXX]
basic_ios<wchar_t, char_traits<wchar_t>>::operator!() const(GLIBCXX_3.4) [ISOCXX]
basic_ios<wchar_t, char_traits<wchar_t>>::exceptions(_Ios_Iostate) (GLIBCXX_3.4) [ISOCXX]
basic_ios<wchar_t, char_traits<wchar_t>>::_M_setstate(_Ios_Iostate) (GLIBCXX_3.4) [ISOCXX]
basic_ios<wchar_t, char_traits<wchar_t>>::tie(basic_ostream<wchar_t, char_traits<wchar_t>>*)(GLIBCXX_3.4) [ISOCXX]
basic_ios<wchar_t, char_traits<wchar_t>>::fill(wchar_t)(GLIBCXX_3.4) [ISOCXX]
basic_ios<wchar_t, char_traits<wchar_t>>::init(basic_streambuf<wchar_t, char_traits<wchar_t>>*)(GLIBCXX_3.4) [ISOCXX]
basic_ios<wchar_t, char_traits<wchar_t>>::clear(_Ios_Iostate) (GLIBCXX_3.4) [ISOCXX]
basic_ios<wchar_t, char_traits<wchar_t>>::imbue(locale const&) (GLIBCXX_3.4) [ISOCXX]
basic_ios<wchar_t, char_traits<wchar_t>>::rdbuf(basic_streambuf<wchar_t, char_traits<wchar_t>>*)(GLIBCXX_3.4) [ISOCXX]
basic_ios<wchar_t, char_traits<wchar_t>>::copyfmt(basic_ios<wchar_t, char_traits<wchar_t>> const&)(GLIBCXX_3.4) [ISOCXX]
basic_ios<wchar_t, char_traits<wchar_t>>::setstate(_Ios_Iostate) (GLIBCXX_3.4) [ISOCXX]
basic_ios<wchar_t, char_traits<wchar_t>> >::basic_ios(basic_streambuf<wchar_t, char_traits<wchar_t>>*) (GLIBCXX_3.4) [ISOCXX]
basic_ios<wchar_t, char_traits<wchar_t>>::basic_ios()(GLIBCXX_3.4) [ISOCXX]
basic_ios<wchar_t, char_traits<wchar_t>> >::basic_ios(basic_streambuf<wchar_t, char_traits<wchar_t>>*) (GLIBCXX_3.4) [ISOCXX]
basic_ios<wchar_t, char_traits<wchar_t>>::basic_ios()(GLIBCXX_3.4) [ISOCXX]
basic_ios<wchar_t, char_traits<wchar_t>>::~basic_ios()(GLIBCXX_3.4) [ISOCXX]
basic_ios<wchar_t, char_traits<wchar_t>>::~basic_ios()(GLIBCXX_3.4) [ISOCXX]
basic_ios<wchar_t, char_traits<wchar_t>>::~basic_ios()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::basic_ios<wchar_t, std::char_traits<wchar_t>> specified in [Table 9-246](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-246 libstdc++ - Class `basic_ios<wchar_t, char_traits<wchar_t>` > Data Interfaces

typeinfo for <code>basic_ios<wchar_t, char_traits<wchar_t></code> >(GLIBCXX_3.4) [CXXABI]
typeinfo name for <code>basic_ios<wchar_t, char_traits<wchar_t></code> >(GLIBCXX_3.4) [CXXABI]
vtable for <code>basic_ios<wchar_t, char_traits<wchar_t></code> >(GLIBCXX_3.4) [CXXABI]

9.1.89 Class `ios_base::failure`

9.1.89.1 Class data for `ios_base::failure`

The virtual table for the `std::ios_base::failure` class is described by [Table 9-247](#)

Table 9-247 Primary vtable for `ios_base::failure`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>ios_base::failure</code>
vfunc[0]:	<code>ios_base::failure::~failure()</code>
vfunc[1]:	<code>ios_base::failure::~failure()</code>
vfunc[2]:	<code>ios_base::failure::what() const</code>

The Run Time Type Information for the `std::ios_base::failure` class is described by [Table 9-248](#)

Table 9-248 typeinfo for `ios_base::failure`

Base Vtable	vtable for <code>_cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for <code>ios_base::failure</code>

9.1.89.2 Interfaces for Class `ios_base::failure`

An LSB conforming implementation shall provide the generic methods for Class `std::ios_base::failure` specified in [Table 9-249](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-249 libstdc++ - Class `ios_base::failure` Function Interfaces

ios_base::failure::what() const(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class `std::ios_base::failure` specified in [Table 9-250](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-250 libstdc++ - Class `ios_base::failure` Data Interfaces

typeinfo for <code>ios_base::failure</code> (GLIBCXX_3.4) [CXXABI]
typeinfo name for <code>ios_base::failure</code> (GLIBCXX_3.4) [CXXABI]
vtable for <code>ios_base::failure</code> (GLIBCXX_3.4) [CXXABI]

9.1.90 Class `_timepunct<char>`

9.1.90.1 Class data for `_timepunct<char>`

The virtual table for the `std::_timepunct<char>` class is described by [Table 9-251](#)

Table 9-251 Primary vtable for `_timepunct<char>`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>_timepunct<char></code>
vfunc[0]:	<code>_timepunct<char>::~_timepunct()</code>
vfunc[1]:	<code>_timepunct<char>::~_timepunct()</code>

The Run Time Type Information for the `std::_timepunct<char>` class is described by [Table 9-252](#)

Table 9-252 typeinfo for `_timepunct<char>`

Base Vtable	vtable for <code>_cxxabiv1::si_class_type_info</code>
Name	typeinfo name for <code>_timepunct<char></code>

9.1.90.2 Interfaces for Class `_timepunct<char>`

An LSB conforming implementation shall provide the generic methods for Class `std::_timepunct<char>` specified in [Table 9-253](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-253 libstdc++ - Class `_timepunct<char>` Function Interfaces

<code>_timepunct<char>::_M_am_pm_format(char const*) const(GLIBCXX_3.4)</code> [ISOCXX]
<code>_timepunct<char>::_M_date_formats(char const**) const(GLIBCXX_3.4)</code> [ISOCXX]
<code>_timepunct<char>::_M_time_formats(char const**) const(GLIBCXX_3.4)</code> [ISOCXX]
<code>_timepunct<char>::_M_days_abbreviated(char const**) const(GLIBCXX_3.4)</code> [ISOCXX]
<code>_timepunct<char>::_M_date_time_formats(char const**) const(GLIBCXX_3.4)</code> [ISOCXX]
<code>_timepunct<char>::_M_months_abbreviated(char const**) const(GLIBCXX_3.4)</code> [ISOCXX]
<code>_timepunct<char>::_M_days(char const**) const(GLIBCXX_3.4)</code> [ISOCXX]
<code>_timepunct<char>::_M_am_pm(char const**) const(GLIBCXX_3.4)</code> [ISOCXX]
<code>_timepunct<char>::_M_months(char const**) const(GLIBCXX_3.4)</code> [ISOCXX]
<code>_timepunct<wchar_t>::_M_am_pm_format(wchar_t const*) const(GLIBCXX_3.4)</code> [ISOCXX]

<code>__timepunct<char>::__M_initialize_timepunct(__locale_struct*)</code> (GLIBCXX_3.4) [ISOCXX]
<code>__timepunct<char>::~__timepunct()(GLIBCXX_3.4)</code> [ISOCXX]
<code>__timepunct<char>::~__timepunct()(GLIBCXX_3.4)</code> [ISOCXX]
<code>__timepunct<char>::~__timepunct()(GLIBCXX_3.4)</code> [ISOCXX]
<code>bool has_facet<__timepunct<char>>(locale const&)(GLIBCXX_3.4)</code> [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::__timepunct<char> specified in [Table 9-254](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-254 libstdc++ - Class __timepunct<char> Data Interfaces

guard variable for __timepunct<char>::id(GLIBCXX_3.4) [CXXABI]
<code>__timepunct<char>::id(GLIBCXX_3.4)</code> [ISOCXX]
typeinfo for __timepunct<char>(GLIBCXX_3.4) [CXXABI]
typeinfo name for __timepunct<char>(GLIBCXX_3.4) [CXXABI]
vtable for __timepunct<char>(GLIBCXX_3.4) [CXXABI]

9.1.91 Class __timepunct<wchar_t>

9.1.91.1 Class data for __timepunct<wchar_t>

The virtual table for the std::__timepunct<wchar_t> class is described by [Table 9-255](#)

Table 9-255 Primary vtable for __timepunct<wchar_t>

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for __timepunct<wchar_t>
vfunc[0]:	<code>__timepunct<wchar_t>::~__timepunct()</code>
vfunc[1]:	<code>__timepunct<wchar_t>::~__timepunct()</code>

The Run Time Type Information for the std::__timepunct<wchar_t> class is described by [Table 9-256](#)

Table 9-256 typeinfo for __timepunct<wchar_t>

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for __timepunct<wchar_t>

9.1.91.2 Interfaces for Class __timepunct<wchar_t>

An LSB conforming implementation shall provide the generic methods for Class std::__timepunct<wchar_t> specified in [Table 9-257](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-257 libstdc++ - Class `_timepunct<wchar_t>` Function Interfaces

<code>_timepunct<wchar_t>::_M_date_formats(wchar_t const**)</code> const(GLIBCXX_3.4) [ISOCXX]
<code>_timepunct<wchar_t>::_M_time_formats(wchar_t const**)</code> const(GLIBCXX_3.4) [ISOCXX]
<code>_timepunct<wchar_t>::_M_days_abbreviated(wchar_t const**)</code> const(GLIBCXX_3.4) [ISOCXX]
<code>_timepunct<wchar_t>::_M_date_time_formats(wchar_t const**)</code> const(GLIBCXX_3.4) [ISOCXX]
<code>_timepunct<wchar_t>::_M_months_abbreviated(wchar_t const**)</code> const(GLIBCXX_3.4) [ISOCXX]
<code>_timepunct<wchar_t>::_M_days(wchar_t const**)</code> const(GLIBCXX_3.4) [ISOCXX]
<code>_timepunct<wchar_t>::_M_am_pm(wchar_t const**)</code> const(GLIBCXX_3.4) [ISOCXX]
<code>_timepunct<wchar_t>::_M_months(wchar_t const**)</code> const(GLIBCXX_3.4) [ISOCXX]
<code>_timepunct<wchar_t>::_M_initialize_timepunct(_locale_struct*)</code> (GLIBCXX_3.4) [ISOCXX]
<code>_timepunct<wchar_t>::~_timepunct()</code> (GLIBCXX_3.4) [ISOCXX]
<code>_timepunct<wchar_t>::~_timepunct()</code> (GLIBCXX_3.4) [ISOCXX]
<code>_timepunct<wchar_t>::~_timepunct()</code> (GLIBCXX_3.4) [ISOCXX]
bool has_facet< <code>_timepunct<wchar_t></code> >(locale const&)(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::`_timepunct<wchar_t>` specified in [Table 9-258](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-258 libstdc++ - Class `_timepunct<wchar_t>` Data Interfaces

guard variable for <code>_timepunct<wchar_t>::id</code> (GLIBCXX_3.4) [CXXABI]
<code>_timepunct<wchar_t>::id</code> (GLIBCXX_3.4) [ISOCXX]
typeinfo for <code>_timepunct<wchar_t></code> (GLIBCXX_3.4) [CXXABI]
typeinfo name for <code>_timepunct<wchar_t></code> (GLIBCXX_3.4) [CXXABI]
vtable for <code>_timepunct<wchar_t></code> (GLIBCXX_3.4) [CXXABI]

9.1.92 Class messages_base

9.1.92.1 Class data for messages_base

The Run Time Type Information for the std::messages_base class is described by [Table 9-259](#)

Table 9-259 typeinfo for messages_base

Base Vtable	vtable for <code>_cxxabiv1::__class_type_info</code>
Name	typeinfo name for messages_base

9.1.92.2 Interfaces for Class `messages_base`

No external methods are defined for libstdcxx - Class std::messages_base in this part of the specification. See also the relevant architecture specific part of this specification.

An LSB conforming implementation shall provide the generic data interfaces for Class std::messages_base specified in [Table 9-260](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-260 libstdcxx - Class `messages_base` Data Interfaces

typeinfo for messages_base(GLIBCXX_3.4) [CXXABI]
typeinfo name for messages_base(GLIBCXX_3.4) [CXXABI]

9.1.93 Class `messages<char>`

9.1.93.1 Class data for `messages<char>`

The virtual table for the std::messages<char> class is described by [Table 9-261](#)

Table 9-261 Primary vtable for `messages<char>`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>messages<char></code>
vfunc[0]:	<code>messages<char>::~messages()</code>
vfunc[1]:	<code>messages<char>::~messages()</code>
vfunc[2]:	<code>messages<char>::do_open(basic_string<char, char_traits<char>, allocator<char> > const&, locale const&) const</code>
vfunc[3]:	<code>messages<char>::do_get(int, int, int, basic_string<char, char_traits<char>, allocator<char> > const&) const</code>
vfunc[4]:	<code>messages<char>::do_close(int) const</code>

9.1.93.2 Interfaces for Class `messages<char>`

An LSB conforming implementation shall provide the generic methods for Class std::messages<char> specified in [Table 9-262](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-262 libstdcxx - Class `messages<char>` Function Interfaces

<code>messages<char>::_M_convert_to_char(basic_string<char, char_traits<char>, allocator<char> > const&) const(GLIBCXX_3.4) [ISOCXX]</code>
<code>messages<char>::_M_convert_from_char(char*) const(GLIBCXX_3.4) [ISOCXX]</code>
<code>messages<char>::get(int, int, int, basic_string<char, char_traits<char>, allocator<char> > const&) const(GLIBCXX_3.4) [ISOCXX]</code>
<code>messages<char>::open(basic_string<char, char_traits<char>, allocator<char> > const&, locale const&) const(GLIBCXX_3.4) [ISOCXX]</code>
<code>messages<char>::open(basic_string<char, char_traits<char>, allocator<char> > const&, locale const&) const(GLIBCXX_3.4) [ISOCXX]</code>

> const&, locale const&, char const*) const(GLIBCXX_3.4) [ISOCXX]
messages<char>::close(int) const(GLIBCXX_3.4) [ISOCXX]
messages<char>::do_get(int, int, int, basic_string<char, char_traits<char>, allocator<char> > const&) const(GLIBCXX_3.4) [ISOCXX]
messages<char>::do_open(basic_string<char, char_traits<char>, allocator<char> > const&, locale const&) const(GLIBCXX_3.4) [ISOCXX]
messages<char>::do_close(int) const(GLIBCXX_3.4) [ISOCXX]
messages<char>::~messages()(GLIBCXX_3.4) [ISOCXX]
messages<char>::~messages()(GLIBCXX_3.4) [ISOCXX]
messages<char>::~messages()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::messages<char> specified in [Table 9-263](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-263 libstdcxx - Class messages<char> Data Interfaces

guard variable for messages<char>::id(GLIBCXX_3.4) [CXXABI]
messages<char>::id(GLIBCXX_3.4) [ISOCXX]
typeinfo for messages<char>(GLIBCXX_3.4) [CXXABI]
typeinfo name for messages<char>(GLIBCXX_3.4) [CXXABI]
vtable for messages<char>(GLIBCXX_3.4) [CXXABI]

9.1.94 Class messages<wchar_t>

9.1.94.1 Class data for messages<wchar_t>

The virtual table for the std::messages<wchar_t> class is described by [Table 9-264](#)

Table 9-264 Primary vtable for messages<wchar_t>

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for messages<wchar_t>
vfunc[0]:	messages<wchar_t>::~messages()
vfunc[1]:	messages<wchar_t>::~messages()
vfunc[2]:	messages<wchar_t>::do_open(basic_string<char, char_traits<char>, allocator<char> > const&, locale const&) const
vfunc[3]:	messages<wchar_t>::do_get(int, int, int, basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&) const
vfunc[4]:	messages<wchar_t>::do_close(int) const

9.1.94.2 Interfaces for Class `messages<wchar_t>`

An LSB conforming implementation shall provide the generic methods for Class `std::messages<wchar_t>` specified in [Table 9-265](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-265 libstdc++ - Class `messages<wchar_t>` Function Interfaces

messages<wchar_t>::__M_convert_to_char(basic_string<wchar_t,> char_traits<wchar_t>, allocator<wchar_t> > const&) const(GLIBCXX_3.4) [ISOCXX]
messages<wchar_t>::__M_convert_from_char(char*) const(GLIBCXX_3.4) [ISOCXX]
messages<wchar_t>::get(int, int, int, basic_string<wchar_t,> char_traits<wchar_t>, allocator<wchar_t> > const&) const(GLIBCXX_3.4) [ISOCXX]
messages<wchar_t>::open(basic_string<char, char_traits<char>,> allocator<char> > const&, locale const&) const(GLIBCXX_3.4) [ISOCXX]
messages<wchar_t>::open(basic_string<char, char_traits<char>,> allocator<char> > const&, locale const&, char const*) const(GLIBCXX_3.4) [ISOCXX]
messages<wchar_t>::close(int) const(GLIBCXX_3.4) [ISOCXX]
messages<wchar_t>::do_get(int, int, int, basic_string<wchar_t,> char_traits<wchar_t>, allocator<wchar_t> > const&) const(GLIBCXX_3.4) [ISOCXX]
messages<wchar_t>::do_open(basic_string<char, char_traits<char>,> allocator<char> > const&, locale const&) const(GLIBCXX_3.4) [ISOCXX]
messages<wchar_t>::do_close(int) const(GLIBCXX_3.4) [ISOCXX]
messages<wchar_t>::~messages() (GLIBCXX_3.4) [ISOCXX]
messages<wchar_t>::~messages() (GLIBCXX_3.4) [ISOCXX]
messages<wchar_t>::~messages() (GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class `std::messages<wchar_t>` specified in [Table 9-266](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-266 libstdc++ - Class `messages<wchar_t>` Data Interfaces

guard variable for messages<wchar_t>::id(GLIBCXX_3.4) [CXXABI]
messages<wchar_t>::id(GLIBCXX_3.4) [ISOCXX]
typeinfo for messages<wchar_t> (GLIBCXX_3.4) [CXXABI]
typeinfo name for messages<wchar_t> (GLIBCXX_3.4) [CXXABI]
vtable for messages<wchar_t> (GLIBCXX_3.4) [CXXABI]

9.1.95 Class `messages_byname<char>`

9.1.95.1 Class data for `messages_byname<char>`

The virtual table for the `std::messages_byname<char>` class is described by [Table 9-267](#)

Table 9-267 Primary vtable for messages_byname<char>

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for messages_byname<char>
vfunc[0]:	messages_byname<char>::~messages_byname()
vfunc[1]:	messages_byname<char>::~messages_byname()
vfunc[2]:	messages<char>::do_open(basic_string<char, char_traits<char>, allocator<char> > const&, locale const&) const
vfunc[3]:	messages<char>::do_get(int, int, int, basic_string<char, char_traits<char>, allocator<char> > const&) const
vfunc[4]:	messages<char>::do_close(int) const

The Run Time Type Information for the std::messages_byname<char> class is described by [Table 9-268](#)

Table 9-268 typeinfo for messages_byname<char>

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for messages_byname<char>

9.1.95.2 Interfaces for Class messages_byname<char>

An LSB conforming implementation shall provide the generic methods for Class std::messages_byname<char> specified in [Table 9-269](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-269 libstdc++ - Class messages_byname<char> Function Interfaces

messages_byname<char>::~messages_byname()(GLIBCXX_3.4) [ISOCXX]
messages_byname<char>::~messages_byname()(GLIBCXX_3.4) [ISOCXX]
messages_byname<char>::~messages_byname()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::messages_byname<char> specified in [Table 9-270](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-270 libstdc++ - Class messages_byname<char> Data Interfaces

typeinfo for messages_byname<char>(GLIBCXX_3.4) [CXXABI]
typeinfo name for messages_byname<char>(GLIBCXX_3.4) [CXXABI]
vtable for messages_byname<char>(GLIBCXX_3.4) [CXXABI]

9.1.96 Class `messages_byname<wchar_t>`

9.1.96.1 Class data for `messages_byname<wchar_t>`

The virtual table for the `std::messages_byname<wchar_t>` class is described by [Table 9-271](#)

Table 9-271 Primary vtable for `messages_byname<wchar_t>`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>messages_byname<wchar_t></code>
vfunc[0]:	<code>messages_byname<wchar_t>::~messages_byname()</code>
vfunc[1]:	<code>messages_byname<wchar_t>::~messages_byname()</code>
vfunc[2]:	<code>messages<wchar_t>::do_open(basic_string<char, char_traits<char>, allocator<char> > const&, locale const&) const</code>
vfunc[3]:	<code>messages<wchar_t>::do_get(int, int, int, basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&) const</code>
vfunc[4]:	<code>messages<wchar_t>::do_close(int) const</code>

The Run Time Type Information for the `std::messages_byname<wchar_t>` class is described by [Table 9-272](#)

Table 9-272 typeinfo for `messages_byname<wchar_t>`

Base Vtable	vtable for <code>_cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for <code>messages_byname<wchar_t></code>

9.1.96.2 Interfaces for Class `messages_byname<wchar_t>`

An LSB conforming implementation shall provide the generic methods for Class `std::messages_byname<wchar_t>` specified in [Table 9-273](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-273 libstdc++ - Class `messages_byname<wchar_t>` Function Interfaces

<code>messages_byname<wchar_t>::~messages_byname()(GLIBCXX_3.4)</code> [ISOCXX]
<code>messages_byname<wchar_t>::~messages_byname()(GLIBCXX_3.4)</code> [ISOCXX]
<code>messages_byname<wchar_t>::~messages_byname()(GLIBCXX_3.4)</code> [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::messages_byname<wchar_t> specified in [Table 9-274](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-274 libstdc++ - Class messages_byname<wchar_t> Data Interfaces

typeinfo for messages_byname<wchar_t>(GLIBCXX_3.4) [CXXABI]
typeinfo name for messages_byname<wchar_t>(GLIBCXX_3.4) [CXXABI]
vtable for messages_byname<wchar_t>(GLIBCXX_3.4) [CXXABI]

9.1.97 Class numpunct<char>

9.1.97.1 Class data for numpunct<char>

The virtual table for the std::numpunct<char> class is described by [Table 9-275](#)

Table 9-275 Primary vtable for numpunct<char>

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for numpunct<char>
vfunc[0]:	numpunct<char>::~numpunct()
vfunc[1]:	numpunct<char>::~numpunct()
vfunc[2]:	numpunct<char>::do_decimal_point() const
vfunc[3]:	numpunct<char>::do_thousands_sep() const
vfunc[4]:	numpunct<char>::do_grouping() const
vfunc[5]:	numpunct<char>::do_truename() const
vfunc[6]:	numpunct<char>::do_falsename() const

The Run Time Type Information for the std::numpunct<char> class is described by [Table 9-276](#)

Table 9-276 typeinfo for numpunct<char>

Base Vtable	vtable for <u>_cxxabiv1::__si_class_type_info</u>
Name	typeinfo name for numpunct<char>

9.1.97.2 Interfaces for Class numpunct<char>

An LSB conforming implementation shall provide the generic methods for Class std::numpunct<char> specified in [Table 9-277](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-277 libstdc++ - Class numpunct<char> Function Interfaces

numpunct<char>::do_grouping() const(GLIBCXX_3.4) [ISOCXX]
numpunct<char>::do_truename() const(GLIBCXX_3.4) [ISOCXX]

numpunct<char>::do_falsename() const(GLIBCXX_3.4) [ISOCXX]
numpunct<char>::decimal_point() const(GLIBCXX_3.4) [ISOCXX]
numpunct<char>::thousands_sep() const(GLIBCXX_3.4) [ISOCXX]
numpunct<char>::do_decimal_point() const(GLIBCXX_3.4) [ISOCXX]
numpunct<char>::do_thousands_sep() const(GLIBCXX_3.4) [ISOCXX]
numpunct<char>::grouping() const(GLIBCXX_3.4) [ISOCXX]
numpunct<char>::truename() const(GLIBCXX_3.4) [ISOCXX]
numpunct<char>::falsename() const(GLIBCXX_3.4) [ISOCXX]
numpunct<char>::_M_initialize_numpunct(__locale_struct*)(GLIBCXX_3.4) [ISOCXX]
numpunct<char>::~numpunct()(GLIBCXX_3.4) [ISOCXX]
numpunct<char>::~numpunct()(GLIBCXX_3.4) [ISOCXX]
numpunct<char>::~numpunct()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::numpunct<char> specified in [Table 9-278](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-278 libstdc++ - Class numpunct<char> Data Interfaces

guard variable for numpunct<char>::id(GLIBCXX_3.4) [CXXABI]
numpunct<char>::id(GLIBCXX_3.4) [ISOCXX]
typeinfo for numpunct<char>(GLIBCXX_3.4) [CXXABI]
typeinfo name for numpunct<char>(GLIBCXX_3.4) [CXXABI]
vtable for numpunct<char>(GLIBCXX_3.4) [CXXABI]

9.1.98 Class numpunct<wchar_t>

9.1.98.1 Class data for numpunct<wchar_t>

The virtual table for the std::numpunct<wchar_t> class is described by [Table 9-279](#)

Table 9-279 Primary vtable for numpunct<wchar_t>

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for numpunct<wchar_t>
vfunc[0]:	numpunct<wchar_t>::~numpunct()
vfunc[1]:	numpunct<wchar_t>::~numpunct()
vfunc[2]:	numpunct<wchar_t>::do_decimal_p oint() const
vfunc[3]:	numpunct<wchar_t>::do_thousan ds_sep() const
vfunc[4]:	numpunct<wchar_t>::do_grouping() const
vfunc[5]:	numpunct<wchar_t>::do_truename() const

vfunc[6]:	numpunct<wchar_t>::do_falsename() const
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The Run Time Type Information for the std::numpunct<wchar_t> class is described by [Table 9-280](#)

Table 9-280 typeinfo for numpunct<wchar_t>

Base Vtable	vtable for _cxxabiv1::__si_class_type_info
Name	typeinfo name for numpunct<wchar_t>

9.1.98.2 Interfaces for Class numpunct<wchar_t>

An LSB conforming implementation shall provide the generic methods for Class std::numpunct<wchar_t> specified in [Table 9-281](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-281 libstdc++ - Class numpunct<wchar_t> Function Interfaces

numpunct<wchar_t>::do_grouping() const(GLIBCXX_3.4) [ISOCXX]
numpunct<wchar_t>::do_truename() const(GLIBCXX_3.4) [ISOCXX]
numpunct<wchar_t>::do_falsename() const(GLIBCXX_3.4) [ISOCXX]
numpunct<wchar_t>::decimal_point() const(GLIBCXX_3.4) [ISOCXX]
numpunct<wchar_t>::thousands_sep() const(GLIBCXX_3.4) [ISOCXX]
numpunct<wchar_t>::do_decimal_point() const(GLIBCXX_3.4) [ISOCXX]
numpunct<wchar_t>::do_thousands_sep() const(GLIBCXX_3.4) [ISOCXX]
numpunct<wchar_t>::grouping() const(GLIBCXX_3.4) [ISOCXX]
numpunct<wchar_t>::truename() const(GLIBCXX_3.4) [ISOCXX]
numpunct<wchar_t>::falsename() const(GLIBCXX_3.4) [ISOCXX]
numpunct<wchar_t>::_M_initialize_numpunct(__locale_struct*) (GLIBCXX_3.4) [ISOCXX]
numpunct<wchar_t>::~numpunct()(GLIBCXX_3.4) [ISOCXX]
numpunct<wchar_t>::~numpunct()(GLIBCXX_3.4) [ISOCXX]
numpunct<wchar_t>::~numpunct()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::numpunct<wchar_t> specified in [Table 9-282](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-282 libstdc++ - Class numpunct<wchar_t> Data Interfaces

guard variable for numpunct<wchar_t>::id(GLIBCXX_3.4) [CXXABI]
numpunct<wchar_t>::id(GLIBCXX_3.4) [ISOCXX]
typeinfo for numpunct<wchar_t>(GLIBCXX_3.4) [CXXABI]
typeinfo name for numpunct<wchar_t>(GLIBCXX_3.4) [CXXABI]
vtable for numpunct<wchar_t>(GLIBCXX_3.4) [CXXABI]

9.1.99 Class `numpunct_byname<char>`

9.1.99.1 Class data for `numpunct_byname<char>`

The virtual table for the `std::numpunct_byname<char>` class is described by [Table 9-283](#)

Table 9-283 Primary vtable for `numpunct_byname<char>`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>numpunct_byname<char></code>
vfunc[0]:	<code>numpunct_byname<char>::~numpunct_byname()</code>
vfunc[1]:	<code>numpunct_byname<char>::~numpunct_byname()</code>
vfunc[2]:	<code>numpunct<char>::do_decimal_point() const</code>
vfunc[3]:	<code>numpunct<char>::do_thousands_sep() const</code>
vfunc[4]:	<code>numpunct<char>::do_grouping() const</code>
vfunc[5]:	<code>numpunct<char>::do_truename() const</code>
vfunc[6]:	<code>numpunct<char>::do_falsename() const</code>

The Run Time Type Information for the `std::numpunct_byname<char>` class is described by [Table 9-284](#)

Table 9-284 typeinfo for `numpunct_byname<char>`

Base Vtable	vtable for <code>_cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for <code>numpunct_byname<char></code>

9.1.99.2 Interfaces for Class `numpunct_byname<char>`

An LSB conforming implementation shall provide the generic methods for Class `std::numpunct_byname<char>` specified in [Table 9-285](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-285 libstdc++ - Class `numpunct_byname<char>` Function Interfaces

<code>numpunct_byname<char>::~numpunct_byname()(GLIBCXX_3.4)</code> [ISOCXX]
<code>numpunct_byname<char>::~numpunct_byname()(GLIBCXX_3.4)</code> [ISOCXX]
<code>numpunct_byname<char>::~numpunct_byname()(GLIBCXX_3.4)</code> [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class `std::numpunct_byname<char>` specified in [Table 9-286](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-286 libstdc++ - Class `numpunct_byname<char>` Data Interfaces

typeinfo for <code>numpunct_byname<char></code> (GLIBCXX_3.4) [CXXABI]
typeinfo name for <code>numpunct_byname<char></code> (GLIBCXX_3.4) [CXXABI]
vtable for <code>numpunct_byname<char></code> (GLIBCXX_3.4) [CXXABI]

9.1.100 Class `numpunct_byname<wchar_t>`

9.1.100.1 Class data for `numpunct_byname<wchar_t>`

The virtual table for the `std::numpunct_byname<wchar_t>` class is described by [Table 9-287](#)

Table 9-287 Primary vtable for `numpunct_byname<wchar_t>`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>numpunct_byname<wchar_t></code>
vfunc[0]:	<code>numpunct_byname<wchar_t>::~numpunct_byname()</code>
vfunc[1]:	<code>numpunct_byname<wchar_t>::~numpunct_byname()</code>
vfunc[2]:	<code>numpunct<wchar_t>::do_decimal_point()</code> const
vfunc[3]:	<code>numpunct<wchar_t>::do_thousands_sep()</code> const
vfunc[4]:	<code>numpunct<wchar_t>::do_grouping()</code> const
vfunc[5]:	<code>numpunct<wchar_t>::do_truename()</code> const
vfunc[6]:	<code>numpunct<wchar_t>::do_falsename()</code> const

The Run Time Type Information for the `std::numpunct_byname<wchar_t>` class is described by [Table 9-288](#)

Table 9-288 typeinfo for `numpunct_byname<wchar_t>`

Base Vtable	vtable for <code>_cxxabiv1::_si_class_type_info</code>
Name	typeinfo name for <code>numpunct_byname<wchar_t></code>

9.1.100.2 Interfaces for Class `numpunct_byname<wchar_t>`

An LSB conforming implementation shall provide the generic methods for Class `std::numpunct_byname<wchar_t>` specified in [Table 9-289](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-289 libstdcxx - Class `numpunct_byname<wchar_t>` Function Interfaces

<code>numpunct_byname<wchar_t>::~numpunct_byname()(GLIBCXX_3.4)</code> [ISOCXX]
<code>numpunct_byname<wchar_t>::~numpunct_byname()(GLIBCXX_3.4)</code> [ISOCXX]
<code>numpunct_byname<wchar_t>::~numpunct_byname()(GLIBCXX_3.4)</code> [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class `std::numpunct_byname<wchar_t>` specified in [Table 9-290](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-290 libstdcxx - Class `numpunct_byname<wchar_t>` Data Interfaces

<code>typeinfo</code> for <code>numpunct_byname<wchar_t>(GLIBCXX_3.4)</code> [CXXABI]
<code>typeinfo name</code> for <code>numpunct_byname<wchar_t>(GLIBCXX_3.4)</code> [CXXABI]
<code>vtable</code> for <code>numpunct_byname<wchar_t>(GLIBCXX_3.4)</code> [CXXABI]

9.1.101 Class `__codecvt_abstract_base<char, char, __mbstate_t>`

9.1.101.1 Interfaces for Class `__codecvt_abstract_base<char, char, __mbstate_t>`

No external methods are defined for libstdcxx - Class `std::__codecvt_abstract_base<char, char, __mbstate_t>` in this part of the specification. See also the relevant architecture specific part of this specification.

9.1.102 Class `__codecvt_abstract_base<wchar_t, char, __mbstate_t>`

9.1.102.1 Class data for `__codecvt_abstract_base<wchar_t, char, __mbstate_t>`

The virtual table for the `std::__codecvt_abstract_base<wchar_t, char, __mbstate_t>` class is described by [Table 9-291](#)

Table 9-291 Primary vtable for `__codecvt_abstract_base<wchar_t, char, __mbstate_t>`

Base Offset	0
Virtual Base Offset	0
RTTI	<code>typeinfo</code> for <code>__codecvt_abstract_base<wchar_t, char, __mbstate_t></code>
vfunc[0]:	NULL or <code>__codecvt_abstract_base<wchar_t, char, __mbstate_t>::~__codecvt_abstract_b ase()</code>
vfunc[1]:	NULL or

	<code>__codecvt_abstract_base<wchar_t, char, __mbstate_t>::~__codecvt_abstract_b ase()</code>
vfunc[2]:	<code>__cxa_pure_virtual</code>
vfunc[3]:	<code>__cxa_pure_virtual</code>
vfunc[4]:	<code>__cxa_pure_virtual</code>
vfunc[5]:	<code>__cxa_pure_virtual</code>
vfunc[6]:	<code>__cxa_pure_virtual</code>
vfunc[7]:	<code>__cxa_pure_virtual</code>
vfunc[8]:	<code>__cxa_pure_virtual</code>

9.1.102.2 Interfaces for Class `__codecvt_abstract_base<wchar_t, char, __mbstate_t>`

No external methods are defined for libstdcxx - Class `std::__codecvt_abstract_base<wchar_t, char, __mbstate_t>` in this part of the specification. See also the relevant architecture specific part of this specification.

An LSB conforming implementation shall provide the generic data interfaces for Class `std::__codecvt_abstract_base<wchar_t, char, __mbstate_t>` specified in [Table 9-292](#), with the full mandatory functionality as described in the referenced underlying specification.

**Table 9-292 libstdcxx - Class `__codecvt_abstract_base<wchar_t, char,
__mbstate_t>` Data Interfaces**

typeinfo for <code>__codecvt_abstract_base<wchar_t, char, __mbstate_t>(GLIBCXX_3.4)</code> [CXXABI]
typeinfo name for <code>__codecvt_abstract_base<wchar_t, char, __mbstate_t>(GLIBCXX_3.4)</code> [CXXABI]
vtable for <code>__codecvt_abstract_base<wchar_t, char, __mbstate_t>(GLIBCXX_3.4)</code> [CXXABI]

9.1.103 Class `codecvt_base`

9.1.103.1 Class data for `codecvt_base`

The Run Time Type Information for the `std::codecvt_base` class is described by [Table 9-293](#)

Table 9-293 typeinfo for `codecvt_base`

Base Vtable	vtable for <code>__cxxabiv1::__class_type_info</code>
Name	typeinfo name for <code>codecvt_base</code>

9.1.103.2 Interfaces for Class `codecvt_base`

No external methods are defined for libstdcxx - Class `std::codecvt_base` in this part of the specification. See also the relevant architecture specific part of this specification.

An LSB conforming implementation shall provide the generic data interfaces for

Class std::codecvt_base specified in [Table 9-294](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-294 libstdc++ - Class codecvt_base Data Interfaces

typeinfo for codecvt_base(GLIBCXX_3.4) [CXXABI]
typeinfo name for codecvt_base(GLIBCXX_3.4) [CXXABI]

9.1.104 Class codecvt<char, char, __mbstate_t>

9.1.104.1 Class data for codecvt<char, char, __mbstate_t>

The virtual table for the std::codecvt<char, char, __mbstate_t> class is described by [Table 9-295](#)

Table 9-295 Primary vtable for codecvt<char, char, __mbstate_t>

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for codecvt<char, char, __mbstate_t>
vfunc[0]:	codecvt<char, char, __mbstate_t>::~codecvt()
vfunc[1]:	codecvt<char, char, __mbstate_t>::~codecvt()
vfunc[2]:	codecvt<char, char, __mbstate_t>::do_out(__mbstate_t&, char const*, char const*, char const*&, char*, char*, char*&) const
vfunc[3]:	codecvt<char, char, __mbstate_t>::do_unshift(__mbstate_t&, char*, char*, char*&) const
vfunc[4]:	codecvt<char, char, __mbstate_t>::do_in(__mbstate_t&, char const*, char const*, char const*&, char*, char*, char*&) const
vfunc[5]:	codecvt<char, char, __mbstate_t>::do_encoding() const
vfunc[6]:	codecvt<char, char, __mbstate_t>::do_always_noconv() const
vfunc[7]:	See The Architecture Specific Specification
vfunc[8]:	codecvt<char, char, __mbstate_t>::do_max_length() const

The Run Time Type Information for the std::codecvt<char, char, __mbstate_t> class is described by [Table 9-296](#)

Table 9-296 typeinfo for codecvt<char, char, __mbstate_t>

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for codecvt<char, char, __mbstate_t>

9.1.104.2 Class data for __codecvt_abstract_base<char, char, __mbstate_t>

The virtual table for the std::__codecvt_abstract_base<char, char, __mbstate_t> class is described by [Table 9-297](#)

Table 9-297 Primary vtable for __codecvt_abstract_base<char, char, __mbstate_t>

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for __codecvt_abstract_base<char, char, __mbstate_t>
vfunc[0]:	NULL or __codecvt_abstract_base<char, char, __mbstate_t>::~__codecvt_abstract_b ase()
vfunc[1]:	NULL or __codecvt_abstract_base<char, char, __mbstate_t>::~__codecvt_abstract_b ase()
vfunc[2]:	<u>_cxa_pure_virtual</u>
vfunc[3]:	<u>_cxa_pure_virtual</u>
vfunc[4]:	<u>_cxa_pure_virtual</u>
vfunc[5]:	<u>_cxa_pure_virtual</u>
vfunc[6]:	<u>_cxa_pure_virtual</u>
vfunc[7]:	<u>_cxa_pure_virtual</u>
vfunc[8]:	<u>_cxa_pure_virtual</u>

9.1.104.3 Interfaces for Class codecvt<char, char, __mbstate_t>

An LSB conforming implementation shall provide the generic methods for Class std::codecvt<char, char, __mbstate_t> specified in [Table 9-298](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-298 libstdcxx - Class codecvt<char, char, __mbstate_t> Function Interfaces

codecvt<char, char, __mbstate_t>::do_unshift(__mbstate_t&, char*, char*, char*&) const(GLIBCXX_3.4) [ISOCXX]
codecvt<char, char, __mbstate_t>::do_encoding() const(GLIBCXX_3.4) [ISOCXX]
codecvt<char, char, __mbstate_t>::do_max_length() const(GLIBCXX_3.4) [ISOCXX]

codecvt<char, char, __mbstate_t>::do_always_noconv() const(GLIBCXX_3.4) [ISOcxx]
codecvt<char, char, __mbstate_t>::do_in(__mbstate_t&, char const*, char const*, char const*&, char*, char*, char*&) const(GLIBCXX_3.4) [ISOcxx]
codecvt<char, char, __mbstate_t>::do_out(__mbstate_t&, char const*, char const*, char const*&, char*, char*, char*&) const(GLIBCXX_3.4) [ISOcxx]
codecvt<char, char, __mbstate_t>::~codecvt()(GLIBCXX_3.4) [ISOcxx]
codecvt<char, char, __mbstate_t>::~codecvt()(GLIBCXX_3.4) [ISOcxx]
codecvt<char, char, __mbstate_t>::~codecvt()(GLIBCXX_3.4) [ISOcxx]

An LSB conforming implementation shall provide the generic data interfaces for Class std::codecvt<char, char, __mbstate_t> specified in [Table 9-299](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-299 libstdc++ - Class codecvt<char, char, __mbstate_t> Data Interfaces

codecvt<char, char, __mbstate_t>::id(GLIBCXX_3.4) [ISOcxx]
typeinfo for __codecvt_abstract_base<char, char, __mbstate_t>(GLIBCXX_3.4) [Cxxabi]
typeinfo for codecvt<char, char, __mbstate_t>(GLIBCXX_3.4) [Cxxabi]
typeinfo name for __codecvt_abstract_base<char, char, __mbstate_t>(GLIBCXX_3.4) [Cxxabi]
typeinfo name for codecvt<char, char, __mbstate_t>(GLIBCXX_3.4) [Cxxabi]
vtable for __codecvt_abstract_base<char, char, __mbstate_t>(GLIBCXX_3.4) [Cxxabi]
vtable for codecvt<char, char, __mbstate_t>(GLIBCXX_3.4) [Cxxabi]

9.1.105 Class codecvt<wchar_t, char, __mbstate_t>

9.1.105.1 Class data for codecvt<wchar_t, char, __mbstate_t>

The virtual table for the std::codecvt<wchar_t, char, __mbstate_t> class is described by [Table 9-300](#)

Table 9-300 Primary vtable for codecvt<wchar_t, char, __mbstate_t>

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for codecvt<wchar_t, char, __mbstate_t>
vfunc[0]:	codecvt<wchar_t, char, __mbstate_t>::~codecvt()
vfunc[1]:	codecvt<wchar_t, char, __mbstate_t>::~codecvt()
vfunc[2]:	codecvt<wchar_t, char, __mbstate_t>::do_out(__mbstate_t&, wchar_t const*, wchar_t const*, wchar_t const*&, char*, char*, char*)

	char*&) const
vfunc[3]:	codecvt<wchar_t, char, __mbstate_t>::do_unshift(__mbstate_t&, char*, char*, char*&) const
vfunc[4]:	codecvt<wchar_t, char, __mbstate_t>::do_in(__mbstate_t&, char const*, char const*, char const*&, wchar_t*, wchar_t*, wchar_t*&) const
vfunc[5]:	codecvt<wchar_t, char, __mbstate_t>::do_encoding() const
vfunc[6]:	codecvt<wchar_t, char, __mbstate_t>::do_always_noconv() const
vfunc[7]:	See The Architecture Specific Specification
vfunc[8]:	codecvt<wchar_t, char, __mbstate_t>::do_max_length() const

The Run Time Type Information for the std::codecvt<wchar_t, char, __mbstate_t> class is described by [Table 9-301](#)

Table 9-301 typeinfo for codecvt<wchar_t, char, __mbstate_t>

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for codecvt<wchar_t, char, __mbstate_t>

9.1.105.2 Interfaces for Class codecvt<wchar_t, char, __mbstate_t>

An LSB conforming implementation shall provide the generic methods for Class std::codecvt<wchar_t, char, __mbstate_t> specified in [Table 9-302](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-302 libstdc++ - Class codecvt<wchar_t, char, __mbstate_t> Function Interfaces

codecvt<wchar_t, char, __mbstate_t>::do_unshift(__mbstate_t&, char*, char*, char*&) const(GLIBCXX_3.4) [ISOCXX]
codecvt<wchar_t, char, __mbstate_t>::do_encoding() const(GLIBCXX_3.4) [ISOCXX]
codecvt<wchar_t, char, __mbstate_t>::do_max_length() const(GLIBCXX_3.4) [ISOCXX]
codecvt<wchar_t, char, __mbstate_t>::do_always_noconv() const(GLIBCXX_3.4) [ISOCXX]
codecvt<wchar_t, char, __mbstate_t>::do_in(__mbstate_t&, char const*, char const*, char const*&, wchar_t*, wchar_t*, wchar_t*&) const(GLIBCXX_3.4) [ISOCXX]
codecvt<wchar_t, char, __mbstate_t>::do_out(__mbstate_t&, wchar_t const*,

wchar_t const*, wchar_t const*&, char*, char*, char*&) const(GLIBCXX_3.4) [ISOCXX]
codecvt<wchar_t, char, __mbstate_t>::~codecvt()(GLIBCXX_3.4) [ISOCXX]
codecvt<wchar_t, char, __mbstate_t>::~codecvt()(GLIBCXX_3.4) [ISOCXX]
codecvt<wchar_t, char, __mbstate_t>::~codecvt()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::codecvt<wchar_t, char, __mbstate_t> specified in [Table 9-303](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-303 libstdcxx - Class codecvt<wchar_t, char, __mbstate_t> Data Interfaces

codecvt<wchar_t, char, __mbstate_t>::id(GLIBCXX_3.4) [ISOCXX]
typeinfo for codecvt<wchar_t, char, __mbstate_t>(GLIBCXX_3.4) [CXXABI]
typeinfo name for codecvt<wchar_t, char, __mbstate_t>(GLIBCXX_3.4) [CXXABI]
vtable for codecvt<wchar_t, char, __mbstate_t>(GLIBCXX_3.4) [CXXABI]

9.1.106 Class `codecvt_byname<char, char, __mbstate_t>`

9.1.106.1 Class data for `codecvt_byname<char, char, __mbstate_t>`

The virtual table for the std::codecvt_byname<char, char, __mbstate_t> class is described by [Table 9-304](#)

Table 9-304 Primary vtable for `codecvt_byname<char, char, __mbstate_t>`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>codecvt_byname<char, char, __mbstate_t></code>
vfunc[0]:	<code>codecvt_byname<char, char, __mbstate_t>::~codecvt_byname()</code>
vfunc[1]:	<code>codecvt_byname<char, char, __mbstate_t>::~codecvt_byname()</code>
vfunc[2]:	<code>codecvt<char, char, __mbstate_t>::do_out(__mbstate_t&, char const*, char const*, char const*&, char*, char*, char*&) const</code>
vfunc[3]:	<code>codecvt<char, char, __mbstate_t>::do_unshift(__mbstate_t&, char*, char*, char*&) const</code>
vfunc[4]:	<code>codecvt<char, char, __mbstate_t>::do_in(__mbstate_t&, char const*, char const*, char const*&, char*, char*, char*&) const</code>
vfunc[5]:	<code>codecvt<char, char,</code>

	<code>__mbstate_t>::do_encoding() const</code>
vfunc[6]:	<code>codecvt<char, char, __mbstate_t>::do_always_noconv() const</code>
vfunc[7]:	See The Architecture Specific Specification
vfunc[8]:	<code>codecvt<char, char, __mbstate_t>::do_max_length() const</code>

The Run Time Type Information for the `std::codecvt_byname<char, char, __mbstate_t>` class is described by [Table 9-305](#)

Table 9-305 typeinfo for `codecvt_byname<char, char, __mbstate_t>`

Base Vtable	vtable for <code>_cxxabiv1::_si_class_type_info</code>
Name	typeinfo name for <code>codecvt_byname<char, char, __mbstate_t></code>

9.1.106.2 Interfaces for Class `codecvt_byname<char, char, __mbstate_t>`

An LSB conforming implementation shall provide the generic methods for Class `std::codecvt_byname<char, char, __mbstate_t>` specified in [Table 9-306](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-306 libstdc++ - Class `codecvt_byname<char, char, __mbstate_t>` Function Interfaces

<code>codecvt_byname<char, char, __mbstate_t>::~codecvt_byname()</code> (GLIBCXX_3.4) [ISOCXX]
<code>codecvt_byname<char, char, __mbstate_t>::~codecvt_byname()</code> (GLIBCXX_3.4) [ISOCXX]
<code>codecvt_byname<char, char, __mbstate_t>::~codecvt_byname()</code> (GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class `std::codecvt_byname<char, char, __mbstate_t>` specified in [Table 9-307](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-307 libstdc++ - Class `codecvt_byname<char, char, __mbstate_t>` Data Interfaces

typeinfo for <code>codecvt_byname<char, char, __mbstate_t></code> (GLIBCXX_3.4) [CXXABI]
typeinfo name for <code>codecvt_byname<char, char, __mbstate_t></code> (GLIBCXX_3.4) [CXXABI]
vtable for <code>codecvt_byname<char, char, __mbstate_t></code> (GLIBCXX_3.4) [CXXABI]

9.1.107 Class `codecvt_byname<wchar_t, char, __mbstate_t>`

9.1.107.1 Class data for `codecvt_byname<wchar_t, char, __mbstate_t>`

The virtual table for the `std::codecvt_byname<wchar_t, char, __mbstate_t>` class is described by [Table 9-308](#)

Table 9-308 Primary vtable for `codecvt_byname<wchar_t, char, __mbstate_t>`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>codecvt_byname<wchar_t, char, __mbstate_t></code>
vfunc[0]:	<code>codecvt_byname<wchar_t, char, __mbstate_t>::~codecvt_byname()</code>
vfunc[1]:	<code>codecvt_byname<wchar_t, char, __mbstate_t>::~codecvt_byname()</code>
vfunc[2]:	<code>codecvt<wchar_t, char, __mbstate_t>::do_out(__mbstate_t&, wchar_t const*, wchar_t const*, wchar_t const*&, char*, char*, char*&) const</code>
vfunc[3]:	<code>codecvt<wchar_t, char, __mbstate_t>::do_unshift(__mbstate_t&, char*, char*, char*&) const</code>
vfunc[4]:	<code>codecvt<wchar_t, char, __mbstate_t>::do_in(__mbstate_t&, char const*, char const*, char const*&, wchar_t*, wchar_t*, wchar_t*&) const</code>
vfunc[5]:	<code>codecvt<wchar_t, char, __mbstate_t>::do_encoding() const</code>
vfunc[6]:	<code>codecvt<wchar_t, char, __mbstate_t>::do_always_noconv() const</code>
vfunc[7]:	See The Architecture Specific Specification
vfunc[8]:	<code>codecvt<wchar_t, char, __mbstate_t>::do_max_length() const</code>

The Run Time Type Information for the `std::codecvt_byname<wchar_t, char, __mbstate_t>` class is described by [Table 9-309](#)

Table 9-309 typeinfo for `codecvt_byname<wchar_t, char, __mbstate_t>`

Base Vtable	vtable for <code>_cxxabiv1::__si_class_type_info</code>
-------------	--

Name	typeinfo name for codecvt_byname<wchar_t, char, __mbstate_t>
------	--

9.1.107.2 Class data for collate_byname<wchar_t>

The virtual table for the std::collate_byname<wchar_t> class is described by [Table 9-310](#)

Table 9-310 Primary vtable for collate_byname<wchar_t>

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for collate_byname<wchar_t>
vfunc[0]:	collate_byname<wchar_t>::~collate_byname()
vfunc[1]:	collate_byname<wchar_t>::~collate_byname()
vfunc[2]:	collate<wchar_t>::do_compare(wchar_t const*, wchar_t const*, wchar_t const*, wchar_t const*) const
vfunc[3]:	collate<wchar_t>::do_transform(wchar_t const*, wchar_t const*) const
vfunc[4]:	collate<wchar_t>::do_hash(wchar_t const*, wchar_t const*) const

The Run Time Type Information for the std::collate_byname<wchar_t> class is described by [Table 9-311](#)

Table 9-311 typeinfo for collate_byname<wchar_t>

Base Vtable	vtable for _cxxabiv1::__si_class_type_info
Name	typeinfo name for collate_byname<wchar_t>

9.1.107.3 Interfaces for Class codecvt_byname<wchar_t, char, __mbstate_t>

An LSB conforming implementation shall provide the generic methods for Class std::codecvt_byname<wchar_t, char, __mbstate_t> specified in [Table 9-312](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-312 libstdc++ - Class codecvt_byname<wchar_t, char, __mbstate_t> Function Interfaces

codecvt_byname<wchar_t, char, __mbstate_t>::~codecvt_byname() (GLIBCXX_3.4) [ISOCXX]
codecvt_byname<wchar_t, char, __mbstate_t>::~codecvt_byname() (GLIBCXX_3.4) [ISOCXX]
codecvt_byname<wchar_t, char, __mbstate_t>::~codecvt_byname()

(GLIBCXX_3.4) [ISOCXX]
collate_byname<wchar_t>::~collate_byname()(GLIBCXX_3.4) [ISOCXX]
collate_byname<wchar_t>::~collate_byname()(GLIBCXX_3.4) [ISOCXX]
collate_byname<wchar_t>::~collate_byname()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::codecvt_byname<wchar_t, char, __mbstate_t> specified in [Table 9-313](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-313 libstdcxx - Class codecvt_byname<wchar_t, char, __mbstate_t> Data Interfaces

typeinfo for codecvt_byname<wchar_t, char, __mbstate_t>(GLIBCXX_3.4) [CXXABI]
typeinfo for collate_byname<wchar_t>(GLIBCXX_3.4) [CXXABI]
typeinfo name for codecvt_byname<wchar_t, char, __mbstate_t>(GLIBCXX_3.4) [CXXABI]
typeinfo name for collate_byname<wchar_t>(GLIBCXX_3.4) [CXXABI]
vtable for codecvt_byname<wchar_t, char, __mbstate_t>(GLIBCXX_3.4) [CXXABI]
vtable for collate_byname<wchar_t>(GLIBCXX_3.4) [CXXABI]

9.1.108 Class collate<char>

9.1.108.1 Class data for collate<char>

The virtual table for the std::collate<char> class is described by [Table 9-314](#)

Table 9-314 Primary vtable for collate<char>

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for collate<char>
vfunc[0]:	collate<char>::~collate()
vfunc[1]:	collate<char>::~collate()
vfunc[2]:	collate<char>::do_compare(char const*, char const*, char const*, char const*) const
vfunc[3]:	collate<char>::do_transform(char const*, char const*) const
vfunc[4]:	collate<char>::do_hash(char const*, char const*) const

The Run Time Type Information for the std::collate<char> class is described by [Table 9-315](#)

Table 9-315 typeinfo for collate<char>

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
-------------	--

Name	typeinfo name for collate<char>
------	---------------------------------

9.1.108.2 Interfaces for Class `collate<char>`

An LSB conforming implementation shall provide the generic methods for Class `std::collate<char>` specified in [Table 9-316](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-316 libstdcxx - Class `collate<char>` Function Interfaces

<code>collate<char>::_M_compare(char const*, char const*) const(GLIBCXX_3.4) [ISOCXX]</code>
<code>collate<char>::do_compare(char const*, char const*, char const*, char const*) const(GLIBCXX_3.4) [ISOCXX]</code>
<code>collate<char>::do_transform(char const*, char const*) const(GLIBCXX_3.4) [ISOCXX]</code>
<code>collate<char>::hash(char const*, char const*) const(GLIBCXX_3.4) [ISOCXX]</code>
<code>collate<char>::compare(char const*, char const*, char const*, char const*) const(GLIBCXX_3.4) [ISOCXX]</code>
<code>collate<char>::do_hash(char const*, char const*) const(GLIBCXX_3.4) [ISOCXX]</code>
<code>collate<char>::transform(char const*, char const*) const(GLIBCXX_3.4) [ISOCXX]</code>
<code>collate<char>::~collate()(GLIBCXX_3.4) [ISOCXX]</code>
<code>collate<char>::~collate()(GLIBCXX_3.4) [ISOCXX]</code>
<code>collate<char>::~collate()(GLIBCXX_3.4) [ISOCXX]</code>

An LSB conforming implementation shall provide the generic data interfaces for Class `std::collate<char>` specified in [Table 9-317](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-317 libstdcxx - Class `collate<char>` Data Interfaces

<code>guard variable for collate<char>::id(GLIBCXX_3.4) [CXXABI]</code>
<code>collate<char>::id(GLIBCXX_3.4) [ISOCXX]</code>
<code>typeinfo for collate<char>(GLIBCXX_3.4) [CXXABI]</code>
<code>typeinfo name for collate<char>(GLIBCXX_3.4) [CXXABI]</code>
<code>vtable for collate<char>(GLIBCXX_3.4) [CXXABI]</code>

9.1.109 Class `collate<wchar_t>`

9.1.109.1 Class data for `collate<wchar_t>`

The virtual table for the `std::collate<wchar_t>` class is described by [Table 9-318](#)

Table 9-318 Primary vtable for `collate<wchar_t>`

Base Offset	0
Virtual Base Offset	0
RTTI	<code>typeinfo for collate<wchar_t></code>
vfunc[0]:	<code>collate<wchar_t>::~collate()</code>

vfunc[1]:	collate<wchar_t>::~collate()
vfunc[2]:	collate<wchar_t>::do_compare(wchar_t const*, wchar_t const*, wchar_t const*, wchar_t const*) const
vfunc[3]:	collate<wchar_t>::do_transform(wchar_t const*, wchar_t const*) const
vfunc[4]:	collate<wchar_t>::do_hash(wchar_t const*, wchar_t const*) const

The Run Time Type Information for the std::collate<wchar_t> class is described by [Table 9-319](#)

Table 9-319 typeinfo for collate<wchar_t>

Base Vtable	vtable for _cxxabiv1::__si_class_type_info
Name	typeinfo name for collate<wchar_t>

9.1.109.2 Interfaces for Class collate<wchar_t>

An LSB conforming implementation shall provide the generic methods for Class std::collate<wchar_t> specified in [Table 9-320](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-320 libstdcxx - Class collate<wchar_t> Function Interfaces

collate<wchar_t>::_M_compare(wchar_t const*, wchar_t const*) const(GLIBCXX_3.4) [ISOCXX]
collate<wchar_t>::do_compare(wchar_t const*, wchar_t const*, wchar_t const*, wchar_t const*) const(GLIBCXX_3.4) [ISOCXX]
collate<wchar_t>::do_transform(wchar_t const*, wchar_t const*) const(GLIBCXX_3.4) [ISOCXX]
collate<wchar_t>::hash(wchar_t const*, wchar_t const*) const(GLIBCXX_3.4) [ISOCXX]
collate<wchar_t>::compare(wchar_t const*, wchar_t const*, wchar_t const*, wchar_t const*) const(GLIBCXX_3.4) [ISOCXX]
collate<wchar_t>::do_hash(wchar_t const*, wchar_t const*) const(GLIBCXX_3.4) [ISOCXX]
collate<wchar_t>::transform(wchar_t const*, wchar_t const*) const(GLIBCXX_3.4) [ISOCXX]
collate<wchar_t>::~collate()(GLIBCXX_3.4) [ISOCXX]
collate<wchar_t>::~collate()(GLIBCXX_3.4) [ISOCXX]
collate<wchar_t>::~collate()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::collate<wchar_t> specified in [Table 9-321](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-321 libstdcxx - Class collate<wchar_t> Data Interfaces

guard variable for collate<wchar_t>::id(GLIBCXX_3.4) [CXXABI]
collate<wchar_t>::id(GLIBCXX_3.4) [ISOCXX]

typeinfo for collate<wchar_t>(GLIBCXX_3.4) [CXXABI]
typeinfo name for collate<wchar_t>(GLIBCXX_3.4) [CXXABI]
vtable for collate<wchar_t>(GLIBCXX_3.4) [CXXABI]

9.1.110 Class `collate_byname<char>`

9.1.110.1 Class data for `collate_byname<char>`

The virtual table for the `std::collate_byname<char>` class is described by [Table 9-322](#)

Table 9-322 Primary vtable for `collate_byname<char>`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>collate_byname<char></code>
vfunc[0]:	<code>collate_byname<char>::~collate_byname()</code>
vfunc[1]:	<code>collate_byname<char>::~collate_byname()</code>
vfunc[2]:	<code>collate<char>::do_compare(char const*, char const*, char const*, char const*) const</code>
vfunc[3]:	<code>collate<char>::do_transform(char const*, char const*) const</code>
vfunc[4]:	<code>collate<char>::do_hash(char const*, char const*) const</code>

The Run Time Type Information for the `std::collate_byname<char>` class is described by [Table 9-323](#)

Table 9-323 typeinfo for `collate_byname<char>`

Base Vtable	vtable for <code>_cxxabiv1::_si_class_type_info</code>
Name	typeinfo name for <code>collate_byname<char></code>

9.1.110.2 Interfaces for Class `collate_byname<char>`

An LSB conforming implementation shall provide the generic methods for Class `std::collate_byname<char>` specified in [Table 9-324](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-324 libstdc++ - Class `collate_byname<char>` Function Interfaces

<code>collate_byname<char>::~collate_byname()(GLIBCXX_3.4)</code> [ISOCXX]
<code>collate_byname<char>::~collate_byname()(GLIBCXX_3.4)</code> [ISOCXX]
<code>collate_byname<char>::~collate_byname()(GLIBCXX_3.4)</code> [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class `std::collate_byname<char>` specified in [Table 9-325](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-325 libstdcxx - Class collate_byname<char> Data Interfaces

typeinfo for collate_byname<char>(GLIBCXX_3.4) [CXXABI]
typeinfo name for collate_byname<char>(GLIBCXX_3.4) [CXXABI]
vtable for collate_byname<char>(GLIBCXX_3.4) [CXXABI]

9.1.111 Class collate_byname<wchar_t>

9.1.111.1 Interfaces for Class collate_byname<wchar_t>

No external methods are defined for libstdcxx - Class std::collate_byname<wchar_t> in this part of the specification. See also the relevant architecture specific part of this specification.

9.1.112 Class time_base

9.1.112.1 Class data for time_base

The Run Time Type Information for the std::time_base class is described by [Table 9-326](#)

Table 9-326 typeinfo for time_base

Base Vtable	vtable for <u>_cxxabiv1::__class_type_info</u>
Name	typeinfo name for time_base

9.1.112.2 Interfaces for Class time_base

No external methods are defined for libstdcxx - Class std::time_base in this part of the specification. See also the relevant architecture specific part of this specification.

An LSB conforming implementation shall provide the generic data interfaces for Class std::time_base specified in [Table 9-327](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-327 libstdcxx - Class time_base Data Interfaces

typeinfo for time_base(GLIBCXX_3.4) [CXXABI]
typeinfo name for time_base(GLIBCXX_3.4) [CXXABI]

9.1.113 Class time_get_byname<char, istreambuf_iterator<char, char_traits<char>>>

9.1.113.1 Class data for time_get_byname<char, istreambuf_iterator<char, char_traits<char>>>

The virtual table for the std::time_get_byname<char, std::istreambuf_iterator<char, std::char_traits<char>>> class is described by [Table 9-328](#)

Table 9-328 Primary vtable for time_get_byname<char, istreambuf_iterator<char, char_traits<char>>>

Base Offset	0
-------------	---

Virtual Base Offset	0
RTTI	typeinfo for time_get_byname<char, istreambuf_iterator<char, char_traits<char> >>
vfunc[0]:	time_get_byname<char, istreambuf_iterator<char, char_traits<char> >>::time_get_byname()
vfunc[1]:	time_get_byname<char, istreambuf_iterator<char, char_traits<char> >>::time_get_byname()
vfunc[2]:	time_get<char, istreambuf_iterator<char, char_traits<char> >>::do_date_order() const
vfunc[3]:	time_get<char, istreambuf_iterator<char, char_traits<char> >>::do_get_time(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, tm*) const
vfunc[4]:	time_get<char, istreambuf_iterator<char, char_traits<char> >>::do_get_date(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, tm*) const
vfunc[5]:	time_get<char, istreambuf_iterator<char, char_traits<char> >>::do_get_weekday(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, tm*) const
vfunc[6]:	time_get<char, istreambuf_iterator<char, char_traits<char> >>::do_get_monthname(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, tm*) const
vfunc[7]:	time_get<char, istreambuf_iterator<char,

	char_traits<char> > >::do_get_year(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, tm*) const
--	--

The Run Time Type Information for the `std::time_get_byname<char, std::istreambuf_iterator<char, std::char_traits<char> >>` class is described by [Table 9-329](#)

Table 9-329 typeinfo for time_get_byname<char, istreambuf_iterator<char, char_traits<char> >>

Base Vtable	vtable for <code>_cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for <code>time_get_byname<char, istreambuf_iterator<char, char_traits<char> >></code>

9.1.113.2 Interfaces for Class `time_get_byname<char, istreambuf_iterator<char, char_traits<char> >>`

An LSB conforming implementation shall provide the generic methods for Class `std::time_get_byname<char, std::istreambuf_iterator<char, std::char_traits<char> >>` specified in [Table 9-330](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-330 libstdcxx - Class `time_get_byname<char, istreambuf_iterator<char, char_traits<char> >>` Function Interfaces

<code>time_get_byname<char, istreambuf_iterator<char, char_traits<char> >>::time_get_byname()(GLIBCXX_3.4)</code> [ISO CXX]
<code>time_get_byname<char, istreambuf_iterator<char, char_traits<char> >>::~time_get_byname()(GLIBCXX_3.4)</code> [ISO CXX]
<code>time_get_byname<char, istreambuf_iterator<char, char_traits<char> >>::~time_get_byname()(GLIBCXX_3.4)</code> [ISO CXX]

An LSB conforming implementation shall provide the generic data interfaces for Class `std::time_get_byname<char, std::istreambuf_iterator<char, std::char_traits<char> >>` specified in [Table 9-331](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-331 libstdcxx - Class `time_get_byname<char, istreambuf_iterator<char, char_traits<char> >>` Data Interfaces

<code>typeinfo for time_get_byname<char, istreambuf_iterator<char, char_traits<char> >>(GLIBCXX_3.4)</code> [CXXABI]
<code>typeinfo name for time_get_byname<char, istreambuf_iterator<char, char_traits<char> >>(GLIBCXX_3.4)</code> [CXXABI]
<code>vtable for time_get_byname<char, istreambuf_iterator<char, char_traits<char> >>(GLIBCXX_3.4)</code> [CXXABI]

**9.1.114 Class `time_get_byname<wchar_t,
istreambuf_iterator<wchar_t, char_traits<wchar_t> >`**
>

**9.1.114.1 Class data for `time_get_byname<wchar_t,
istreambuf_iterator<wchar_t, char_traits<wchar_t> >>`**

The virtual table for the `std::time_get_byname<wchar_t, std::istreambuf_iterator<wchar_t, std::char_traits<wchar_t> >>` class is described by [Table 9-332](#)

**Table 9-332 Primary vtable for `time_get_byname<wchar_t,
istreambuf_iterator<wchar_t, char_traits<wchar_t> >>`**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>time_get_byname<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> >></code>
vfunc[0]:	<code>time_get_byname<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::~time_get_byname()</code>
vfunc[1]:	<code>time_get_byname<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::~time_get_byname()</code>
vfunc[2]:	<code>time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::do_date_order() const</code>
vfunc[3]:	<code>time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::do_get_time(istreambuf_iterator< wchar_t, char_traits<wchar_t> >, istreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, _Ios_Iostate&, tm*) const</code>
vfunc[4]:	<code>time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::do_get_date(istreambuf_iterator< wchar_t, char_traits<wchar_t> >, istreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, _Ios_Iostate&, tm*) const</code>
vfunc[5]:	<code>time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> ></code>

	>::do_get_weekday(istreambuf_iterator<wchar_t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, _Ios_Iostate&, tm*) const
vfunc[6]:	time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::do_get_mmonthname(istreambuf_iterator<wchar_t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, _Ios_Iostate&, tm*) const
vfunc[7]:	time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::do_get_year(istreambuf_iterator<wchar_t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, _Ios_Iostate&, tm*) const

The Run Time Type Information for the `std::time_get_byname<wchar_t, std::istreambuf_iterator<wchar_t, std::char_traits<wchar_t>>>` class is described by [Table 9-333](#)

Table 9-333 typeinfo for `time_get_byname<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>>`

Base Vtable	vtable for <code>_cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for <code>time_get_byname<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>></code>

9.1.114.2 Interfaces for Class `time_get_byname<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>>`

An LSB conforming implementation shall provide the generic methods for Class `std::time_get_byname<wchar_t, std::istreambuf_iterator<wchar_t, std::char_traits<wchar_t>>>` specified in [Table 9-334](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-334 libstdcxx - Class `time_get_byname<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>>` Function Interfaces

<code>time_get_byname<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>>::~time_get_byname()(GLIBCXX_3.4)</code> [ISOCXX]
<code>time_get_byname<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>>::~time_get_byname()(GLIBCXX_3.4)</code> [ISOCXX]
<code>time_get_byname<wchar_t, istreambuf_iterator<wchar_t,</code>

char_traits<wchar_t> > >::~time_get_byname()(GLIBCXX_3.4) [ISOCXX]
--

An LSB conforming implementation shall provide the generic data interfaces for Class std::time_get_byname<wchar_t, std::istreambuf_iterator<wchar_t, std::char_traits<wchar_t> > > specified in [Table 9-335](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-335 libstdc++ - Class time_get_byname<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > > Data Interfaces

typeinfo for time_get_byname<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >(GLIBCXX_3.4) [CXXABI]
typeinfo name for time_get_byname<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >(GLIBCXX_3.4) [CXXABI]
vtable for time_get_byname<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >(GLIBCXX_3.4) [CXXABI]

9.1.115 Class time_put_byname<char, ostreambuf_iterator<char, char_traits<char> > >

9.1.115.1 Class data for time_put_byname<char, ostreambuf_iterator<char, char_traits<char> > >

The virtual table for the std::time_put_byname<char, std::ostreambuf_iterator<char, std::char_traits<char> > > class is described by [Table 9-336](#)

Table 9-336 Primary vtable for time_put_byname<char, ostreambuf_iterator<char, char_traits<char> > >

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for time_put_byname<char, ostreambuf_iterator<char, char_traits<char> > >
vfunc[0]:	time_put_byname<char, ostreambuf_iterator<char, char_traits<char> > >::~time_put_byname()
vfunc[1]:	time_put_byname<char, ostreambuf_iterator<char, char_traits<char> > >::~time_put_byname()
vfunc[2]:	time_put<char, ostreambuf_iterator<char, char_traits<char> > >::do_put(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, tm const*, char, char) const

The Run Time Type Information for the std::time_put_byname<char, std::ostreambuf_iterator<char, std::char_traits<char> > > class is described by [Table 9-](#)

337**Table 9-337 typeinfo for time_put_byname<char, ostreambuf_iterator<char, char_traits<char> > >**

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for time_put_byname<char, ostreambuf_iterator<char, char_traits<char> > >

9.1.115.2 Interfaces for Class time_put_byname<char, ostreambuf_iterator<char, char_traits<char> > >

An LSB conforming implementation shall provide the generic methods for Class std::time_put_byname<char, std::ostreambuf_iterator<char, std::char_traits<char> > > specified in [Table 9-338](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-338 libstdcxx - Class time_put_byname<char, ostreambuf_iterator<char, char_traits<char> > > Function Interfaces

time_put_byname<char, ostreambuf_iterator<char, char_traits<char> > >::~time_put_byname()(GLIBCXX_3.4) [ISOcxx]
time_put_byname<char, ostreambuf_iterator<char, char_traits<char> > >::~time_put_byname()(GLIBCXX_3.4) [ISOcxx]
time_put_byname<char, ostreambuf_iterator<char, char_traits<char> > >::~time_put_byname()(GLIBCXX_3.4) [ISOcxx]

An LSB conforming implementation shall provide the generic data interfaces for Class std::time_put_byname<char, std::ostreambuf_iterator<char, std::char_traits<char> > > specified in [Table 9-339](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-339 libstdcxx - Class time_put_byname<char, ostreambuf_iterator<char, char_traits<char> > > Data Interfaces

typeinfo for time_put_byname<char, ostreambuf_iterator<char, char_traits<char> > >(GLIBCXX_3.4) [Cxxabi]
typeinfo name for time_put_byname<char, ostreambuf_iterator<char, char_traits<char> > >(GLIBCXX_3.4) [Cxxabi]
vtable for time_put_byname<char, ostreambuf_iterator<char, char_traits<char> > >(GLIBCXX_3.4) [Cxxabi]

9.1.116 Class time_put_byname<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >**9.1.116.1 Class data for time_put_byname<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >**

The virtual table for the std::time_put_byname<wchar_t, std::ostreambuf_iterator<wchar_t, std::char_traits<wchar_t> > > class is described by [Table 9-340](#)

Table 9-340 Primary vtable for time_put_byname<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for time_put_byname<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>
vfunc[0]:	time_put_byname<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>> >::~time_put_byname()
vfunc[1]:	time_put_byname<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>> >::~time_put_byname()
vfunc[2]:	time_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>> >::do_put(ostreambuf_iterator<wcha r_t, char_traits<wchar_t> >, ios_base&, wchar_t, tm const*, char, char) const

The Run Time Type Information for the std::time_put_byname<wchar_t, std::ostreambuf_iterator<wchar_t, std::char_traits<wchar_t>>> class is described by [Table 9-341](#)

Table 9-341 typeinfo for time_put_byname<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>

Base Vtable	vtable for _cxxabiv1::__si_class_type_info
Name	typeinfo name for time_put_byname<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>

9.1.116.2 Interfaces for Class time_put_byname<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>

An LSB conforming implementation shall provide the generic methods for Class std::time_put_byname<wchar_t, std::ostreambuf_iterator<wchar_t, std::char_traits<wchar_t>>> specified in [Table 9-342](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-342 libstdc++ - Class time_put_byname<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>> Function Interfaces

time_put_byname<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>::~time_put_byname()(GLIBCXX_3.4) [ISOCXX]
time_put_byname<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>::~time_put_byname()(GLIBCXX_3.4) [ISOCXX]

time_put_byname<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>::~time_put_byname()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::time_put_byname<wchar_t, std::ostreambuf_iterator<wchar_t, std::char_traits<wchar_t>>> specified in [Table 9-343](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-343 libstdcxx - Class time_put_byname<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>> Data Interfaces

typeinfo for time_put_byname<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>(GLIBCXX_3.4) [CXXABI]
typeinfo name for time_put_byname<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>(GLIBCXX_3.4) [CXXABI]
vtable for time_put_byname<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>(GLIBCXX_3.4) [CXXABI]

9.1.117 Class time_get<char, istreambuf_iterator<char, char_traits<char>>>

9.1.117.1 Class data for time_get<char, istreambuf_iterator<char, char_traits<char>>>

The virtual table for the std::time_get<char, std::istreambuf_iterator<char, std::char_traits<char>>> class is described by [Table 9-344](#)

Table 9-344 Primary vtable for time_get<char, istreambuf_iterator<char, char_traits<char>>>

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for time_get<char, istreambuf_iterator<char, char_traits<char>>>
vfunc[0]:	time_get<char, istreambuf_iterator<char, char_traits<char>>>::~time_get()
vfunc[1]:	time_get<char, istreambuf_iterator<char, char_traits<char>>>::~time_get()
vfunc[2]:	time_get<char, istreambuf_iterator<char, char_traits<char>>>::do_date_order() const
vfunc[3]:	time_get<char, istreambuf_iterator<char, char_traits<char>>>::do_get_time(istreambuf_iterator<char, char_traits<char>>, istreambuf_iterator<char, char_traits<char>>, ios_base&,

	<code>_Ios_Iostate&, tm*) const</code>
vfunc[4]:	<code>time_get<char, istreambuf_iterator<char, char_traits<char>> >::do_get_date(istreambuf_iterator<char, char_traits<char>>, istreambuf_iterator<char, char_traits<char>>, ios_base&, _Ios_Iostate&, tm*) const</code>
vfunc[5]:	<code>time_get<char, istreambuf_iterator<char, char_traits<char>> >::do_get_weekday(istreambuf_iterator<char, char_traits<char>>, istreambuf_iterator<char, char_traits<char>>, ios_base&, _Ios_Iostate&, tm*) const</code>
vfunc[6]:	<code>time_get<char, istreambuf_iterator<char, char_traits<char>> >::do_get_monthname(istreambuf_iterator<char, char_traits<char>>, istreambuf_iterator<char, char_traits<char>>, ios_base&, _Ios_Iostate&, tm*) const</code>
vfunc[7]:	<code>time_get<char, istreambuf_iterator<char, char_traits<char>> >::do_get_year(istreambuf_iterator<char, char_traits<char>>, istreambuf_iterator<char, char_traits<char>>, ios_base&, _Ios_Iostate&, tm*) const</code>

9.1.117.2 Interfaces for Class `time_get<char, istreambuf_iterator<char, char_traits<char>>`

An LSB conforming implementation shall provide the generic methods for Class `std::time_get<char, std::istreambuf_iterator<char, std::char_traits<char>>>` specified in [Table 9-345](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-345 libstdcxx - Class `time_get<char, istreambuf_iterator<char, char_traits<char>>` Function Interfaces

<code>time_get<char, istreambuf_iterator<char, char_traits<char>>>::date_order() const(GLIBCXX_3.4) [ISO CXX]</code>
<code>time_get<char, istreambuf_iterator<char, char_traits<char>> >::do_get_date(istreambuf_iterator<char, char_traits<char>>, istreambuf_iterator<char, char_traits<char>>, ios_base&, _Ios_Iostate&, tm*) const(GLIBCXX_3.4) [ISO CXX]</code>
<code>time_get<char, istreambuf_iterator<char, char_traits<char>></code>

>::do_get_time(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, tm*) const(GLIBCXX_3.4) [ISO CXX]
time_get<char, istreambuf_iterator<char, char_traits<char> > >::do_get_year(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, tm*) const(GLIBCXX_3.4) [ISO CXX]
time_get<char, istreambuf_iterator<char, char_traits<char> > >::get_weekday(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, tm*) const(GLIBCXX_3.4) [ISO CXX]
time_get<char, istreambuf_iterator<char, char_traits<char> > >::do_date_order() const(GLIBCXX_3.4) [ISO CXX]
time_get<char, istreambuf_iterator<char, char_traits<char> > >::get_monthname(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, tm*) const(GLIBCXX_3.4) [ISO CXX]
time_get<char, istreambuf_iterator<char, char_traits<char> > >::do_get_weekday(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, tm*) const(GLIBCXX_3.4) [ISO CXX]
time_get<char, istreambuf_iterator<char, char_traits<char> > >::do_get_monthname(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, tm*) const(GLIBCXX_3.4) [ISO CXX]
time_get<char, istreambuf_iterator<char, char_traits<char> > >::_M_extract_via_format(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, tm*, char const*) const(GLIBCXX_3.4) [ISO CXX]
time_get<char, istreambuf_iterator<char, char_traits<char> > >::get_date(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, tm*) const(GLIBCXX_3.4) [ISO CXX]
time_get<char, istreambuf_iterator<char, char_traits<char> > >::get_time(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, tm*) const(GLIBCXX_3.4) [ISO CXX]
time_get<char, istreambuf_iterator<char, char_traits<char> > >::get_year(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, tm*) const(GLIBCXX_3.4) [ISO CXX]
time_get<char, istreambuf_iterator<char, char_traits<char> > >::~time_get() (GLIBCXX_3.4) [ISO CXX]
time_get<char, istreambuf_iterator<char, char_traits<char> > >::~time_get() (GLIBCXX_3.4) [ISO CXX]
time_get<char, istreambuf_iterator<char, char_traits<char> > >::~time_get() (GLIBCXX_3.4) [ISO CXX]

An LSB conforming implementation shall provide the generic data interfaces for

Class `std::time_get<char, std::istreambuf_iterator<char, std::char_traits<char> >` specified in [Table 9-346](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-346 libstdcxx - Class `time_get<char, istreambuf_iterator<char, char_traits<char> >` Data Interfaces

guard variable for <code>time_get<char, istreambuf_iterator<char, char_traits<char> ></code> ::id(GLIBCXX_3.4) [CXXABI]
<code>time_get<char, istreambuf_iterator<char, char_traits<char> ></code> ::id(GLIBCXX_3.4) [ISOCXX]
typeinfo for <code>time_get<char, istreambuf_iterator<char, char_traits<char> ></code> >(GLIBCXX_3.4) [CXXABI]
typeinfo name for <code>time_get<char, istreambuf_iterator<char, char_traits<char> ></code> >(GLIBCXX_3.4) [CXXABI]
vtable for <code>time_get<char, istreambuf_iterator<char, char_traits<char> ></code> >(GLIBCXX_3.4) [CXXABI]

9.1.118 Class `time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> >`

>

9.1.118.1 Class data for `time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> >`

The virtual table for the `std::time_get<wchar_t, std::istreambuf_iterator<wchar_t, std::char_traits<wchar_t> >` class is described by [Table 9-347](#)

Table 9-347 Primary vtable for `time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> >`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> ></code>
vfunc[0]:	<code>time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> ></code> ::~ <code>time_get()</code>
vfunc[1]:	<code>time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> ></code> ::~ <code>time_get()</code>
vfunc[2]:	<code>time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> ></code> ::do_date_order() const
vfunc[3]:	<code>time_get<wchar_t, istreambuf_iterator<wchar_t,</code>

	<code>char_traits<wchar_t> > >::do_get_time(istreambuf_iterator< wchar_t, char_traits<wchar_t> >, istreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, _Ios_Iostate&, tm*) const</code>
vfunc[4]:	<code>time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::do_get_date(istreambuf_iterator< wchar_t, char_traits<wchar_t> >, istreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, _Ios_Iostate&, tm*) const</code>
vfunc[5]:	<code>time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::do_get_weekday(istreambuf_iterator< wchar_t, char_traits<wchar_t> >, istreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, _Ios_Iostate&, tm*) const</code>
vfunc[6]:	<code>time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::do_get_monthname(istreambuf_iterator< wchar_t, char_traits<wchar_t> >, istreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, _Ios_Iostate&, tm*) const</code>
vfunc[7]:	<code>time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::do_get_year(istreambuf_iterator< wchar_t, char_traits<wchar_t> >, istreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, _Ios_Iostate&, tm*) const</code>

9.1.118.2 Interfaces for Class `time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> >>`

An LSB conforming implementation shall provide the generic methods for Class `std::time_get<wchar_t, std::istreambuf_iterator<wchar_t, std::char_traits<wchar_t> >>` specified in [Table 9-348](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-348 libstdc++ - Class time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> Function Interfaces

time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::date_order() const(GLIBCXX_3.4) [ISOcxx]
time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::do_get_date(istreambuf_iterator<wchar_t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, _Ios_Iostate&, tm*) const(GLIBCXX_3.4) [ISOcxx]
time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::do_get_time(istreambuf_iterator<wchar_t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, _Ios_Iostate&, tm*) const(GLIBCXX_3.4) [ISOcxx]
time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::do_get_year(istreambuf_iterator<wchar_t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, _Ios_Iostate&, tm*) const(GLIBCXX_3.4) [ISOcxx]
time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::get_weekday(istreambuf_iterator<wchar_t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, _Ios_Iostate&, tm*) const(GLIBCXX_3.4) [ISOcxx]
time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::do_date_order() const(GLIBCXX_3.4) [ISOcxx]
time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::get_monthname(istreambuf_iterator<wchar_t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, _Ios_Iostate&, tm*) const(GLIBCXX_3.4) [ISOcxx]
time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::do_get_monthname(istreambuf_iterator<wchar_t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, _Ios_Iostate&, tm*) const(GLIBCXX_3.4) [ISOcxx]
time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::_M_extract_via_format(istreambuf_iterator<wchar_t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, _Ios_Iostate&, tm*, wchar_t const*) const(GLIBCXX_3.4) [ISOcxx]
time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::get_date(istreambuf_iterator<wchar_t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, _Ios_Iostate&, tm*) const(GLIBCXX_3.4) [ISOcxx]
time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::get_time(istreambuf_iterator<wchar_t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, _Ios_Iostate&, tm*) const(GLIBCXX_3.4) [ISOcxx]
time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::get_year(istreambuf_iterator<wchar_t, char_traits<wchar_t>>,

istreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, _Ios_Iostate&, tm*) const(GLIBCXX_3.4) [ISOcxx]
time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::~time_get()(GLIBCXX_3.4) [ISOcxx]
time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::~time_get()(GLIBCXX_3.4) [ISOcxx]
time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::~time_get()(GLIBCXX_3.4) [ISOcxx]

An LSB conforming implementation shall provide the generic data interfaces for Class `std::time_get<wchar_t, std::istreambuf_iterator<wchar_t, std::char_traits<wchar_t> > >` specified in [Table 9-349](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-349 libstdcxx - Class `time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >` Data Interfaces

guard variable for <code>time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::id(GLIBCXX_3.4)</code> [Cxxabi]
<code>time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::id(GLIBCXX_3.4)</code> [ISOcxx]
typeinfo for <code>time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::(GLIBCXX_3.4)</code> [Cxxabi]
typeinfo name for <code>time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::(GLIBCXX_3.4)</code> [Cxxabi]
vtable for <code>time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::(GLIBCXX_3.4)</code> [Cxxabi]

9.1.119 Class `time_put<char, ostreambuf_iterator<char, char_traits<char> > >`

9.1.119.1 Class data for `time_put<char, ostreambuf_iterator<char, char_traits<char> > >`

The virtual table for the `std::time_put<char, std::ostreambuf_iterator<char, std::char_traits<char> > >` class is described by [Table 9-350](#)

Table 9-350 Primary vtable for `time_put<char, ostreambuf_iterator<char, char_traits<char> > >`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>time_put<char, ostreambuf_iterator<char, char_traits<char> > ></code>
vfunc[0]:	<code>time_put<char, ostreambuf_iterator<char, char_traits<char> > >::~time_put()</code>
vfunc[1]:	<code>time_put<char, ostreambuf_iterator<char, char_traits<char> > >::~time_put()</code>

vfunc[2]:	time_put<char, ostreambuf_iterator<char, char_traits<char> > >::do_put(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, tm const*, char, char) const
-----------	--

The Run Time Type Information for the std::time_put<char, std::ostreambuf_iterator<char, std::char_traits<char> >> class is described by [Table 9-351](#)

Table 9-351 typeinfo for time_put<char, ostreambuf_iterator<char, char_traits<char> >>

Base Vtable	vtable for __cxxabiv1::__si_class_t ype_info	
Name	typeinfo name for time_put<char, ostreambuf_iterator<ch ar, char_traits<char> > >	
flags:	8	
basetype:	typeinfo for locale::facet	2
basetype:	typeinfo for time_base	2

9.1.119.2 Interfaces for Class time_put<char, ostreambuf_iterator<char, char_traits<char> >>

An LSB conforming implementation shall provide the generic methods for Class std::time_put<char, std::ostreambuf_iterator<char, std::char_traits<char> >> specified in [Table 9-352](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-352 libstdc++ - Class time_put<char, ostreambuf_iterator<char, char_traits<char> >> Function Interfaces

time_put<char, ostreambuf_iterator<char, char_traits<char> > >::put(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, tm const*, char const*, char const*) const(GLIBCXX_3.4) [ISOCXX]	
time_put<char, ostreambuf_iterator<char, char_traits<char> > >::put(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, tm const*, char, char) const(GLIBCXX_3.4) [ISOCXX]	
time_put<char, ostreambuf_iterator<char, char_traits<char> > >::do_put(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, tm const*, char, char) const(GLIBCXX_3.4) [ISOCXX]	
time_put<char, ostreambuf_iterator<char, char_traits<char> >>::~time_put() (GLIBCXX_3.4) [ISOCXX]	
time_put<char, ostreambuf_iterator<char, char_traits<char> >>::~time_put() (GLIBCXX_3.4) [ISOCXX]	
time_put<char, ostreambuf_iterator<char, char_traits<char> >>::~time_put() (GLIBCXX_3.4) [ISOCXX]	

An LSB conforming implementation shall provide the generic data interfaces for Class `std::time_put<char, std::ostreambuf_iterator<char, std::char_traits<char> > >` specified in [Table 9-353](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-353 libstdc++ - Class `time_put<char, ostreambuf_iterator<char, char_traits<char> > >` Data Interfaces

guard variable for <code>time_put<char, ostreambuf_iterator<char, char_traits<char> > ></code> ::id(GLIBCXX_3.4) [CXXABI]
<code>time_put<char, ostreambuf_iterator<char, char_traits<char> > ></code> ::id(GLIBCXX_3.4) [ISOCXX]
<code>typeinfo</code> for <code>time_put<char, ostreambuf_iterator<char, char_traits<char> > ></code> (GLIBCXX_3.4) [CXXABI]
<code>typeinfo</code> name for <code>time_put<char, ostreambuf_iterator<char, char_traits<char> > ></code> (GLIBCXX_3.4) [CXXABI]
vtable for <code>time_put<char, ostreambuf_iterator<char, char_traits<char> > ></code> (GLIBCXX_3.4) [CXXABI]

9.1.120 Class `time_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >`

9.1.120.1 Class data for `time_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >`

The virtual table for the `std::time_put<wchar_t, std::ostreambuf_iterator<wchar_t, std::char_traits<wchar_t> > >` class is described by [Table 9-354](#)

Table 9-354 Primary vtable for `time_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >`

Base Offset	0
Virtual Base Offset	0
RTTI	<code>typeinfo</code> for <code>time_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > ></code>
vfunc[0]:	<code>time_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > ></code> ::~ <code>time_put()</code>
vfunc[1]:	<code>time_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > ></code> ::~ <code>time_put()</code>
vfunc[2]:	<code>time_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > ></code> ::do_put(<code>ostreambuf_iterator<wchar_t, char_traits<wchar_t> ></code> ,

	ios_base&, wchar_t, tm const*, char, char) const
--	--

The Run Time Type Information for the `std::time_put<wchar_t, std::ostreambuf_iterator<wchar_t, std::char_traits<wchar_t>>>` class is described by [Table 9-355](#)

Table 9-355 typeinfo for time_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>

Base Vtable	vtable for __cxxabiv1::__si_class_type_info	
Name	typeinfo name for time_put<wchar_t, ostreambuf_iterator<w char_t, char_traits<wchar_t> >	
flags:	8	
basetype:	typeinfo for locale::facet	2
basetype:	typeinfo for time_base	2

9.1.120.2 Interfaces for Class `time_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>`

An LSB conforming implementation shall provide the generic methods for Class `std::time_put<wchar_t, std::ostreambuf_iterator<wchar_t, std::char_traits<wchar_t>>>` specified in [Table 9-356](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-356 libstdc++ - Class `time_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>` Function Interfaces

<code>time_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>::put(ostreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, wchar_t, tm const*, wchar_t const*, wchar_t const*) const(GLIBCXX_3.4)</code> [ISO CXX]
<code>time_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>::put(ostreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, wchar_t, tm const*, char, char) const(GLIBCXX_3.4)</code> [ISO CXX]
<code>time_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>::do_put(ostreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, wchar_t, tm const*, char, char) const(GLIBCXX_3.4)</code> [ISO CXX]
<code>time_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>::~time_put()(GLIBCXX_3.4)</code> [ISO CXX]
<code>time_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>::~time_put()(GLIBCXX_3.4)</code> [ISO CXX]
<code>time_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>::~time_put()(GLIBCXX_3.4)</code> [ISO CXX]

An LSB conforming implementation shall provide the generic data interfaces for Class `std::time_put<wchar_t, std::ostreambuf_iterator<wchar_t, std::char_traits<wchar_t>>>` specified in [Table 9-357](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-357 libstdc++ - Class `time_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>` Data Interfaces

guard variable for <code>time_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>::id(GLIBCXX_3.4)</code> [CXXABI]
<code>time_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>::id(GLIBCXX_3.4)</code> [ISOcxx]
typeinfo for <code>time_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>(GLIBCXX_3.4)</code> [CXXABI]
typeinfo name for <code>time_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>(GLIBCXX_3.4)</code> [CXXABI]
vtable for <code>time_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>(GLIBCXX_3.4)</code> [CXXABI]

9.1.121 Class `moneypunct<char, false>`

9.1.121.1 Class data for `moneypunct<char, false>`

The virtual table for the `std::moneypunct<char, false>` class is described by [Table 9-358](#)

Table 9-358 Primary vtable for `moneypunct<char, false>`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>moneypunct<char, false></code>
vfunc[0]:	<code>moneypunct<char, false>::~moneypunct()</code>
vfunc[1]:	<code>moneypunct<char, false>::~moneypunct()</code>
vfunc[2]:	<code>moneypunct<char, false>::do_decimal_point() const</code>
vfunc[3]:	<code>moneypunct<char, false>::do_thousands_sep() const</code>
vfunc[4]:	<code>moneypunct<char, false>::do_grouping() const</code>
vfunc[5]:	<code>moneypunct<char, false>::do_curr_symbol() const</code>
vfunc[6]:	<code>moneypunct<char, false>::do_positive_sign() const</code>
vfunc[7]:	<code>moneypunct<char, false>::do_negative_sign() const</code>
vfunc[8]:	<code>moneypunct<char, false>::do_frac_digits() const</code>

vfunc[9]:	moneypunct<char, false>::do_pos_format() const
vfunc[10]:	moneypunct<char, false>::do_neg_format() const

9.1.121.2 Interfaces for Class moneypunct<char, false>

An LSB conforming implementation shall provide the generic methods for Class std::moneypunct<char, false> specified in [Table 9-359](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-359 libstdc++ - Class moneypunct<char, false> Function Interfaces

moneypunct<char, false>::neg_format() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, false>::pos_format() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, false>::curr_symbol() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, false>::do_grouping() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, false>::frac_digits() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, false>::decimal_point() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, false>::do_neg_format() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, false>::do_pos_format() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, false>::negative_sign() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, false>::positive_sign() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, false>::thousands_sep() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, false>::do_curr_symbol() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, false>::do_frac_digits() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, false>::do_decimal_point() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, false>::do_negative_sign() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, false>::do_positive_sign() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, false>::do_thousands_sep() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, false>::grouping() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, false>::_M_initialize_moneypunct(__locale_struct*, char const*)(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, false>::~moneypunct()(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, false>::~moneypunct()(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, false>::~moneypunct()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::moneypunct<char, false> specified in [Table 9-360](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-360 libstdc++ - Class moneypunct<char, false> Data Interfaces

guard variable for moneypunct<char, false>::id(GLIBCXX_3.4) [CXXABI]
moneypunct<char, false>::id(GLIBCXX_3.4) [ISOCXX]

<code>moneypunct<char, false>::intl(GLIBCXX_3.4)</code> [ISOCXX]
<code>typeinfo for moneypunct<char, false>(GLIBCXX_3.4)</code> [CXXABI]
<code>typeinfo name for moneypunct<char, false>(GLIBCXX_3.4)</code> [CXXABI]
<code>vtable for moneypunct<char, false>(GLIBCXX_3.4)</code> [CXXABI]

9.1.122 Class `moneypunct<char, true>`

9.1.122.1 Class data for `moneypunct<char, true>`

The virtual table for the `std::moneypunct<char, true>` class is described by [Table 9-361](#)

Table 9-361 Primary vtable for `moneypunct<char, true>`

Base Offset	0
Virtual Base Offset	0
RTTI	<code>typeinfo for moneypunct<char, true></code>
<code>vfunc[0]:</code>	<code>moneypunct<char, true>::~moneypunct()</code>
<code>vfunc[1]:</code>	<code>moneypunct<char, true>::~moneypunct()</code>
<code>vfunc[2]:</code>	<code>moneypunct<char, true>::do_decimal_point() const</code>
<code>vfunc[3]:</code>	<code>moneypunct<char, true>::do_thousands_sep() const</code>
<code>vfunc[4]:</code>	<code>moneypunct<char, true>::do_grouping() const</code>
<code>vfunc[5]:</code>	<code>moneypunct<char, true>::do_curr_symbol() const</code>
<code>vfunc[6]:</code>	<code>moneypunct<char, true>::do_positive_sign() const</code>
<code>vfunc[7]:</code>	<code>moneypunct<char, true>::do_negative_sign() const</code>
<code>vfunc[8]:</code>	<code>moneypunct<char, true>::do_frac_digits() const</code>
<code>vfunc[9]:</code>	<code>moneypunct<char, true>::do_pos_format() const</code>
<code>vfunc[10]:</code>	<code>moneypunct<char, true>::do_neg_format() const</code>

9.1.122.2 Interfaces for Class `moneypunct<char, true>`

An LSB conforming implementation shall provide the generic methods for Class `std::moneypunct<char, true>` specified in [Table 9-362](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-362 libstdc++ - Class `moneypunct<char, true>` Function Interfaces

<code>moneypunct<char, true>::neg_format() const(GLIBCXX_3.4)</code> [ISOCXX]

moneypunct<char, true>::pos_format() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, true>::curr_symbol() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, true>::do_grouping() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, true>::frac_digits() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, true>::decimal_point() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, true>::do_neg_format() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, true>::do_pos_format() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, true>::negative_sign() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, true>::positive_sign() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, true>::thousands_sep() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, true>::do_curr_symbol() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, true>::do_frac_digits() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, true>::do_decimal_point() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, true>::do_negative_sign() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, true>::do_positive_sign() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, true>::do_thousands_sep() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, true>::grouping() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, true>::_M_initialize_moneypunct(__locale_struct*, char const*)(GLIBCXX_3.4) [ISOCXXI]
moneypunct<char, true>::~moneypunct()(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, true>::~moneypunct()(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, true>::~moneypunct()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::moneypunct<char, true> specified in [Table 9-363](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-363 libstdc++ - Class moneypunct<char, true> Data Interfaces

guard variable for moneypunct<char, true>::id(GLIBCXX_3.4) [CXXABI]
moneypunct<char, true>::id(GLIBCXX_3.4) [ISOCXX]
moneypunct<char, true>::intl(GLIBCXX_3.4) [ISOCXX]
typeinfo for moneypunct<char, true>(GLIBCXX_3.4) [CXXABI]
typeinfo name for moneypunct<char, true>(GLIBCXX_3.4) [CXXABI]
vtable for moneypunct<char, true>(GLIBCXX_3.4) [CXXABI]

9.1.123 Class moneypunct<wchar_t, false>

9.1.123.1 Class data for moneypunct<wchar_t, false>

The virtual table for the std::moneypunct<wchar_t, false> class is described by [Table 9-364](#)

Table 9-364 Primary vtable for moneypunct<wchar_t, false>

Base Offset	0
-------------	---

Virtual Base Offset	0
RTTI	typeinfo for moneypunct<wchar_t, false>
vfunc[0]:	moneypunct<wchar_t, false>::~moneypunct()
vfunc[1]:	moneypunct<wchar_t, false>::~moneypunct()
vfunc[2]:	moneypunct<wchar_t, false>::do_decimal_point() const
vfunc[3]:	moneypunct<wchar_t, false>::do_thousands_sep() const
vfunc[4]:	moneypunct<wchar_t, false>::do_grouping() const
vfunc[5]:	moneypunct<wchar_t, false>::do_curr_symbol() const
vfunc[6]:	moneypunct<wchar_t, false>::do_positive_sign() const
vfunc[7]:	moneypunct<wchar_t, false>::do_negative_sign() const
vfunc[8]:	moneypunct<wchar_t, false>::do_frac_digits() const
vfunc[9]:	moneypunct<wchar_t, false>::do_pos_format() const
vfunc[10]:	moneypunct<wchar_t, false>::do_neg_format() const

9.1.123.2 Interfaces for Class `moneypunct<wchar_t, false>`

An LSB conforming implementation shall provide the generic methods for Class `std::moneypunct<wchar_t, false>` specified in [Table 9-365](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-365 libstdcxx - Class `moneypunct<wchar_t, false>` Function Interfaces

<code>moneypunct<wchar_t, false>::neg_format() const(GLIBCXX_3.4)</code> [ISOCXX]
<code>moneypunct<wchar_t, false>::pos_format() const(GLIBCXX_3.4)</code> [ISOCXX]
<code>moneypunct<wchar_t, false>::curr_symbol() const(GLIBCXX_3.4)</code> [ISOCXX]
<code>moneypunct<wchar_t, false>::do_grouping() const(GLIBCXX_3.4)</code> [ISOCXX]
<code>moneypunct<wchar_t, false>::frac_digits() const(GLIBCXX_3.4)</code> [ISOCXX]
<code>moneypunct<wchar_t, false>::decimal_point() const(GLIBCXX_3.4)</code> [ISOCXX]
<code>moneypunct<wchar_t, false>::do_neg_format() const(GLIBCXX_3.4)</code> [ISOCXX]
<code>moneypunct<wchar_t, false>::do_pos_format() const(GLIBCXX_3.4)</code> [ISOCXX]
<code>moneypunct<wchar_t, false>::negative_sign() const(GLIBCXX_3.4)</code> [ISOCXX]
<code>moneypunct<wchar_t, false>::positive_sign() const(GLIBCXX_3.4)</code> [ISOCXX]

moneypunct<wchar_t, false>::thousands_sep() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, false>::do_curr_symbol() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, false>::do_frac_digits() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, false>::do_decimal_point() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, false>::do_negative_sign() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, false>::do_positive_sign() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, false>::do_thousands_sep() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, false>::grouping() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, false>::_M_initialize_moneypunct(__locale_struct*, char const*)(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, false>::~moneypunct()(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, false>::~moneypunct()(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, false>::~moneypunct()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::moneypunct<wchar_t, false> specified in [Table 9-366](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-366 libstdcxx - Class moneypunct<wchar_t, false> Data Interfaces

guard variable for moneypunct<wchar_t, false>::id(GLIBCXX_3.4) [CXXABI]
moneypunct<wchar_t, false>::id(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, false>::intl(GLIBCXX_3.4) [ISOCXX]
typeinfo for moneypunct<wchar_t, false>(GLIBCXX_3.4) [CXXABI]
typeinfo name for moneypunct<wchar_t, false>(GLIBCXX_3.4) [CXXABI]
vtable for moneypunct<wchar_t, false>(GLIBCXX_3.4) [CXXABI]

9.1.124 Class moneypunct<wchar_t, true>

9.1.124.1 Class data for moneypunct<wchar_t, true>

The virtual table for the std::moneypunct<wchar_t, true> class is described by [Table 9-367](#)

Table 9-367 Primary vtable for moneypunct<wchar_t, true>

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for moneypunct<wchar_t, true>
vfunc[0]:	moneypunct<wchar_t, true>::~moneypunct()

vfunc[1]:	moneypunct<wchar_t, true>::~moneypunct()
vfunc[2]:	moneypunct<wchar_t, true>::do_decimal_point() const
vfunc[3]:	moneypunct<wchar_t, true>::do_thousands_sep() const
vfunc[4]:	moneypunct<wchar_t, true>::do_grouping() const
vfunc[5]:	moneypunct<wchar_t, true>::do_curr_symbol() const
vfunc[6]:	moneypunct<wchar_t, true>::do_positive_sign() const
vfunc[7]:	moneypunct<wchar_t, true>::do_negative_sign() const
vfunc[8]:	moneypunct<wchar_t, true>::do_frac_digits() const
vfunc[9]:	moneypunct<wchar_t, true>::do_pos_format() const
vfunc[10]:	moneypunct<wchar_t, true>::do_neg_format() const

9.1.124.2 Interfaces for Class moneypunct<wchar_t, true>

An LSB conforming implementation shall provide the generic methods for Class std::moneypunct<wchar_t, true> specified in [Table 9-368](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-368 libstdc++ - Class moneypunct<wchar_t, true> Function Interfaces

moneypunct<wchar_t, true>::neg_format() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, true>::pos_format() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, true>::curr_symbol() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, true>::do_grouping() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, true>::frac_digits() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, true>::decimal_point() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, true>::do_neg_format() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, true>::do_pos_format() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, true>::negative_sign() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, true>::positive_sign() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, true>::thousands_sep() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, true>::do_curr_symbol() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, true>::do_frac_digits() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, true>::do_decimal_point() const(GLIBCXX_3.4)

[ISOCXX]
moneypunct<wchar_t, true>::do_negative_sign() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, true>::do_positive_sign() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, true>::do_thousands_sep() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, true>::grouping() const(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, true>::_M_initialize_moneypunct(__locale_struct*, char const*)(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, true>::~moneypunct()(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, true>::~moneypunct()(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, true>::~moneypunct()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::moneypunct<wchar_t, true> specified in [Table 9-369](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-369 libstdc++ - Class moneypunct<wchar_t, true> Data Interfaces

guard variable for moneypunct<wchar_t, true>::id(GLIBCXX_3.4) [CXXABI]
moneypunct<wchar_t, true>::id(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, true>::intl(GLIBCXX_3.4) [ISOCXX]
typeinfo for moneypunct<wchar_t, true>(GLIBCXX_3.4) [CXXABI]
typeinfo name for moneypunct<wchar_t, true>(GLIBCXX_3.4) [CXXABI]
vtable for moneypunct<wchar_t, true>(GLIBCXX_3.4) [CXXABI]

9.1.125 Class moneypunct_byname<char, false>

9.1.125.1 Class data for moneypunct_byname<char, false>

The virtual table for the std::moneypunct_byname<char, false> class is described by [Table 9-370](#)

Table 9-370 Primary vtable for moneypunct_byname<char, false>

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for moneypunct_byname<char, false>
vfunc[0]:	moneypunct_byname<char, false>::~moneypunct_byname()
vfunc[1]:	moneypunct_byname<char, false>::~moneypunct_byname()
vfunc[2]:	moneypunct<char, false>::do_decimal_point() const
vfunc[3]:	moneypunct<char, false>::do_thousands_sep() const

vfunc[4]:	moneypunct<char, false>::do_grouping() const
vfunc[5]:	moneypunct<char, false>::do_curr_symbol() const
vfunc[6]:	moneypunct<char, false>::do_positive_sign() const
vfunc[7]:	moneypunct<char, false>::do_negative_sign() const
vfunc[8]:	moneypunct<char, false>::do_frac_digits() const
vfunc[9]:	moneypunct<char, false>::do_pos_format() const
vfunc[10]:	moneypunct<char, false>::do_neg_format() const

The Run Time Type Information for the std::moneypunct_byname<char, false> class is described by [Table 9-371](#)

Table 9-371 typeinfo for moneypunct_byname<char, false>

Base Vtable	vtable for _cxxabiv1::__si_class_type_info
Name	typeinfo name for moneypunct_byname<char, false>

9.1.125.2 Interfaces for Class moneypunct_byname<char, false>

An LSB conforming implementation shall provide the generic methods for Class std::moneypunct_byname<char, false> specified in [Table 9-372](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-372 libstdc++ - Class moneypunct_byname<char, false> Function Interfaces

moneypunct_byname<char, false>::~moneypunct_byname()(GLIBCXX_3.4) [ISOCXX]
moneypunct_byname<char, false>::~moneypunct_byname()(GLIBCXX_3.4) [ISOCXX]
moneypunct_byname<char, false>::~moneypunct_byname()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::moneypunct_byname<char, false> specified in [Table 9-373](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-373 libstdc++ - Class moneypunct_byname<char, false> Data Interfaces

moneypunct_byname<char, false>::intl(GLIBCXX_3.4) [ISOCXX]
typeinfo for moneypunct_byname<char, false>(GLIBCXX_3.4) [CXXABI]
typeinfo name for moneypunct_byname<char, false>(GLIBCXX_3.4)

[CXXABI]

vtable for moneypunct_byname<char, false>(GLIBCXX_3.4) [CXXABI]

9.1.126 Class moneypunct_byname<char, true>

9.1.126.1 Class data for moneypunct_byname<char, true>

The virtual table for the std::moneypunct_byname<char, true> class is described by [Table 9-374](#)

Table 9-374 Primary vtable for moneypunct_byname<char, true>

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for moneypunct_byname<char, true>
vfunc[0]:	moneypunct_byname<char, true>::~moneypunct_byname()
vfunc[1]:	moneypunct_byname<char, true>::~moneypunct_byname()
vfunc[2]:	moneypunct<char, true>::do_decimal_point() const
vfunc[3]:	moneypunct<char, true>::do_thousands_sep() const
vfunc[4]:	moneypunct<char, true>::do_grouping() const
vfunc[5]:	moneypunct<char, true>::do_curr_symbol() const
vfunc[6]:	moneypunct<char, true>::do_positive_sign() const
vfunc[7]:	moneypunct<char, true>::do_negative_sign() const
vfunc[8]:	moneypunct<char, true>::do_frac_digits() const
vfunc[9]:	moneypunct<char, true>::do_pos_format() const
vfunc[10]:	moneypunct<char, true>::do_neg_format() const

The Run Time Type Information for the std::moneypunct_byname<char, true> class is described by [Table 9-375](#)

Table 9-375 typeinfo for moneypunct_byname<char, true>

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for moneypunct_byname<char, true>

9.1.126.2 Interfaces for Class `moneypunct_byname<char, true>`

An LSB conforming implementation shall provide the generic methods for Class `std::moneypunct_byname<char, true>` specified in [Table 9-376](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-376 libstdc++ - Class `moneypunct_byname<char, true>` Function Interfaces

<code>moneypunct_byname<char, true>::~moneypunct_byname()(GLIBCXX_3.4)</code> [ISOCXX]
<code>moneypunct_byname<char, true>::~moneypunct_byname()(GLIBCXX_3.4)</code> [ISOCXX]
<code>moneypunct_byname<char, true>::~moneypunct_byname()(GLIBCXX_3.4)</code> [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class `std::moneypunct_byname<char, true>` specified in [Table 9-377](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-377 libstdc++ - Class `moneypunct_byname<char, true>` Data Interfaces

<code>moneypunct_byname<char, true>::intl(GLIBCXX_3.4)</code> [ISOCXX]
<code>typeinfo for moneypunct_byname<char, true>(GLIBCXX_3.4)</code> [CXXABI]
<code>typeinfo name for moneypunct_byname<char, true>(GLIBCXX_3.4)</code> [CXXABI]
<code>vtable for moneypunct_byname<char, true>(GLIBCXX_3.4)</code> [CXXABI]

9.1.127 Class `moneypunct_byname<wchar_t, false>`

9.1.127.1 Class data for `moneypunct_byname<wchar_t, false>`

The virtual table for the `std::moneypunct_byname<wchar_t, false>` class is described by [Table 9-378](#)

Table 9-378 Primary vtable for `moneypunct_byname<wchar_t, false>`

Base Offset	0
Virtual Base Offset	0
RTTI	<code>typeinfo for moneypunct_byname<wchar_t, false></code>
<code>vfunc[0]:</code>	<code>moneypunct_byname<wchar_t, false>::~moneypunct_byname()</code>
<code>vfunc[1]:</code>	<code>moneypunct_byname<wchar_t, false>::~moneypunct_byname()</code>
<code>vfunc[2]:</code>	<code>moneypunct<wchar_t, false>::do_decimal_point() const</code>
<code>vfunc[3]:</code>	<code>moneypunct<wchar_t, false>::do_thousands_sep() const</code>
<code>vfunc[4]:</code>	<code>moneypunct<wchar_t,</code>

	false>::do_grouping() const
vfunc[5]:	moneypunct<wchar_t, false>::do_curr_symbol() const
vfunc[6]:	moneypunct<wchar_t, false>::do_positive_sign() const
vfunc[7]:	moneypunct<wchar_t, false>::do_negative_sign() const
vfunc[8]:	moneypunct<wchar_t, false>::do_frac_digits() const
vfunc[9]:	moneypunct<wchar_t, false>::do_pos_format() const
vfunc[10]:	moneypunct<wchar_t, false>::do_neg_format() const

The Run Time Type Information for the std::moneypunct_byname<wchar_t, false> class is described by [Table 9-379](#)

Table 9-379 typeinfo for moneypunct_byname<wchar_t, false>

Base Vtable	vtable for _cxxabiv1::_si_class_type_info
Name	typeinfo name for moneypunct_byname<wchar_t, false>

9.1.127.2 Interfaces for Class moneypunct_byname<wchar_t, false>

An LSB conforming implementation shall provide the generic methods for Class std::moneypunct_byname<wchar_t, false> specified in [Table 9-380](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-380 libstdcxx - Class moneypunct_byname<wchar_t, false> Function Interfaces

moneypunct_byname<wchar_t, false>::~moneypunct_byname() (GLIBCXX_3.4) [ISOCXX]
moneypunct_byname<wchar_t, false>::~moneypunct_byname() (GLIBCXX_3.4) [ISOCXX]
moneypunct_byname<wchar_t, false>::~moneypunct_byname() (GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::moneypunct_byname<wchar_t, false> specified in [Table 9-381](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-381 libstdcxx - Class moneypunct_byname<wchar_t, false> Data Interfaces

moneypunct_byname<wchar_t, false>::intl(GLIBCXX_3.4) [ISOCXX]
typeinfo for moneypunct_byname<wchar_t, false>(GLIBCXX_3.4) [CXXABI]
typeinfo name for moneypunct_byname<wchar_t, false>(GLIBCXX_3.4)

[\[CXXABI\]](#)vtable for moneypunct_byname<wchar_t, false>(GLIBCXX_3.4) [\[CXXABI\]](#)**9.1.128 Class moneypunct_byname<wchar_t, true>****9.1.128.1 Class data for moneypunct_byname<wchar_t, true>**

The virtual table for the std::moneypunct_byname<wchar_t, true> class is described by [Table 9-382](#)

Table 9-382 Primary vtable for moneypunct_byname<wchar_t, true>

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for moneypunct_byname<wchar_t, true>
vfunc[0]:	moneypunct_byname<wchar_t, true>::~moneypunct_byname()
vfunc[1]:	moneypunct_byname<wchar_t, true>::~moneypunct_byname()
vfunc[2]:	moneypunct<wchar_t, true>::do_decimal_point() const
vfunc[3]:	moneypunct<wchar_t, true>::do_thousands_sep() const
vfunc[4]:	moneypunct<wchar_t, true>::do_grouping() const
vfunc[5]:	moneypunct<wchar_t, true>::do_curr_symbol() const
vfunc[6]:	moneypunct<wchar_t, true>::do_positive_sign() const
vfunc[7]:	moneypunct<wchar_t, true>::do_negative_sign() const
vfunc[8]:	moneypunct<wchar_t, true>::do_frac_digits() const
vfunc[9]:	moneypunct<wchar_t, true>::do_pos_format() const
vfunc[10]:	moneypunct<wchar_t, true>::do_neg_format() const

The Run Time Type Information for the std::moneypunct_byname<wchar_t, true> class is described by [Table 9-383](#)

Table 9-383 typeinfo for moneypunct_byname<wchar_t, true>

Base Vtable	vtable for __cxxabiv1::__si_class_type_info
Name	typeinfo name for moneypunct_byname<wchar_t, true>

9.1.128.2 Interfaces for Class `moneypunct_byname<wchar_t, true>`

An LSB conforming implementation shall provide the generic methods for Class `std::moneypunct_byname<wchar_t, true>` specified in [Table 9-384](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-384 libstdcxx - Class `moneypunct_byname<wchar_t, true>` Function Interfaces

<code>moneypunct_byname<wchar_t, true>::~moneypunct_byname()</code> (GLIBCXX_3.4) [ISOCXX]
<code>moneypunct_byname<wchar_t, true>::~moneypunct_byname()</code> (GLIBCXX_3.4) [ISOCXX]
<code>moneypunct_byname<wchar_t, true>::~moneypunct_byname()</code> (GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class `std::moneypunct_byname<wchar_t, true>` specified in [Table 9-385](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-385 libstdcxx - Class `moneypunct_byname<wchar_t, true>` Data Interfaces

<code>moneypunct_byname<wchar_t, true>::intl(GLIBCXX_3.4)</code> [ISOCXX]
<code>typeinfo</code> for <code>moneypunct_byname<wchar_t, true>(GLIBCXX_3.4)</code> [CXXABI]
<code>typeinfo</code> name for <code>moneypunct_byname<wchar_t, true>(GLIBCXX_3.4)</code> [CXXABI]
<code>vtable</code> for <code>moneypunct_byname<wchar_t, true>(GLIBCXX_3.4)</code> [CXXABI]

9.1.129 Class `money_base`

9.1.129.1 Class data for `money_base`

The Run Time Type Information for the `std::money_base` class is described by [Table 9-386](#)

Table 9-386 typeinfo for `money_base`

Base Vtable	<code>vtable for __cxxabiv1::__class_type_info</code>
Name	<code>typeinfo</code> name for <code>money_base</code>

9.1.129.2 Interfaces for Class `money_base`

An LSB conforming implementation shall provide the generic methods for Class `std::money_base` specified in [Table 9-387](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-387 libstdcxx - Class `money_base` Function Interfaces

<code>money_base::__S_construct_pattern(char, char, char)(GLIBCXX_3.4)</code> [ISOCXX]
--

An LSB conforming implementation shall provide the generic data interfaces for Class `std::money_base` specified in [Table 9-388](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-388 libstdc++ - Class money_base Data Interfaces

money_base:: S_default_pattern(GLIBCXX_3.4) [ISOCXX]
money_base:: S_atoms(GLIBCXX_3.4) [ISOCXX]
typeinfo for money_base(GLIBCXX_3.4) [CXXABI]
typeinfo name for money_base(GLIBCXX_3.4) [CXXABI]

9.1.130 Class `money_get<char, istreambuf_iterator<char, char_traits<char>>>`

9.1.130.1 Class data for `money_get<char, istreambuf_iterator<char, char_traits<char>>>`

The virtual table for the `std::money_get<char, std::istreambuf_iterator<char, std::char_traits<char>>>` class is described by [Table 9-389](#)

Table 9-389 Primary vtable for `money_get<char, istreambuf_iterator<char, char_traits<char>>>`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>money_get<char, istreambuf_iterator<char, char_traits<char>>></code>
vfunc[0]:	<code>money_get<char, istreambuf_iterator<char, char_traits<char>>>::~money_get()</code>
vfunc[1]:	<code>money_get<char, istreambuf_iterator<char, char_traits<char>>>::~money_get()</code>
vfunc[2]:	<code>money_get<char, istreambuf_iterator<char, char_traits<char>>>::do_get(istreambuf_iterator<char, char_traits<char>>, istreambuf_iterator<char, char_traits<char>>, bool, ios_base&, _Ios_Iostate&, long double&) const</code>
vfunc[3]:	<code>money_get<char, istreambuf_iterator<char, char_traits<char>>>::do_get(istreambuf_iterator<char, char_traits<char>>, istreambuf_iterator<char, char_traits<char>>, basic_string<char, char_traits<char>, allocator<char>>&) const</code>

The Run Time Type Information for the `std::money_get<char, std::istreambuf_iterator<char, std::char_traits<char>>>` class is described by [Table 9-390](#)

Table 9-390 typeinfo for money_get<char, istreambuf_iterator<char, char_traits<char> >>

Base Vtable	vtable for _cxxabiv1::__si_class_type_info
Name	typeinfo name for money_get<char, istreambuf_iterator<char, char_traits<char> >>

9.1.130.2 Interfaces for Class money_get<char, istreambuf_iterator<char, char_traits<char> >>

An LSB conforming implementation shall provide the generic methods for Class std::money_get<char, std::istreambuf_iterator<char, std::char_traits<char> >> specified in [Table 9-391](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-391 libstdcxx - Class money_get<char, istreambuf_iterator<char, char_traits<char> >> Function Interfaces

istreambuf_iterator<char, char_traits<char> > money_get<char, istreambuf_iterator<char, char_traits<char> >>::_M_extract<false>(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, basic_string<char, char_traits<char>, allocator<char> >&) const(GLIBCXX_3.4) [ISOCXX]
istreambuf_iterator<char, char_traits<char> > money_get<char, istreambuf_iterator<char, char_traits<char> >>::_M_extract<true>(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, basic_string<char, char_traits<char>, allocator<char> >&) const(GLIBCXX_3.4) [ISOCXX]
money_get<char, istreambuf_iterator<char, char_traits<char> >>::get(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, bool, ios_base&, _Ios_Iostate&, basic_string<char, char_traits<char>, allocator<char> >&) const(GLIBCXX_3.4) [ISOCXX]
money_get<char, istreambuf_iterator<char, char_traits<char> >>::get(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, bool, ios_base&, _Ios_Iostate&, long double&) const(GLIBCXX_3.4) [ISOCXX]
money_get<char, istreambuf_iterator<char, char_traits<char> >>::do_get(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, bool, ios_base&, _Ios_Iostate&, basic_string<char, char_traits<char>, allocator<char> >&) const(GLIBCXX_3.4) [ISOCXX]
money_get<char, istreambuf_iterator<char, char_traits<char> >>::do_get(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, bool, ios_base&, _Ios_Iostate&, long double&) const(GLIBCXX_3.4) [ISOCXX]
money_get<char, istreambuf_iterator<char, char_traits<char> >>::~money_get()(GLIBCXX_3.4) [ISOCXX]

money_get<char, istreambuf_iterator<char, char_traits<char> > >::~money_get()(GLIBCXX_3.4) [ISOCXX]
money_get<char, istreambuf_iterator<char, char_traits<char> > >::~money_get()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::money_get<char, std::istreambuf_iterator<char, std::char_traits<char> >> specified in [Table 9-392](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-392 libstdc++ - Class money_get<char, istreambuf_iterator<char, char_traits<char> >> Data Interfaces

guard variable for money_get<char, istreambuf_iterator<char, char_traits<char> >>::id(GLIBCXX_3.4) [CXXABI]
money_get<char, istreambuf_iterator<char, char_traits<char> >>::id(GLIBCXX_3.4) [ISOCXX]
typeinfo for money_get<char, istreambuf_iterator<char, char_traits<char> >>(GLIBCXX_3.4) [CXXABI]
typeinfo name for money_get<char, istreambuf_iterator<char, char_traits<char> >>(GLIBCXX_3.4) [CXXABI]
vtable for money_get<char, istreambuf_iterator<char, char_traits<char> >>(GLIBCXX_3.4) [CXXABI]

9.1.131 Class money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> >>

9.1.131.1 Class data for money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> >>

The virtual table for the std::money_get<wchar_t, std::istreambuf_iterator<wchar_t, std::char_traits<wchar_t> >> class is described by [Table 9-393](#)

Table 9-393 Primary vtable for money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> >>

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> >>
vfunc[0]:	money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> >>::~money_get()
vfunc[1]:	money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> >>::money_get()

vfunc[2]:	money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::do_get(istreambuf_iterator<wchar _t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, bool, ios_base&, _Ios_Iostate&, long double&) const
vfunc[3]:	money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::do_get(istreambuf_iterator<wchar _t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, bool, ios_base&, _Ios_Iostate&, basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t>>&) const

The Run Time Type Information for the std::money_get<wchar_t, std::istreambuf_iterator<wchar_t, std::char_traits<wchar_t>>> class is described by [Table 9-394](#)

Table 9-394 typeinfo for money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>>

Base Vtable	vtable for <code>_cxxabiv1::_si_class_type_info</code>
Name	typeinfo name for money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>>

9.1.131.2 Interfaces for Class money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>>

An LSB conforming implementation shall provide the generic methods for Class std::money_get<wchar_t, std::istreambuf_iterator<wchar_t, std::char_traits<wchar_t>>> specified in [Table 9-395](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-395 libstdcxx - Class money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>> Function Interfaces

istreambuf_iterator<wchar_t, char_traits<wchar_t>> money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::_M_extract<false>(istreambuf_iterator<wchar_t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, _Ios_Iostate&, basic_string<char, char_traits<char>, allocator<char>>&) const(GLIBCXX_3.4) [ISO CXX]
istreambuf_iterator<wchar_t, char_traits<wchar_t>> money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>

>:_M_extract<true>(istreambuf_iterator<wchar_t, char_traits<wchar_t> >, istreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, _Ios_Iostate&, basic_string<char, char_traits<char>, allocator<char> >&) const(GLIBCXX_3.4) [ISOCXX]
money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::get(istreambuf_iterator<wchar_t, char_traits<wchar_t> >, istreambuf_iterator<wchar_t, char_traits<wchar_t> >, bool, ios_base&, _Ios_Iostate&, basic_string<wchar_t, char_traits<wchar_t> >, allocator<wchar_t> >&) const(GLIBCXX_3.4) [ISOCXX]
money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::get(istreambuf_iterator<wchar_t, char_traits<wchar_t> >, istreambuf_iterator<wchar_t, char_traits<wchar_t> >, bool, ios_base&, _Ios_Iostate&, long double&) const(GLIBCXX_3.4) [ISOCXX]
money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::do_get(istreambuf_iterator<wchar_t, char_traits<wchar_t> >, istreambuf_iterator<wchar_t, char_traits<wchar_t> >, bool, ios_base&, _Ios_Iostate&, basic_string<wchar_t, char_traits<wchar_t> >, allocator<wchar_t> >&) const(GLIBCXX_3.4) [ISOCXX]
money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::do_get(istreambuf_iterator<wchar_t, char_traits<wchar_t> >, istreambuf_iterator<wchar_t, char_traits<wchar_t> >, bool, ios_base&, _Ios_Iostate&, long double&) const(GLIBCXX_3.4) [ISOCXX]
money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::~money_get()(GLIBCXX_3.4) [ISOCXX]
money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::~money_get()(GLIBCXX_3.4) [ISOCXX]
money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::~money_get()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::money_get<wchar_t, std::istreambuf_iterator<wchar_t, std::char_traits<wchar_t> > > specified in [Table 9-396](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-396 libstdcxx - Class money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > > Data Interfaces

guard variable for money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::id(GLIBCXX_3.4) [CXXABI]
money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::id(GLIBCXX_3.4) [ISOCXX]
typeinfo for money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::(GLIBCXX_3.4) [CXXABI]
typeinfo name for money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::(GLIBCXX_3.4) [CXXABI]
vtable for money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t> > >::(GLIBCXX_3.4) [CXXABI]

9.1.132 Class `money_put<char, ostreambuf_iterator<char, char_traits<char> >>`

9.1.132.1 Class data for `money_put<char, ostreambuf_iterator<char, char_traits<char> >>`

The virtual table for the `std::money_put<char, std::ostreambuf_iterator<char, std::char_traits<char> >>` class is described by [Table 9-397](#)

Table 9-397 Primary vtable for `money_put<char, ostreambuf_iterator<char, char_traits<char> >>`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>money_put<char, ostreambuf_iterator<char, char_traits<char> >></code>
vfunc[0]:	<code>money_put<char, ostreambuf_iterator<char, char_traits<char> >>::~money_put()</code>
vfunc[1]:	<code>money_put<char, ostreambuf_iterator<char, char_traits<char> >>::~money_put()</code>
vfunc[2]:	<code>money_put<char, ostreambuf_iterator<char, char_traits<char> >>::do_put(ostreambuf_iterator<char, char_traits<char> >, bool, ios_base&, char, long double) const</code>
vfunc[3]:	<code>money_put<char, ostreambuf_iterator<char, char_traits<char> >>::do_put(ostreambuf_iterator<char, char_traits<char> >, bool, ios_base&, char, basic_string<char, char_traits<char>, allocator<char> > const&) const</code>

The Run Time Type Information for the `std::money_put<char, std::ostreambuf_iterator<char, std::char_traits<char> >>` class is described by [Table 9-398](#)

Table 9-398 typeinfo for `money_put<char, ostreambuf_iterator<char, char_traits<char> >>`

Base Vtable	vtable for <code>__cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for <code>money_put<char, ostreambuf_iterator<char, char_traits<char> >></code>

9.1.132.2 Interfaces for Class `money_put<char, ostreambuf_iterator<char, char_traits<char> >`

An LSB conforming implementation shall provide the generic methods for Class `std::money_put<char, std::ostreambuf_iterator<char, std::char_traits<char> >` specified in [Table 9-399](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-399 libstdc++ - Class `money_put<char, ostreambuf_iterator<char, char_traits<char> >` Function Interfaces

<code>money_put<char, ostreambuf_iterator<char, char_traits<char> ></code> <code>>::put(ostreambuf_iterator<char, char_traits<char> >, bool, ios_base&, char,</code> <code>basic_string<char, char_traits<char>, allocator<char> > const&)</code> <code>const(GLIBCXX_3.4) [ISOcxx]</code>
<code>money_put<char, ostreambuf_iterator<char, char_traits<char> ></code> <code>>::put(ostreambuf_iterator<char, char_traits<char> >, bool, ios_base&, char,</code> <code>long double) const(GLIBCXX_3.4) [ISOcxx]</code>
<code>money_put<char, ostreambuf_iterator<char, char_traits<char> ></code> <code>>::do_put(ostreambuf_iterator<char, char_traits<char> >, bool, ios_base&,</code> <code>char, basic_string<char, char_traits<char>, allocator<char> > const&)</code> <code>const(GLIBCXX_3.4) [ISOcxx]</code>
<code>money_put<char, ostreambuf_iterator<char, char_traits<char> ></code> <code>>::do_put(ostreambuf_iterator<char, char_traits<char> >, bool, ios_base&,</code> <code>char, long double) const(GLIBCXX_3.4) [ISOcxx]</code>
<code>ostreambuf_iterator<char, char_traits<char> > money_put<char,</code> <code>ostreambuf_iterator<char, char_traits<char> ></code> <code>>::_M_insert<false>(ostreambuf_iterator<char, char_traits<char> >,</code> <code>ios_base&, char, basic_string<char, char_traits<char>, allocator<char> ></code> <code>const&) const(GLIBCXX_3.4) [ISOcxx]</code>
<code>ostreambuf_iterator<char, char_traits<char> > money_put<char,</code> <code>ostreambuf_iterator<char, char_traits<char> ></code> <code>>::_M_insert<true>(ostreambuf_iterator<char, char_traits<char> >,</code> <code>ios_base&, char, basic_string<char, char_traits<char>, allocator<char> ></code> <code>const&) const(GLIBCXX_3.4) [ISOcxx]</code>
<code>money_put<char, ostreambuf_iterator<char, char_traits<char> ></code> <code>>::~money_put()(GLIBCXX_3.4) [ISOcxx]</code>
<code>money_put<char, ostreambuf_iterator<char, char_traits<char> ></code> <code>>::~money_put()(GLIBCXX_3.4) [ISOcxx]</code>
<code>money_put<char, ostreambuf_iterator<char, char_traits<char> ></code> <code>>::~money_put()(GLIBCXX_3.4) [ISOcxx]</code>

An LSB conforming implementation shall provide the generic data interfaces for Class `std::money_put<char, std::ostreambuf_iterator<char, std::char_traits<char> > >` specified in [Table 9-400](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-400 libstdc++ - Class `money_put<char, ostreambuf_iterator<char, char_traits<char> >` Data Interfaces

guard variable for <code>money_put<char, ostreambuf_iterator<char, char_traits<char> > ::id(GLIBCXX_3.4) [CXXABI]</code>

money_put<char, ostreambuf_iterator<char, char_traits<char> > >::id(GLIBCXX_3.4) [ISOCXX]
typeinfo for money_put<char, ostreambuf_iterator<char, char_traits<char> > >(GLIBCXX_3.4) [CXXABI]
typeinfo name for money_put<char, ostreambuf_iterator<char, char_traits<char> > >(GLIBCXX_3.4) [CXXABI]
vtable for money_put<char, ostreambuf_iterator<char, char_traits<char> > >(GLIBCXX_3.4) [CXXABI]

9.1.133 Class `money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> >`

>

9.1.133.1 Class data for `money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >`

The virtual table for the `std::money_put<wchar_t, std::ostreambuf_iterator<wchar_t, std::char_traits<wchar_t> > >` class is described by [Table 9-401](#)

Table 9-401 Primary vtable for `money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >
vfunc[0]:	<code>money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >::~money_put()</code>
vfunc[1]:	<code>money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >::~money_put()</code>
vfunc[2]:	<code>money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >::do_put(ostreambuf_iterator<wchar_t, char_traits<wchar_t> >, bool, ios_base&, wchar_t, long double)</code> const
vfunc[3]:	<code>money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >::do_put(ostreambuf_iterator<wchar_t, char_traits<wchar_t> >, bool, ios_base&, wchar_t, basic_string<wchar_t,</code>

	char_traits<wchar_t>, allocator<wchar_t> > const&) const
--	---

The Run Time Type Information for the `std::money_put<wchar_t, std::ostreambuf_iterator<wchar_t, std::char_traits<wchar_t> > >` class is described by [Table 9-402](#)

Table 9-402 typeinfo for `money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >`

Base Vtable	vtable for <code>_cxxabiv1::_si_class_type_info</code>
Name	typeinfo name for <code>money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > ></code>

9.1.133.2 Interfaces for Class `money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >`

An LSB conforming implementation shall provide the generic methods for Class `std::money_put<wchar_t, std::ostreambuf_iterator<wchar_t, std::char_traits<wchar_t> > >` specified in [Table 9-403](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-403 libstdcxx - Class `money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >` Function Interfaces

<code>money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >::put(ostreambuf_iterator<wchar_t, char_traits<wchar_t> >, bool, ios_base&, wchar_t, basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&) const(GLIBCXX_3.4) [ISOCXX]</code>
<code>money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >::put(ostreambuf_iterator<wchar_t, char_traits<wchar_t> >, bool, ios_base&, wchar_t, long double) const(GLIBCXX_3.4) [ISOCXX]</code>
<code>money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >::do_put(ostreambuf_iterator<wchar_t, char_traits<wchar_t> >, bool, ios_base&, wchar_t, basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&) const(GLIBCXX_3.4) [ISOCXX]</code>
<code>money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >::do_put(ostreambuf_iterator<wchar_t, char_traits<wchar_t> >, bool, ios_base&, wchar_t, long double) const(GLIBCXX_3.4) [ISOCXX]</code>
<code>ostreambuf_iterator<wchar_t, char_traits<wchar_t> > money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >::_M_insert<false>(ostreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, wchar_t, basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&) const(GLIBCXX_3.4) [ISOCXX]</code>
<code>ostreambuf_iterator<wchar_t, char_traits<wchar_t> > money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >::_M_insert<true>(ostreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, wchar_t, basic_string<wchar_t, char_traits<wchar_t>, allocator<wchar_t> > const&) const(GLIBCXX_3.4) [ISOCXX]</code>
<code>money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > ></code>

>::~money_put()(GLIBCXX_3.4) [ISOCXX]
money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>> >::~money_put()(GLIBCXX_3.4) [ISOCXX]
money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>> >::~money_put()(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::money_put<wchar_t, std::ostreambuf_iterator<wchar_t, std::char_traits<wchar_t>>> specified in [Table 9-404](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-404 libstdcxx - Class money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>> Data Interfaces

guard variable for money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>::id(GLIBCXX_3.4) [CXXABI]
money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>> >::id(GLIBCXX_3.4) [ISOCXX]
typeinfo for money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>(GLIBCXX_3.4) [CXXABI]
typeinfo name for money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>(GLIBCXX_3.4) [CXXABI]
vtable for money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>(GLIBCXX_3.4) [CXXABI]

9.1.134 Class locale

9.1.134.1 Interfaces for Class locale

An LSB conforming implementation shall provide the generic methods for Class std::locale specified in [Table 9-405](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-405 libstdcxx - Class locale Function Interfaces

locale::id::_M_id() const(GLIBCXX_3.4) [ISOCXX]
locale::name() const(GLIBCXX_3.4) [ISOCXX]
locale::operator==(locale const&) const(GLIBCXX_3.4) [ISOCXX]
locale::_M_coalesce(locale const&, locale const&, int)(GLIBCXX_3.4) [ISOCXX]
locale::_S_normalize_category(int)(GLIBCXX_3.4) [ISOCXX]
locale::_Impl::_M_install_facet(locale::id const*, locale::facet const*) (GLIBCXX_3.4) [LSB]
locale::_Impl::_M_replace_facet(locale::_Impl const*, locale::id const*) (GLIBCXX_3.4) [LSB]
locale::_Impl::~_Impl()(GLIBCXX_3.4) [LSB]
locale::_Impl::~_Impl()(GLIBCXX_3.4) [LSB]
locale::global(locale const&)(GLIBCXX_3.4) [ISOCXX]
locale::classic()(GLIBCXX_3.4) [ISOCXX]

locale::locale(char const*)(GLIBCXX_3.4) [ISOCXX]
locale::locale(locale::_Impl*)(GLIBCXX_3.4) [ISOCXX]
locale::locale(locale const&)(GLIBCXX_3.4) [ISOCXX]
locale::locale(locale const&, locale const&, int)(GLIBCXX_3.4) [ISOCXX]
locale::locale()(GLIBCXX_3.4) [ISOCXX]
locale::locale(char const*)(GLIBCXX_3.4) [ISOCXX]
locale::locale(locale::_Impl*)(GLIBCXX_3.4) [ISOCXX]
locale::locale(locale const&)(GLIBCXX_3.4) [ISOCXX]
locale::locale(locale const&, char const*, int)(GLIBCXX_3.4) [ISOCXX]
locale::locale(locale const&, locale const&, int)(GLIBCXX_3.4) [ISOCXX]
locale::locale()(GLIBCXX_3.4) [ISOCXX]
locale::~locale()(GLIBCXX_3.4) [ISOCXX]
locale::~locale()(GLIBCXX_3.4) [ISOCXX]
locale::operator=(locale const&)(GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::locale specified in [Table 9-406](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-406 libstdcxx - Class locale Data Interfaces

locale::all(GLIBCXX_3.4) [ISOCXX]
locale::none(GLIBCXX_3.4) [ISOCXX]
locale::time(GLIBCXX_3.4) [ISOCXX]
locale::ctype(GLIBCXX_3.4) [ISOCXX]
locale::collate(GLIBCXX_3.4) [ISOCXX]
locale::numeric(GLIBCXX_3.4) [ISOCXX]
locale::messages(GLIBCXX_3.4) [ISOCXX]
locale::monetary(GLIBCXX_3.4) [ISOCXX]

9.1.135 Class locale::facet

9.1.135.1 Class data for locale::facet

The virtual table for the std::locale::facet class is described by [Table 9-407](#)

Table 9-407 Primary vtable for locale::facet

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for locale::facet
vfunc[0]:	locale::facet::~facet()
vfunc[1]:	locale::facet::~facet()

The Run Time Type Information for the std::locale::facet class is described by [Table 9-408](#)

Table 9-408 typeinfo for locale::facet

Base Vtable	vtable for <code>_cxxabiv1::__class_type_info</code>
Name	typeinfo name for locale::facet

9.1.135.2 Interfaces for Class locale::facet

An LSB conforming implementation shall provide the generic methods for Class std::locale::facet specified in [Table 9-409](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-409 libstdc++ - Class locale::facet Function Interfaces

<code>locale::facet::_S_get_c_name(GLIBCXX_3.4.6)</code> [ISOCXX]
<code>locale::facet::_S_get_c_locale(GLIBCXX_3.4)</code> [ISOCXX]
<code>locale::facet::_S_clone_c_locale(__locale_struct*&)(GLIBCXX_3.4)</code> [ISOCXX]
<code>locale::facet::_S_create_c_locale(__locale_struct*&, char const*, __locale_struct*)(GLIBCXX_3.4)</code> [ISOCXX]
<code>locale::facet::_S_destroy_c_locale(__locale_struct*&)(GLIBCXX_3.4)</code> [ISOCXX]
<code>locale::facet::~facet(GLIBCXX_3.4)</code> [ISOCXX]
<code>locale::facet::~facet(GLIBCXX_3.4)</code> [ISOCXX]
<code>locale::facet::~facet(GLIBCXX_3.4)</code> [ISOCXX]
<code>locale::locale(locale const&, char const*, int)(GLIBCXX_3.4)</code> [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::locale::facet specified in [Table 9-410](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-410 libstdc++ - Class locale::facet Data Interfaces

<code>__timepunct_cache<char>::_S_timezones(GLIBCXX_3.4)</code> [ISOCXX]
<code>__timepunct_cache<wchar_t>::_S_timezones(GLIBCXX_3.4)</code> [ISOCXX]
<code>typeinfo for locale::facet(GLIBCXX_3.4)</code> [CXXABI]
<code>typeinfo name for locale::facet(GLIBCXX_3.4)</code> [CXXABI]
<code>vtable for locale::facet(GLIBCXX_3.4)</code> [CXXABI]

9.1.136 facet functions

9.1.136.1 Interfaces for facet functions

An LSB conforming implementation shall provide the generic methods for facet functions specified in [Table 9-411](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-411 libstdc++ - facet functions Function Interfaces

<code>void __convert_to_v<double>(char const*, double&, _Ios_Iostate&, __locale_struct* const&)(GLIBCXX_3.4)</code> [ISOCXX]
<code>void __convert_to_v<long double>(char const*, long double&, _Ios_Iostate&, __locale_struct* const&)(GLIBCXX_3.4)</code> [ISOCXX]

```

void __convert_to_v<float>(char const*, float&, _Ios_Iostate&,
__locale_struct* const&)(GLIBCXX_3.4) [ISOCXX]

bool has_facet<moneypunct<char, false>>(locale const&)(GLIBCXX_3.4)
[ISOCXX]

bool has_facet<moneypunct<wchar_t, false>>(locale const&)(GLIBCXX_3.4)
[ISOCXX]

bool has_facet<ctype<wchar_t>>(locale const&)(GLIBCXX_3.4) [ISOCXX]

bool has_facet<codecvt<char, char, __mbstate_t>>(locale const&)
(GLIBCXX_3.4) [ISOCXX]

bool has_facet<codecvt<wchar_t, char, __mbstate_t>>(locale const&)
(GLIBCXX_3.4) [ISOCXX]

bool has_facet<collate<char>>(locale const&)(GLIBCXX_3.4) [ISOCXX]

bool has_facet<collate<wchar_t>>(locale const&)(GLIBCXX_3.4) [ISOCXX]

bool has_facet<num_get<char, istreambuf_iterator<char, char_traits<char>>
>>(locale const&)(GLIBCXX_3.4) [ISOCXX]

bool has_facet<num_get<wchar_t, istreambuf_iterator<wchar_t,
char_traits<wchar_t>>>>(locale const&)(GLIBCXX_3.4) [ISOCXX]

bool has_facet<num_put<char, ostreambuf_iterator<char, char_traits<char>>
>>>(locale const&)(GLIBCXX_3.4) [ISOCXX]

bool has_facet<num_put<wchar_t, ostreambuf_iterator<wchar_t,
char_traits<wchar_t>>>>(locale const&)(GLIBCXX_3.4) [ISOCXX]

bool has_facet<messages<char>>(locale const&)(GLIBCXX_3.4) [ISOCXX]

bool has_facet<messages<wchar_t>>(locale const&)(GLIBCXX_3.4)
[ISOCXX]

bool has_facet<numpunct<char>>(locale const&)(GLIBCXX_3.4) [ISOCXX]

bool has_facet<numpunct<wchar_t>>(locale const&)(GLIBCXX_3.4)
[ISOCXX]

bool has_facet<time_get<char, istreambuf_iterator<char, char_traits<char>>
>>(locale const&)(GLIBCXX_3.4) [ISOCXX]

bool has_facet<time_get<wchar_t, istreambuf_iterator<wchar_t,
char_traits<wchar_t>>>>(locale const&)(GLIBCXX_3.4) [ISOCXX]

bool has_facet<time_put<char, ostreambuf_iterator<char, char_traits<char>>
>>>(locale const&)(GLIBCXX_3.4) [ISOCXX]

bool has_facet<time_put<wchar_t, ostreambuf_iterator<wchar_t,
char_traits<wchar_t>>>>(locale const&)(GLIBCXX_3.4) [ISOCXX]

bool has_facet<money_get<char, istreambuf_iterator<char, char_traits<char>>
>>>(locale const&)(GLIBCXX_3.4) [ISOCXX]

bool has_facet<money_get<wchar_t, istreambuf_iterator<wchar_t,
char_traits<wchar_t>>>>(locale const&)(GLIBCXX_3.4) [ISOCXX]

bool has_facet<money_put<char, ostreambuf_iterator<char,
char_traits<char>>>>(locale const&)(GLIBCXX_3.4) [ISOCXX]

bool has_facet<money_put<wchar_t, ostreambuf_iterator<wchar_t,
char_traits<wchar_t>>>>>(locale const&)(GLIBCXX_3.4) [ISOCXX]

moneypunct<char, false> const& use_facet<moneypunct<char, false>
>(locale const&)(GLIBCXX_3.4) [ISOCXX]

```

moneypunct<char, true> const& use_facet<moneypunct<char, true>>(locale const&)(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, false> const& use_facet<moneypunct<wchar_t, false>>(locale const&)(GLIBCXX_3.4) [ISOCXX]
moneypunct<wchar_t, true> const& use_facet<moneypunct<wchar_t, true>>(locale const&)(GLIBCXX_3.4) [ISOCXX]
__timepunct<char> const& use_facet<__timepunct<char>>(locale const&)(GLIBCXX_3.4) [ISOCXX]
__timepunct<wchar_t> const& use_facet<__timepunct<wchar_t>>(locale const&)(GLIBCXX_3.4) [ISOCXX]
ctype<char> const& use_facet<ctype<char>>(locale const&)(GLIBCXX_3.4) [ISOCXX]
ctype<wchar_t> const& use_facet<ctype<wchar_t>>(locale const&)(GLIBCXX_3.4) [ISOCXX]
codecvt<char, char, __mbstate_t> const& use_facet<codecvt<char, char, __mbstate_t>>(locale const&)(GLIBCXX_3.4) [ISOCXX]
codecvt<wchar_t, char, __mbstate_t> const& use_facet<codecvt<wchar_t, char, __mbstate_t>>(locale const&)(GLIBCXX_3.4) [ISOCXX]
collate<char> const& use_facet<collate<char>>(locale const&)(GLIBCXX_3.4) [ISOCXX]
collate<wchar_t> const& use_facet<collate<wchar_t>>(locale const&)(GLIBCXX_3.4) [ISOCXX]
num_get<char, istreambuf_iterator<char, char_traits<char>>> const& use_facet<num_get<char, istreambuf_iterator<char, char_traits<char>>>(locale const&)(GLIBCXX_3.4) [ISOCXX]
num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>> const& use_facet<num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>>(locale const&)(GLIBCXX_3.4) [ISOCXX]
num_put<char, ostreambuf_iterator<char, char_traits<char>>> const& use_facet<num_put<char, ostreambuf_iterator<char, char_traits<char>>>(locale const&)(GLIBCXX_3.4) [ISOCXX]
num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>> const& use_facet<num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>(locale const&)(GLIBCXX_3.4) [ISOCXX]
messages<char> const& use_facet<messages<char>>(locale const&)(GLIBCXX_3.4) [ISOCXX]
messages<wchar_t> const& use_facet<messages<wchar_t>>(locale const&)(GLIBCXX_3.4) [ISOCXX]
numpunct<char> const& use_facet<numpunct<char>>(locale const&)(GLIBCXX_3.4) [ISOCXX]
numpunct<wchar_t> const& use_facet<numpunct<wchar_t>>(locale const&)(GLIBCXX_3.4) [ISOCXX]
time_get<char, istreambuf_iterator<char, char_traits<char>>> const& use_facet<time_get<char, istreambuf_iterator<char, char_traits<char>>>(locale const&)(GLIBCXX_3.4) [ISOCXX]
time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>>

const& use_facet<time_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>>(locale const&)(GLIBCXX_3.4) [ISOcxx]
time_put<char, ostreambuf_iterator<char, char_traits<char>>> const& use_facet<time_put<char, ostreambuf_iterator<char, char_traits<char>>>(locale const&)(GLIBCXX_3.4) [ISOcxx]
time_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>> const& use_facet<time_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>(locale const&)(GLIBCXX_3.4) [ISOcxx]
money_get<char, istreambuf_iterator<char, char_traits<char>>> const& use_facet<money_get<char, istreambuf_iterator<char, char_traits<char>>>(locale const&)(GLIBCXX_3.4) [ISOcxx]
money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>> const& use_facet<money_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>>(locale const&)(GLIBCXX_3.4) [ISOcxx]
money_put<char, ostreambuf_iterator<char, char_traits<char>>> const& use_facet<money_put<char, ostreambuf_iterator<char, char_traits<char>>>(locale const&)(GLIBCXX_3.4) [ISOcxx]
money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>> const& use_facet<money_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>(locale const&)(GLIBCXX_3.4) [ISOcxx]

9.1.137 Class `__num_base`

9.1.137.1 Class data for `__num_base`

9.1.137.2 Interfaces for Class `__num_base`

An LSB conforming implementation shall provide the generic methods for Class `std::__num_base` specified in [Table 9-412](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-412 libstdc++ - Class `__num_base` Function Interfaces

<code>__num_base::S_format_float(ios_base const&, char*, char)(GLIBCXX_3.4)</code> [ISOcxx]

An LSB conforming implementation shall provide the generic data interfaces for Class `std::__num_base` specified in [Table 9-413](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-413 libstdc++ - Class `__num_base` Data Interfaces

<code>__num_base::S_atoms_in(GLIBCXX_3.4)</code> [ISOcxx]
<code>__num_base::S_atoms_out(GLIBCXX_3.4)</code> [ISOcxx]

9.1.138 Class `num_get<char, istreambuf_iterator<char, char_traits<char>>>`

9.1.138.1 Class data for `num_get<char, istreambuf_iterator<char, char_traits<char>>>`

The virtual table for the `std::num_get<char, std::istreambuf_iterator<char, std::char_traits<char>>>` class is described by [Table 9-414](#)

Table 9-414 Primary vtable for num_get<char, istreambuf_iterator<char, char_traits<char> >>

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for num_get<char, istreambuf_iterator<char, char_traits<char> >>
vfunc[0]:	num_get<char, istreambuf_iterator<char, char_traits<char> >>::~num_get()
vfunc[1]:	num_get<char, istreambuf_iterator<char, char_traits<char> >>::~num_get()
vfunc[2]:	num_get<char, istreambuf_iterator<char, char_traits<char> >>::do_get(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, bool&) const
vfunc[3]:	num_get<char, istreambuf_iterator<char, char_traits<char> >>::do_get(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, long&) const
vfunc[4]:	num_get<char, istreambuf_iterator<char, char_traits<char> >>::do_get(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, unsigned short&) const
vfunc[5]:	num_get<char, istreambuf_iterator<char, char_traits<char> >>::do_get(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, unsigned int&) const
vfunc[6]:	num_get<char, istreambuf_iterator<char, char_traits<char> >>::do_get(istreambuf_iterator<char,

	<code>char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, unsigned long&) const</code>
vfunc[7]:	<code>num_get<char, istreambuf_iterator<char, char_traits<char> > >; do_get(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, long long&) const</code>
vfunc[8]:	<code>num_get<char, istreambuf_iterator<char, char_traits<char> > >; do_get(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, unsigned long long&) const</code>
vfunc[9]:	<code>num_get<char, istreambuf_iterator<char, char_traits<char> > >; do_get(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, float&) const</code>
vfunc[10]:	<code>num_get<char, istreambuf_iterator<char, char_traits<char> > >; do_get(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, double&) const</code>
vfunc[11]:	<code>num_get<char, istreambuf_iterator<char, char_traits<char> > >; do_get(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, long double&) const</code>
vfunc[12]:	<code>num_get<char, istreambuf_iterator<char, char_traits<char> > >; do_get(istreambuf_iterator<char, char_traits<char> >,</code>

	istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, void*&) const
--	--

The Run Time Type Information for the std::num_get<char, std::istreambuf_iterator<char, std::char_traits<char> >> class is described by [Table 9-415](#)

Table 9-415 typeinfo for num_get<char, istreambuf_iterator<char, char_traits<char> >>

Base Vtable	vtable for <code>_cxxabiv1::_si_class_type_info</code>
Name	typeinfo name for num_get<char, istreambuf_iterator<char, char_traits<char> >>
basetype:	typeinfo for locale::facet

9.1.138.2 Interfaces for Class num_get<char, istreambuf_iterator<char, char_traits<char> >>

An LSB conforming implementation shall provide the generic methods for Class std::num_get<char, std::istreambuf_iterator<char, std::char_traits<char> >> specified in [Table 9-416](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-416 libstdcxx - Class num_get<char, istreambuf_iterator<char, char_traits<char> >> Function Interfaces

istreambuf_iterator<char, char_traits<char> > num_get<char, istreambuf_iterator<char, char_traits<char> >>::_M_extract_int<unsigned int>(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, unsigned int&) const(GLIBCXX_3.4) [ISOCXX]
istreambuf_iterator<char, char_traits<char> > num_get<char, istreambuf_iterator<char, char_traits<char> >>::_M_extract_int<long>(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, long&) const(GLIBCXX_3.4) [ISOCXX]
istreambuf_iterator<char, char_traits<char> > num_get<char, istreambuf_iterator<char, char_traits<char> >>::_M_extract_int<unsigned long>(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, unsigned long&) const(GLIBCXX_3.4) [ISOCXX]
istreambuf_iterator<char, char_traits<char> > num_get<char, istreambuf_iterator<char, char_traits<char> >>::_M_extract_int<unsigned short>(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, unsigned short&) const(GLIBCXX_3.4) [ISOCXX]
istreambuf_iterator<char, char_traits<char> > num_get<char, istreambuf_iterator<char, char_traits<char> >>::_M_extract_int<long long>(istreambuf_iterator<char, char_traits<char> >, istreambuf_iterator<char, char_traits<char> >, ios_base&, _Ios_Iostate&, long long&) const(GLIBCXX_3.4) [ISOCXX]

num_get<char, istreambuf_iterator<char, char_traits<char>> >::~num_get() (GLIBCXX_3.4) [ISOCXX]
num_get<char, istreambuf_iterator<char, char_traits<char>> >::~num_get() (GLIBCXX_3.4) [ISOCXX]
num_get<char, istreambuf_iterator<char, char_traits<char>> >::~num_get() (GLIBCXX_3.4) [ISOCXX]

An LSB conforming implementation shall provide the generic data interfaces for Class std::num_get<char, std::istreambuf_iterator<char, std::char_traits<char>> > specified in [Table 9-417](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-417 libstdcxx - Class num_get<char, istreambuf_iterator<char, char_traits<char>> > Data Interfaces

guard variable for num_get<char, istreambuf_iterator<char, char_traits<char>> >::id(GLIBCXX_3.4) [CXXABI]
num_get<char, istreambuf_iterator<char, char_traits<char>> >::id(GLIBCXX_3.4) [ISOCXX]
typeinfo for num_get<char, istreambuf_iterator<char, char_traits<char>> >(GLIBCXX_3.4) [CXXABI]
typeinfo name for num_get<char, istreambuf_iterator<char, char_traits<char>> >(GLIBCXX_3.4) [CXABI]

9.1.139 Class num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >

9.1.139.1 Class data for num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >

The virtual table for the std::num_get<wchar_t, std::istreambuf_iterator<wchar_t, std::char_traits<wchar_t>> > class is described by [Table 9-418](#)

Table 9-418 Primary vtable for num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >
vfunc[0]:	num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::~num_get()
vfunc[1]:	num_get<wchar_t, istreambuf_iterator<wchar_t,

	<code>char_traits<wchar_t> > >::~num_get()</code>
vfunc[2]:	<code>num_get<wchar_t,&br/>istreambuf_iterator<wchar_t,&br/>char_traits<wchar_t> > >::do_get(istreambuf_iterator<wchar _t, char_traits<wchar_t> >, istreambuf_iterator<wchar_t,&br/>char_traits<wchar_t> >, ios_base&, _Ios_Iostate&, bool&) const</code>
vfunc[3]:	<code>num_get<wchar_t,&br/>istreambuf_iterator<wchar_t,&br/>char_traits<wchar_t> > >::do_get(istreambuf_iterator<wchar _t, char_traits<wchar_t> >, istreambuf_iterator<wchar_t,&br/>char_traits<wchar_t> >, ios_base&, _Ios_Iostate&, long&) const</code>
vfunc[4]:	<code>num_get<wchar_t,&br/>istreambuf_iterator<wchar_t,&br/>char_traits<wchar_t> > >::do_get(istreambuf_iterator<wchar _t, char_traits<wchar_t> >, istreambuf_iterator<wchar_t,&br/>char_traits<wchar_t> >, ios_base&, _Ios_Iostate&, unsigned short&) const</code>
vfunc[5]:	<code>num_get<wchar_t,&br/>istreambuf_iterator<wchar_t,&br/>char_traits<wchar_t> > >::do_get(istreambuf_iterator<wchar _t, char_traits<wchar_t> >, istreambuf_iterator<wchar_t,&br/>char_traits<wchar_t> >, ios_base&, _Ios_Iostate&, unsigned int&) const</code>
vfunc[6]:	<code>num_get<wchar_t,&br/>istreambuf_iterator<wchar_t,&br/>char_traits<wchar_t> > >::do_get(istreambuf_iterator<wchar _t, char_traits<wchar_t> >, istreambuf_iterator<wchar_t,&br/>char_traits<wchar_t> >, ios_base&, _Ios_Iostate&, unsigned long&) const</code>
vfunc[7]:	<code>num_get<wchar_t,&br/>istreambuf_iterator<wchar_t,&br/>char_traits<wchar_t> > >::do_get(istreambuf_iterator<wchar _t, char_traits<wchar_t> >, istreambuf_iterator<wchar_t,&br/>char_traits<wchar_t> >, ios_base&,</code>

	_Ios_Iostate&, long long&) const
vfunc[8]:	num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::do_get(istreambuf_iterator<wchar _t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, _Ios_Iostate&, unsigned long long&) const
vfunc[9]:	num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::do_get(istreambuf_iterator<wchar _t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, _Ios_Iostate&, float&) const
vfunc[10]:	num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::do_get(istreambuf_iterator<wchar _t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, _Ios_Iostate&, double&) const
vfunc[11]:	num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::do_get(istreambuf_iterator<wchar _t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, _Ios_Iostate&, long double&) const
vfunc[12]:	num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::do_get(istreambuf_iterator<wchar _t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, _Ios_Iostate&, void*&) const

The Run Time Type Information for the `std::num_get<wchar_t, std::istreambuf_iterator<wchar_t, std::char_traits<wchar_t>>>` class is described by [Table 9-419](#)

Table 9-419 typeinfo for num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>>

Base Vtable	vtable for <code>_cxxabiv1::__si_class_type_info</code>
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Name	typeinfo name for num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>>
basetype:	typeinfo for locale::facet

9.1.139.2 Interfaces for Class num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>>

An LSB conforming implementation shall provide the generic methods for Class std::num_get<wchar_t, std::istreambuf_iterator<wchar_t, std::char_traits<wchar_t>>> specified in [Table 9-420](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-420 libstdc++ - Class num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>> Function Interfaces

istreambuf_iterator<wchar_t, char_traits<wchar_t>> num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>> >::_M_extract_int<unsigned int>(istreambuf_iterator<wchar_t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, _Ios_Iostate&, unsigned int&) const(GLIBCXX_3.4) [ISO CXX]
istreambuf_iterator<wchar_t, char_traits<wchar_t>> num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>> >::_M_extract_int<long>(istreambuf_iterator<wchar_t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, _Ios_Iostate&, long&) const(GLIBCXX_3.4) [ISO CXX]
istreambuf_iterator<wchar_t, char_traits<wchar_t>> num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>> >::_M_extract_int<unsigned long>(istreambuf_iterator<wchar_t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, _Ios_Iostate&, unsigned long&) const(GLIBCXX_3.4) [ISO CXX]
istreambuf_iterator<wchar_t, char_traits<wchar_t>> num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>> >::_M_extract_int<unsigned short>(istreambuf_iterator<wchar_t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, _Ios_Iostate&, unsigned short&) const(GLIBCXX_3.4) [ISO CXX]
istreambuf_iterator<wchar_t, char_traits<wchar_t>> num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>>::_M_extract_int<long long>(istreambuf_iterator<wchar_t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, _Ios_Iostate&, long long&) const(GLIBCXX_3.4) [ISO CXX]
istreambuf_iterator<wchar_t, char_traits<wchar_t>> num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>> >::_M_extract_int<unsigned long long>(istreambuf_iterator<wchar_t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, _Ios_Iostate&, unsigned long long&) const(GLIBCXX_3.4) [ISO CXX]
num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>> >::_M_extract_float(istreambuf_iterator<wchar_t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, _Ios_Iostate&, float&) const(GLIBCXX_3.4) [ISO CXX]

<code>_Ios_Iostate&, void*&) const(GLIBCXX_3.4) [ISOCXX]</code>
<code>num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::do_get(istreambuf_iterator<wchar_t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, <u>_Ios_Iostate&, bool&)</u> const(GLIBCXX_3.4) [ISOCXX]</code>
<code>num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::do_get(istreambuf_iterator<wchar_t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, <u>_Ios_Iostate&, double&)</u> const(GLIBCXX_3.4) [ISOCXX]</code>
<code>num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::do_get(istreambuf_iterator<wchar_t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, <u>_Ios_Iostate&, long double&)</u> const(GLIBCXX_3.4) [ISOCXX]</code>
<code>num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::do_get(istreambuf_iterator<wchar_t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, <u>_Ios_Iostate&, float&)</u> const(GLIBCXX_3.4) [ISOCXX]</code>
<code>num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::do_get(istreambuf_iterator<wchar_t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, <u>_Ios_Iostate&, unsigned int&)</u> const(GLIBCXX_3.4) [ISOCXX]</code>
<code>num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::do_get(istreambuf_iterator<wchar_t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, <u>_Ios_Iostate&, long&)</u> const(GLIBCXX_3.4) [ISOCXX]</code>
<code>num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::do_get(istreambuf_iterator<wchar_t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, <u>_Ios_Iostate&, unsigned long&)</u> const(GLIBCXX_3.4) [ISOCXX]</code>
<code>num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::do_get(istreambuf_iterator<wchar_t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, <u>_Ios_Iostate&, unsigned short&)</u> const(GLIBCXX_3.4) [ISOCXX]</code>
<code>num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::do_get(istreambuf_iterator<wchar_t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, <u>_Ios_Iostate&, long long&)</u> const(GLIBCXX_3.4) [ISOCXX]</code>
<code>num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::do_get(istreambuf_iterator<wchar_t, char_traits<wchar_t>>, istreambuf_iterator<wchar_t, char_traits<wchar_t>>, ios_base&, <u>_Ios_Iostate&, unsigned long long&)</u> const(GLIBCXX_3.4) [ISOCXX]</code>
<code>num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::~num_get()(GLIBCXX_3.4) [ISOCXX]</code>
<code>num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::~num_get()(GLIBCXX_3.4) [ISOCXX]</code>
<code>num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>> >::~num_get()(GLIBCXX_3.4) [ISOCXX]</code>

An LSB conforming implementation shall provide the generic data interfaces for

Class `std::num_get<wchar_t, std::istreambuf_iterator<wchar_t, std::char_traits<wchar_t>>` specified in [Table 9-421](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-421 libstdc++ - Class `num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>>` Data Interfaces

guard variable for <code>num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>></code> : <code>>::id(GLIBCXX_3.4)</code> [CXXABI]
<code>num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>></code> : <code>>::id(GLIBCXX_3.4)</code> [ISOCXX]
typeinfo for <code>num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>></code> : <code>(GLIBCXX_3.4)</code> [CXXABI]
typeinfo name for <code>num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>></code> : <code>(GLIBCXX_3.4)</code> [CXXABI]
vtable for <code>num_get<wchar_t, istreambuf_iterator<wchar_t, char_traits<wchar_t>></code> : <code>(GLIBCXX_3.4)</code> [CXXABI]

9.1.140 Class `num_put<char, ostreambuf_iterator<char, char_traits<char>>`

9.1.140.1 Class data for `num_put<char, ostreambuf_iterator<char, char_traits<char>>`

The virtual table for the `std::num_put<char, std::ostreambuf_iterator<char, std::char_traits<char>>` class is described by [Table 9-422](#)

Table 9-422 Primary vtable for `num_put<char, ostreambuf_iterator<char, char_traits<char>>`

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for <code>num_put<char, ostreambuf_iterator<char, char_traits<char>></code>
vfunc[0]:	<code>num_put<char, ostreambuf_iterator<char, char_traits<char>></code> : <code>::~num_put()</code>
vfunc[1]:	<code>num_put<char, ostreambuf_iterator<char, char_traits<char>></code> : <code>::~num_put()</code>
vfunc[2]:	<code>num_put<char, ostreambuf_iterator<char, char_traits<char>></code> : <code>>::do_put(ostreambuf_iterator<char, char_traits<char>>, ios_base&, char, bool) const</code>
vfunc[3]:	<code>num_put<char, ostreambuf_iterator<char, char_traits<char>></code> : <code>>::do_put(ostreambuf_iterator<char,</code>

	<code>char_traits<char> >, ios_base&, char, long) const</code>
vfunc[4]:	<code>num_put<char, ostreambuf_iterator<char, char_traits<char> >>::do_put(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, unsigned long) const</code>
vfunc[5]:	<code>num_put<char, ostreambuf_iterator<char, char_traits<char> >>::do_put(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, long long) const</code>
vfunc[6]:	<code>num_put<char, ostreambuf_iterator<char, char_traits<char> >>::do_put(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, unsigned long long) const</code>
vfunc[7]:	<code>num_put<char, ostreambuf_iterator<char, char_traits<char> >>::do_put(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, double) const</code>
vfunc[8]:	<code>num_put<char, ostreambuf_iterator<char, char_traits<char> >>::do_put(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, long double) const</code>
vfunc[9]:	<code>num_put<char, ostreambuf_iterator<char, char_traits<char> >>::do_put(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, void const*) const</code>

The Run Time Type Information for the `std::num_put<char, std::ostreambuf_iterator<char, std::char_traits<char> >>` class is described by [Table 9-423](#)

Table 9-423 typeinfo for num_put<char, ostreambuf_iterator<char, char_traits<char> >>

Base Vtable	vtable for <code>_cxxabiv1::_si_class_type_info</code>
Name	typeinfo name for <code>num_put<char, ostreambuf_iterator<char, char_traits<char> >></code>
basetype:	typeinfo for <code>locale::facet</code>

9.1.140.2 Interfaces for Class `num_put<char, ostreambuf_iterator<char, char_traits<char> >`

An LSB conforming implementation shall provide the generic methods for Class `std::num_put<char, std::ostreambuf_iterator<char, std::char_traits<char> >` specified in [Table 9-424](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-424 libstdc++ - Class `num_put<char, ostreambuf_iterator<char, char_traits<char> >` Function Interfaces

<code>ostreambuf_iterator<char, char_traits<char> > num_put<char, ostreambuf_iterator<char, char_traits<char> > >::_M_insert_int<long>(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, long) const(GLIBCXX_3.4) [ISOcxx]</code>
<code>ostreambuf_iterator<char, char_traits<char> > num_put<char, ostreambuf_iterator<char, char_traits<char> > >::_M_insert_int<unsigned long>(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, unsigned long) const(GLIBCXX_3.4) [ISOcxx]</code>
<code>ostreambuf_iterator<char, char_traits<char> > num_put<char, ostreambuf_iterator<char, char_traits<char> > >::_M_insert_int<long long>(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, long long) const(GLIBCXX_3.4) [ISOcxx]</code>
<code>ostreambuf_iterator<char, char_traits<char> > num_put<char, ostreambuf_iterator<char, char_traits<char> > >::_M_insert_int<unsigned long long>(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, unsigned long long) const(GLIBCXX_3.4) [ISOcxx]</code>
<code>ostreambuf_iterator<char, char_traits<char> > num_put<char, ostreambuf_iterator<char, char_traits<char> > >::_M_insert_float<double>(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, double) const(GLIBCXX_3.4) [ISOcxx]</code>
<code>ostreambuf_iterator<char, char_traits<char> > num_put<char, ostreambuf_iterator<char, char_traits<char> > >::_M_insert_float<long double>(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, long double) const(GLIBCXX_3.4) [ISOcxx]</code>
<code>num_put<char, ostreambuf_iterator<char, char_traits<char> > >::put(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, void const*) const(GLIBCXX_3.4) [ISOcxx]</code>
<code>num_put<char, ostreambuf_iterator<char, char_traits<char> > >::put(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, bool) const(GLIBCXX_3.4) [ISOcxx]</code>
<code>num_put<char, ostreambuf_iterator<char, char_traits<char> > >::put(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, double) const(GLIBCXX_3.4) [ISOcxx]</code>
<code>num_put<char, ostreambuf_iterator<char, char_traits<char> > >::put(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, long double) const(GLIBCXX_3.4) [ISOcxx]</code>
<code>num_put<char, ostreambuf_iterator<char, char_traits<char> > >::put(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, long) const(GLIBCXX_3.4) [ISOcxx]</code>
<code>num_put<char, ostreambuf_iterator<char, char_traits<char> ></code>

>::put(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, unsigned long) const(GLIBCXX_3.4) [ISOcxx]
num_put<char, ostreambuf_iterator<char, char_traits<char> > >::put(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, long long) const(GLIBCXX_3.4) [ISOcxx]
num_put<char, ostreambuf_iterator<char, char_traits<char> > >::put(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, unsigned long long) const(GLIBCXX_3.4) [ISOcxx]
num_put<char, ostreambuf_iterator<char, char_traits<char> > >::do_put(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, void const*) const(GLIBCXX_3.4) [ISOcxx]
num_put<char, ostreambuf_iterator<char, char_traits<char> > >::do_put(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, bool) const(GLIBCXX_3.4) [ISOcxx]
num_put<char, ostreambuf_iterator<char, char_traits<char> > >::do_put(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, double) const(GLIBCXX_3.4) [ISOcxx]
num_put<char, ostreambuf_iterator<char, char_traits<char> > >::do_put(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, long double) const(GLIBCXX_3.4) [ISOcxx]
num_put<char, ostreambuf_iterator<char, char_traits<char> > >::do_put(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, long) const(GLIBCXX_3.4) [ISOcxx]
num_put<char, ostreambuf_iterator<char, char_traits<char> > >::do_put(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, unsigned long) const(GLIBCXX_3.4) [ISOcxx]
num_put<char, ostreambuf_iterator<char, char_traits<char> > >::do_put(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, long long) const(GLIBCXX_3.4) [ISOcxx]
num_put<char, ostreambuf_iterator<char, char_traits<char> > >::do_put(ostreambuf_iterator<char, char_traits<char> >, ios_base&, char, unsigned long long) const(GLIBCXX_3.4) [ISOcxx]
num_put<char, ostreambuf_iterator<char, char_traits<char> > >::~num_put()(GLIBCXX_3.4) [ISOcxx]
num_put<char, ostreambuf_iterator<char, char_traits<char> > >::~num_put()(GLIBCXX_3.4) [ISOcxx]
num_put<char, ostreambuf_iterator<char, char_traits<char> > >::~num_put()(GLIBCXX_3.4) [ISOcxx]

An LSB conforming implementation shall provide the generic data interfaces for Class std::num_put<char, std::ostreambuf_iterator<char, std::char_traits<char> > > specified in [Table 9-425](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-425 libstdcxx - Class num_put<char, ostreambuf_iterator<char, char_traits<char> > > Data Interfaces

guard variable for num_put<char, ostreambuf_iterator<char, char_traits<char> > >::id(GLIBCXX_3.4) [Cxxabi]
--

num_put<char, ostreambuf_iterator<char, char_traits<char>> >::id(GLIBCXX_3.4) [ISOCXX]
typeinfo for num_put<char, ostreambuf_iterator<char, char_traits<char>> >(GLIBCXX_3.4) [CXXABI]
typeinfo name for num_put<char, ostreambuf_iterator<char, char_traits<char>>>(GLIBCXX_3.4) [CXXABI]
vtable for num_put<char, ostreambuf_iterator<char, char_traits<char>> >(GLIBCXX_3.4) [CXXABI]

9.1.141 Class num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>> >

9.1.141.1 Class data for num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>

The virtual table for the std::num_put<wchar_t, std::ostreambuf_iterator<wchar_t, std::char_traits<wchar_t>>> class is described by [Table 9-426](#)

**Table 9-426 Primary vtable for num_put<wchar_t,
ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>**

Base Offset	0
Virtual Base Offset	0
RTTI	typeinfo for num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>>>
vfunc[0]:	num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>> >::~num_put()
vfunc[1]:	num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>> >::~num_put()
vfunc[2]:	num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>> >::do_put(ostreambuf_iterator<wcha r_t, char_traits<wchar_t> >, ios_base&, wchar_t, bool) const
vfunc[3]:	num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>> >::do_put(ostreambuf_iterator<wcha r_t, char_traits<wchar_t> >, ios_base&, wchar_t, long) const
vfunc[4]:	num_put<wchar_t, ostreambuf_iterator<wchar_t,

	<code>char_traits<wchar_t> > >::do_put(ostreambuf_iterator<wchar_t>, ios_base&, wchar_t, unsigned long) const</code>
vfunc[5]:	<code>num_put<wchar_t,
ostreambuf_iterator<wchar_t>,
char_traits<wchar_t>>
>::do_put(ostreambuf_iterator<wchar_t>,
char_traits<wchar_t>>,
ios_base&, wchar_t, long long) const</code>
vfunc[6]:	<code>num_put<wchar_t,
ostreambuf_iterator<wchar_t>,
char_traits<wchar_t>>
>::do_put(ostreambuf_iterator<wchar_t>,
char_traits<wchar_t>>,
ios_base&, wchar_t, unsigned long long) const</code>
vfunc[7]:	<code>num_put<wchar_t,
ostreambuf_iterator<wchar_t>,
char_traits<wchar_t>>
>::do_put(ostreambuf_iterator<wchar_t>,
char_traits<wchar_t>>,
ios_base&, wchar_t, double) const</code>
vfunc[8]:	<code>num_put<wchar_t,
ostreambuf_iterator<wchar_t>,
char_traits<wchar_t>>
>::do_put(ostreambuf_iterator<wchar_t>,
char_traits<wchar_t>>,
ios_base&, wchar_t, long double) const</code>
vfunc[9]:	<code>num_put<wchar_t,
ostreambuf_iterator<wchar_t>,
char_traits<wchar_t>>
>::do_put(ostreambuf_iterator<wchar_t>,
char_traits<wchar_t>>,
ios_base&, wchar_t, void const*) const</code>

The Run Time Type Information for the `std::num_put<wchar_t, std::ostreambuf_iterator<wchar_t, std::char_traits<wchar_t> >>` class is described by [Table 9-427](#)

Table 9-427 typeinfo for num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> >>

Base Vtable	vtable for <code>_cxxabiv1::__si_class_type_info</code>
Name	typeinfo name for <code>num_put<wchar_t,
ostreambuf_iterator<wchar_t,
char_traits<wchar_t> >></code>

basetype:	typeinfo for locale::facet
9.1.141.2 Interfaces for Class num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >	
An LSB conforming implementation shall provide the generic methods for Class std::num_put<wchar_t, std::ostreambuf_iterator<wchar_t, std::char_traits<wchar_t> > > specified in Table 9-428 , with the full mandatory functionality as described in the referenced underlying specification.	
Table 9-428 libstdcxx - Class num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > > Function Interfaces	
<pre>ostreambuf_iterator<wchar_t, char_traits<wchar_t> > num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >::_M_insert_int<long>(ostreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, wchar_t, long) const(GLIBCXX_3.4) [ISOCXX]</pre>	
<pre>ostreambuf_iterator<wchar_t, char_traits<wchar_t> > num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >::_M_insert_int<unsigned long>(ostreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, wchar_t, unsigned long) const(GLIBCXX_3.4) [ISOCXX]</pre>	
<pre>ostreambuf_iterator<wchar_t, char_traits<wchar_t> > num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >::_M_insert_int<long long>(ostreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, wchar_t, long long) const(GLIBCXX_3.4) [ISOCXX]</pre>	
<pre>ostreambuf_iterator<wchar_t, char_traits<wchar_t> > num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >::_M_insert_int<unsigned long long>(ostreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, wchar_t, unsigned long long) const(GLIBCXX_3.4) [ISOCXX]</pre>	
<pre>ostreambuf_iterator<wchar_t, char_traits<wchar_t> > num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >::_M_insert_float<double>(ostreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, wchar_t, char, double) const(GLIBCXX_3.4) [ISOCXX]</pre>	
<pre>ostreambuf_iterator<wchar_t, char_traits<wchar_t> > num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >::_M_insert_float<long double>(ostreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, wchar_t, char, long double) const(GLIBCXX_3.4) [ISOCXX]</pre>	
<pre>num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >::put(ostreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, wchar_t, void const*) const(GLIBCXX_3.4) [ISOCXX]</pre>	
<pre>num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >::put(ostreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, wchar_t, bool) const(GLIBCXX_3.4) [ISOCXX]</pre>	
<pre>num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> > >::put(ostreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, wchar_t, double) const(GLIBCXX_3.4) [ISOCXX]</pre>	
<pre>num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> ></pre>	

>::put(ostreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, wchar_t, long double) const(GLIBCXX_3.4) [ISO CXX]
num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> >>::put(ostreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, wchar_t, long) const(GLIBCXX_3.4) [ISO CXX]
num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> >>::put(ostreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, wchar_t, unsigned long) const(GLIBCXX_3.4) [ISO CXX]
num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> >>::put(ostreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, wchar_t, long long) const(GLIBCXX_3.4) [ISO CXX]
num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> >>::put(ostreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, wchar_t, unsigned long long) const(GLIBCXX_3.4) [ISO CXX]
num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> >>::do_put(ostreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, wchar_t, void const*) const(GLIBCXX_3.4) [ISO CXX]
num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> >>::do_put(ostreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, wchar_t, bool) const(GLIBCXX_3.4) [ISO CXX]
num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> >>::do_put(ostreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, wchar_t, double) const(GLIBCXX_3.4) [ISO CXX]
num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> >>::do_put(ostreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, wchar_t, long double) const(GLIBCXX_3.4) [ISO CXX]
num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> >>::do_put(ostreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, wchar_t, long) const(GLIBCXX_3.4) [ISO CXX]
num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> >>::do_put(ostreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, wchar_t, unsigned long) const(GLIBCXX_3.4) [ISO CXX]
num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> >>::do_put(ostreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, wchar_t, long long) const(GLIBCXX_3.4) [ISO CXX]
num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> >>::do_put(ostreambuf_iterator<wchar_t, char_traits<wchar_t> >, ios_base&, wchar_t, unsigned long long) const(GLIBCXX_3.4) [ISO CXX]
num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> >>::~num_put()(GLIBCXX_3.4) [ISO CXX]
num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> >>::~num_put()(GLIBCXX_3.4) [ISO CXX]
num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t> >>::~num_put()(GLIBCXX_3.4) [ISO CXX]

An LSB conforming implementation shall provide the generic data interfaces for Class `std::num_put<wchar_t, std::ostreambuf_iterator<wchar_t, std::char_traits<wchar_t> > >` specified in [Table 9-429](#), with the full mandatory

functionality as described in the referenced underlying specification.

Table 9-429 libstdc++ - Class num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>> >> Data Interfaces

guard variable for num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>> >>::id(GLIBCXX_3.4) [CXXABI]
num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>> >>::id(GLIBCXX_3.4) [ISOcxx]
typeinfo for num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>> >>(GLIBCXX_3.4) [CXXABI]
typeinfo name for num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>> >>(GLIBCXX_3.4) [CXXABI]
vtable for num_put<wchar_t, ostreambuf_iterator<wchar_t, char_traits<wchar_t>> >>(GLIBCXX_3.4) [CXXABI]

9.1.142 Class gslice

9.1.142.1 Class data for gslice

9.1.142.2 Interfaces for Class gslice

No external methods are defined for libstdc++ - Class std::gslice in this part of the specification. See also the relevant architecture specific part of this specification.

9.1.143 Class __basic_file<char>

9.1.143.1 Class data for __basic_file<char>

9.1.143.2 Interfaces for Class __basic_file<char>

An LSB conforming implementation shall provide the generic methods for Class std::__basic_file<char> specified in [Table 9-430](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-430 libstdc++ - Class __basic_file<char> Function Interfaces

__basic_file<char>::is_open() const(GLIBCXX_3.4) [ISOcxx]
__basic_file<char>::fd()(GLIBCXX_3.4) [ISOcxx]
__basic_file<char>::file()(GLIBCXX_3.4.1) [ISOcxx]
__basic_file<char>::open(char const*, _Ios_Openmode, int)(GLIBCXX_3.4) [ISOcxx]
__basic_file<char>::sync()(GLIBCXX_3.4) [ISOcxx]
__basic_file<char>::close()(GLIBCXX_3.4) [ISOcxx]
__basic_file<char>::sys_open(_IO_FILE*, _Ios_Openmode)(GLIBCXX_3.4) [ISOcxx]
__basic_file<char>::sys_open(int, _Ios_Openmode)(GLIBCXX_3.4) [ISOcxx]
__basic_file<char>::showmany_c()(GLIBCXX_3.4) [ISOcxx]
__basic_file<char>::__basic_file(pthread_mutex_t*)(GLIBCXX_3.4) [ISOcxx]
__basic_file<char>::__basic_file(pthread_mutex_t*)(GLIBCXX_3.4) [ISOcxx]

<code>_basic_file<char>::~_basic_file()(GLIBCXX_3.4) [ISOCXX]</code>
<code>_basic_file<char>::~_basic_file()(GLIBCXX_3.4) [ISOCXX]</code>

9.1.144 Class `_List_node_base`

9.1.144.1 Interfaces for Class `_List_node_base`

An LSB conforming implementation shall provide the generic methods for Class `std::_List_node_base` specified in [Table 9-431](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-431 libstdcxx - Class `_List_node_base` Function Interfaces

<code>_List_node_base::hook(_List_node_base*)(GLIBCXX_3.4) [LSB]</code>
<code>_List_node_base::swap(_List_node_base&, _List_node_base&)(GLIBCXX_3.4) [LSB]</code>
<code>_List_node_base::unhook()(GLIBCXX_3.4) [LSB]</code>
<code>_List_node_base::reverse()(GLIBCXX_3.4) [LSB]</code>
<code>_List_node_base::transfer(_List_node_base*, _List_node_base*)(GLIBCXX_3.4) [LSB]</code>

9.1.145 Class `valarray<unsigned int>`

9.1.145.1 Class data for `valarray<unsigned int>`

9.1.145.2 Interfaces for Class `valarray<unsigned int>`

No external methods are defined for libstdcxx - Class `std::valarray<unsigned int>` in this part of the specification. See also the relevant architecture specific part of this specification.

9.1.146 Class `allocator<char>`

9.1.146.1 Class data for `allocator<char>`

9.1.146.2 Interfaces for Class `allocator<char>`

An LSB conforming implementation shall provide the generic methods for Class `std::allocator<char>` specified in [Table 9-432](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-432 libstdcxx - Class `allocator<char>` Function Interfaces

<code>allocator<char>::allocator(allocator<char> const&)(GLIBCXX_3.4) [ISOCXX]</code>
<code>allocator<char>::allocator()(GLIBCXX_3.4) [ISOCXX]</code>
<code>allocator<char>::allocator(allocator<char> const&)(GLIBCXX_3.4) [ISOCXX]</code>
<code>allocator<char>::allocator()(GLIBCXX_3.4) [ISOCXX]</code>
<code>allocator<char>::~allocator()(GLIBCXX_3.4) [ISOCXX]</code>
<code>allocator<char>::~allocator()(GLIBCXX_3.4) [ISOCXX]</code>

9.1.147 Class allocator<wchar_t>

9.1.147.1 Class data for allocator<wchar_t>

9.1.147.2 Interfaces for Class allocator<wchar_t>

An LSB conforming implementation shall provide the generic methods for Class std::allocator<wchar_t> specified in [Table 9-433](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-433 libstdc++ - Class allocator<wchar_t> Function Interfaces

allocator<wchar_t>::allocator(allocator<wchar_t> const&)(GLIBCXX_3.4) [ISO CXX]
allocator<wchar_t>::allocator()(GLIBCXX_3.4) [ISO CXX]
allocator<wchar_t>::allocator(allocator<wchar_t> const&)(GLIBCXX_3.4) [ISO CXX]
allocator<wchar_t>::allocator()(GLIBCXX_3.4) [ISO CXX]
allocator<wchar_t>::~allocator()(GLIBCXX_3.4) [ISO CXX]
allocator<wchar_t>::~allocator()(GLIBCXX_3.4) [ISO CXX]

9.1.148 Class __gnu_cxx::__pool<true>

9.1.148.1 Interfaces for Class __gnu_cxx::__pool<true>

An LSB conforming implementation shall provide the generic methods for Class __gnu_cxx::__pool<true> specified in [Table 9-434](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-434 libstdc++ - Class __gnu_cxx::__pool<true> Function Interfaces

__gnu_cxx::__pool<true>::__M_destroy()(GLIBCXX_3.4.4) [LSB]
__gnu_cxx::__pool<true>::__M_initialize(void (*) (void*))(GLIBCXX_3.4.4) [LSB]
__gnu_cxx::__pool<true>::__M_initialize()(GLIBCXX_3.4.6) [LSB]
__gnu_cxx::__pool<true>::__M_get_thread_id()(GLIBCXX_3.4.4) [LSB]
__gnu_cxx::__pool<true>::__M_destroy_thread_key(void*)(GLIBCXX_3.4.4) [LSB]

9.1.149 Class __gnu_cxx::__pool<false>

9.1.149.1 Interfaces for Class __gnu_cxx::__pool<false>

An LSB conforming implementation shall provide the generic methods for Class __gnu_cxx::__pool<false> specified in [Table 9-435](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-435 libstdc++ - Class __gnu_cxx::__pool<false> Function Interfaces

__gnu_cxx::__pool<false>::__M_destroy()(GLIBCXX_3.4.4) [LSB]
__gnu_cxx::__pool<false>::__M_initialize()(GLIBCXX_3.4.4) [LSB]

9.1.150 Class `_gnu_cxx::free_list`

9.1.150.1 Interfaces for Class `_gnu_cxx::free_list`

An LSB conforming implementation shall provide the generic methods for Class `_gnu_cxx::free_list` specified in [Table 9-436](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-436 libstdcxx - Class `_gnu_cxx::free_list` Function Interfaces

<code>_gnu_cxx::free_list::M_clear()(GLIBCXX_3.4.4)</code> [LSB]
--

9.1.151 Class `locale::Impl`

9.1.151.1 Interfaces for Class `locale::Impl`

No external methods are defined for libstdcxx - Class `std::locale::Impl` in this part of the specification. See also the relevant architecture specific part of this specification.

9.1.152 Namespace std Functions

9.1.152.1 Interfaces for Namespace std Functions

No external methods are defined for libstdcxx - Namespace `std` Functions in this part of the specification. See also the relevant architecture specific part of this specification.

9.1.153 Class `char_traits<char>`

9.1.153.1 Interfaces for Class `char_traits<char>`

An LSB conforming implementation shall provide the generic methods for Class `std::char_traits<char>` specified in [Table 9-437](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-437 libstdcxx - Class `char_traits<char>` Function Interfaces

<code>char_traits<char>::eq(char const&, char const&)(GLIBCXX_3.4.5)</code> [ISOCXX]
--

9.1.154 Class `char_traits<wchar_t>`

9.1.154.1 Interfaces for Class `char_traits<wchar_t>`

An LSB conforming implementation shall provide the generic methods for Class `std::char_traits<wchar_t>` specified in [Table 9-438](#), with the full mandatory functionality as described in the referenced underlying specification.

Table 9-438 libstdcxx - Class `char_traits<wchar_t>` Function Interfaces

<code>char_traits<wchar_t>::eq(wchar_t const&, wchar_t const&)(GLIBCXX_3.4.5)</code> [ISOCXX]

9.2 Interface Definitions for libstdcxx

The interfaces defined on the following pages are included in libstdcxx and are defined by this specification. Unless otherwise noted, these interfaces shall be included in the source standard.

Other interfaces listed in [Section 9.1](#) shall behave as described in the referenced base document.

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