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# User Manual

for S32K14X BASE Driver

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# Chapter 1

## Revision History

**Table 1-1. Revision History**

Revision	Date	Author	Description
1.0	26/04/2019	NXP MCAL Team	Updated version for ASR 4.2.2S32K14XR1.0.2



# Chapter 2

## Introduction

This User Manual describes NXP Semiconductors AUTOSAR Base ( BASE ) for S32K14X .

AUTOSAR BASE driver configuration parameters are described in BASE Driver chapter of this document. BASE driver requirements and APIs are also described in BASE Driver chapter of this document. The BASE configuration plugin is described in the Tresos Configuration Plug-in chapter.

### 2.1 Supported Derivatives

The software described in this document is intended to be used with the following microcontroller devices of NXP Semiconductors .

**Table 2-1. S32K14X Derivatives**

NXP Semiconductors	s32k148_lqfp144, s32k148_lqfp176, s32k148_mapbga100, s32k146_lqfp144, s32k146_lqfp100, s32k146_lqfp64, s32k146_mapbga100, s32k144_lqfp100, s32k144_lqfp64, s32k144_mapbga100, s32k142_lqfp100, s32k142_lqfp64, s32k118_lqfp48, s32k118_lqfp64, s32k142_lqfp48, s32k144_lqfp48, s32k148_lqfp100
--------------------	--

All of the above microcontroller devices are collectively named as S32K14X .

### 2.2 Overview

**AUTOSAR (AUTomotive Open System ARchitecture)** is an industry partnership working to establish standards for software interfaces and software modules for automobile electronic control systems.

## AUTOSAR

- paves the way for innovative electronic systems that further improve performance, safety and environmental friendliness.
- is a strong global partnership that creates one common standard: "Cooperate on standards, compete on implementation".
- is a key enabling technology to manage the growing electrics/electronics complexity. It aims to be prepared for the upcoming technologies and to improve cost-efficiency without making any compromise with respect to quality.
- facilitates the exchange and update of software and hardware over the service life of the vehicle.

## 2.3 About this Manual

This Technical Reference employs the following typographical conventions:

**Boldface type:** Bold is used for important terms, notes and warnings.

*Italic font:* Italic typeface is used for code snippets in the text. Note that C language modifiers such "const" or "volatile" are sometimes omitted to improve readability of the presented code.

Notes and warnings are shown as below:

### Note

This is a note.

## 2.4 Acronyms and Definitions

**Table 2-2. Acronyms and Definitions**

Term	Definition
API	Application Programming Interface
ASM	Assembler Language
AUTOSAR	Automotive Open System Architecture
BSMI	Basic Software Make file Interface
C/CPP	C and C++ Source Code
DEM	Diagnostic Event Manager
DET	Development Error Tracer
N/A	Not Applicable
MCU	Micro Controller Unit
VLE	Variable Length Encoding



## 2.5 Reference List

**Table 2-3. Reference List**

#	Title	Version
1	Specification of BASE Driver	AUTOSAR Release 4.2.2
2	S32K14X Reference Manual	Reference Manual, Rev. 9, 9/2018
3	S32K142 Mask Set Errata for Mask 0N33V (0N33V)	30/11/2017
4	S32K144 Mask Set Errata for Mask 0N57U (0N57U)	30/11/2017
5	S32K146 Mask Set Errata for Mask 0N73V (0N73V)	30/11/2017
6	S32K148 Mask Set Errata for Mask 0N20V (0N20V)	25/10/2018
7	S32K118 Mask Set Errata for Mask 0N97V (0N97V)	07/01/2019



# Chapter 3

## Driver

### 3.1 Requirements

BASE is an custom module, so AUTOSAR only specifies some guidelines for the design and configuration. Other details for this module can be found in EB tresos Studio developer's guide. This module contains stubs from several AutoSAR components. The requirements used for the files present in this module are available in the Software Specification documents from Table [Reference List](#) .

### 3.2 Driver Design Summary

The BASE module contains the common files/definitions needed by the MCAL. This means that it is a dependency for all other MCAL modules.

The BASE module consists from a list of C header files that can be split into 3 categories:

- AutoSAR required files (that AutoSAR specifies and must not be modified)
- Stubs - files that are required by AutoSAR but are provided as examples in the NXP SemiconductorsS32K14X MCAL release. They must be re-written by the integrator.
- Files that are required by the NXP SemiconductorsS32K14X MCAL and must not be modified.

Below you can find the descriptions for each file present in the BASE module:

**Table 3-1. Description of files inside the BASE module**

File Name	File Type	Description
Can_GeneralTypes.h	Stub file. Must be replaced by all integrators.	This file is a stub. Its name and content is specified by AutoSAR but in the NXP SemiconductorsS32K14X MCAL release it contains only the defines/typedefs/constants that are needed by the MCAL drivers. Note: The following files need to be included prior to include Can_GeneralTypes.h - ComStack_Cfg.h and Can_Cfg.h

*Table continues on the next page...*

**Table 3-1. Description of files inside the BASE module (continued)**

File Name	File Type	Description
Compiler.h	AutoSAR specified file - must not be modified.	This is a file with content fully defined by the AutoSAR standard. AutoSAR requires that no modification must be done to the contents of this file.  During integration this file can be overwritten with another one with the same C content.  The NXP SemiconductorsS32K14X MCAL release provides this file and can be used as-is.
Compiler_Cfg.h	Stub file. Must be replaced by all integrators.	This file is a stub. Its name and content is specified by AutoSAR but in the NXP SemiconductorsS32K14X MCAL release it contains only the defines that are needed by the MCAL drivers.  This file defines the compiler memory and pointer classes to be used for MCAL. The value of the defines must be set by each integrator.
ComStack_Cfg.h	Stub file. Must be replaced by all integrators.	This file is a stub. Its name and content is specified by AutoSAR but in the NXP SemiconductorsS32K14X MCAL release it contains only the defines/typedefs/constants that are needed by the MCAL drivers.
ComStack_Type.s.h	Stub file. Must be replaced by all integrators.	This file is a stub. Its name and content is specified by AutoSAR but in the NXP SemiconductorsS32K14X MCAL release it contains only the defines/typedefs/constants that are needed by the MCAL drivers.
Eth_GeneralTypes.h	Stub file. Must be replaced by all integrators.	This file is a stub. Its name and content is specified by AutoSAR but in the NXP SemiconductorsS32K14X MCAL release it contains only the defines/typedefs/constants that are needed by the MCAL drivers.
Fr_GeneralTypes.h	Stub file. Must be replaced by all integrators.	This file is a stub. Its name and content is specified by AutoSAR but in the NXP SemiconductorsS32K14X MCAL release it contains only the defines/typedefs/constants that are needed by the MCAL drivers.
Lin_GeneralTypes.h	Stub file. Must be replaced by all integrators.	This file is a stub. Its name and content is specified by AutoSAR but in the NXP SemiconductorsS32K14X MCAL release it contains only the defines/typedefs/constants that are needed by the MCAL drivers.
Mcal.h	MCAL specific file.	This is a file that specific to NXP SemiconductorsS32K14X MCAL release. It contains defines and macros needed by MCAL drivers.  It contains several macros defined for every compiler supported by MCAL (but not all compilers are available for all releases - for a list of compilers supported by this release please check the release note document).  If no operating system is used, the following 4 macros can be overwritten by the integrators depending on their environment: <ul style="list-style-type: none"> <li>• ISR</li> <li>• EXIT_INTERRUPT</li> <li>• SuspendAllInterrupts</li> <li>• ResumeAllInterrupts</li> </ul> If the integrated project uses an AutoSAR operating system, this file must be used as-is.
MemMap.h	Stub file. Must be replaced by all integrators.	This file is a stub. Its name and content is specified by AutoSAR but in the NXP SemiconductorsS32K14X MCAL release it contains only the defines/typedefs/constants that are needed by the MCAL drivers.  This file contains the memory mapping instructions/pragmas needed for every memory section from the MCAL code.  The default content of this file only renames some sections and has the pragmas to clearly mark the RAM code sections. Depending on the integrating environment, this entire file must be updated.
Platform_Types.h	AutoSAR specified file -	This is a file with content fully defined by the AutoSAR standard. AutoSAR requires that no modification must be done to the contents of this file.

*Table continues on the next page...*

**Table 3-1. Description of files inside the BASE module (continued)**

File Name	File Type	Description
	must not be modified.	During integration this file can be overwritten with another one with the same C content. The NXP SemiconductorsS32K14X MCAL release provides this file and can be used as-is.
RegLockMacros.h	MCAL specific file - to be used as-is.	This is a file that specific to NXP SemiconductorsS32K14X MCAL release. It contains defines needed by MCAL drivers.
Reg_eSys.h	MCAL specific file - to be used as-is.	This is a file that specific to NXP SemiconductorsS32K14X MCAL release. It contains defines needed by MCAL drivers.
SilRegMacros.h	MCAL specific file - to be used as-is.	This is a file that specific to NXP SemiconductorsS32K14X MCAL release. It contains defines and macros needed by MCAL drivers.
Soc_lps.h	MCAL specific file - to be used as-is.	This is a file that specific to NXP SemiconductorsS32K14X MCAL release. It contains defines and macros needed by MCAL drivers.
StdRegMacros.h	MCAL specific file - to be used as-is.	This is a file that specific to NXP SemiconductorsS32K14X MCAL release. It contains defines and macros needed by MCAL drivers.
Std_Types.h	AutoSAR specified file - must not be modified.	This is a file with content fully defined by the AutoSAR standard. AutoSAR requires that no modification must be done to the contents of this file. During integration this file can be overwritten with another one with the same C content. The NXP SemiconductorsS32K14X MCAL release provides this file and can be used as-is.
modules.h	MCAL specific file - to be used as-is.	This is a file that is generated by Base plugin and contains defines needed by MCAL drivers.

### 3.3 Hardware Resources

None.

### 3.4 Deviation from Requirements

Since this is a custom module, it contains files from several AutoSAR components. The AUTOSAR provides some guidelines for design and configuration the BASE Module. The BASE module deviates from the AUTOSAR software specification documents from Table [Reference List](#) mainly for the files provided as stubs in the current release.

There are also some additional requirements (on top of requirements detailed in AUTOSAR software specification documents from Table [Reference List](#) ) which need to be satisfied for correct operation.

**Table 3-2. Deviations Status Column Description**

Term	Definition
N/A	Not available
N/T	Not testable
N/S	Out of scope
N/I	Not implemented
N/F	Not fully implemented

Below table identifies the AUTOSAR requirements that are not fully implemented, implemented differently, or out of scope for the module.

**Table 3-3. Driver Deviations Table**

Requirement	Status	Description	Notes
N/A	N/A	N/A	N/A

### 3.5 Driver limitations

None

### 3.6 Driver usage and configuration tips

None

### 3.7 Runtime Errors

The module does not generate any DEM errors at runtime.

**Table 3-4. Runtime Errors**

Function	Error Code	Condition triggering the error
N/A	N/A	N/A

## 3.8 Software specification

The following sections contains driver software specifications.

### 3.8.1 Define Reference

Constants supported by the driver are as per AUTOSAR BASE Driver software specification Version 4.2 Rev0002 .

#### 3.8.1.1 Define COMPILER\_VENDOR\_ID

Parameters that shall be published within the compiler abstraction header file and also in the module's description file.

**Implements:** DBASE03023

**Table 3-5. Define COMPILER\_VENDOR\_ID Description**

<b>Name</b>	COMPILER_VENDOR_ID
<b>Initializer</b>	43

#### 3.8.1.2 Define COMPILER\_AR\_RELEASE\_MAJOR\_VERSION

Parameters that shall be published within the compiler abstraction header file and also in the module's description file.

**Implements:** DBASE03023

**Table 3-6. Define COMPILER\_AR\_RELEASE\_MAJOR\_VERSION Description**

<b>Name</b>	COMPILER_AR_RELEASE_MAJOR_VERSION
<b>Initializer</b>	4

### 3.8.1.3 Define COMPILER\_AR\_RELEASE\_MINOR\_VERSION

Parameters that shall be published within the compiler abstraction header file and also in the module's description file.

**Implements:** DBASE03023

**Table 3-7. Define COMPILER\_AR\_RELEASE\_MINOR\_VERSION  
Description**

<b>Name</b>	COMPILER_AR_RELEASE_MINOR_VERSION
<b>Initializer</b>	2

### 3.8.1.4 Define COMPILER\_AR\_RELEASE\_REVISION\_VERSION

Parameters that shall be published within the compiler abstraction header file and also in the module's description file.

**Implements:** DBASE03023

**Table 3-8. Define COMPILER\_AR\_RELEASE\_REVISION\_VERSION  
Description**

<b>Name</b>	COMPILER_AR_RELEASE_REVISION_VERSION
<b>Initializer</b>	2

### 3.8.1.5 Define COMPILER\_SW\_MAJOR\_VERSION

Parameters that shall be published within the compiler abstraction header file and also in the module's description file.

**Implements:** DBASE03023

**Table 3-9. Define COMPILER\_SW\_MAJOR\_VERSION  
Description**

<b>Name</b>	COMPILER_SW_MAJOR_VERSION
<b>Initializer</b>	1



### 3.8.1.6 Define COMPILER\_SW\_MINOR\_VERSION

Parameters that shall be published within the compiler abstraction header file and also in the module's description file.

**Implements:** DBASE03023

**Table 3-10. Define COMPILER\_SW\_MINOR\_VERSION Description**

<b>Name</b>	COMPILER_SW_MINOR_VERSION
<b>Initializer</b>	0

### 3.8.1.7 Define COMPILER\_SW\_PATCH\_VERSION

Parameters that shall be published within the compiler abstraction header file and also in the module's description file.

**Implements:** DBASE03023

**Table 3-11. Define COMPILER\_SW\_PATCH\_VERSION Description**

<b>Name</b>	COMPILER_SW_PATCH_VERSION
<b>Initializer</b>	2

### 3.8.1.8 Define AUTOMATIC

The memory class AUTOMATIC shall be provided as empty definition, used for the declaration of local pointers.

**Implements:** DBASE03004

**Table 3-12. Define AUTOMATIC Description**

<b>Name</b>	AUTOMATIC
<b>Initializer</b>	

### 3.8.1.9 Define CONST

The compiler abstraction shall define the CONST macro for the declaration and definition of constants.

**Implements:** DBASE03012

**Table 3-13. Define CONST Description**

<b>Name</b>	CONST
<b>Initializer</b>	const consttype

### 3.8.1.10 Define CONSTP2CONST

The compiler abstraction shall define the CONSTP2CONST macro for the declaration and definition of constant pointers accessing constants.

**Implements:** DBASE03013

**Table 3-14. Define CONSTP2CONST Description**

<b>Name</b>	CONSP2CONST
<b>Initializer</b>	const ptrtype * const

### 3.8.1.11 Define CONSTP2VAR

The compiler abstraction shall define the CONSTP2VAR macro for the declaration and definition of constant pointers accessing variables.

**Implements:** DBASE03014

**Table 3-15. Define CONSTP2VAR Description**

<b>Name</b>	CONSP2VAR
<b>Initializer</b>	ptrtype * const

### 3.8.1.12 Define FUNC

The compiler abstraction shall define the FUNC macro for the declaration and definition of functions, that ensures correct syntax of function declarations as required by a specific compiler.

**Implements:** DBASE03015

**Table 3-16. Define FUNC Description**

<b>Name</b>	FUNC
<b>Initializer</b>	rettype

### 3.8.1.13 Define NULL\_PTR

The compiler abstraction shall provide the NULL\_PTR define with a void pointer to zero definition.

**Implements:** DBASE03009

**Table 3-17. Define NULL\_PTR Description**

<b>Name</b>	NULL_PTR
<b>Initializer</b>	((void *)0)

### 3.8.1.14 Define P2CONST

The compiler abstraction shall define the P2CONST macro for the declaration and definition of pointers in RAM pointing to constants.

**Implements:** DBASE03017

**Table 3-18. Define P2CONST Description**

<b>Name</b>	P2CONST
<b>Initializer</b>	const ptrtype *

### 3.8.1.15 Define P2FUNC

The compiler abstraction shall define the P2FUNC macro for the type definition of pointers to functions.

**Implements:** DBASE03018

**Table 3-19. Define P2FUNC Description**

<b>Name</b>	P2FUNC
<b>Initializer</b>	rettype (*fctname)

### 3.8.1.16 Define P2VAR

The compiler abstraction shall define the P2VAR macro for the declaration and definition of pointers in RAM, pointing to variables.

**Implements:** DBASE03019

**Table 3-20. Define P2VAR Description**

<b>Name</b>	P2VAR
<b>Initializer</b>	ptrtype *

### 3.8.1.17 Define TYPEDEF

The memory class TYPEDEF shall be provided as empty definition. This memory class shall be used within type definitions, where no memory qualifier can be specified. This can be necessary for defining pointer types, with e.g. P2VAR, where the macros require two parameters. First parameter can be specified in the type definition (distance to the memory location referenced by the pointer), but the second one (memory allocation of the pointer itself) cannot be defined at this time. Hence memory class TYPEDEF shall be applied.

**Implements:** DBASE03011

**Table 3-21. Define TYPEDEF Description**

<b>Name</b>	TYPEDEF
<b>Initializer</b>	

### 3.8.1.18 Define VAR

The compiler abstraction shall define the VAR macro for the declaration and definition of variables.

**Implements:** DBASE03022

**Table 3-22. Define VAR Description**

<b>Name</b>	VAR
<b>Initializer</b>	vartype

### 3.8.1.19 Define ADC\_CODE

ADC memory and pointer classes.

**Implements:** DBASE04001

**Table 3-23. Define ADC\_CODE Description**

<b>Name</b>	ADC_CODE
<b>Initializer</b>	

### 3.8.1.20 Define ADC\_CONST

ADC memory and pointer classes.

**Implements:** DBASE04001

**Table 3-24. Define ADC\_CONST Description**

<b>Name</b>	ADC_CONST
<b>Initializer</b>	

### 3.8.1.21 Define ADC\_APPL\_DATA

ADC memory and pointer classes.

**Implements:** DBASE04001

**Table 3-25. Define ADC\_APPL\_DATA Description**

<b>Name</b>	ADC_APPL_DATA
<b>Initializer</b>	

### 3.8.1.22 Define ADC\_APPL\_CONST

ADC memory and pointer classes.

**Implements:** DBASE04001

**Table 3-26. Define ADC\_APPL\_CONST Description**

<b>Name</b>	ADC_APPL_CONST
<b>Initializer</b>	

### 3.8.1.23 Define ADC\_APPL\_CODE

ADC memory and pointer classes.

**Implements:** DBASE04001

**Table 3-27. Define ADC\_APPL\_CODE Description**

<b>Name</b>	ADC_APPL_CODE
<b>Initializer</b>	

### 3.8.1.24 Define ADC\_CALLOUT\_CODE

ADC memory and pointer classes.

**Implements:** DBASE04001

**Table 3-28. Define ADC\_CALLOUT\_CODE Description**

<b>Name</b>	ADC_CALLOUT_CODE
<b>Initializer</b>	

### 3.8.1.25 Define ADC\_VAR\_NOINIT

ADC memory and pointer classes.

**Implements:** DBASE04001

**Table 3-29. Define ADC\_VAR\_NOINIT Description**

<b>Name</b>	ADC_VAR_NOINIT
<b>Initializer</b>	

### 3.8.1.26 Define ADC\_VAR\_POWER\_ON\_INIT

ADC memory and pointer classes.

**Implements:** DBASE04001

**Table 3-30. Define ADC\_VAR\_POWER\_ON\_INIT Description**

<b>Name</b>	ADC_VAR_POWER_ON_INIT
<b>Initializer</b>	

### 3.8.1.27 Define ADC\_VAR\_FAST

ADC memory and pointer classes.

**Implements:** DBASE04001

**Table 3-31. Define ADC\_VAR\_FAST Description**

<b>Name</b>	ADC_VAR_FAST
<b>Initializer</b>	

### 3.8.1.28 Define ADC\_VAR

ADC memory and pointer classes.

**Implements:** DBASE04001

**Table 3-32. Define ADC\_VAR Description**

<b>Name</b>	ADC_VAR
<b>Initializer</b>	

### 3.8.1.29 Define CAN\_CODE

CAN memory and pointer classes.

**Implements:** DBASE04001

**Table 3-33. Define CAN\_CODE Description**

<b>Name</b>	CAN_CODE
<b>Initializer</b>	

### 3.8.1.30 Define CAN\_CONST

CAN memory and pointer classes.



**Implements:** DBASE04001

**Table 3-34. Define CAN\_CONST Description**

<b>Name</b>	CAN_CONST
<b>Initializer</b>	

### 3.8.1.31 Define CAN\_APPL\_DATA

CAN memory and pointer classes.

**Implements:** DBASE04001

**Table 3-35. Define CAN\_APPL\_DATA Description**

<b>Name</b>	CAN_APPL_DATA
<b>Initializer</b>	

### 3.8.1.32 Define CAN\_APPL\_CONST

CAN memory and pointer classes.

**Implements:** DBASE04001

**Table 3-36. Define CAN\_APPL\_CONST Description**

<b>Name</b>	CAN_APPL_CONST
<b>Initializer</b>	

### 3.8.1.33 Define CAN\_APPL\_CODE

CAN memory and pointer classes.

**Implements:** DBASE04001

**Table 3-37. Define CAN\_APPL\_CODE Description**

<b>Name</b>	CAN_APPL_CODE
<b>Initializer</b>	

### 3.8.1.34 Define CAN\_CALLOUT\_CODE

CAN memory and pointer classes.

**Implements:** DBASE04001

**Table 3-38. Define CAN\_CALLOUT\_CODE Description**

<b>Name</b>	CAN_CALLOUT_CODE
<b>Initializer</b>	

### 3.8.1.35 Define CAN\_VAR\_NOINIT

CAN memory and pointer classes.

**Implements:** DBASE04001

**Table 3-39. Define CAN\_VAR\_NOINIT Description**

<b>Name</b>	CAN_VAR_NOINIT
<b>Initializer</b>	

### 3.8.1.36 Define CAN\_VAR\_POWER\_ON\_INIT

CAN memory and pointer classes.

**Implements:** DBASE04001

**Table 3-40. Define CAN\_VAR\_POWER\_ON\_INIT Description**

<b>Name</b>	CAN_VAR_POWER_ON_INIT
<b>Initializer</b>	

### 3.8.1.37 Define CAN\_VAR\_FAST

CAN memory and pointer classes.

**Implements:** DBASE04001

**Table 3-41. Define CAN\_VAR\_FAST Description**

<b>Name</b>	CAN_VAR_FAST
<b>Initializer</b>	

### 3.8.1.38 Define CAN\_VAR

CAN memory and pointer classes.

**Implements:** DBASE04001

**Table 3-42. Define CAN\_VAR Description**

<b>Name</b>	CAN_VAR
<b>Initializer</b>	

### 3.8.1.39 Define CRCU\_CODE

CRCU memory and pointer classes.

**Implements:**

**Table 3-43. Define CRCU\_CODE Description**

<b>Name</b>	CRCU_CODE
<b>Initializer</b>	

### 3.8.1.40 Define CRCU\_CONST

CRCU memory and pointer classes.

#### Implements:

**Table 3-44. Define CRCU\_CONST Description**

<b>Name</b>	CRCU_CONST
<b>Initializer</b>	

### 3.8.1.41 Define CRCU\_APPL\_DATA

CRCU memory and pointer classes.

#### Implements:

**Table 3-45. Define CRCU\_APPL\_DATA Description**

<b>Name</b>	CRCU_APPL_DATA
<b>Initializer</b>	

### 3.8.1.42 Define CRCU\_APPL\_CONST

CRCU memory and pointer classes.

#### Implements:

**Table 3-46. Define CRCU\_APPL\_CONST Description**

<b>Name</b>	CRCU_APPL_CONST
<b>Initializer</b>	

### 3.8.1.43 Define CRCU\_APPL\_CODE

CRCU memory and pointer classes.

**Implements:** DBASE04001

**Table 3-47. Define CRCU\_APPL\_CODE Description**

<b>Name</b>	CRCU_APPL_CODE
<b>Initializer</b>	

### 3.8.1.44 Define CRCU\_CALLOUT\_CODE

CRCU memory and pointer classes.

**Implements:**

**Table 3-48. Define CRCU\_CALLOUT\_CODE Description**

<b>Name</b>	CRCU_CALLOUT_CODE
<b>Initializer</b>	

### 3.8.1.45 Define CRCU\_VAR\_NOINIT

CRCU memory and pointer classes.

**Implements:**

**Table 3-49. Define CRCU\_VAR\_NOINIT Description**

<b>Name</b>	CRCU_VAR_NOINIT
<b>Initializer</b>	

### 3.8.1.46 Define CRCU\_VAR\_POWER\_ON\_INIT

CRCU memory and pointer classes.

**Implements:**

**Table 3-50. Define CRCU\_VAR\_POWER\_ON\_INIT Description**

<b>Name</b>	CRCU_VAR_POWER_ON_INIT
<b>Initializer</b>	

### 3.8.1.47 Define CRCU\_VAR\_FAST

CRCU memory and pointer classes.

#### Implements:

**Table 3-51. Define CRCU\_VAR\_FAST Description**

<b>Name</b>	CRCU_VAR_FAST
<b>Initializer</b>	

### 3.8.1.48 Define CRCU\_VAR

CRCU memory and pointer classes.

#### Implements:

**Table 3-52. Define CRCU\_VAR Description**

<b>Name</b>	CRCU_VAR
<b>Initializer</b>	

### 3.8.1.49 Define CANIF\_CODE

CANIF memory and pointer classes.

#### Implements: DBASE04001

**Table 3-53. Define CANIF\_CODE Description**

<b>Name</b>	CANIF_CODE
<b>Initializer</b>	

### 3.8.1.50 Define CANIF\_CONST

CANIF memory and pointer classes.

**Implements:** DBASE04001

**Table 3-54. Define CANIF\_CONST Description**

<b>Name</b>	CANIF_CONST
<b>Initializer</b>	

### 3.8.1.51 Define CANIF\_APPL\_DATA

CANIF memory and pointer classes.

**Implements:** DBASE04001

**Table 3-55. Define CANIF\_APPL\_DATA Description**

<b>Name</b>	CANIF_APPL_DATA
<b>Initializer</b>	

### 3.8.1.52 Define CANIF\_APPL\_CONST

CANIF memory and pointer classes.

**Implements:** DBASE04001

**Table 3-56. Define CANIF\_APPL\_CONST Description**

<b>Name</b>	CANIF_APPL_CONST
<b>Initializer</b>	

### 3.8.1.53 Define CANIF\_APPL\_CODE

CANIF memory and pointer classes.

**Implements:** DBASE04001

**Table 3-57. Define CANIF\_APPL\_CODE Description**

<b>Name</b>	CANIF_APPL_CODE
<b>Initializer</b>	

### 3.8.1.54 Define CANIF\_CALLOUT\_CODE

CANIF memory and pointer classes.

**Implements:** DBASE04001

**Table 3-58. Define CANIF\_CALLOUT\_CODE Description**

<b>Name</b>	CANIF_CALLOUT_CODE
<b>Initializer</b>	

### 3.8.1.55 Define CANIF\_VAR\_NOINIT

CANIF memory and pointer classes.

**Implements:** DBASE04001

**Table 3-59. Define CANIF\_VAR\_NOINIT Description**

<b>Name</b>	CANIF_VAR_NOINIT
<b>Initializer</b>	

### 3.8.1.56 Define CANIF\_VAR\_POWER\_ON\_INIT

CANIF memory and pointer classes.



**Implements:** DBASE04001

**Table 3-60. Define CANIF\_VAR\_POWER\_ON\_INIT Description**

<b>Name</b>	CANIF_VAR_POWER_ON_INIT
<b>Initializer</b>	

### 3.8.1.57 Define CANIF\_VAR\_FAST

CANIF memory and pointer classes.

**Implements:** DBASE04001

**Table 3-61. Define CANIF\_VAR\_FAST Description**

<b>Name</b>	CANIF_VAR_FAST
<b>Initializer</b>	

### 3.8.1.58 Define CANIF\_VAR

CANIF memory and pointer classes.

**Implements:** DBASE04001

**Table 3-62. Define CANIF\_VAR Description**

<b>Name</b>	CANIF_VAR
<b>Initializer</b>	

### 3.8.1.59 Define DEM\_CODE

DEM memory and pointer classes.

**Implements:** DBASE04001

**Table 3-63. Define DEM\_CODE Description**

<b>Name</b>	DEM_CODE
<b>Initializer</b>	

### 3.8.1.60 Define DEM\_CONST

DEM memory and pointer classes.

**Implements:** DBASE04001

**Table 3-64. Define DEM\_CONST Description**

<b>Name</b>	DEM_CONST
<b>Initializer</b>	

### 3.8.1.61 Define DEM\_APPL\_DATA

DEM memory and pointer classes.

**Implements:** DBASE04001

**Table 3-65. Define DEM\_APPL\_DATA Description**

<b>Name</b>	DEM_APPL_DATA
<b>Initializer</b>	

### 3.8.1.62 Define DEM\_APPL\_CONST

DEM memory and pointer classes.

**Implements:** DBASE04001

**Table 3-66. Define DEM\_APPL\_CONST Description**

<b>Name</b>	DEM_APPL_CONST
<b>Initializer</b>	

### 3.8.1.63 Define DEM\_APPL\_CODE

DEM memory and pointer classes.

**Implements:** DBASE04001

**Table 3-67. Define DEM\_APPL\_CODE Description**

<b>Name</b>	DEM_APPL_CODE
<b>Initializer</b>	

### 3.8.1.64 Define DEM\_CALLOUT\_CODE

DEM memory and pointer classes.

**Implements:** DBASE04001

**Table 3-68. Define DEM\_CALLOUT\_CODE Description**

<b>Name</b>	DEM_CALLOUT_CODE
<b>Initializer</b>	

### 3.8.1.65 Define DEM\_VAR\_NOINIT

DEM memory and pointer classes.

**Implements:** DBASE04001

**Table 3-69. Define DEM\_VAR\_NOINIT Description**

<b>Name</b>	DEM_VAR_NOINIT
<b>Initializer</b>	

### 3.8.1.66 Define DEM\_VAR\_POWER\_ON\_INIT

DEM memory and pointer classes.

**Implements:** DBASE04001

**Table 3-70. Define DEM\_VAR\_POWER\_ON\_INIT Description**

<b>Name</b>	DEM_VAR_POWER_ON_INIT
<b>Initializer</b>	

### 3.8.1.67 Define DEM\_VAR\_FAST

DEM memory and pointer classes.

**Implements:** DBASE04001

**Table 3-71. Define DEM\_VAR\_FAST Description**

<b>Name</b>	DEM_VAR_FAST
<b>Initializer</b>	

### 3.8.1.68 Define DEM\_VAR

DEM memory and pointer classes.

**Implements:** DBASE04001

**Table 3-72. Define DEM\_VAR Description**

<b>Name</b>	DEM_VAR
<b>Initializer</b>	

### 3.8.1.69 Define DET\_CODE

DET memory and pointer classes.

**Implements:** DBASE04001

**Table 3-73. Define DET\_CODE Description**

<b>Name</b>	DET_CODE
<b>Initializer</b>	

### 3.8.1.70 Define DET\_CONST

DET memory and pointer classes.

**Implements:** DBASE04001

**Table 3-74. Define DET\_CONST Description**

<b>Name</b>	DET_CONST
<b>Initializer</b>	

### 3.8.1.71 Define DET\_APPL\_DATA

DET memory and pointer classes.

**Implements:** DBASE04001

**Table 3-75. Define DET\_APPL\_DATA Description**

<b>Name</b>	DET_APPL_DATA
<b>Initializer</b>	

### 3.8.1.72 Define DET\_APPL\_CONST

DET memory and pointer classes.

**Implements:** DBASE04001

**Table 3-76. Define DET\_APPL\_CONST Description**

<b>Name</b>	DET_APPL_CONST
<b>Initializer</b>	

### 3.8.1.73 Define DET\_APPL\_CODE

DET memory and pointer classes.

**Implements:** DBASE04001

**Table 3-77. Define DET\_APPL\_CODE Description**

<b>Name</b>	DET_APPL_CODE
<b>Initializer</b>	

### 3.8.1.74 Define DET\_CALLOUT\_CODE

DET memory and pointer classes.

**Implements:** DBASE04001

**Table 3-78. Define DET\_CALLOUT\_CODE Description**

<b>Name</b>	DET_CALLOUT_CODE
<b>Initializer</b>	

### 3.8.1.75 Define DET\_VAR\_NOINIT

DET memory and pointer classes.

**Implements:** DBASE04001

**Table 3-79. Define DET\_VAR\_NOINIT Description**

<b>Name</b>	DET_VAR_NOINIT
<b>Initializer</b>	

### 3.8.1.76 Define DET\_VAR\_POWER\_ON\_INIT

DET memory and pointer classes.

**Implements:** DBASE04001

**Table 3-80. Define DET\_VAR\_POWER\_ON\_INIT Description**

<b>Name</b>	DET_VAR_POWER_ON_INIT
<b>Initializer</b>	

### 3.8.1.77 Define DET\_VAR\_FAST

DET memory and pointer classes.

**Implements:** DBASE04001

**Table 3-81. Define DET\_VAR\_FAST Description**

<b>Name</b>	DET_VAR_FAST
<b>Initializer</b>	

### 3.8.1.78 Define DET\_VAR

DET memory and pointer classes.

**Implements:** DBASE04001

**Table 3-82. Define DET\_VAR Description**

<b>Name</b>	DET_VAR
<b>Initializer</b>	

### 3.8.1.79 Define DIO\_CODE

DIO memory and pointer classes.

**Implements:** DBASE04001

**Table 3-83. Define DIO\_CODE Description**

Name	DIO_CODE
Initializer	

### 3.8.1.80 Define DIO\_CONST

DIO memory and pointer classes.

**Implements:** DBASE04001

**Table 3-84. Define DIO\_CONST Description**

Name	DIO_CONST
Initializer	

### 3.8.1.81 Define DIO\_APPL\_DATA

DIO memory and pointer classes.

**Implements:** DBASE04001

**Table 3-85. Define DIO\_APPL\_DATA Description**

Name	DIO_APPL_DATA
Initializer	

### 3.8.1.82 Define DIO\_APPL\_CONST

DIO memory and pointer classes.



**Implements:** DBASE04001

**Table 3-86. Define DIO\_APPL\_CONST Description**

<b>Name</b>	DIO_APPL_CONST
<b>Initializer</b>	

### 3.8.1.83 Define DIO\_APPL\_CODE

DIO memory and pointer classes.

**Implements:** DBASE04001

**Table 3-87. Define DIO\_APPL\_CODE Description**

<b>Name</b>	DIO_APPL_CODE
<b>Initializer</b>	

### 3.8.1.84 Define DIO\_CALLOUT\_CODE

DIO memory and pointer classes.

**Implements:** DBASE04001

**Table 3-88. Define DIO\_CALLOUT\_CODE Description**

<b>Name</b>	DIO_CALLOUT_CODE
<b>Initializer</b>	

### 3.8.1.85 Define DIO\_VAR\_NOINIT

DIO memory and pointer classes.

**Implements:** DBASE04001

**Table 3-89. Define DIO\_VAR\_NOINIT Description**

<b>Name</b>	DIO_VAR_NOINIT
<b>Initializer</b>	

### 3.8.1.86 Define DIO\_VAR\_POWER\_ON\_INIT

DIO memory and pointer classes.

**Implements:** DBASE04001

**Table 3-90. Define DIO\_VAR\_POWER\_ON\_INIT Description**

<b>Name</b>	DIO_VAR_POWER_ON_INIT
<b>Initializer</b>	

### 3.8.1.87 Define DIO\_VAR\_FAST

DIO memory and pointer classes.

**Implements:** DBASE04001

**Table 3-91. Define DIO\_VAR\_FAST Description**

<b>Name</b>	DIO_VAR_FAST
<b>Initializer</b>	

### 3.8.1.88 Define DIO\_VAR

DIO memory and pointer classes.

**Implements:** DBASE04001

**Table 3-92. Define DIO\_VAR Description**

<b>Name</b>	DIO_VAR
<b>Initializer</b>	

### 3.8.1.89 Define ETH\_CODE

ETH memory and pointer classes.

**Implements:** DBASE04001

**Table 3-93. Define ETH\_CODE Description**

<b>Name</b>	ETH_CODE
<b>Initializer</b>	

### 3.8.1.90 Define ETH\_CONST

ETH memory and pointer classes.

**Implements:** DBASE04001

**Table 3-94. Define ETH\_CONST Description**

<b>Name</b>	ETH_CONST
<b>Initializer</b>	

### 3.8.1.91 Define ETH\_APPL\_DATA

ETH memory and pointer classes.

**Implements:** DBASE04001

**Table 3-95. Define ETH\_APPL\_DATA Description**

<b>Name</b>	ETH_APPL_DATA
<b>Initializer</b>	

### 3.8.1.92 Define ETH\_APPL\_CONST

ETH memory and pointer classes.

**Implements:** DBASE04001

**Table 3-96. Define ETH\_APPL\_CONST Description**

<b>Name</b>	ETH_APPL_CONST
<b>Initializer</b>	

### 3.8.1.93 Define ETH\_APPL\_CODE

ETH memory and pointer classes.

**Implements:** DBASE04001

**Table 3-97. Define ETH\_APPL\_CODE Description**

<b>Name</b>	ETH_APPL_CODE
<b>Initializer</b>	

### 3.8.1.94 Define ETH\_CALLOUT\_CODE

ETH memory and pointer classes.

**Implements:** DBASE04001

**Table 3-98. Define ETH\_CALLOUT\_CODE Description**

<b>Name</b>	ETH_CALLOUT_CODE
<b>Initializer</b>	

### 3.8.1.95 Define ETH\_VAR\_NOINIT

ETH memory and pointer classes.

**Implements:** DBASE04001

**Table 3-99. Define ETH\_VAR\_NOINIT Description**

<b>Name</b>	ETH_VAR_NOINIT
<b>Initializer</b>	

### 3.8.1.96 Define ETH\_VAR\_POWER\_ON\_INIT

ETH memory and pointer classes.

**Implements:** DBASE04001

**Table 3-100. Define ETH\_VAR\_POWER\_ON\_INIT Description**

<b>Name</b>	ETH_VAR_POWER_ON_INIT
<b>Initializer</b>	

### 3.8.1.97 Define ETH\_VAR\_FAST

ETH memory and pointer classes.

**Implements:** DBASE04001

**Table 3-101. Define ETH\_VAR\_FAST Description**

<b>Name</b>	ETH_VAR_FAST
<b>Initializer</b>	

### 3.8.1.98 Define ETH\_VAR

ETH memory and pointer classes.

**Implements:** DBASE04001

**Table 3-102. Define ETH\_VAR Description**

<b>Name</b>	ETH_VAR
<b>Initializer</b>	

### 3.8.1.99 Define ETH\_AR\_RELEASE\_MAJOR\_VERSION\_ETHGENERALTYPES

**Violates:** MISRA rule 1.4

**Table 3-103. Define ETH\_AR\_RELEASE\_MAJOR\_VERSION\_ETHGENERALTYPES Description**

<b>Name</b>	ETH_AR_RELEASE_MAJOR_VERSION_ETHGENERALTYPES
<b>Initializer</b>	4

### 3.8.1.100 Define ETH\_AR\_RELEASE\_MINOR\_VERSION\_ETHGENERALTYPES

**Violates:** MISRA rule 1.4

**Table 3-104. Define ETH\_AR\_RELEASE\_MINOR\_VERSION\_ETHGENERALTYPES Description**

<b>Name</b>	ETH_AR_RELEASE_MINOR_VERSION_ETHGENERALTYPES
<b>Initializer</b>	2

### 3.8.1.101 Define ETH\_AR\_RELEASE\_REVISION\_VERSION\_ETHGENERALTYPES

**Violates:** MISRA rule 1.4

**Table 3-105. Define ETH\_AR\_RELEASE\_REVISION\_VERSION\_ETHGENERALTYPES**  
Description

<b>Name</b>	ETH_AR_RELEASE_REVISION_VERSION_ETHGENERALTYPES
<b>Initializer</b>	2

### 3.8.1.102 Define ETH\_MODULE\_ID\_ETHGENERALTYPES

**Table 3-106. Define ETH\_MODULE\_ID\_ETHGENERALTYPES**  
Description

<b>Name</b>	ETH_MODULE_ID_ETHGENERALTYPES
<b>Initializer</b>	0

### 3.8.1.103 Define ETH\_SW\_MAJOR\_VERSION\_ETHGENERALTYPES

**Violates:** MISRA rule 1.4

**Table 3-107. Define ETH\_SW\_MAJOR\_VERSION\_ETHGENERALTYPES**  
Description

<b>Name</b>	ETH_SW_MAJOR_VERSION_ETHGENERALTYPES
<b>Initializer</b>	1

### 3.8.1.104 Define ETH\_SW\_MINOR\_VERSION\_ETHGENERALTYPES

**Violates:** MISRA rule 1.4

**Table 3-108. Define ETH\_SW\_MINOR\_VERSION\_ETHGENERALTYPES**  
Description

<b>Name</b>	ETH_SW_MINOR_VERSION_ETHGENERALTYPES
<b>Initializer</b>	0

### 3.8.1.105 Define ETH\_SW\_PATCH\_VERSION\_ETHGENERALTYPES

**Violates:** MISRA rule 1.4

**Table 3-109. Define ETH\_SW\_PATCH\_VERSION\_ETHGENERALTYPES**  
Description

<b>Name</b>	ETH_SW_PATCH_VERSION_ETHGENERALTYPES
<b>Initializer</b>	2

### 3.8.1.106 Define ETH\_VENDOR\_ID\_ETHGENERALTYPES

**Table 3-110. Define ETH\_VENDOR\_ID\_ETHGENERALTYPES**  
Description

<b>Name</b>	ETH_VENDOR_ID_ETHGENERALTYPES
<b>Initializer</b>	43

### 3.8.1.107 Define FEE\_CODE

FEE memory and pointer classes.

**Implements:** DBASE04001

**Table 3-111. Define FEE\_CODE Description**

<b>Name</b>	FEE_CODE
<b>Initializer</b>	

### 3.8.1.108 Define FEE\_CONST

FEE memory and pointer classes.

**Implements:** DBASE04001



**Table 3-112. Define FEE\_CONST Description**

<b>Name</b>	FEE_CONST
<b>Initializer</b>	

### 3.8.1.109 Define FEE\_APPL\_DATA

FEE memory and pointer classes.

**Implements:** DBASE04001

**Table 3-113. Define FEE\_APPL\_DATA Description**

<b>Name</b>	FEE_APPL_DATA
<b>Initializer</b>	

### 3.8.1.110 Define FEE\_APPL\_CONST

FEE memory and pointer classes.

**Implements:** DBASE04001

**Table 3-114. Define FEE\_APPL\_CONST Description**

<b>Name</b>	FEE_APPL_CONST
<b>Initializer</b>	

### 3.8.1.111 Define FEE\_APPL\_CODE

FEE memory and pointer classes.

**Implements:** DBASE04001

**Table 3-115. Define FEE\_APPL\_CODE Description**

<b>Name</b>	FEE_APPL_CODE
<b>Initializer</b>	

### 3.8.1.112 Define FEE\_CALLOUT\_CODE

FEE memory and pointer classes.

**Implements:** DBASE04001

**Table 3-116. Define FEE\_CALLOUT\_CODE Description**

<b>Name</b>	FEE_CALLOUT_CODE
<b>Initializer</b>	

### 3.8.1.113 Define FEE\_VAR\_NOINIT

FEE memory and pointer classes.

**Implements:** DBASE04001

**Table 3-117. Define FEE\_VAR\_NOINIT Description**

<b>Name</b>	FEE_VAR_NOINIT
<b>Initializer</b>	

### 3.8.1.114 Define FEE\_VAR\_POWER\_ON\_INIT

FEE memory and pointer classes.

**Implements:** DBASE04001

**Table 3-118. Define FEE\_VAR\_POWER\_ON\_INIT Description**

<b>Name</b>	FEE_VAR_POWER_ON_INIT
<b>Initializer</b>	

### 3.8.1.115 Define FEE\_VAR\_FAST

FEE memory and pointer classes.

**Implements:** DBASE04001

**Table 3-119. Define FEE\_VAR\_FAST Description**

<b>Name</b>	FEE_VAR_FAST
<b>Initializer</b>	

### 3.8.1.116 Define FEE\_VAR

FEE memory and pointer classes.

**Implements:** DBASE04001

**Table 3-120. Define FEE\_VAR Description**

<b>Name</b>	FEE_VAR
<b>Initializer</b>	

### 3.8.1.117 Define FLS\_CODE

FLS memory and pointer classes.

**Implements:** DBASE04001

**Table 3-121. Define FLS\_CODE Description**

<b>Name</b>	FLS_CODE
<b>Initializer</b>	

### 3.8.1.118 Define FLS\_CONST

FLS memory and pointer classes.

**Implements:** DBASE04001

**Table 3-122. Define FLS\_CONST Description**

<b>Name</b>	FLS_CONST
<b>Initializer</b>	

### 3.8.1.119 Define FLS\_APPL\_DATA

FLS memory and pointer classes.

**Implements:** DBASE04001

**Table 3-123. Define FLS\_APPL\_DATA Description**

<b>Name</b>	FLS_APPL_DATA
<b>Initializer</b>	

### 3.8.1.120 Define FLS\_APPL\_CONST

FLS memory and pointer classes.

**Implements:** DBASE04001

**Table 3-124. Define FLS\_APPL\_CONST  
Description**

<b>Name</b>	FLS_APPL_CONST
<b>Initializer</b>	

### 3.8.1.121 Define FLS\_APPL\_CODE

FLS memory and pointer classes.

**Implements:** DBASE04001

**Table 3-125. Define FLS\_APPL\_CODE**  
Description

<b>Name</b>	FLS_APPL_CODE
<b>Initializer</b>	

### 3.8.1.122 Define FLS\_CALLOUT\_CODE

FLS memory and pointer classes.

**Implements:** DBASE04001

**Table 3-126. Define FLS\_CALLOUT\_CODE**  
Description

<b>Name</b>	FLS_CALLOUT_CODE
<b>Initializer</b>	

### 3.8.1.123 Define FLS\_VAR\_NOINIT

FLS memory and pointer classes.

**Implements:** DBASE04001

**Table 3-127. Define FLS\_VAR\_NOINIT Description**

<b>Name</b>	FLS_VAR_NOINIT
<b>Initializer</b>	

### 3.8.1.124 Define FLS\_VAR\_POWER\_ON\_INIT

FLS memory and pointer classes.

**Implements:** DBASE04001

**Table 3-128. Define FLS\_VAR\_POWER\_ON\_INIT**  
**Description**

<b>Name</b>	FLS_VAR_POWER_ON_INIT
<b>Initializer</b>	

### 3.8.1.125 Define FLS\_VAR\_FAST

FLS memory and pointer classes.

**Implements:** DBASE04001

**Table 3-129. Define FLS\_VAR\_FAST Description**

<b>Name</b>	FLS_VAR_FAST
<b>Initializer</b>	

### 3.8.1.126 Define FLS\_VAR

FLS memory and pointer classes.

**Implements:** DBASE04001

**Table 3-130. Define FLS\_VAR Description**

<b>Name</b>	FLS_VAR
<b>Initializer</b>	

### 3.8.1.127 Define FR\_APPL\_CODE

FlexRay memory and pointer classes.

**Implements:** DBASE04001

**Table 3-131. Define FR\_APPL\_CODE Description**

<b>Name</b>	FR_APPL_CODE
<b>Initializer</b>	

### 3.8.1.128 Define FR\_APPL\_CONST

FlexRay memory and pointer classes.

**Implements:** DBASE04001

**Table 3-132. Define FR\_APPL\_CONST Description**

<b>Name</b>	FR_APPL_CONST
<b>Initializer</b>	

### 3.8.1.129 Define FR\_APPL\_DATA

FlexRay memory and pointer classes.

**Implements:** DBASE04001

**Table 3-133. Define FR\_APPL\_DATA Description**

<b>Name</b>	FR_APPL_DATA
<b>Initializer</b>	

### 3.8.1.130 Define FR\_CALLOUT\_CODE

FlexRay memory and pointer classes.

**Implements:** DBASE04001

**Table 3-134. Define FR\_CALLOUT\_CODE Description**

<b>Name</b>	FR_CALLOUT_CODE
<b>Initializer</b>	

**3.8.1.131 Define FR\_CIDX\_GCOLDSTARTATTEMPTS****Table 3-135. Define FR\_CIDX\_GCOLDSTARTATTEMPTS Description**

<b>Name</b>	FR_CIDX_GCOLDSTARTATTEMPTS
<b>Initializer</b>	17U

**3.8.1.132 Define FR\_CIDX\_GCYCLECOUNTMAX****Table 3-136. Define FR\_CIDX\_GCYCLECOUNTMAX Description**

<b>Name</b>	FR_CIDX_GCYCLECOUNTMAX
<b>Initializer</b>	18U

**3.8.1.133 Define FR\_CIDX\_GDACTIONPOINTOFFSET****Table 3-137. Define FR\_CIDX\_GDACTIONPOINTOFFSET Description**

<b>Name</b>	FR_CIDX_GDACTIONPOINTOFFSET
<b>Initializer</b>	25U

**3.8.1.134 Define FR\_CIDX\_GDBIT****Table 3-138. Define FR\_CIDX\_GDBIT Description**

<b>Name</b>	FR_CIDX_GDBIT
<b>Initializer</b>	26U

**3.8.1.135 Define FR\_CIDX\_GDCASRXLOWMAX****Table 3-139. Define FR\_CIDX\_GDCASRXLOWMAX Description**

<b>Name</b>	FR_CIDX_GDCASRXLOWMAX
<b>Initializer</b>	27U



### 3.8.1.136 Define FR\_CIDX\_GDCYCLE

Macros which can be passed into Fr\_ReadCCConfig as parameter Fr\_ConfigParamIdx.

#### Details:

Each macro (index) uniquely identifies a configuration parameter which value can be read out of the controllers configuration using Fr\_ReadCCConfig.

Covers FR657

**Implements:** DFR32010

**Table 3-140. Define FR\_CIDX\_GDCYCLE Description**

<b>Name</b>	FR_CIDX_GDCYCLE
<b>Initializer</b>	0U

### 3.8.1.137 Define FR\_CIDX\_GDDYNAMICSLOTIDLEPHASE

**Table 3-141. Define FR\_CIDX\_GDDYNAMICSLOTIDLEPHASE Description**

<b>Name</b>	FR_CIDX_GDDYNAMICSLOTIDLEPHASE
<b>Initializer</b>	28U

### 3.8.1.138 Define FR\_CIDX\_GDIGNOREAFTERTX

**Table 3-142. Define FR\_CIDX\_GDIGNOREAFTERTX Description**

<b>Name</b>	FR_CIDX_GDIGNOREAFTERTX
<b>Initializer</b>	54U

### 3.8.1.139 Define FR\_CIDX\_GDMACROTICK

**Table 3-143. Define FR\_CIDX\_GDMACROTICK Description**

<b>Name</b>	FR_CIDX_GDMACROTICK
<b>Initializer</b>	4U

**3.8.1.140 Define FR\_CIDX\_GDMINISLOT****Table 3-144. Define FR\_CIDX\_GDMINISLOT Description**

<b>Name</b>	FR_CIDX_GDMINISLOT
<b>Initializer</b>	30U

**3.8.1.141 Define FR\_CIDX\_GDMINISLOTACTIONPOINTOFFSET****Table 3-145. Define FR\_CIDX\_GDMINISLOTACTIONPOINTOFFSET Description**

<b>Name</b>	FR_CIDX_GDMINISLOTACTIONPOINTOFFSET
<b>Initializer</b>	29U

**3.8.1.142 Define FR\_CIDX\_GDNIT****Table 3-146. Define FR\_CIDX\_GDNIT Description**

<b>Name</b>	FR_CIDX_GDNIT
<b>Initializer</b>	7U

**3.8.1.143 Define FR\_CIDX\_GDSAMPLECLOCKPERIOD****Table 3-147. Define FR\_CIDX\_GDSAMPLECLOCKPERIOD Description**

<b>Name</b>	FR_CIDX_GDSAMPLECLOCKPERIOD
<b>Initializer</b>	31U

**3.8.1.144 Define FR\_CIDX\_GDSTATICSLOT****Table 3-148. Define FR\_CIDX\_GDSTATICSLOT Description**

<b>Name</b>	FR_CIDX_GDSTATICSLOT
<b>Initializer</b>	8U

**3.8.1.145 Define FR\_CIDX\_GDSYMBOLWINDOW****Table 3-149. Define FR\_CIDX\_GDSYMBOLWINDOW  
Description**

<b>Name</b>	FR_CIDX_GDSYMBOLWINDOW
<b>Initializer</b>	32U

**3.8.1.146 Define  
FR\_CIDX\_GDSYMBOLWINDOWACTIONPOINTOFFSET****Table 3-150. Define FR\_CIDX\_GDSYMBOLWINDOWACTIONPOINTOFFSET  
Description**

<b>Name</b>	FR_CIDX_GDSYMBOLWINDOWACTIONPOINTOFFSET
<b>Initializer</b>	33U

**3.8.1.147 Define FR\_CIDX\_GDTSSTRANSMITTER****Table 3-151. Define FR\_CIDX\_GDTSSTRANSMITTER Description**

<b>Name</b>	FR_CIDX_GDTSSTRANSMITTER
<b>Initializer</b>	34U

**3.8.1.148 Define FR\_CIDX\_GDWAKEUPRXIDLE****Table 3-152. Define FR\_CIDX\_GDWAKEUPRXIDLE  
Description**

<b>Name</b>	FR_CIDX_GDWAKEUPRXIDLE
<b>Initializer</b>	35U

**3.8.1.149 Define FR\_CIDX\_GDWAKEUPRXLOW****Table 3-153. Define FR\_CIDX\_GDWAKEUPRXLOW  
Description**

<b>Name</b>	FR_CIDX_GDWAKEUPRXLOW
<b>Initializer</b>	36U

**3.8.1.150 Define FR\_CIDX\_GDWAKEUPRXWINDOW****Table 3-154. Define FR\_CIDX\_GDWAKEUPRXWINDOW Description**

<b>Name</b>	FR_CIDX_GDWAKEUPRXWINDOW
<b>Initializer</b>	9U

**3.8.1.151 Define FR\_CIDX\_GDWAKEUPTXACTIVE****Table 3-155. Define FR\_CIDX\_GDWAKEUPTXACTIVE Description**

<b>Name</b>	FR_CIDX_GDWAKEUPTXACTIVE
<b>Initializer</b>	37U

**3.8.1.152 Define FR\_CIDX\_GDWAKEUPTXIDLE****Table 3-156. Define FR\_CIDX\_GDWAKEUPTXIDLE Description**

<b>Name</b>	FR_CIDX_GDWAKEUPTXIDLE
<b>Initializer</b>	38U

**3.8.1.153 Define FR\_CIDX\_GLISTENNOISE****Table 3-157. Define FR\_CIDX\_GLISTENNOISE Description**

<b>Name</b>	FR_CIDX_GLISTENNOISE
<b>Initializer</b>	19U

**3.8.1.154 Define FR\_CIDX\_GMACROPERCYCLE****Table 3-158. Define FR\_CIDX\_GMACROPERCYCLE Description**

<b>Name</b>	FR_CIDX_GMACROPERCYCLE
<b>Initializer</b>	3U

### 3.8.1.155 Define FR\_CIDX\_GMAXWITHOUTCLOCKCORRECTFATAL

Table 3-159. Define FR\_CIDX\_GMAXWITHOUTCLOCKCORRECTFATAL  
Description

Name	FR_CIDX_GMAXWITHOUTCLOCKCORRECTFATAL
Initializer	20U

### 3.8.1.156 Define FR\_CIDX\_GMAXWITHOUTCLOCKCORRECTPASSIVE

Table 3-160. Define FR\_CIDX\_GMAXWITHOUTCLOCKCORRECTPASSIVE  
Description

Name	FR_CIDX_GMAXWITHOUTCLOCKCORRECTPASSIVE
Initializer	21U

### 3.8.1.157 Define FR\_CIDX\_GNETWORKMANAGEMENTVECTORLENGTH

Table 3-161. Define FR\_CIDX\_GNETWORKMANAGEMENTVECTORLENGTH  
Description

Name	FR_CIDX_GNETWORKMANAGEMENTVECTORLENGTH
Initializer	22U

### 3.8.1.158 Define FR\_CIDX\_GNUMBEROFMINISLOTS

Table 3-162. Define FR\_CIDX\_GNUMBEROFMINISLOTS  
Description

Name	FR_CIDX_GNUMBEROFMINISLOTS
Initializer	5U

**3.8.1.159 Define FR\_CIDX\_GNUMBEROFSTATICSLOTS****Table 3-163. Define FR\_CIDX\_GNUMBEROFSTATICSLOTS  
Description**

<b>Name</b>	FR_CIDX_GNUMBEROFSTATICSLOTS
<b>Initializer</b>	6U

**3.8.1.160 Define FR\_CIDX\_GPAYLOADLENGTHSTATIC****Table 3-164. Define FR\_CIDX\_GPAYLOADLENGTHSTATIC  
Description**

<b>Name</b>	FR_CIDX_GPAYLOADLENGTHSTATIC
<b>Initializer</b>	23U

**3.8.1.161 Define FR\_CIDX\_GSYNCFRAMEIDCOUNTMAX****Table 3-165. Define FR\_CIDX\_GSYNCFRAMEIDCOUNTMAX  
Description**

<b>Name</b>	FR_CIDX_GSYNCFRAMEIDCOUNTMAX
<b>Initializer</b>	24U

**3.8.1.162 Define FR\_CIDX\_PALLOWHALTDUETOCLOCK****Table 3-166. Define FR\_CIDX\_PALLOWHALTDUETOCLOCK  
Description**

<b>Name</b>	FR_CIDX_PALLOWHALTDUETOCLOCK
<b>Initializer</b>	55U

**3.8.1.163 Define FR\_CIDX\_PALLOWPASSIVETOACTIVE****Table 3-167. Define FR\_CIDX\_PALLOWPASSIVETOACTIVE  
Description**

<b>Name</b>	FR_CIDX_PALLOWPASSIVETOACTIVE
<b>Initializer</b>	39U

### 3.8.1.164 Define FR\_CIDX\_PCHANNELS

Table 3-168. Define FR\_CIDX\_PCHANNELS Description

Name	FR_CIDX_PCHANNELS
Initializer	40U

### 3.8.1.165 Define FR\_CIDX\_PCLUSTERDRIFTDAMPING

Table 3-169. Define FR\_CIDX\_PCLUSTERDRIFTDAMPING Description

Name	FR_CIDX_PCLUSTERDRIFTDAMPING
Initializer	41U

### 3.8.1.166 Define FR\_CIDX\_PDACCEPTEDSTARTUPRANGE

Table 3-170. Define FR\_CIDX\_PDACCEPTEDSTARTUPRANGE Description

Name	FR_CIDX_PDACCEPTEDSTARTUPRANGE
Initializer	16U

### 3.8.1.167 Define FR\_CIDX\_PDECODINGCORRECTION

Table 3-171. Define FR\_CIDX\_PDECODINGCORRECTION Description

Name	FR_CIDX_PDECODINGCORRECTION
Initializer	42U

### 3.8.1.168 Define FR\_CIDX\_PDELAYCOMPENSATIONA

Table 3-172. Define FR\_CIDX\_PDELAYCOMPENSATIONA Description

Name	FR_CIDX_PDELAYCOMPENSATIONA
Initializer	43U

**3.8.1.169 Define FR\_CIDX\_PDELAYCOMPENSATIONB****Table 3-173. Define FR\_CIDX\_PDELAYCOMPENSATIONB Description**

<b>Name</b>	FR_CIDX_PDELAYCOMPENSATIONB
<b>Initializer</b>	44U

**3.8.1.170 Define FR\_CIDX\_PDLISTENTIMEOUT****Table 3-174. Define FR\_CIDX\_PDLISTENTIMEOUT Description**

<b>Name</b>	FR_CIDX_PDLISTENTIMEOUT
<b>Initializer</b>	2U

**3.8.1.171 Define FR\_CIDX\_PDMICROTICK****Table 3-175. Define FR\_CIDX\_PDMICROTICK Description**

<b>Name</b>	FR_CIDX_PDMICROTICK
<b>Initializer</b>	53U

**3.8.1.172 Define FR\_CIDX\_PEXTERNALSYNC****Table 3-176. Define FR\_CIDX\_PEXTERNALSYNC Description**

<b>Name</b>	FR_CIDX_PEXTERNALSYNC
<b>Initializer</b>	56U

**3.8.1.173 Define FR\_CIDX\_PFALLBACKINTERNAL****Table 3-177. Define FR\_CIDX\_PFALLBACKINTERNAL Description**

<b>Name</b>	FR_CIDX_PFALLBACKINTERNAL
<b>Initializer</b>	57U



**3.8.1.174 Define FR\_CIDX\_PKEYSLOTID****Table 3-178. Define FR\_CIDX\_PKEYSLOTID Description**

<b>Name</b>	FR_CIDX_PKEYSLOTID
<b>Initializer</b>	10U

**3.8.1.175 Define FR\_CIDX\_PKEYSLOTONLYENABLED****Table 3-179. Define FR\_CIDX\_PKEYSLOTONLYENABLED Description**

<b>Name</b>	FR_CIDX_PKEYSLOTONLYENABLED
<b>Initializer</b>	58U

**3.8.1.176 Define FR\_CIDX\_PKEYSLOTUSEDFORSTARTUP****Table 3-180. Define FR\_CIDX\_PKEYSLOTUSEDFORSTARTUP Description**

<b>Name</b>	FR_CIDX_PKEYSLOTUSEDFORSTARTUP
<b>Initializer</b>	59U

**3.8.1.177 Define FR\_CIDX\_PKEYSLOTUSEDFORSYNC****Table 3-181. Define FR\_CIDX\_PKEYSLOTUSEDFORSYNC Description**

<b>Name</b>	FR_CIDX_PKEYSLOTUSEDFORSYNC
<b>Initializer</b>	60U

**3.8.1.178 Define FR\_CIDX\_PLATESTTX****Table 3-182. Define FR\_CIDX\_PLATESTTX Description**

<b>Name</b>	FR_CIDX_PLATESTTX
<b>Initializer</b>	11U

**3.8.1.179 Define FR\_CIDX\_PMACROINITIALOFFSETA****Table 3-183. Define FR\_CIDX\_PMACROINITIALOFFSETA  
Description**

<b>Name</b>	FR_CIDX_PMACROINITIALOFFSETA
<b>Initializer</b>	45U

**3.8.1.180 Define FR\_CIDX\_PMACROINITIALOFFSETB****Table 3-184. Define FR\_CIDX\_PMACROINITIALOFFSETB  
Description**

<b>Name</b>	FR_CIDX_PMACROINITIALOFFSETB
<b>Initializer</b>	46U

**3.8.1.181 Define FR\_CIDX\_PMICROINITIALOFFSETA****Table 3-185. Define FR\_CIDX\_PMICROINITIALOFFSETA  
Description**

<b>Name</b>	FR_CIDX_PMICROINITIALOFFSETA
<b>Initializer</b>	47U

**3.8.1.182 Define FR\_CIDX\_PMICROINITIALOFFSETB****Table 3-186. Define FR\_CIDX\_PMICROINITIALOFFSETB  
Description**

<b>Name</b>	FR_CIDX_PMICROINITIALOFFSETB
<b>Initializer</b>	48U

**3.8.1.183 Define FR\_CIDX\_PMICROPERCYCLE****Table 3-187. Define FR\_CIDX\_PMICROPERCYCLE  
Description**

<b>Name</b>	FR_CIDX_PMICROPERCYCLE
<b>Initializer</b>	1U

### 3.8.1.184 Define FR\_CIDX\_PNMVECTOREARLYUPDATE

Table 3-188. Define FR\_CIDX\_PNMVECTOREARLYUPDATE  
Description

Name	FR_CIDX_PNMVECTOREARLYUPDATE
Initializer	61U

### 3.8.1.185 Define FR\_CIDX\_POFFSETCORRECTIONOUT

Table 3-189. Define FR\_CIDX\_POFFSETCORRECTIONOUT  
Description

Name	FR_CIDX_POFFSETCORRECTIONOUT
Initializer	12U

### 3.8.1.186 Define FR\_CIDX\_POFFSETCORRECTIONSTART

Table 3-190. Define FR\_CIDX\_POFFSETCORRECTIONSTART  
Description

Name	FR_CIDX_POFFSETCORRECTIONSTART
Initializer	13U

### 3.8.1.187 Define FR\_CIDX\_PPAYLOADLENGTHDYNMAX

Table 3-191. Define FR\_CIDX\_PPAYLOADLENGTHDYNMAX  
Description

Name	FR_CIDX_PPAYLOADLENGTHDYNMAX
Initializer	49U

### 3.8.1.188 Define FR\_CIDX\_PRATECORRECTIONOUT

Table 3-192. Define FR\_CIDX\_PRATECORRECTIONOUT Description

Name	FR_CIDX_PRATECORRECTIONOUT
Initializer	14U

**3.8.1.189 Define FR\_CIDX\_PSAMPLESPERMICROTICK****Table 3-193. Define FR\_CIDX\_PSAMPLESPERMICROTICK  
Description**

<b>Name</b>	FR_CIDX_PSAMPLESPERMICROTICK
<b>Initializer</b>	50U

**3.8.1.190 Define FR\_CIDX\_PSECONDKEYSLOTID****Table 3-194. Define FR\_CIDX\_PSECONDKEYSLOTID  
Description**

<b>Name</b>	FR_CIDX_PSECONDKEYSLOTID
<b>Initializer</b>	15U

**3.8.1.191 Define FR\_CIDX\_PTWOKEYSLOTMODE****Table 3-195. Define FR\_CIDX\_PTWOKEYSLOTMODE  
Description**

<b>Name</b>	FR_CIDX_PTWOKEYSLOTMODE
<b>Initializer</b>	62U

**3.8.1.192 Define FR\_CIDX\_PWAKEUPCHANNEL****Table 3-196. Define FR\_CIDX\_PWAKEUPCHANNEL  
Description**

<b>Name</b>	FR_CIDX_PWAKEUPCHANNEL
<b>Initializer</b>	51U

### 3.8.1.193 Define FR\_CIDX\_PWAKEUPPATTERN

**Table 3-197. Define FR\_CIDX\_PWAKEUPPATTERN Description**

<b>Name</b>	FR_CIDX_PWAKEUPPATTERN
<b>Initializer</b>	52U

### 3.8.1.194 Define FR\_CODE

FlexRay memory and pointer classes.

**Implements:** DBASE04001

**Table 3-198. Define FR\_CODE Description**

<b>Name</b>	FR_CODE
<b>Initializer</b>	

### 3.8.1.195 Define FR\_CONST

FlexRay memory and pointer classes.

**Implements:** DBASE04001

**Table 3-199. Define FR\_CONST Description**

<b>Name</b>	FR_CONST
<b>Initializer</b>	

### 3.8.1.196 Define FR\_SLOTMODE\_SINGLE

This macro is used for backward compatibility with Autosar 3.0 definition of Fr\_SlotModeType Covers FR599.

**Implements:** DFR32011

**Table 3-200. Define FR\_SLOTMODE\_SINGLE  
Description**

<b>Name</b>	FR_SLOTMODE_SINGLE
<b>Initializer</b>	FR_SLOTMODE_KEYSLLOT

### 3.8.1.197 Define FR\_VAR

FlexRay memory and pointer classes.

**Implements:** DBASE04001

**Table 3-201. Define FR\_VAR Description**

<b>Name</b>	FR_VAR
<b>Initializer</b>	

### 3.8.1.198 Define FR\_VAR\_FAST

FlexRay memory and pointer classes.

**Implements:** DBASE04001

**Table 3-202. Define FR\_VAR\_FAST Description**

<b>Name</b>	FR_VAR_FAST
<b>Initializer</b>	

### 3.8.1.199 Define FR\_VAR\_NOINIT

FlexRay memory and pointer classes.

**Implements:** DBASE04001

**Table 3-203. Define FR\_VAR\_NOINIT Description**

<b>Name</b>	FR_VAR_NOINIT
<b>Initializer</b>	

### 3.8.1.200 Define FR\_VAR\_POWER\_ON\_INIT

FlexRay memory and pointer classes.

**Implements:** DBASE04001

**Table 3-204. Define FR\_VAR\_POWER\_ON\_INIT Description**

<b>Name</b>	FR_VAR_POWER_ON_INIT
<b>Initializer</b>	

### 3.8.1.201 Define GPT\_CODE

GPT memory and pointer classes.

**Implements:** DBASE04001

**Table 3-205. Define GPT\_CODE Description**

<b>Name</b>	GPT_CODE
<b>Initializer</b>	

### 3.8.1.202 Define GPT\_CONST

GPT memory and pointer classes.

**Implements:** DBASE04001

**Table 3-206. Define GPT\_CONST Description**

<b>Name</b>	GPT_CONST
<b>Initializer</b>	

### 3.8.1.203 Define GPT\_APPL\_DATA

GPT memory and pointer classes.

**Implements:** DBASE04001

**Table 3-207. Define GPT\_APPL\_DATA Description**

<b>Name</b>	GPT_APPL_DATA
<b>Initializer</b>	

### 3.8.1.204 Define GPT\_APPL\_CONST

GPT memory and pointer classes.

**Implements:** DBASE04001

**Table 3-208. Define GPT\_APPL\_CONST Description**

<b>Name</b>	GPT_APPL_CONST
<b>Initializer</b>	

### 3.8.1.205 Define GPT\_APPL\_CODE

GPT memory and pointer classes.

**Implements:** DBASE04001

**Table 3-209. Define GPT\_APPL\_CODE Description**

<b>Name</b>	GPT_APPL_CODE
<b>Initializer</b>	



### 3.8.1.206 Define GPT\_CALLOUT\_CODE

GPT memory and pointer classes.

**Implements:** DBASE04001

**Table 3-210. Define GPT\_CALLOUT\_CODE Description**

<b>Name</b>	GPT_CALLOUT_CODE
<b>Initializer</b>	

### 3.8.1.207 Define GPT\_VAR\_NOINIT

GPT memory and pointer classes.

**Implements:** DBASE04001

**Table 3-211. Define GPT\_VAR\_NOINIT Description**

<b>Name</b>	GPT_VAR_NOINIT
<b>Initializer</b>	

### 3.8.1.208 Define GPT\_VAR\_POWER\_ON\_INIT

GPT memory and pointer classes.

**Implements:** DBASE04001

**Table 3-212. Define GPT\_VAR\_POWER\_ON\_INIT Description**

<b>Name</b>	GPT_VAR_POWER_ON_INIT
<b>Initializer</b>	

### 3.8.1.209 Define GPT\_VAR\_FAST

GPT memory and pointer classes.

**Implements:** DBASE04001

**Table 3-213. Define GPT\_VAR\_FAST Description**

<b>Name</b>	GPT_VAR_FAST
<b>Initializer</b>	

### 3.8.1.210 Define GPT\_VAR

GPT memory and pointer classes.

**Implements:** DBASE04001

**Table 3-214. Define GPT\_VAR Description**

<b>Name</b>	GPT_VAR
<b>Initializer</b>	

### 3.8.1.211 Define ICU\_CODE

ICU memory and pointer classes.

**Implements:** DBASE04001

**Table 3-215. Define ICU\_CODE Description**

<b>Name</b>	ICU_CODE
<b>Initializer</b>	

### 3.8.1.212 Define ICU\_CONST

ICU memory and pointer classes.

**Implements:** DBASE04001

**Table 3-216. Define ICU\_CONST Description**

<b>Name</b>	ICU_CONST
<b>Initializer</b>	

### 3.8.1.213 Define ICU\_APPL\_DATA

ICU memory and pointer classes.

**Implements:** DBASE04001

**Table 3-217. Define ICU\_APPL\_DATA Description**

<b>Name</b>	ICU_APPL_DATA
<b>Initializer</b>	

### 3.8.1.214 Define ICU\_APPL\_CONST

ICU memory and pointer classes.

**Implements:** DBASE04001

**Table 3-218. Define ICU\_APPL\_CONST Description**

<b>Name</b>	ICU_APPL_CONST
<b>Initializer</b>	

### 3.8.1.215 Define ICU\_APPL\_CODE

ICU memory and pointer classes.

**Implements:** DBASE04001

**Table 3-219. Define ICU\_APPL\_CODE Description**

<b>Name</b>	ICU_APPL_CODE
<b>Initializer</b>	

### 3.8.1.216 Define ICU\_CALLOUT\_CODE

ICU memory and pointer classes.

**Implements:** DBASE04001

**Table 3-220. Define ICU\_CALLOUT\_CODE Description**

<b>Name</b>	ICU_CALLOUT_CODE
<b>Initializer</b>	

### 3.8.1.217 Define ICU\_VAR\_NOINIT

ICU memory and pointer classes.

**Implements:** DBASE04001

**Table 3-221. Define ICU\_VAR\_NOINIT Description**

<b>Name</b>	ICU_VAR_NOINIT
<b>Initializer</b>	

### 3.8.1.218 Define ICU\_VAR\_POWER\_ON\_INIT

ICU memory and pointer classes.

**Implements:** DBASE04001

**Table 3-222. Define ICU\_VAR\_POWER\_ON\_INIT Description**

<b>Name</b>	ICU_VAR_POWER_ON_INIT
<b>Initializer</b>	

### 3.8.1.219 Define ICU\_VAR\_FAST

ICU memory and pointer classes.

**Implements:** DBASE04001

**Table 3-223. Define ICU\_VAR\_FAST Description**

<b>Name</b>	ICU_VAR_FAST
<b>Initializer</b>	

### 3.8.1.220 Define ICU\_VAR

ICU memory and pointer classes.

**Implements:** DBASE04001

**Table 3-224. Define ICU\_VAR Description**

<b>Name</b>	ICU_VAR
<b>Initializer</b>	

### 3.8.1.221 Define LIN\_CODE

LIN memory and pointer classes.

**Implements:** DBASE04001

**Table 3-225. Define LIN\_CODE Description**

<b>Name</b>	LIN_CODE
<b>Initializer</b>	

### 3.8.1.222 Define LIN\_CONST

LIN memory and pointer classes.

**Implements:** DBASE04001

**Table 3-226. Define LIN\_CONST Description**

<b>Name</b>	LIN_CONST
<b>Initializer</b>	

### 3.8.1.223 Define LIN\_APPL\_DATA

LIN memory and pointer classes.

**Implements:** DBASE04001

**Table 3-227. Define LIN\_APPL\_DATA Description**

<b>Name</b>	LIN_APPL_DATA
<b>Initializer</b>	

### 3.8.1.224 Define LIN\_APPL\_CONST

LIN memory and pointer classes.

**Implements:** DBASE04001

**Table 3-228. Define LIN\_APPL\_CONST Description**

<b>Name</b>	LIN_APPL_CONST
<b>Initializer</b>	

### 3.8.1.225 Define LIN\_APPL\_CODE

LIN memory and pointer classes.

**Implements:** DBASE04001

**Table 3-229. Define LIN\_APPL\_CODE Description**

<b>Name</b>	LIN_APPL_CODE
<b>Initializer</b>	

### 3.8.1.226 Define LIN\_CALLOUT\_CODE

LIN memory and pointer classes.

**Implements:** DBASE04001

**Table 3-230. Define LIN\_CALLOUT\_CODE Description**

<b>Name</b>	LIN_CALLOUT_CODE
<b>Initializer</b>	

### 3.8.1.227 Define LIN\_VAR\_NOINIT

LIN memory and pointer classes.

**Implements:** DBASE04001

**Table 3-231. Define LIN\_VAR\_NOINIT Description**

<b>Name</b>	LIN_VAR_NOINIT
<b>Initializer</b>	

### 3.8.1.228 Define LIN\_VAR\_POWER\_ON\_INIT

LIN memory and pointer classes.

**Implements:** DBASE04001

**Table 3-232. Define LIN\_VAR\_POWER\_ON\_INIT Description**

<b>Name</b>	LIN_VAR_POWER_ON_INIT
<b>Initializer</b>	

### 3.8.1.229 Define LIN\_VAR\_FAST

LIN memory and pointer classes.

**Implements:** DBASE04001

**Table 3-233. Define LIN\_VAR\_FAST Description**

<b>Name</b>	LIN_VAR_FAST
<b>Initializer</b>	

### 3.8.1.230 Define LIN\_VAR

LIN memory and pointer classes.

**Implements:** DBASE04001

**Table 3-234. Define LIN\_VAR Description**

<b>Name</b>	LIN_VAR
<b>Initializer</b>	

### 3.8.1.231 Define MCEM\_CODE

MCEM memory and pointer classes.

**Implements:**

**Table 3-235. Define MCEM\_CODE Description**

<b>Name</b>	MCEM_CODE
<b>Initializer</b>	



### 3.8.1.232 Define MCEM\_CONST

MCEM memory and pointer classes.

#### Implements:

**Table 3-236. Define MCEM\_CONST Description**

<b>Name</b>	MCEM_CONST
<b>Initializer</b>	

### 3.8.1.233 Define MCEM\_APPL\_DATA

MCEM memory and pointer classes.

#### Implements:

**Table 3-237. Define MCEM\_APPL\_DATA Description**

<b>Name</b>	MCEM_APPL_DATA
<b>Initializer</b>	

### 3.8.1.234 Define MCEM\_APPL\_CONST

MCEM memory and pointer classes.

#### Implements:

**Table 3-238. Define MCEM\_APPL\_CONST Description**

<b>Name</b>	MCEM_APPL_CONST
<b>Initializer</b>	

### 3.8.1.235 Define MCEM\_APPL\_CODE

MCEM memory and pointer classes.

**Implements:****Table 3-239. Define MCEM\_APPL\_CODE Description**

<b>Name</b>	MCEM_APPL_CODE
<b>Initializer</b>	

**3.8.1.236 Define MCEM\_CALLOUT\_CODE**

MCEM memory and pointer classes.

**Implements:****Table 3-240. Define MCEM\_CALLOUT\_CODE Description**

<b>Name</b>	MCEM_CALLOUT_CODE
<b>Initializer</b>	

**3.8.1.237 Define MCEM\_VAR\_NOINIT**

MCEM memory and pointer classes.

**Implements:****Table 3-241. Define MCEM\_VAR\_NOINIT Description**

<b>Name</b>	MCEM_VAR_NOINIT
<b>Initializer</b>	

**3.8.1.238 Define MCEM\_VAR\_POWER\_ON\_INIT**

MCEM memory and pointer classes.

**Implements:**

**Table 3-242. Define MCEM\_VAR\_POWER\_ON\_INIT Description**

<b>Name</b>	MCEM_VAR_POWER_ON_INIT
<b>Initializer</b>	

### 3.8.1.239 Define MCEM\_VAR\_FAST

MCEM memory and pointer classes.

#### Implements:

**Table 3-243. Define MCEM\_VAR\_FAST Description**

<b>Name</b>	MCEM_VAR_FAST
<b>Initializer</b>	

### 3.8.1.240 Define MCEM\_VAR

MCEM memory and pointer classes.

#### Implements:

**Table 3-244. Define MCEM\_VAR Description**

<b>Name</b>	MCEM_VAR
<b>Initializer</b>	

### 3.8.1.241 Define MCL\_CODE

MCL memory and pointer classes.

#### Implements:

**Table 3-245. Define MCL\_CODE Description**

<b>Name</b>	MCL_CODE
<b>Initializer</b>	

### 3.8.1.242 Define MCL\_CONST

MCL memory and pointer classes.

#### Implements:

**Table 3-246. Define MCL\_CONST Description**

<b>Name</b>	MCL_CONST
<b>Initializer</b>	

### 3.8.1.243 Define MCL\_APPL\_DATA

MCL memory and pointer classes.

#### Implements:

**Table 3-247. Define MCL\_APPL\_DATA Description**

<b>Name</b>	MCL_APPL_DATA
<b>Initializer</b>	

### 3.8.1.244 Define MCL\_APPL\_CONST

MCL memory and pointer classes.

#### Implements:

**Table 3-248. Define MCL\_APPL\_CONST Description**

<b>Name</b>	MCL_APPL_CONST
<b>Initializer</b>	

### 3.8.1.245 Define MCL\_APPL\_CODE

MCL memory and pointer classes.

#### Implements:

**Table 3-249. Define MCL\_APPL\_CODE Description**

<b>Name</b>	MCL_APPL_CODE
<b>Initializer</b>	

### 3.8.1.246 Define MCL\_CALLOUT\_CODE

MCL memory and pointer classes.

#### Implements:

**Table 3-250. Define MCL\_CALLOUT\_CODE Description**

<b>Name</b>	MCL_CALLOUT_CODE
<b>Initializer</b>	

### 3.8.1.247 Define MCL\_VAR\_NOINIT

MCL memory and pointer classes.

#### Implements:

**Table 3-251. Define MCL\_VAR\_NOINIT Description**

<b>Name</b>	MCL_VAR_NOINIT
<b>Initializer</b>	

### 3.8.1.248 Define MCL\_VAR\_POWER\_ON\_INIT

MCL memory and pointer classes.

**Implements:****Table 3-252. Define MCL\_VAR\_POWER\_ON\_INIT Description**

<b>Name</b>	MCL_VAR_POWER_ON_INIT
<b>Initializer</b>	

**3.8.1.249 Define MCL\_VAR\_FAST**

MCL memory and pointer classes.

**Implements:****Table 3-253. Define MCL\_VAR\_FAST Description**

<b>Name</b>	MCL_VAR_FAST
<b>Initializer</b>	

**3.8.1.250 Define MCL\_VAR**

MCL memory and pointer classes.

**Implements:****Table 3-254. Define MCL\_VAR Description**

<b>Name</b>	MCL_VAR
<b>Initializer</b>	

**3.8.1.251 Define MCU\_CODE**

MCU memory and pointer classes.

**Implements:** DBASE04001

**Table 3-255. Define MCU\_CODE Description**

<b>Name</b>	MCU_CODE
<b>Initializer</b>	

### 3.8.1.252 Define MCU\_CONST

MCU memory and pointer classes.

**Implements:** DBASE04001

**Table 3-256. Define MCU\_CONST Description**

<b>Name</b>	MCU_CONST
<b>Initializer</b>	

### 3.8.1.253 Define MCU\_APPL\_DATA

MCU memory and pointer classes.

**Implements:** DBASE04001

**Table 3-257. Define MCU\_APPL\_DATA Description**

<b>Name</b>	MCU_APPL_DATA
<b>Initializer</b>	

### 3.8.1.254 Define MCU\_APPL\_CONST

MCU memory and pointer classes.

**Implements:** DBASE04001

**Table 3-258. Define MCU\_APPL\_CONST Description**

<b>Name</b>	MCU_APPL_CONST
<b>Initializer</b>	

### 3.8.1.255 Define MCU\_APPL\_CODE

MCU memory and pointer classes.

**Implements:** DBASE04001

**Table 3-259. Define MCU\_APPL\_CODE Description**

Name	MCU_APPL_CODE
Initializer	

### 3.8.1.256 Define MCU\_CALLOUT\_CODE

MCU memory and pointer classes.

**Implements:** DBASE04001

**Table 3-260. Define MCU\_CALLOUT\_CODE Description**

Name	MCU_CALLOUT_CODE
Initializer	

### 3.8.1.257 Define MCU\_VAR\_NOINIT

MCU memory and pointer classes.

**Implements:** DBASE04001

**Table 3-261. Define MCU\_VAR\_NOINIT Description**

Name	MCU_VAR_NOINIT
Initializer	



### 3.8.1.258 Define MCU\_VAR\_POWER\_ON\_INIT

MCU memory and pointer classes.

**Implements:** DBASE04001

**Table 3-262. Define MCU\_VAR\_POWER\_ON\_INIT Description**

<b>Name</b>	MCU_VAR_POWER_ON_INIT
<b>Initializer</b>	

### 3.8.1.259 Define MCU\_VAR\_FAST

MCU memory and pointer classes.

**Implements:** DBASE04001

**Table 3-263. Define MCU\_VAR\_FAST Description**

<b>Name</b>	MCU_VAR_FAST
<b>Initializer</b>	

### 3.8.1.260 Define MCU\_VAR

MCU memory and pointer classes.

**Implements:** DBASE04001

**Table 3-264. Define MCU\_VAR Description**

<b>Name</b>	MCU_VAR
<b>Initializer</b>	

### 3.8.1.261 Define PORT\_CODE

PORT memory and pointer classes.

**Implements:** DBASE04001

**Table 3-265. Define PORT\_CODE Description**

Name	PORT_CODE
Initializer	

### 3.8.1.262 Define PORT\_CONST

PORT memory and pointer classes.

**Implements:** DBASE04001

**Table 3-266. Define PORT\_CONST Description**

Name	PORT_CONST
Initializer	

### 3.8.1.263 Define PORT\_APPL\_DATA

PORT memory and pointer classes.

**Implements:** DBASE04001

**Table 3-267. Define PORT\_APPL\_DATA Description**

Name	PORT_APPL_DATA
Initializer	

### 3.8.1.264 Define PORT\_APPL\_CONST

PORT memory and pointer classes.

**Implements:** DBASE04001

**Table 3-268. Define PORT\_APPL\_CONST Description**

<b>Name</b>	PORT_APPL_CONST
<b>Initializer</b>	

### 3.8.1.265 Define PORT\_APPL\_CODE

PORT memory and pointer classes.

**Implements:** DBASE04001

**Table 3-269. Define PORT\_APPL\_CODE Description**

<b>Name</b>	PORT_APPL_CODE
<b>Initializer</b>	

### 3.8.1.266 Define PORT\_CALLOUT\_CODE

PORT memory and pointer classes.

**Implements:** DBASE04001

**Table 3-270. Define PORT\_CALLOUT\_CODE Description**

<b>Name</b>	PORT_CALLOUT_CODE
<b>Initializer</b>	

### 3.8.1.267 Define PORT\_VAR\_NOINIT

PORT memory and pointer classes.

**Implements:** DBASE04001

**Table 3-271. Define PORT\_VAR\_NOINIT Description**

<b>Name</b>	PORT_VAR_NOINIT
<b>Initializer</b>	

### 3.8.1.268 Define PORT\_VAR\_POWER\_ON\_INIT

PORT memory and pointer classes.

**Implements:** DBASE04001

**Table 3-272. Define PORT\_VAR\_POWER\_ON\_INIT Description**

<b>Name</b>	PORT_VAR_POWER_ON_INIT
<b>Initializer</b>	

### 3.8.1.269 Define PORT\_VAR\_FAST

PORT memory and pointer classes.

**Implements:** DBASE04001

**Table 3-273. Define PORT\_VAR\_FAST Description**

<b>Name</b>	PORT_VAR_FAST
<b>Initializer</b>	

### 3.8.1.270 Define PORT\_VAR

PORT memory and pointer classes.

**Implements:** DBASE04001

**Table 3-274. Define PORT\_VAR Description**

<b>Name</b>	PORT_VAR
<b>Initializer</b>	

### 3.8.1.271 Define PWM\_CODE

PWM memory and pointer classes.

**Implements:** DBASE04001

**Table 3-275. Define PWM\_CODE Description**

<b>Name</b>	PWM_CODE
<b>Initializer</b>	

### 3.8.1.272 Define PWM\_CONST

PWM memory and pointer classes.

**Implements:** DBASE04001

**Table 3-276. Define PWM\_CONST Description**

<b>Name</b>	PWM_CONST
<b>Initializer</b>	

### 3.8.1.273 Define PWM\_APPL\_DATA

PWM memory and pointer classes.

**Implements:** DBASE04001

**Table 3-277. Define PWM\_APPL\_DATA Description**

<b>Name</b>	PWM_APPL_DATA
<b>Initializer</b>	

### 3.8.1.274 Define PWM\_APPL\_CONST

PWM memory and pointer classes.

**Implements:** DBASE04001

**Table 3-278. Define PWM\_APPL\_CONST Description**

<b>Name</b>	PWM_APPL_CONST
<b>Initializer</b>	

### 3.8.1.275 Define PWM\_APPL\_CODE

PWM memory and pointer classes.

**Implements:** DBASE04001

**Table 3-279. Define PWM\_APPL\_CODE Description**

<b>Name</b>	PWM_APPL_CODE
<b>Initializer</b>	

### 3.8.1.276 Define PWM\_CALLOUT\_CODE

PWM memory and pointer classes.

**Implements:** DBASE04001

**Table 3-280. Define PWM\_CALLOUT\_CODE Description**

<b>Name</b>	PWM_CALLOUT_CODE
<b>Initializer</b>	

### 3.8.1.277 Define PWM\_VAR\_NOINIT

PWM memory and pointer classes.

**Implements:** DBASE04001

**Table 3-281. Define PWM\_VAR\_NOINIT Description**

<b>Name</b>	PWM_VAR_NOINIT
<b>Initializer</b>	

**3.8.1.278 Define PWM\_VAR\_POWER\_ON\_INIT**

PWM memory and pointer classes.

**Implements:** DBASE04001

**Table 3-282. Define PWM\_VAR\_POWER\_ON\_INIT Description**

<b>Name</b>	PWM_VAR_POWER_ON_INIT
<b>Initializer</b>	

**3.8.1.279 Define PWM\_VAR\_FAST**

PWM memory and pointer classes.

**Implements:** DBASE04001

**Table 3-283. Define PWM\_VAR\_FAST Description**

<b>Name</b>	PWM_VAR_FAST
<b>Initializer</b>	

**3.8.1.280 Define PWM\_VAR**

PWM memory and pointer classes.

**Implements:** DBASE04001

**Table 3-284. Define PWM\_VAR Description**

<b>Name</b>	PWM_VAR
<b>Initializer</b>	

### 3.8.1.281 Define RAMTST\_CODE

RamTST memory and pointer classes.

**Implements:** DBASE04001

**Table 3-285. Define RAMTST\_CODE Description**

<b>Name</b>	RAMTST_CODE
<b>Initializer</b>	

### 3.8.1.282 Define RAMTST\_CONST

RamTST memory and pointer classes.

**Implements:** DBASE04001

**Table 3-286. Define RAMTST\_CONST Description**

<b>Name</b>	RAMTST_CONST
<b>Initializer</b>	

### 3.8.1.283 Define RAMTST\_APPL\_DATA

RamTST memory and pointer classes.

**Implements:** DBASE04001

**Table 3-287. Define RAMTST\_APPL\_DATA Description**

<b>Name</b>	RAMTST_APPL_DATA
<b>Initializer</b>	



### 3.8.1.284 Define RAMTST\_APPL\_CONST

RamTST memory and pointer classes.

**Implements:** DBASE04001

**Table 3-288. Define RAMTST\_APPL\_CONST Description**

<b>Name</b>	RAMTST_APPL_CONST
<b>Initializer</b>	

### 3.8.1.285 Define RAMTST\_APPL\_CODE

RamTST memory and pointer classes.

**Implements:** DBASE04001

**Table 3-289. Define RAMTST\_APPL\_CODE Description**

<b>Name</b>	RAMTST_APPL_CODE
<b>Initializer</b>	

### 3.8.1.286 Define RAMTST\_CALLOUT\_CODE

RamTST memory and pointer classes.

**Implements:** DBASE04001

**Table 3-290. Define RAMTST\_CALLOUT\_CODE Description**

<b>Name</b>	RAMTST_CALLOUT_CODE
<b>Initializer</b>	

### 3.8.1.287 Define RAMTST\_VAR\_NOINIT

RamTST memory and pointer classes.

**Implements:** DBASE04001

**Table 3-291. Define RAMTST\_VAR\_NOINIT Description**

<b>Name</b>	RAMTST_VAR_NOINIT
<b>Initializer</b>	

### 3.8.1.288 Define RAMTST\_VAR\_POWER\_ON\_INIT

RamTST memory and pointer classes.

**Implements:** DBASE04001

**Table 3-292. Define RAMTST\_VAR\_POWER\_ON\_INIT Description**

<b>Name</b>	RAMTST_VAR_POWER_ON_INIT
<b>Initializer</b>	

### 3.8.1.289 Define RAMTST\_VAR\_FAST

RamTST memory and pointer classes.

**Implements:** DBASE04001

**Table 3-293. Define RAMTST\_VAR\_FAST Description**

<b>Name</b>	RAMTST_VAR_FAST
<b>Initializer</b>	

### 3.8.1.290 Define RAMTST\_VAR

RamTST memory and pointer classes.

**Implements:** DBASE04001

**Table 3-294. Define RAMTST\_VAR Description**

<b>Name</b>	RAMTST_VAR
<b>Initializer</b>	

### 3.8.1.291 Define SCHM\_CODE

SchM memory and pointer classes.

**Implements:** DBASE04001

**Table 3-295. Define SCHM\_CODE Description**

<b>Name</b>	SCHM_CODE
<b>Initializer</b>	

### 3.8.1.292 Define SCHM\_CONST

SchM memory and pointer classes.

**Implements:** DBASE04001

**Table 3-296. Define SCHM\_CONST Description**

<b>Name</b>	SCHM_CONST
<b>Initializer</b>	

### 3.8.1.293 Define SCHM\_APPL\_DATA

SchM memory and pointer classes.

**Implements:** DBASE04001

**Table 3-297. Define SCHM\_APPL\_DATA Description**

<b>Name</b>	SCHM_APPL_DATA
<b>Initializer</b>	

### 3.8.1.294 Define SCHM\_APPL\_CONST

SchM memory and pointer classes.

**Implements:** DBASE04001

**Table 3-298. Define SCHM\_APPL\_CONST Description**

<b>Name</b>	SCHM_APPL_CONST
<b>Initializer</b>	

### 3.8.1.295 Define SCHM\_APPL\_CODE

SchM memory and pointer classes.

**Implements:** DBASE04001

**Table 3-299. Define SCHM\_APPL\_CODE Description**

<b>Name</b>	SCHM_APPL_CODE
<b>Initializer</b>	

### 3.8.1.296 Define SCHM\_CALLOUT\_CODE

SchM memory and pointer classes.

**Implements:** DBASE04001

**Table 3-300. Define SCHM\_CALLOUT\_CODE Description**

<b>Name</b>	SCHM_CALLOUT_CODE
<b>Initializer</b>	

### 3.8.1.297 Define SCHM\_VAR\_NOINIT

SchM memory and pointer classes.

**Implements:** DBASE04001

**Table 3-301. Define SCHM\_VAR\_NOINIT Description**

<b>Name</b>	SCHM_VAR_NOINIT
<b>Initializer</b>	

### 3.8.1.298 Define SCHM\_VAR\_POWER\_ON\_INIT

SchM memory and pointer classes.

**Implements:** DBASE04001

**Table 3-302. Define SCHM\_VAR\_POWER\_ON\_INIT Description**

<b>Name</b>	SCHM_VAR_POWER_ON_INIT
<b>Initializer</b>	

### 3.8.1.299 Define SCHM\_VAR\_FAST

SchM memory and pointer classes.

**Implements:** DBASE04001

**Table 3-303. Define SCHM\_VAR\_FAST Description**

<b>Name</b>	SCHM_VAR_FAST
<b>Initializer</b>	

### 3.8.1.300 Define SCHM\_VAR

SchM memory and pointer classes.

**Implements:** DBASE04001

**Table 3-304. Define SCHM\_VAR Description**

<b>Name</b>	SCHM_VAR
<b>Initializer</b>	

### 3.8.1.301 Define SPI\_CODE

SPI memory and pointer classes.

**Implements:** DBASE04001

**Table 3-305. Define SPI\_CODE Description**

<b>Name</b>	SPI_CODE
<b>Initializer</b>	

### 3.8.1.302 Define SPI\_CONST

SPI memory and pointer classes.

**Implements:** DBASE04001

**Table 3-306. Define SPI\_CONST Description**

<b>Name</b>	SPI_CONST
<b>Initializer</b>	

### 3.8.1.303 Define SPI\_APPL\_DATA

SPI memory and pointer classes.

**Implements:** DBASE04001

**Table 3-307. Define SPI\_APPL\_DATA Description**

<b>Name</b>	SPI_APPL_DATA
<b>Initializer</b>	

### 3.8.1.304 Define SPI\_APPL\_CONST

SPI memory and pointer classes.

**Implements:** DBASE04001

**Table 3-308. Define SPI\_APPL\_CONST Description**

<b>Name</b>	SPI_APPL_CONST
<b>Initializer</b>	

### 3.8.1.305 Define SPI\_APPL\_CODE

SPI memory and pointer classes.

**Implements:** DBASE04001

**Table 3-309. Define SPI\_APPL\_CODE Description**

<b>Name</b>	SPI_APPL_CODE
<b>Initializer</b>	

### 3.8.1.306 Define SPI\_CALLOUT\_CODE

SPI memory and pointer classes.

**Implements:** DBASE04001

**Table 3-310. Define SPI\_CALLOUT\_CODE Description**

<b>Name</b>	SPI_CALLOUT_CODE
<b>Initializer</b>	

### 3.8.1.307 Define SPI\_VAR\_NOINIT

SPI memory and pointer classes.

**Implements:** DBASE04001

**Table 3-311. Define SPI\_VAR\_NOINIT Description**

Name	SPI_VAR_NOINIT
Initializer	

### 3.8.1.308 Define SPI\_VAR\_POWER\_ON\_INIT

SPI memory and pointer classes.

**Implements:** DBASE04001

**Table 3-312. Define SPI\_VAR\_POWER\_ON\_INIT Description**

Name	SPI_VAR_POWER_ON_INIT
Initializer	

### 3.8.1.309 Define SPI\_VAR\_FAST

SPI memory and pointer classes.

**Implements:** DBASE04001

**Table 3-313. Define SPI\_VAR\_FAST Description**

Name	SPI_VAR_FAST
Initializer	



### 3.8.1.310 Define SPI\_VAR

SPI memory and pointer classes.

**Implements:** DBASE04001

**Table 3-314. Define SPI\_VAR Description**

<b>Name</b>	SPI_VAR
<b>Initializer</b>	

### 3.8.1.311 Define WDG\_CODE

WDG memory and pointer classes.

**Implements:** DBASE04001

**Table 3-315. Define WDG\_CODE Description**

<b>Name</b>	WDG_CODE
<b>Initializer</b>	

### 3.8.1.312 Define WDG\_CONST

WDG memory and pointer classes.

**Implements:** DBASE04001

**Table 3-316. Define WDG\_CONST Description**

<b>Name</b>	WDG_CONST
<b>Initializer</b>	

### 3.8.1.313 Define WDG\_APPL\_DATA

WDG memory and pointer classes.

**Implements:** DBASE04001

**Table 3-317. Define WDG\_APPL\_DATA Description**

<b>Name</b>	WDG_APPL_DATA
<b>Initializer</b>	

### 3.8.1.314 Define WDG\_APPL\_CONST

WDG memory and pointer classes.

**Implements:** DBASE04001

**Table 3-318. Define WDG\_APPL\_CONST Description**

<b>Name</b>	WDG_APPL_CONST
<b>Initializer</b>	

### 3.8.1.315 Define WDG\_APPL\_CODE

WDG memory and pointer classes.

**Implements:** DBASE04001

**Table 3-319. Define WDG\_APPL\_CODE Description**

<b>Name</b>	WDG_APPL_CODE
<b>Initializer</b>	

### 3.8.1.316 Define WDG\_CALLOUT\_CODE

WDG memory and pointer classes.

**Implements:** DBASE04001

**Table 3-320. Define WDG\_CALLOUT\_CODE Description**

<b>Name</b>	WDG_CALLOUT_CODE
<b>Initializer</b>	

**3.8.1.317 Define WDG\_VAR\_NOINIT**

WDG memory and pointer classes.

**Implements:** DBASE04001

**Table 3-321. Define WDG\_VAR\_NOINIT Description**

<b>Name</b>	WDG_VAR_NOINIT
<b>Initializer</b>	

**3.8.1.318 Define WDG\_VAR\_POWER\_ON\_INIT**

WDG memory and pointer classes.

**Implements:** DBASE04001

**Table 3-322. Define WDG\_VAR\_POWER\_ON\_INIT Description**

<b>Name</b>	WDG_VAR_POWER_ON_INIT
<b>Initializer</b>	

**3.8.1.319 Define WDG\_VAR\_FAST**

WDG memory and pointer classes.

**Implements:** DBASE04001

**Table 3-323. Define WDG\_VAR\_FAST Description**

<b>Name</b>	WDG_VAR_FAST
<b>Initializer</b>	

### 3.8.1.320 Define WDG\_VAR

WDG memory and pointer classes.

**Implements:** DBASE04001

**Table 3-324. Define WDG\_VAR Description**

Name	WDG_VAR
Initializer	

### 3.8.1.321 Define WDGIF\_CODE

WDGIF memory and pointer classes.

**Implements:** DBASE04001

**Table 3-325. Define WDGIF\_CODE Description**

Name	WDGIF_CODE
Initializer	

### 3.8.1.322 Define WDGIF\_CONST

WDGIF memory and pointer classes.

**Implements:** DBASE04001

**Table 3-326. Define WDGIF\_CONST Description**

Name	WDGIF_CONST
Initializer	

### 3.8.1.323 Define WDGIF\_APPL\_DATA

WDGIF memory and pointer classes.

**Implements:** DBASE04001

**Table 3-327. Define WDGIF\_APPL\_DATA Description**

<b>Name</b>	WDGIF_APPL_DATA
<b>Initializer</b>	

### 3.8.1.324 Define WDGIF\_APPL\_CONST

WDGIF memory and pointer classes.

**Implements:** DBASE04001

**Table 3-328. Define WDGIF\_APPL\_CONST Description**

<b>Name</b>	WDGIF_APPL_CONST
<b>Initializer</b>	

### 3.8.1.325 Define WDGIF\_APPL\_CODE

WDGIF memory and pointer classes.

**Implements:** DBASE04001

**Table 3-329. Define WDGIF\_APPL\_CODE Description**

<b>Name</b>	WDGIF_APPL_CODE
<b>Initializer</b>	

### 3.8.1.326 Define WDGIF\_CALLOUT\_CODE

WDGIF memory and pointer classes.

**Implements:** DBASE04001

**Table 3-330. Define WDGIF\_CALLOUT\_CODE Description**

<b>Name</b>	WDGIF_CALLOUT_CODE
<b>Initializer</b>	

### 3.8.1.327 Define WDGIF\_VAR\_NOINIT

WDGIF memory and pointer classes.

**Implements:** DBASE04001

**Table 3-331. Define WDGIF\_VAR\_NOINIT Description**

<b>Name</b>	WDGIF_VAR_NOINIT
<b>Initializer</b>	

### 3.8.1.328 Define WDGIF\_VAR\_POWER\_ON\_INIT

WDGIF memory and pointer classes.

**Implements:** DBASE04001

**Table 3-332. Define WDGIF\_VAR\_POWER\_ON\_INIT Description**

<b>Name</b>	WDGIF_VAR_POWER_ON_INIT
<b>Initializer</b>	

### 3.8.1.329 Define WDGIF\_VAR\_FAST

WDGIF memory and pointer classes.

**Implements:** DBASE04001

**Table 3-333. Define WDGIF\_VAR\_FAST Description**

<b>Name</b>	WDGIF_VAR_FAST
<b>Initializer</b>	

### 3.8.1.330 Define WDGIF\_VAR

WDGIF memory and pointer classes.

**Implements:** DBASE04001

**Table 3-334. Define WDGIF\_VAR Description**

<b>Name</b>	WDGIF_VAR
<b>Initializer</b>	

### 3.8.1.331 Define AUTOSAR\_COMSTACKDATA

Define for ComStack Data.

**Implements:** DBASE04001

**Table 3-335. Define AUTOSAR\_COMSTACKDATA Description**

<b>Name</b>	AUTOSAR_COMSTACKDATA
<b>Initializer</b>	

### 3.8.1.332 Define BUSTRCV\_E\_ERROR

Bus transceiver detected an unclassified error.

**Details:**

General return codes for BusTrcvErrorType

**Implements:** DBASE02012

**Table 3-336. Define BUSTRCV\_E\_ERROR Description**

<b>Name</b>	BUSTRCV_E_ERROR
<b>Initializer</b>	0x01

### 3.8.1.333 Define BUSTRCV\_OK

There is no bus transceiver error seen or transceiver does not support the detection of bus errors.

#### Details:

General return codes for BusTrcvErrorType

**Implements:** DBASE02012

**Table 3-337. Define BUSTRCV\_OK Description**

<b>Name</b>	BUSTRCV_OK
<b>Initializer</b>	0x00

### 3.8.1.334 Define COMSTACKTYPE\_AR\_RELEASE\_MAJOR\_VERSION

**Table 3-338. Define COMSTACKTYPE\_AR\_RELEASE\_MAJOR\_VERSION Description**

<b>Name</b>	COMSTACKTYPE_AR_RELEASE_MAJOR_VERSION
<b>Initializer</b>	4

### 3.8.1.335 Define COMSTACKTYPE\_AR\_RELEASE\_MINOR\_VERSION

**Table 3-339. Define COMSTACKTYPE\_AR\_RELEASE\_MINOR\_VERSION Description**

<b>Name</b>	COMSTACKTYPE_AR_RELEASE_MINOR_VERSION
<b>Initializer</b>	2



### 3.8.1.336 Define COMSTACKTYPE\_AR\_RELEASE\_REVISION\_VERSION

**Table 3-340. Define COMSTACKTYPE\_AR\_RELEASE\_REVISION\_VERSION Description**

<b>Name</b>	COMSTACKTYPE_AR_RELEASE_REVISION_VERSION
<b>Initializer</b>	2

### 3.8.1.337 Define COMSTACKTYPE\_SW\_MAJOR\_VERSION

**Table 3-341. Define COMSTACKTYPE\_SW\_MAJOR\_VERSION Description**

<b>Name</b>	COMSTACKTYPE_SW_MAJOR_VERSION
<b>Initializer</b>	1

### 3.8.1.338 Define COMSTACKTYPE\_SW\_MINOR\_VERSION

**Table 3-342. Define COMSTACKTYPE\_SW\_MINOR\_VERSION Description**

<b>Name</b>	COMSTACKTYPE_SW_MINOR_VERSION
<b>Initializer</b>	0

### 3.8.1.339 Define COMSTACKTYPE\_SW\_PATCH\_VERSION

**Table 3-343. Define COMSTACKTYPE\_SW\_PATCH\_VERSION Description**

<b>Name</b>	COMSTACKTYPE_SW_PATCH_VERSION
<b>Initializer</b>	2

### 3.8.1.340 Define COMSTACKTYPE\_VENDOR\_ID

Parameters that shall be published within the standard types header file and also in the module's description file.

**Implements:** DBASE02013**Table 3-344. Define COMSTACKTYPE\_VENDOR\_ID Description**

<b>Name</b>	COMSTACKTYPE_VENDOR_ID
<b>Initializer</b>	43

**3.8.1.341 Define NTFRSLT\_E\_ABORT**

Flow control (FC) N\_PDU with FlowStatus = OVFLW received.

**Details:**

General return codes for NotifResultType

**Implements:** DBASE02011**Table 3-345. Define NTFRSLT\_E\_ABORT Description**

<b>Name</b>	NTFRSLT_E_ABORT
<b>Initializer</b>	0x09

**3.8.1.342 Define NTFRSLT\_E\_CANCELATION\_NOT\_OK**

Request cancellation has not been executed Due to an internal error the requested cancelation has not been executed. This will happen e.g. if the to be canceled transmission has been executed already.

**Details:**

General return codes for NotifResultType

**Implements:** DBASE02011**Table 3-346. Define NTFRSLT\_E\_CANCELATION\_NOT\_OK Description**

<b>Name</b>	NTFRSLT_E_CANCELATION_NOT_OK
<b>Initializer</b>	0x0C

### 3.8.1.343 Define NTFRSLT\_E\_CANCELATION\_OK

Requested cancellation has been executed.

#### Details:

General return codes for NotifResultType

**Implements:** DBASE02011

**Table 3-347. Define NTFRSLT\_E\_CANCELATION\_OK**  
**Description**

<b>Name</b>	NTFRSLT_E_CANCELATION_OK
<b>Initializer</b>	0x0B

### 3.8.1.344 Define NTFRSLT\_E\_INVALID\_FS

Invalid or unknown FlowStatus value has been received.

#### Details:

General return codes for NotifResultType

**Implements:** DBASE02011

**Table 3-348. Define NTFRSLT\_E\_INVALID\_FS**  
**Description**

<b>Name</b>	NTFRSLT_E_INVALID_FS
<b>Initializer</b>	0x06

### 3.8.1.345 Define NTFRSLT\_E\_NO\_BUFFER

Indicates an abort of a transmission.

#### Details:

General return codes for NotifResultType

**Implements:** DBASE02011

**Table 3-349. Define NTFRSLT\_E\_NO\_BUFFER  
Description**

<b>Name</b>	NTFRSLT_E_NO_BUFFER
<b>Initializer</b>	0x0A

### 3.8.1.346 Define NTFRSLT\_E\_NOT\_OK

Message not successfully received or sent out.

**Details:**

General return codes for NotifResultType

**Implements:** DBASE02011

**Table 3-350. Define NTFRSLT\_E\_NOT\_OK Description**

<b>Name</b>	NTFRSLT_E_NOT_OK
<b>Initializer</b>	0x01

### 3.8.1.347 Define NTFRSLT\_E\_PARAMETER\_NOT\_OK

The request for the change of the parameter did not complete successfully.

**Details:**

General return codes for NotifResultType

**Implements:** DBASE02011

**Table 3-351. Define NTFRSLT\_E\_PARAMETER\_NOT\_OK  
Description**

<b>Name</b>	NTFRSLT_E_PARAMETER_NOT_OK
<b>Initializer</b>	0x0E

### 3.8.1.348 Define NTFRSLT\_E\_RX\_ON

The parameter change request not executed successfully due to an ongoing reception.

#### Details:

General return codes for NotifResultType

**Implements:** DBASE02011

**Table 3-352. Define NTFRSLT\_E\_RX\_ON Description**

<b>Name</b>	NTFRSLT_E_RX_ON
<b>Initializer</b>	0x0F

### 3.8.1.349 Define NTFRSLT\_E\_TIMEOUT\_A

Timer N\_Ar/N\_As has passed its time-out value N\_Asmax/N\_Armax.

#### Details:

General return codes for NotifResultType

**Implements:** DBASE02011

**Table 3-353. Define NTFRSLT\_E\_TIMEOUT\_A Description**

<b>Name</b>	NTFRSLT_E_TIMEOUT_A
<b>Initializer</b>	0x02

### 3.8.1.350 Define NTFRSLT\_E\_TIMEOUT\_BS

Timer N\_Bs has passed its time-out value N\_Bsmax.

#### Details:

General return codes for NotifResultType

**Implements:** DBASE02011**Table 3-354. Define NTFRSLT\_E\_TIMEOUT\_BS Description**

<b>Name</b>	NTFRSLT_E_TIMEOUT_BS
<b>Initializer</b>	0x03

**3.8.1.351 Define NTFRSLT\_E\_TIMEOUT\_CR**

Timer N\_Cr has passed its time-out value N\_Crmax.

**Details:**

General return codes for NotifResultType

**Implements:** DBASE02011**Table 3-355. Define NTFRSLT\_E\_TIMEOUT\_CR Description**

<b>Name</b>	NTFRSLT_E_TIMEOUT_CR
<b>Initializer</b>	0x04

**3.8.1.352 Define NTFRSLT\_E\_UNEXP\_PDU**

Unexpected protocol data unit received.

**Details:**

General return codes for NotifResultType

**Implements:** DBASE02011**Table 3-356. Define NTFRSLT\_E\_UNEXP\_PDU Description**

<b>Name</b>	NTFRSLT_E_UNEXP_PDU
<b>Initializer</b>	0x07

### 3.8.1.353 Define NTFRSLT\_E\_VALUE\_NOT\_OK

The parameter change request not executed successfully due to a wrong value.

#### Details:

General return codes for NotifResultType

**Implements:** DBASE02011

**Table 3-357. Define NTFRSLT\_E\_VALUE\_NOT\_OK Description**

<b>Name</b>	NTFRSLT_E_VALUE_NOT_OK
<b>Initializer</b>	0x10

### 3.8.1.354 Define NTFRSLT\_E\_WFT\_OVRN

Flow control WAIT frame that exceeds the maximum counter N\_WFTmax received.

#### Details:

General return codes for NotifResultType

**Implements:** DBASE02011

**Table 3-358. Define NTFRSLT\_E\_WFT\_OVRN Description**

<b>Name</b>	NTFRSLT_E_WFT_OVRN
<b>Initializer</b>	0x08

### 3.8.1.355 Define NTFRSLT\_E\_WRONG\_SN

Unexpected sequence number (PCI.SN) value received.

#### Details:

General return codes for NotifResultType

**Implements:** DBASE02011

**Table 3-359. Define NTFRSLT\_E\_WRONG\_SN Description**

<b>Name</b>	NTFRSLT_E_WRONG_SN
<b>Initializer</b>	0x05

### 3.8.1.356 Define NTFRSLT\_OK

Action has been successfully finished.

#### Details:

General return codes for NotifResultType

Implements: DBASE02011

**Table 3-360. Define NTFRSLT\_OK Description**

<b>Name</b>	NTFRSLT_OK
<b>Initializer</b>	0x00

### 3.8.1.357 Define NTFRSLT\_PARAMETER\_OK

The parameter change request has been successfully executed.

#### Details:

General return codes for NotifResultType

Implements: DBASE02011

**Table 3-361. Define NTFRSLT\_PARAMETER\_OK Description**

<b>Name</b>	NTFRSLT_PARAMETER_OK
<b>Initializer</b>	0x0D

### 3.8.1.358 Define CONSTP2FUNC

The compiler abstraction for const pointer to function.



**Implements:** DBASE05031

**Table 3-362. Define CONSTP2FUNC Description**

<b>Name</b>	CONSP2FUNC
<b>Initializer</b>	rettype (* const fctname)

### 3.8.1.359 Define EXIT\_INTERRUPT

Compiler abstraction for returning from an ISR if no OS is present.

**Implements:** DBASE05006

**Table 3-363. Define EXIT\_INTERRUPT Description**

<b>Name</b>	EXIT_INTERRUPT
<b>Initializer</b>	SuspendAllInterrupts(); *((volatileuint32*)((uint32)INTC_BASEADDR + (uint32)INTC_EOIR_OFFSET)) = 0U

### 3.8.1.360 Define ISR

Compiler abstraction for creating an interrupt handler if no OS is present.

**Implements:** DBASE05016

**Table 3-364. Define ISR Description**

<b>Name</b>	ISR
<b>Initializer</b>	INTERRUPT_FUNC void IsrName(void)

### 3.8.1.361 Define MCAL\_AR\_RELEASE\_MAJOR\_VERSION

**Table 3-365. Define MCAL\_AR\_RELEASE\_MAJOR\_VERSION Description**

<b>Name</b>	MCAL_AR_RELEASE_MAJOR_VERSION
<b>Initializer</b>	4

**3.8.1.362 Define MCAL\_AR\_RELEASE\_MINOR\_VERSION****Table 3-366. Define MCAL\_AR\_RELEASE\_MINOR\_VERSION  
Description**

<b>Name</b>	MCAL_AR_RELEASE_MINOR_VERSION
<b>Initializer</b>	2

**3.8.1.363 Define MCAL\_AR\_RELEASE\_REVISION\_VERSION****Table 3-367. Define MCAL\_AR\_RELEASE\_REVISION\_VERSION  
Description**

<b>Name</b>	MCAL_AR_RELEASE_REVISION_VERSION
<b>Initializer</b>	2

**3.8.1.364 Define MCAL\_MODULE\_ID****Table 3-368. Define MCAL\_MODULE\_ID Description**

<b>Name</b>	MCAL_MODULE_ID
<b>Initializer</b>	0

**3.8.1.365 Define MCAL\_SW\_MAJOR\_VERSION****Table 3-369. Define MCAL\_SW\_MAJOR\_VERSION  
Description**

<b>Name</b>	MCAL_SW_MAJOR_VERSION
<b>Initializer</b>	1

**3.8.1.366 Define MCAL\_SW\_MINOR\_VERSION****Table 3-370. Define MCAL\_SW\_MINOR\_VERSION  
Description**

<b>Name</b>	MCAL_SW_MINOR_VERSION
<b>Initializer</b>	0

### 3.8.1.367 Define MCAL\_SW\_PATCH\_VERSION

**Table 3-371. Define MCAL\_SW\_PATCH\_VERSION Description**

<b>Name</b>	MCAL_SW_PATCH_VERSION
<b>Initializer</b>	2

### 3.8.1.368 Define MCAL\_VENDOR\_ID

**Table 3-372. Define MCAL\_VENDOR\_ID Description**

<b>Name</b>	MCAL_VENDOR_ID
<b>Initializer</b>	43

### 3.8.1.369 Define P2P2CONST

The compiler abstraction for pointer to pointer to constant.

**Implements:** DBASE05026

**Table 3-373. Define P2P2CONST Description**

<b>Name</b>	P2P2CONST
<b>Initializer</b>	const ptrtype **

### 3.8.1.370 Define P2P2VAR

The compiler abstraction for pointer to pointer to variable.

**Implements:** DBASE05025

**Table 3-374. Define P2P2VAR Description**

<b>Name</b>	P2P2VAR
<b>Initializer</b>	ptrtype **

### 3.8.1.371 Define ResumeAllInterrupts

Compiler abstraction for re-enabling all interrupts if no OS is present.

**Implements:** DBASE05020

**Table 3-375. Define ResumeAllInterrupts Description**

<b>Name</b>	ResumeAllInterrupts
<b>Initializer</b>	ASM_KEYWORD(" wrteei 1")

### 3.8.1.372 Define STATIC

The compiler abstraction shall provide the STATIC define for abstraction of compiler keyword static. Keep here for backward compatibility. It has been removed from ASR4.0.

**Implements:** DBASE05030

**Table 3-376. Define STATIC Description**

<b>Name</b>	STATIC
<b>Initializer</b>	static

### 3.8.1.373 Define SuspendAllInterrupts

Compiler abstraction for disabling all interrupts if no OS is present.

**Implements:** DBASE05021

**Table 3-377. Define SuspendAllInterrupts Description**

<b>Name</b>	SuspendAllInterrupts
<b>Initializer</b>	ASM_KEYWORD(" wrteei 0")

### 3.8.1.374 Define MEMMAP\_VENDOR\_ID

Parameters that shall be published within the memory map header file and also in the module's description file.

**Implements:** DBASE02002

**Table 3-378. Define MEMMAP\_VENDOR\_ID Description**

<b>Name</b>	MEMMAP_VENDOR_ID
<b>Initializer</b>	43

### 3.8.1.375 Define MEMMAP\_AR\_RELEASE\_MAJOR\_VERSION

Parameters that shall be published within the memory map header file and also in the module's description file.

**Implements:** DBASE02002

**Table 3-379. Define MEMMAP\_AR\_RELEASE\_MAJOR\_VERSION Description**

<b>Name</b>	MEMMAP_AR_RELEASE_MAJOR_VERSION
<b>Initializer</b>	4

### 3.8.1.376 Define MEMMAP\_AR\_RELEASE\_MINOR\_VERSION

Parameters that shall be published within the memory map header file and also in the module's description file.

**Implements:** DBASE02002

**Table 3-380. Define MEMMAP\_AR\_RELEASE\_MINOR\_VERSION Description**

<b>Name</b>	MEMMAP_AR_RELEASE_MINOR_VERSION
<b>Initializer</b>	2

### 3.8.1.377 Define MEMMAP\_AR\_RELEASE\_REVISION\_VERSION

Parameters that shall be published within the memory map header file and also in the module's description file.

**Implements:** DBASE02002

**Table 3-381. Define MEMMAP\_AR\_RELEASE\_REVISION\_VERSION  
Description**

<b>Name</b>	MEMMAP_AR_RELEASE_REVISION_VERSION
<b>Initializer</b>	2

### 3.8.1.378 Define MEMMAP\_SW\_MAJOR\_VERSION

Parameters that shall be published within the memory map header file and also in the module's description file.

**Implements:** DBASE02002

**Table 3-382. Define MEMMAP\_SW\_MAJOR\_VERSION  
Description**

<b>Name</b>	MEMMAP_SW_MAJOR_VERSION
<b>Initializer</b>	1

### 3.8.1.379 Define MEMMAP\_SW\_MINOR\_VERSION

Parameters that shall be published within the memory map header file and also in the module's description file.

**Implements:** DBASE02002

**Table 3-383. Define MEMMAP\_SW\_MINOR\_VERSION**  
Description

<b>Name</b>	MEMMAP_SW_MINOR_VERSION
<b>Initializer</b>	0

### 3.8.1.380 Define MEMMAP\_SW\_PATCH\_VERSION

Parameters that shall be published within the memory map header file and also in the module's description file.

**Implements:** DBASE02002

**Table 3-384. Define MEMMAP\_SW\_PATCH\_VERSION**  
Description

<b>Name</b>	MEMMAP_SW_PATCH_VERSION
<b>Initializer</b>	2

### 3.8.1.381 Define MEMMAP\_ERROR

Symbol used for checking correctness of the includes.

**Implements:** DBASE02001

**Table 3-385. Define MEMMAP\_ERROR** Description

<b>Name</b>	MEMMAP_ERROR
<b>Initializer</b>	

### 3.8.1.382 Define CPU\_BIT\_ORDER

Bit order on register level.

**Implements:** DBASE08017

**Table 3-386. Define CPU\_BIT\_ORDER Description**

<b>Name</b>	CPU_BIT_ORDER
<b>Initializer</b>	(MSB_FIRST)

### 3.8.1.383 Define CPU\_BYTE\_ORDER

The byte order on memory level shall be indicated in the platform types header file using the symbol CPU\_BYTE\_ORDER.

**Implements:** DBASE08018

**Table 3-387. Define CPU\_BYTE\_ORDER Description**

<b>Name</b>	CPU_BYTE_ORDER
<b>Initializer</b>	(HIGH_BYTE_FIRST)

### 3.8.1.384 Define CPU\_TYPE

Processor type.

**Implements:** DBASE08019

**Table 3-388. Define CPU\_TYPE Description**

<b>Name</b>	CPU_TYPE
<b>Initializer</b>	(CPU_TYPE_32)

### 3.8.1.385 Define CPU\_TYPE\_16

16bit Type Processor

**Implements:** DBASE08020



**Table 3-389. Define CPU\_TYPE\_16 Description**

<b>Name</b>	CPU_TYPE_16
<b>Initializer</b>	16

**3.8.1.386 Define CPU\_TYPE\_32**

32bit Type Processor

**Implements:** DBASE08021

**Table 3-390. Define CPU\_TYPE\_32 Description**

<b>Name</b>	CPU_TYPE_32
<b>Initializer</b>	32

**3.8.1.387 Define CPU\_TYPE\_8**

8bit Type Processor

**Implements:** DBASE08022

**Table 3-391. Define CPU\_TYPE\_8 Description**

<b>Name</b>	CPU_TYPE_8
<b>Initializer</b>	8

**3.8.1.388 Define FALSE**

Boolean false value.

**Implements:** DBASE08023

**Table 3-392. Define FALSE Description**

<b>Name</b>	FALSE
<b>Initializer</b>	0

**3.8.1.389 Define HIGH\_BYTE\_FIRST**

HIGH\_BYTE\_FIRST Processor.

**Implements:** DBASE08024

**Table 3-393. Define HIGH\_BYTE\_FIRST Description**

<b>Name</b>	HIGH_BYTE_FIRST
<b>Initializer</b>	0

**3.8.1.390 Define LOW\_BYTE\_FIRST**

LOW\_BYTE\_FIRST Processor.

**Implements:** DBASE08025

**Table 3-394. Define LOW\_BYTE\_FIRST Description**

<b>Name</b>	LOW_BYTE_FIRST
<b>Initializer</b>	1

**3.8.1.391 Define LSB\_FIRST**

LSB First Processor.

**Implements:** DBASE08026

**Table 3-395. Define LSB\_FIRST Description**

<b>Name</b>	LSB_FIRST
<b>Initializer</b>	1

### 3.8.1.392 Define MSB\_FIRST

MSB First Processor.

**Implements:** DBASE08027

**Table 3-396. Define MSB\_FIRST Description**

<b>Name</b>	MSB_FIRST
<b>Initializer</b>	0

### 3.8.1.393 Define PLATFORM\_AR\_RELEASE\_MAJOR\_VERSION

**Table 3-397. Define PLATFORM\_AR\_RELEASE\_MAJOR\_VERSION Description**

<b>Name</b>	PLATFORM_AR_RELEASE_MAJOR_VERSION
<b>Initializer</b>	4

### 3.8.1.394 Define PLATFORM\_AR\_RELEASE\_MINOR\_VERSION

**Table 3-398. Define PLATFORM\_AR\_RELEASE\_MINOR\_VERSION Description**

<b>Name</b>	PLATFORM_AR_RELEASE_MINOR_VERSION
<b>Initializer</b>	2

### 3.8.1.395 Define PLATFORM\_AR\_RELEASE\_REVISION\_VERSION

**Table 3-399. Define PLATFORM\_AR\_RELEASE\_REVISION\_VERSION Description**

<b>Name</b>	PLATFORM_AR_RELEASE_REVISION_VERSION
<b>Initializer</b>	2

**3.8.1.396 Define PLATFORM\_SW\_MAJOR\_VERSION****Table 3-400. Define PLATFORM\_SW\_MAJOR\_VERSION  
Description**

<b>Name</b>	PLATFORM_SW_MAJOR_VERSION
<b>Initializer</b>	1

**3.8.1.397 Define PLATFORM\_SW\_MINOR\_VERSION****Table 3-401. Define PLATFORM\_SW\_MINOR\_VERSION  
Description**

<b>Name</b>	PLATFORM_SW_MINOR_VERSION
<b>Initializer</b>	0

**3.8.1.398 Define PLATFORM\_SW\_PATCH\_VERSION****Table 3-402. Define PLATFORM\_SW\_PATCH\_VERSION  
Description**

<b>Name</b>	PLATFORM_SW_PATCH_VERSION
<b>Initializer</b>	2

**3.8.1.399 Define PLATFORM\_VENDOR\_ID****Table 3-403. Define PLATFORM\_VENDOR\_ID Description**

<b>Name</b>	PLATFORM_VENDOR_ID
<b>Initializer</b>	43

**3.8.1.400 Define TRUE**

Boolean true value.

**Implements:** DBASE08035

**Table 3-404. Define TRUE Description**

<b>Name</b>	TRUE
<b>Initializer</b>	1

### 3.8.1.401 Define E\_NOT\_OK

Return code for failure/error.

**Implements:** DBASE12005

**Table 3-405. Define E\_NOT\_OK Description**

<b>Name</b>	E_NOT_OK
<b>Initializer</b>	0x01

### 3.8.1.402 Define E\_OK

Success return code.

**Implements:** DBASE12004

**Table 3-406. Define E\_OK Description**

<b>Name</b>	E_OK
<b>Initializer</b>	0x00

### 3.8.1.403 Define STATUSTYPEDEFINED

Because E\_OK is already defined within OSEK, the symbol E\_OK has to be shared. To avoid name clashes and redefinition problems, the symbols have to be defined in the following way (approved within implementation).

**Table 3-407. Define STATUSTYPEDEFINED Description**

<b>Name</b>	STATUSTYPEDEFINED
<b>Initializer</b>	

### 3.8.1.404 Define STD\_ACTIVE

Logical state active.

**Implements:** DBASE12008

**Table 3-408. Define STD\_ACTIVE Description**

<b>Name</b>	STD_ACTIVE
<b>Initializer</b>	0x01

### 3.8.1.405 Define STD\_HIGH

Physical state 5V or 3.3V.

**Implements:** DBASE12006

**Table 3-409. Define STD\_HIGH Description**

<b>Name</b>	STD_HIGH
<b>Initializer</b>	0x01

### 3.8.1.406 Define STD\_IDLE

Logical state idle.

**Implements:** DBASE12009

**Table 3-410. Define STD\_IDLE Description**

<b>Name</b>	STD_IDLE
<b>Initializer</b>	0x00

### 3.8.1.407 Define STD\_LOW

Physical state 0V.

**Implements:** DBASE12007

**Table 3-411. Define STD\_LOW Description**

<b>Name</b>	STD_LOW
<b>Initializer</b>	0x00

### 3.8.1.408 Define STD\_OFF

OFF state.

**Implements:** DBASE12011

**Table 3-412. Define STD\_OFF Description**

<b>Name</b>	STD_OFF
<b>Initializer</b>	0x00

### 3.8.1.409 Define STD\_ON

ON State.

**Implements:** DBASE12010

**Table 3-413. Define STD\_ON Description**

<b>Name</b>	STD_ON
<b>Initializer</b>	0x01

**3.8.1.410 Define STD\_TYPES\_AR\_RELEASE\_MAJOR\_VERSION****Table 3-414. Define STD\_TYPES\_AR\_RELEASE\_MAJOR\_VERSION  
Description**

<b>Name</b>	STD_TYPES_AR_RELEASE_MAJOR_VERSION
<b>Initializer</b>	4

**3.8.1.411 Define STD\_TYPES\_AR\_RELEASE\_MINOR\_VERSION****Table 3-415. Define STD\_TYPES\_AR\_RELEASE\_MINOR\_VERSION  
Description**

<b>Name</b>	STD_TYPES_AR_RELEASE_MINOR_VERSION
<b>Initializer</b>	2

**3.8.1.412 Define STD\_TYPES\_AR\_RELEASE\_REVISION\_VERSION****Table 3-416. Define STD\_TYPES\_AR\_RELEASE\_REVISION\_VERSION  
Description**

<b>Name</b>	STD_TYPES_AR_RELEASE_REVISION_VERSION
<b>Initializer</b>	2

**3.8.1.413 Define STD\_TYPES\_SW\_MAJOR\_VERSION****Table 3-417. Define STD\_TYPES\_SW\_MAJOR\_VERSION  
Description**

<b>Name</b>	STD_TYPES_SW_MAJOR_VERSION
<b>Initializer</b>	1

**3.8.1.414 Define STD\_TYPES\_SW\_MINOR\_VERSION****Table 3-418. Define STD\_TYPES\_SW\_MINOR\_VERSION  
Description**

<b>Name</b>	STD_TYPES_SW_MINOR_VERSION
<b>Initializer</b>	0



### 3.8.1.415 Define STD\_TYPES\_SW\_PATCH\_VERSION

**Table 3-419. Define STD\_TYPES\_SW\_PATCH\_VERSION Description**

<b>Name</b>	STD_TYPES_SW_PATCH_VERSION
<b>Initializer</b>	2

### 3.8.1.416 Define STD\_TYPES\_VENDOR\_ID

Parameters that shall be published within the standard types header file and also in the module's description file.

**Implements:** DBASE12012, DBASE12013, DBASE12014, DBASE12015, DBASE12016, DBASE12017, DBASE12018

**Table 3-420. Define STD\_TYPES\_VENDOR\_ID Description**

<b>Name</b>	STD_TYPES_VENDOR_ID
<b>Initializer</b>	43

## 3.8.2 Enum Reference

Enumeration of all constants supported by the driver are as per AUTOSAR BASE Driver software specification Version 4.2 Rev0002 .

### 3.8.2.1 Enumeration Can\_ReturnType

Can\_ReturnType.

#### Details:

CAN Return Types from Functions.

**Implements:** DCAN02414

**Table 3-421. Enumeration Can\_ReturnType Values**

Name	Initializer	Description
CAN_OK	0U	Operation was ok executed.
CAN_NOT_OK		Operation was not ok executed.
CAN_BUSY		Operation was rejected because of busy state.

### 3.8.2.2 Enumeration Can\_StateTransitionType

CAN State Modes of operation.

#### Details:

State transitions that are used by the function CAN\_SetControllerMode().

**Implements:** DCAN02415

**Table 3-422. Enumeration Can\_StateTransitionType Values**

Name	Initializer	Description
CAN_T_STOP	0U	CANIF_CS_STARTED -> CANIF_CS_STOPPED.
CAN_T_START		CANIF_CS_STOPPED -> CANIF_CS_STARTED.
CAN_T_SLEEP		CANIF_CS_STOPPED -> CANIF_CS_SLEEP.
CAN_T_WAKEUP		CANIF_CS_SLEEP -> CANIF_CS_STOPPED.

### 3.8.2.3 Enumeration CanIf\_ControllerModeType

CanIf\_ControllerModeType.

#### Details:

Operating modes of the CAN Controller and CAN Driver

**Table 3-423. Enumeration CanIf\_ControllerModeType Values**

Name	Initializer	Description
CANIF_CS_UNINIT	0U	UNINIT mode.
CANIF_CS_SLEEP		SLEEP mode.
CANIF_CS_STARTED		STARTED mode.
CANIF_CS_STOPPED		STOPPED mode.

### 3.8.2.4 Enumeration Eth\_FilterActionType

Action type for PHY address filtering.

#### Details:

The Enumeration type describes the action to be taken for the MAC address given in \*PhysAddrPtr

**Table 3-424. Enumeration Eth\_FilterActionType Values**

Name	Initializer	Description
ETH_ADD_TO_FILTER	0	Add address to the filter.
ETH_REMOVE_FROM_FILTER		Remove address.

### 3.8.2.5 Enumeration Eth\_ModeType

The Ethernet controller mode.

#### Details:

This type is used to store the information whether the Ethernet controller is stopped or running.

**Table 3-425. Enumeration Eth\_ModeType Values**

Name	Initializer	Description
ETH_MODE_DOWN	0	Controller is shut down.
ETH_MODE_ACTIVE		Controller is active.

### 3.8.2.6 Enumeration Eth\_ReturnType

The Ethernet specific return type.

#### Details:

This return type informs about the function success/failure status.

**Table 3-426. Enumeration Eth\_ReturnType Values**

Name	Initializer	Description
ETH_OK	0	Success.
ETH_E_NOT_OK		General failure.
ETH_E_NO_ACCESS		Ethernet hardware access failure.

### 3.8.2.7 Enumeration Eth\_RxStatusType

The Ethernet reception status.

#### Details:

This status is returned by the `Eth_Receive()` function to indicate whether any frame has been received and if yes, whether there is any frame still waiting in the queue (for another `Eth_Receive()` call).

**Table 3-427. Enumeration Eth\_RxStatusType Values**

Name	Initializer	Description
ETH_RECEIVED	0	A frame has been received and there are no more frames in the queue.
ETH_NOT_RECEIVED		No frames received.
ETH_RECEIVED_MORE_DATA_AVAILABLE		A frame received and at least another one in the queue detected.
ETH_RECEIVED_FRAMES_LOST		Ethernet frame has been received, some frames got lost.

### 3.8.2.8 Enumeration Eth\_StateType

The Ethernet driver state.

#### Details:

A variable of this type holds the state of the Ethernet driver module. The driver is at the ETH\_STATE\_UNINIT at the beginning until the Eth\_Init() function is called. The state remains equal to the ETH\_STATE\_INIT until the Eth\_ControllerInit() function is called. Then the state is ETH\_STATE\_ACTIVE.

**Table 3-428. Enumeration Eth\_StateType Values**

Name	Initializer	Description
ETH_STATE_UNINIT	0	The driver has not been initialized yet.
ETH_STATE_INIT		The driver has not been configured but the controller has not been initialized yet.
ETH_STATE_ACTIVE		The driver was initialized and the controller was configured.

### 3.8.2.9 Enumeration Fr\_ChannelType

#### Details:

This type is used to select the channel.

**Implements:** DFR32001

**Table 3-429. Enumeration Fr\_ChannelType Values**

Name	Initializer	Description
FR_CHANNEL_A	0U	
FR_CHANNEL_B		
FR_CHANNEL_AB		

### 3.8.2.10 Enumeration Fr\_ErrorModeType

Variables of this type are used for storage of FlexRay controller error mode.

**Implements:** DFR32009

**Table 3-430. Enumeration Fr\_ErrorModeType Values**

Name	Initializer	Description
FR_ERRORMODE_ACTIVE	0U	
FR_ERRORMODE_PASSIVE		
FR_ERRORMODE_COMM_HALT		

### 3.8.2.11 Enumeration Fr\_POCStateType

**Details:**

Variables of this type are used to store the POC:state of the controller.

**Implements:** DFR32007

**Table 3-431. Enumeration Fr\_POCStateType Values**

Name	Initializer	Description
FR_POCSTATE_CONFIG	0U	
FR_POCSTATE_DEFAULT_CONFIG		
FR_POCSTATE_HALT		
FR_POCSTATE_NORMAL_ACTIVE		
FR_POCSTATE_NORMAL_PASSIVE		
FR_POCSTATE_READY		
FR_POCSTATE_STARTUP		
FR_POCSTATE_WAKEUP		

### 3.8.2.12 Enumeration Fr\_RxLPduStatusType

Transmit resource status is stored to variable of this type.

**Implements:** DFR32003

**Table 3-432. Enumeration Fr\_RxLPduStatusType Values**

Name	Initializer	Description
FR_RECEIVED	0U	
FR_NOT_RECEIVED		
FR_RECEIVED_MORE_DATA_AVAILABLE		

### 3.8.2.13 Enumeration Fr\_SlotModeType

This type is used to store the slot mode of the controller.

#### Details:

Covers FR506

**Implements:** DFR32008

**Table 3-433. Enumeration Fr\_SlotModeType Values**

Name	Initializer	Description
FR_SLOTMODE_KEYSLLOT	0U	
FR_SLOTMODE_ALL_PENDING		
FR_SLOTMODE_ALL		

### 3.8.2.14 Enumeration Fr\_StartupStateType

#### Details:

Variable of this type is used to query the FlexRay controller Startup state.

**Implements:** DFR32004

**Table 3-434. Enumeration Fr\_StartupStateType Values**

Name	Initializer	Description
FR_STARTUP_UNDEFINED	0U	
FR_STARTUP_COLDSTART_LISTEN		
FR_STARTUP_INTEGRATION_COLDSTART_CHECK		
FR_STARTUP_COLDSTART_JOIN		

*Table continues on the next page...*

**Table 3-434. Enumeration Fr\_StartupStateType Values (continued)**

Name	Initializer	Description
FR_STARTUP_COLDSTART_COLLISION_RESOLUTION		
FR_STARTUP_COLDSTART_CONSISTENCY_CHECK		
FR_STARTUP_INTEGRATION_LISTEN		
FR_STARTUP_INITIALIZE_SCHEDULE		
FR_STARTUP_INTEGRATION_CONSISTENCY_CHECK		
FR_STARTUP_COLDSTART_GAP		

### 3.8.2.15 Enumeration Fr\_TxLPduStatusType

Transmit resource status is stored to variable of this type.

**Implements:** DFR32005

**Table 3-435. Enumeration Fr\_TxLPduStatusType Values**

Name	Initializer	Description
FR_TRANSMITTED	0U	
FR_NOT_TRANSMITTED		

### 3.8.2.16 Enumeration Fr\_WakeupStatusType

**Details:**

Variable of this type is used to query the FlexRay controller Wakeup status.

**Implements:** DFR32006

**Table 3-436. Enumeration Fr\_WakeupStatusType Values**

Name	Initializer	Description
FR_WAKEUP_UNDEFINED	0U	
FR_WAKEUP_RECEIVED_HEADER		
FR_WAKEUP_RECEIVED_WUP		

*Table continues on the next page...*



**Table 3-436. Enumeration Fr\_WakeupStatusType Values (continued)**

Name	Initializer	Description
FR_WAKEUP_COLLISION_HEADER		
FR_WAKEUP_COLLISION_WUP		
FR_WAKEUP_COLLISION_UNKNOWN		
FR_WAKEUP_TRANSMITTED		

### 3.8.2.17 Enumeration BufReq\_ReturnType

Variables of this type are used to store the result of a buffer request.

**Implements:** DBASE02009

**Table 3-437. Enumeration BufReq\_ReturnType Values**

Name	Initializer	Description
BUFREQ_OK	0	Buffer request accomplished successful.
BUFREQ_E_NOT_OK	1	Buffer request not successful. Buffer cannot be accessed.
BUFREQ_E_BUSY	2	Temporarily no buffer available. It's up the requestor to retry request for a certain time.
BUFREQ_E_OVFL	3	No Buffer of the required length can be provided.

### 3.8.2.18 Enumeration TpDataStateType

Variables of this type shall be used to store the state of TP buffer.

**Implements:** DBASE02010

**Table 3-438. Enumeration TpDataStateType Values**

Name	Initializer	Description
TP_DATACONF	0	Indicates that all data, that have been copied so far, are confirmed and can be removed from the TP buffer.

*Table continues on the next page...*

**Table 3-438. Enumeration TpDataStateType Values (continued)**

Name	Initializer	Description
TP_DATARETRY	1	Indicates that this API call shall copy already copied data in order to recover from an error.
TP_CONFPENDING	2	Indicates that the previously copied data must remain in the TP.
TP_NORETRY	3	Indicate that the copied transmit data can be removed from the buffer after it has been copied.

### 3.8.2.19 Enumeration TPParameterType

Specify the parameter to which the value has to be changed (BS or STmin)

**Implements:** DBASE02008

**Table 3-439. Enumeration TPParameterType Values**

Name	Initializer	Description
TP_STMIN	0	Separation Time.
TP_BS	1	Block Size.
TP_BC	2	Band width control parameter used in FlexRay transport protocol module.

### 3.8.2.20 Enumeration Lin\_FrameCsModelType

Checksum models for the LIN Frame.

**Details:**

This type is used to specify the Checksum model to be used for the LIN Frame.

**Implements:** DLIN05031

**Table 3-440. Enumeration Lin\_FrameCsModelType Values**

Name	Initializer	Description
LIN_ENHANCED_CS		Enhanced checksum model.
LIN_CLASSIC_CS		Classic checksum model.

### 3.8.2.21 Enumeration Lin\_FrameResponseType

Frame response types.

#### **Details:**

This type is used to specify whether the frame processor is required to transmit the response part of the LIN frame.

**Implements:** DLIN05034

**Table 3-441. Enumeration Lin\_FrameResponseType Values**

Name	Initializer	Description
LIN_MASTER_RESPONSE		Response is generated from this (master) node.
LIN_SLAVE_RESPONSE		Response is generated from a remote slave node.
LIN_SLAVE_TO_SLAVE		Response is generated from one slave to another slave.  For the master the response will be anonymous, it does not have to receive the response.

### 3.8.2.22 Enumeration Lin\_StatusType

LIN Frame and Channel states operation.

#### **Details:**

LIN operation states for a LIN channel or frame, as returned by the API service Lin\_GetStatus(). part of the LIN frame.

**Implements:** DLIN05036

**Table 3-442. Enumeration Lin\_StatusType Values**

Name	Initializer	Description
LIN_NOT_OK	0	Development or production error occurred.
LIN_TX_OK		Successful transmission.
LIN_TX_BUSY		Ongoing transmission (Header or Response).
LIN_TX_HEADER_ERROR		Erroneous header transmission such as:.
LIN_TX_ERROR		Erroneous transmission such as:.
LIN_RX_OK		Reception of correct response.
LIN_RX_BUSY		Ongoing reception: at least one response byte has been received, but the checksum byte has not been received.
LIN_RX_ERROR		Erroneous reception such as:.
LIN_RX_NO_RESPONSE		No response byte has been received so far.  This is a mess !! Frame status is mixed with channel status but i kept it here only because of LIN168.
LIN_OPERATIONAL		Normal operation;.
LIN_CH_SLEEP		Sleep mode operation;.

### 3.8.3 Function Reference

Functions of all functions supported by the driver are as per AUTOSAR BASE Driver software specification Version 4.2 Rev0002 .

### 3.8.4 Structs Reference

Data structures supported by the driver are as per AUTOSAR BASE Driver software specification Version 4.2 Rev0002 .

#### 3.8.4.1 Structure Can\_PduType

Can\_PduType.

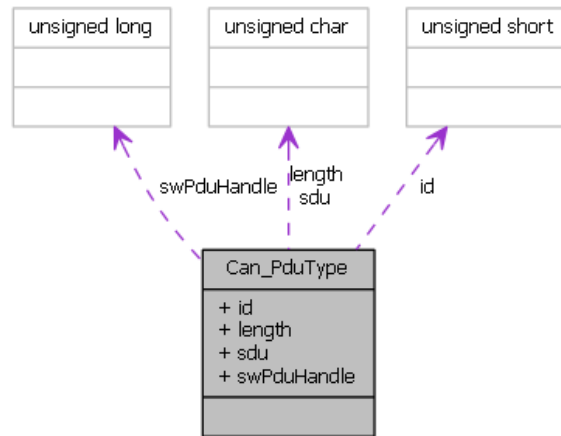


Figure 3-1. Struct Can\_PduType

**Details:**

Type used to provide ID, DLC, SDU from CAN interface to CAN driver.  $HTH/HRH = ID + DLC + SDU$ .

**Implements:** DCAN02417

**Declaration:**

```
typedef struct
{
    Can_IdType id,
    uint8 length,
    uint8* sdu,
    PduIdType swPduHandle
} Can_PduType;
```

Table 3-443. Structure Can\_PduType member description

Member	Description
id	CAN L-PDU = Data Link Layer Protocol Data Unit. Consists of Identifier, DLC and Data(SDU) It is uint32 for CAN_EXTENDEDID=STD_ON, else is uint16.
length	DLC = Data Length Code (part of L-PDU that describes the SDU length).
sdu	CAN L-SDU = Link Layer Service Data Unit. Data that is transported inside the L-PDU.
swPduHandle	The L-PDU Handle = defined and placed inside the CanIf module layer. Each handle represents an L-PDU, which is a constant structure with information for Tx/Rx processing.

**3.8.4.2 Structure Fr\_POCTestStatusType**

Variables of this type are used to query the flexRay controller status.

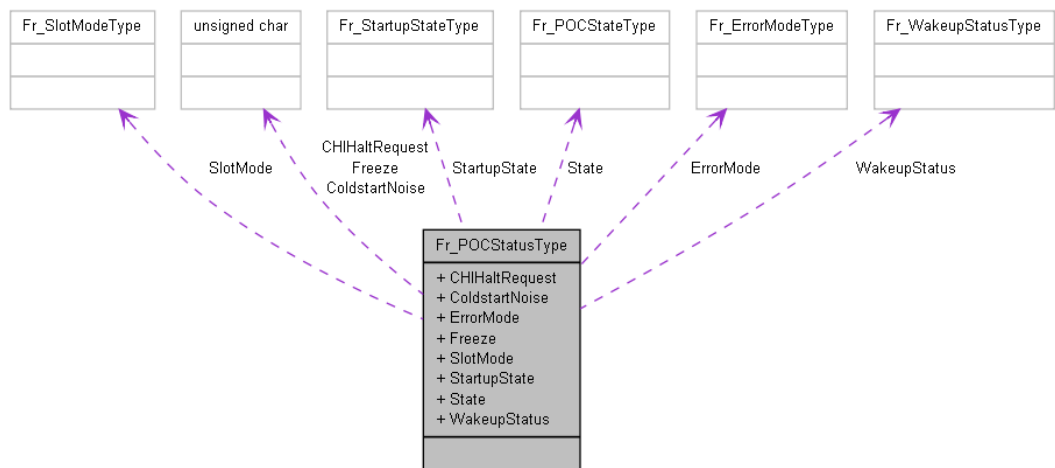


Figure 3-2. Struct Fr\_POCStatusType

**Implements:** DFR32002

**Declaration:**

```
typedef struct
{
    boolean CHIHaltRequest,
        boolean ColdstartNoise,
        Fr_ErrorModeType ErrorMode,
        boolean Freeze,
        Fr_SlotModeType SlotMode,
        Fr_StartupStateType StartupState,
        Fr_POCStateType State,
        Fr_WakeupStatusType WakeupStatus
} Fr_POCStatusType;
```

Table 3-444. Structure Fr\_POCStatusType member description

Member	Description
CHIHaltRequest	TRUE means that noise detected on bus during startup
ColdstartNoise	TRUE means that there is pending halt request
ErrorMode	TRUE means that internal error causing transition to the POC:Halt state or FREEZE command occurred
Freeze	Contains FlexRay controller slot mode
SlotMode	Contains FlexRay controller wakeup status
StartupState	Contains FlexRay controller error mode
State	Contains FlexRay controller startup state
WakeupStatus	Contains FlexRay controller POC state

**3.8.4.3 Structure Lin\_PduType**

The LIN identifier (0..0x3F) with its parity bits.

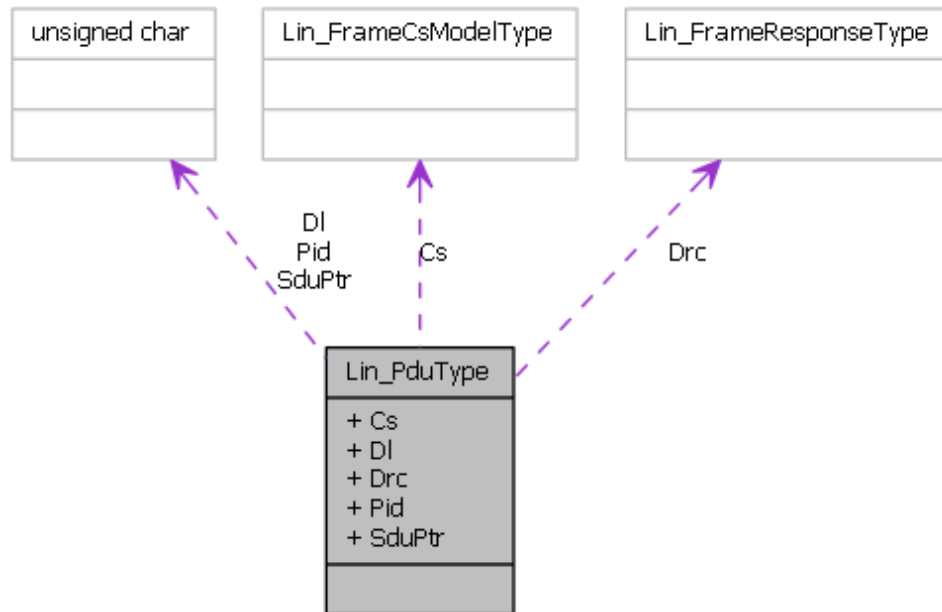


Figure 3-3. Struct Lin\_PduType

**Details:**

This Type is used to provide PID, checksum model, data length and SDU pointer from the LIN Interface to the LIN driver.

**Implements:** DLIN05035

**Declaration:**

```
typedef struct
{
    Lin_FrameCsModelType Cs,
    Lin_FrameDlType Dl,
    Lin_FrameResponseType Drc,
    Lin_FramePidType Pid,
    uint8* SduPtr
} Lin_PduType;
```

Table 3-445. Structure Lin\_PduType member description

Member	Description
Cs	Checksum model type.
Dl	Data length.
Drc	Response type.
Pid	LIN frame identifier.
SduPtr	Pointer to Sdu.

### 3.8.4.4 Structure Mcal\_DemErrorType

Typedef for DEM error management implemented by MCAL drivers.

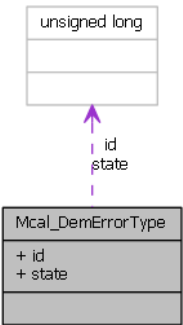


Figure 3-4. Struct Mcal\_DemErrorType

**Implements:** DBASE05032

**Declaration:**

```
typedef struct
{
    uint32 id,
           uint32 state
} Mcal_DemErrorType;
```

Table 3-446. Structure Mcal\_DemErrorType member description

Member	Description
id	enabling/disabling the DEM error: Active=STD_ON/ Inactive=STD_OFF
state	ID of DEM error (0 if STD_OFF)

### 3.8.4.5 Structure PduInfoType

Variables of this type are used to store the basic information about a PDU of any type, namely a pointer variable pointing to it's SDU (payload), and the corresponding length of the SDU in bytes.



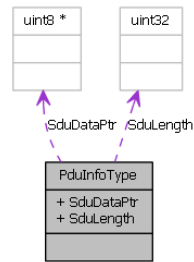


Figure 3-5. Struct PduInfoType

**Implements:** DBASE02006

### Declaration:

```
typedef struct
{
    uint8* SduDataPtr,
        PduLengthType SduLength
} PduInfoType;
```

Table 3-447. Structure PduInfoType member description

Member	Description
SduDataPtr	pointer to the SDU (i.e. payload data) of the PDU
SduLength	length of the SDU in bytes

### 3.8.4.6 Structure RetryInfoType

Variables of this type shall be used to store the information about Tp buffer handling.

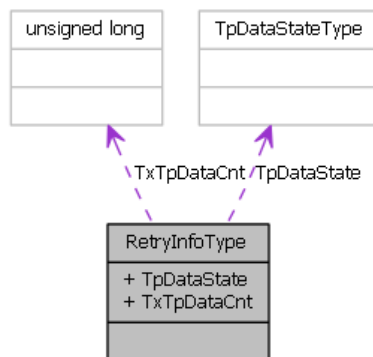


Figure 3-6. Struct RetryInfoType

**Implements:** DBASE02007

Declaration:

```
typedef struct
{
    TpDataStateType TpDataState,
    PduLengthType TxTpDataCnt
} RetryInfoType;
```

Table 3-448. Structure RetryInfoType member description

Member	Description
TpDataState	The enum type to be used to store the state of Tp buffer
TxTpDataCnt	length of the SDU in bytes

3.8.4.7 Structure Std\_VersionInfoType

This type shall be used to request the version of a BSW module using the "ModuleName"\_GetVersionInfo() function.

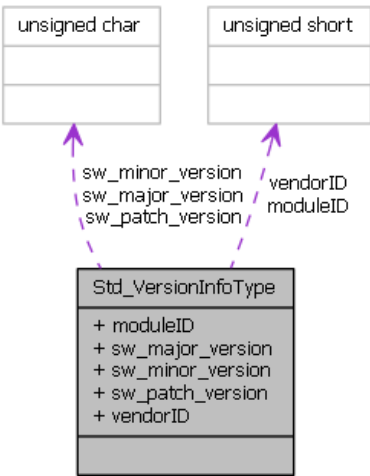


Figure 3-7. Struct Std\_VersionInfoType

**Implements:** DBASE12003

Declaration:

```
typedef struct
{
    uint16 moduleID,
    uint8 sw_major_version,
    uint8 sw_minor_version,
    uint8 sw_patch_version,
    uint16 vendorID
} Std_VersionInfoType;
```

**Table 3-449. Structure Std\_VersionInfoType member description**

Member	Description
moduleID	0
sw_major_version	1
sw_minor_version	0
sw_patch_version	2
vendorID	43

## 3.8.5 Types Reference

Types supported by the driver are as per AUTOSAR BASE Driver software specification Version 4.2 Rev0002 .

### 3.8.5.1 Typedef Can\_IdType

Can\_IdType.

#### Details:

Type for storing the Identifier Length Type: Normal /Extended.

- used by "Can\_MessageBufferConfigObjectType" structure. The driver does not distinguish between Extended and Mixed transmission modes. Extended transmission mode of operation behaves the same as Mixed mode.

**Implements:** DCAN02420

**Type:** uint16

### 3.8.5.2 Typedef Can\_HwHandleType

Can\_HwHandleType.

#### Details:

Represents the hardware object handles of a CAN hardware unit. For CAN hardware units with more than 255 HW objects use extended range.

- used by "Can\_Write" function. The driver does not distinguish between Extended and Mixed transmission modes. Extended transmission mode of operation behaves the same as Mixed mode.

**Implements:** DCAN02421

**Type:** uint16

### 3.8.5.3 Typedef Eth\_DataType

Type used to pass transmit/receive data to/from the driver.

**Details:**

This type was defined as 8 bit wide unsigned integer because this definition is available on all CPU types.

**Type:** uint8

### 3.8.5.4 Typedef Eth\_FrameType

Frame type.

**Details:**

This type is used to pass the value of type/length field in the Ethernet frame header. It is 16 bits long unsigned integer.

- Values less than or equal to 1500 represent the length.
- Values greater than 1500 represent the type (i.e. 0x800 = IP).

**Type:** uint16

### 3.8.5.5 Typedef PduldType

This type serve as a unique identifier of a PDU within a software module. Allowed ranges: uint8 .. uint16.

**Implements:** DBASE02002

**Type:** uint32

### 3.8.5.6 Typedef PduLengthType

This type serve as length information of a PDU in bytes. Allowed ranges: uint8 .. uint32.

**Implements:** DBASE02002

**Type:** uint32

### 3.8.5.7 Typedef BusTrcvErrorType

Variables of this type are used to return the bus status evaluated by a transceiver.

**Implements:** DBASE02005

**Type:** uint8

### 3.8.5.8 Typedef NetworkHandleType

Variables of the type NetworkHandleType are used to store the identifier of a communication channel.

**Implements:** DBASE02004

**Type:** uint8

### 3.8.5.9 Typedef NotifResultType

Variables of this type are used to store the result status of a notification (confirmation or indication).

**Implements:** DBASE02003

**Type:** uint8

### 3.8.5.10 Typedef Lin\_FrameDlType

Data length of a LIN Frame.

**Details:**

This type is used to specify the number of SDU data bytes to copy.

**Implements:** DLIN05032

**Type:** uint8

### 3.8.5.11 Typedef Lin\_FramePidType

The LIN identifier (0..0x3F) with its parity bits.

**Details:**

Represents all valid protected Identifier used by Lin\_SendHeader().

**Implements:** DLIN05033

**Type:** uint8

### 3.8.5.12 Typedef boolean

The standard AUTOSAR type boolean shall be implemented on basis of an eight bits long unsigned integer.

**Implements:** DBASE08002

**Type:** unsigned char

### 3.8.5.13 Typedef float32

32bit long floating point data type

**Implements:** DBASE08015

**Type:** float

### 3.8.5.14 Typedef float64

64bit long floating point data type

**Implements:** DBASE08016

**Type:** double

### 3.8.5.15 Typedef sint16

Signed 16 bit integer with range of -32768 ..+32767 (0x8000..0x7FFF) - 15 bit + 1 sign bit.

**Implements:** DBASE08007

**Type:** signed short

### 3.8.5.16 Typedef sint16\_least

Signed integer at least 16 bit long. Range - at least -32768 ..+32767. At least 15 bit + 1 bit sign.

**Implements:** DBASE08013

**Type:** signed long

### 3.8.5.17 Typedef sint32

Signed 32 bit integer with range of -2147483648.. +2147483647 (0x80000000..0x7FFFFFFF) - 31 bit + 1 sign bit.

**Implements:** DBASE08008

**Type:** signed long

### **3.8.5.18 Typedef sint32\_least**

Signed integer at least 32 bit long. Range - at least -2147483648.. +2147483647. At least 31 bit + 1 bit sign.

**Implements:** DBASE08014

**Type:** signed long

### **3.8.5.19 Typedef sint8**

Signed 8 bit integer with range of -128 ..+127 (0x80..0x7F) - 7 bit + 1 sign bit.

**Implements:** DBASE08006

**Type:** signed char

### **3.8.5.20 Typedef sint8\_least**

Signed integer at least 8 bit long. Range - at least -128 ..+127. At least 7 bit + 1 bit sign.

**Implements:** DBASE08012

**Type:** signed long

### **3.8.5.21 Typedef uint16**

Unsigned 16 bit integer with range of 0 ..+65535 (0x0000..0xFFFF) - 16 bit.

**Implements:** DBASE08004

**Type:** unsigned short



### 3.8.5.22 Typedef uint16\_least

Unsigned integer at least 16 bit long. Range of at least 0 ..+65535 (0x0000..0xFFFF) - 16 bit.

**Implements:** DBASE08010

**Type:** unsigned long

### 3.8.5.23 Typedef uint32

Unsigned 32 bit integer with range of 0 ..+4294967295 (0x00000000..0xFFFFFFFF) - 32 bit.

**Implements:** DBASE08005

**Type:** unsigned long

### 3.8.5.24 Typedef uint32\_least

Unsigned integer at least 32 bit long. Range of at least 0 ..+4294967295 (0x00000000..0xFFFFFFFF) - 32 bit.

**Implements:** DBASE08011

**Type:** unsigned long

### 3.8.5.25 Typedef uint8

Unsigned 8 bit integer with range of 0 ..+255 (0x00..0xFF) - 8 bit.

**Implements:** DBASE08003

**Type:** unsigned char

### 3.8.5.26 Typedef uint8\_least

Unsigned integer at least 8 bit long. Range of at least 0 ..+255 (0x00..0xFF) - 8 bit.

**Implements:** DBASE08009

**Type:** unsigned long

### 3.8.5.27 Typedef StatusType

This type is defined for OSEK compliance.

**Implements:** DBASE12001

**Type:** unsigned char

### 3.8.5.28 Typedef Std\_ReturnType

This type can be used as standard API return type which is shared between the RTE and the BSW modules.

**Implements:** DBASE12002

**Type:** uint8

## 3.9 Symbolic Names Disclaimer

All containers having the symbolic name tag set as true in the Autosar schema will generate defines like:

```
#define <Container_Short_Name> <Container_ID>
```

For this reason it is forbidden to duplicate the name of such containers across the MCAL configuration, or to use names that may trigger other compile issues (e.g. match existing #ifdefs arguments).

## Chapter 4

# Tresos Configuration Plug-in

This chapter describes the Tresos configuration plug-in for the BASE Driver. The most of the parameters are described below.

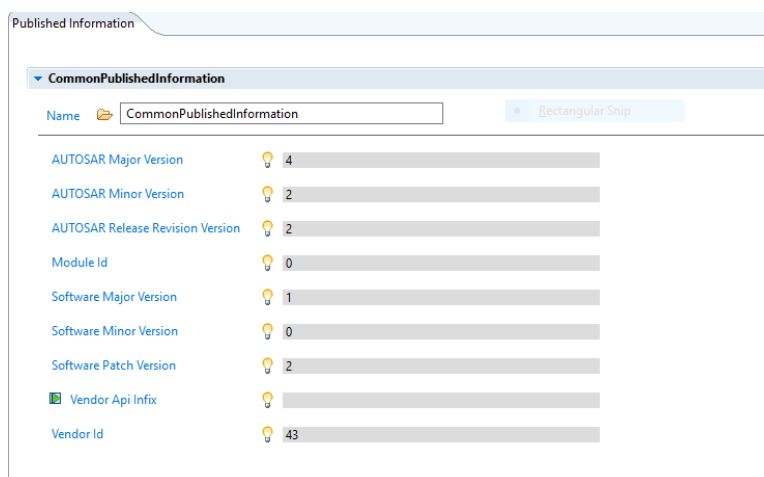
### 4.1 Configuration elements of Base

Included forms :

- [Form CommonPublishedInformation](#)

### 4.2 Form CommonPublishedInformation

Common container, aggregated by all modules. It contains published information about vendor and versions.



Published Information	
CommonPublishedInformation	
Name	CommonPublishedInformation
Rectangular Snip	
AUTOSAR Major Version	4
AUTOSAR Minor Version	2
AUTOSAR Release Revision Version	2
Module Id	0
Software Major Version	1
Software Minor Version	0
Software Patch Version	2
Vendor Api Infix	
Vendor Id	43

**Figure 4-1. Tresos Plugin snapshot for CommonPublishedInformation form.**

## 4.2.1 ArReleaseMajorVersion (CommonPublishedInformation)

Major version number of AUTOSAR specification on which the appropriate implementation is based on.

**Table 4-1. Attribute ArReleaseMajorVersion (CommonPublishedInformation) detailed description**

Property	Value
Label	AUTOSAR Major Version
Type	INTEGER_LABEL
Origin	Custom
Symbolic Name	false
Default	4
Invalid	Range <div> <div>&gt;=4</div> <div>&lt;=4</div> </div>

## 4.2.2 ArReleaseMinorVersion (CommonPublishedInformation)

Minor version number of AUTOSAR specification on which the appropriate implementation is based on.

**Table 4-2. Attribute ArReleaseMinorVersion (CommonPublishedInformation) detailed description**

Property	Value
Label	AUTOSAR Minor Version
Type	INTEGER_LABEL
Origin	Custom
Symbolic Name	false
Default	2
Invalid	Range <div> <div>&gt;=2</div> <div>&lt;=2</div> </div>

## 4.2.3 ArReleaseRevisionVersion (CommonPublishedInformation)

Revision version number of AUTOSAR specification on which the appropriate implementation is based on.

**Table 4-3. Attribute ArReleaseRevisionVersion (CommonPublishedInformation) detailed description**

Property	Value
Label	AUTOSAR Release Revision Version
Type	INTEGER_LABEL
Origin	Custom
Symbolic Name	false
Default	2
Invalid	Range >=2 <=2

## 4.2.4 ModuleId (CommonPublishedInformation)

Module ID of this module from Module List.

**Table 4-4. Attribute ModuleId (CommonPublishedInformation) detailed description**

Property	Value
Label	Module Id
Type	INTEGER_LABEL
Origin	Custom
Symbolic Name	false
Default	0
Invalid	Range >=0 <=0

## 4.2.5 SwMajorVersion (CommonPublishedInformation)

Major version number of the vendor specific implementation of the module. The numbering is vendor specific.

**Table 4-5. Attribute SwMajorVersion (CommonPublishedInformation) detailed description**

Property	Value
Label	Software Major Version
Type	INTEGER_LABEL
Origin	Custom
Symbolic Name	false

*Table continues on the next page...*

**Table 4-5. Attribute SwMajorVersion (CommonPublishedInformation) detailed description (continued)**

Property	Value
Default	1
Invalid	Range >=1 <=1

## 4.2.6 SwMinorVersion (CommonPublishedInformation)

Minor version number of the vendor specific implementation of the module. The numbering is vendor specific.

**Table 4-6. Attribute SwMinorVersion (CommonPublishedInformation) detailed description**

Property	Value
Label	Software Minor Version
Type	INTEGER_LABEL
Origin	Custom
Symbolic Name	false
Default	0
Invalid	Range >=0 <=0

## 4.2.7 SwPatchVersion (CommonPublishedInformation)

Patch level version number of the vendor specific implementation of the module. The numbering is vendor specific.

**Table 4-7. Attribute SwPatchVersion (CommonPublishedInformation) detailed description**

Property	Value
Label	Software Patch Version
Type	INTEGER_LABEL
Origin	Custom
Symbolic Name	false
Default	2
Invalid	Range >=2 <=2

## 4.2.8 VendorApiInfix (CommonPublishedInformation)

In driver modules which can be instantiated several times on a single ECU, BSW00347 requires that the name of APIs is extended by the VendorId and a vendor specific name. This parameter is used to specify the vendor specific name. In total, the implementation specific name is generated as follows:

<ModuleName>\_<VendorId>\_<VendorApiInfix><Api name from SWS>. E.g. assuming that the VendorId of the implementor is 123 and the implementer chose a VendorApiInfix of "v11r456" a api name Can\_Write defined in the SWS will translate to Can\_123\_v11r456Write. This parameter is mandatory for all modules with upper multiplicity > 1. It shall not be used for modules with upper multiplicity =1.

**Table 4-8. Attribute VendorApiInfix (CommonPublishedInformation) detailed description**

Property	Value
Label	Vendor Api Infix
Type	STRING_LABEL
Origin	Custom
Symbolic Name	false
Default	
Enable	false

## 4.2.9 VendorId (CommonPublishedInformation)

Vendor ID of the dedicated implementation of this module according to the AUTOSAR vendor list.

**Table 4-9. Attribute VendorId (CommonPublishedInformation) detailed description**

Property	Value
Label	Vendor Id
Type	INTEGER_LABEL
Origin	Custom
Symbolic Name	false
Default	43
Invalid	Range >=43 <=43





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