

PV2Way Engine

Build Version: CORE\_8.505.1.1

March 13, 2010

## **Contents**

1	pv2way_engine Hierarchical Index	1
	1.1 pv2way_engine Class Hierarchy	. 1
2	pv2way_engine Data Structure Index	2
	2.1 pv2way_engine Data Structures	. 2
3	pv2way_engine File Index	3
	3.1 pv2way_engine File List	. 3
4	pv2way_engine Data Structure Documentation	4
	4.1 CPV2WayEngineFactory Class Reference	. 4
	4.2 CPV2WayInterface Class Reference	. 6
	4.3 CPV2WayProxyFactory Class Reference	. 14
	4.4 CPVUserInput Class Reference	. 15
	4.5 CPVUserInputAlphanumeric Class Reference	. 16
	4.6 CPVUserInputDtmf Class Reference	. 18
	4.7 H324MConfigInterface Class Reference	. 20
	4.8 H324MConfigObserver Class Reference	. 30
	4.9 H324MReverseParametersExtensionInterface Class Reference	. 31
	4.10 PV2Way324ConnectOptions Class Reference	. 32
	4.11 PV2Way324InitInfo Class Reference	. 34
	4.12 PV2WayConnectOptions Class Reference	. 36
	4.13 PV2WayInitInfo Class Reference	. 38
	4.14 PV2WayTestExtensionInterface Class Reference	. 40
	4.15 PVH223Al1Config Class Reference	. 41
	4.16 PVH223Al2Config Class Reference	
	4.17 PVH223Al3Config Class Reference	
	4.18 PVH223AlConfig Class Reference	
	4.19 PVMFComponentInterface Class Reference	



#### packetvideo

5	pv2v	way_engine File Documentation	46
	5.1	pv_2way_basic_types.h File Reference	46
	5.2	pv_2way_engine_factory.h File Reference	51
	5.3	pv_2way_h324m_types.h File Reference	52
	5.4	pv_2way_interface.h File Reference	54
	5.5	pv_2way_proxy_factory.h File Reference	55
	5.6	pv_2way_test_extension_interface.h File Reference	56
	5.7	tsc_h324m_config_interface.h File Reference	57

## pv2way\_engine Hierarchical Index

#### 1.1 pv2way\_engine Class Hierarchy

s inheritance list is sorted roughly, but not completely, alphabetically:	
CPV2WayEngineFactory	4
CPV2WayInterface	
CPV2WayProxyFactory	
CPVUserInput	15
CPVUserInputAlphanumeric	16
CPVUserInputDtmf	
H324MConfigInterface	20
H324MConfigObserver	
H324MReverseParametersExtensionInterface	
PV2WayConnectOptions	36
PV2Way324ConnectOptions	32
PV2WayInitInfo	
PV2Way324InitInfo	
PV2WayTestExtensionInterface	
PVH223AlConfig	
PVH223A11Config	
PVH223Al2Config	
PVH223Al3Config	
PVMFComponentInterface	

## pv2way\_engine Data Structure Index

### 2.1 pv2way\_engine Data Structures

Here are the data structures with brief descriptions:

CPV2wayEngineFactory
CPV2WayInterface
CPV2WayProxyFactory
CPVUserInput
CPVUserInputAlphanumeric
CPVUserInputDtmf
H324MConfigInterface
H324MConfigObserver
H324MReverseParametersExtensionInterface
PV2Way324ConnectOptions
PV2Way324InitInfo
PV2WayConnectOptions
PV2WayInitInfo
PV2WayTestExtensionInterface
PVH223Al1Config
PVH223Al2Config
PVH223Al3Config
PVH223AlConfig
PVMFComponentInterface

## pv2way\_engine File Index

### 3.1 pv2way\_engine File List

Here is a list of all files with brief descriptions:

ov_2way_basic_types.h	40
ov_2way_engine_factory.h	5
ov_2way_h324m_types.h	52
ov_2way_interface.h	54
ov_2way_proxy_factory.h	55
ov_2way_test_extension_interface.h	56
sc_h324m_config_interface.h	5

## pv2way\_engine Data Structure Documentation

#### 4.1 CPV2WayEngineFactory Class Reference

#include <pv\_2way\_engine\_factory.h>

#### **Static Public Methods**

- OSCL\_IMPORT\_REF void Init ()
- OSCL IMPORT REF void Cleanup ()
- OSCL\_IMPORT\_REF CPV2WayInterface \* CreateTerminal (PV2WayTerminalType aTerminalType, PVCommandStatusObserver \*aCmdStatusObserver, PVInformationalEventObserver \*aInfo-EventObserver, PVErrorEventObserver \*aErrorEventObserver)
- OSCL\_IMPORT\_REF void DeleteTerminal (CPV2WayInterface \*terminal)

#### 4.1.1 Member Function Documentation

- 4.1.1.1 OSCL\_IMPORT\_REF void CPV2WayEngineFactory::Cleanup() [static]
- 4.1.1.2 OSCL\_IMPORT\_REF CPV2WayInterface\* CPV2WayEngineFactory::CreateTerminal (PV2WayTerminalType aTerminalType, PVCommandStatusObserver \* aCmdStatusObserver, PVInformationalEventObserver \* aInfoEventObserver, PVErrorEventObserver \* aErrorEventObserver) [static]

Creates an instance of a terminal of a particular type. Initially, this will support 324m type terminals.

#### Parameters:

```
aTerminalType the type of terminal to be created.
aCmdStatusObserver the observer for command status
aInfoEventObserver the observer for unsolicited informational events
aErrorEventObserver the observer for unsolicited error events
```

#### **Returns:**

A pointer to a terminal or leaves if the type is invalid or the system is out of resources



## 4.1.1.3 OSCL\_IMPORT\_REF void CPV2WayEngineFactory::DeleteTerminal (CPV2WayInterface \* terminal) [static]

This function allows the application to delete an instance of a terminal and reclaim all allocated resources. A terminal should be deleted only in the Eldle state. An attempt to delete a terminal in any other state will result in unpredictable behavior.

#### **Parameters:**

terminal to be deleted.

#### 4.1.1.4 OSCL\_IMPORT\_REF void CPV2WayEngineFactory::Init () [static]

The documentation for this class was generated from the following file:

• pv\_2way\_engine\_factory.h

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#### 4.2 CPV2WayInterface Class Reference

#include <pv\_2way\_interface.h>

#### **Public Methods**

- virtual ~CPV2WayInterface ()
- virtual OSCL\_IMPORT\_REF PVCommandId GetSDKInfo (PVSDKInfo &aSDKInfo, OsclAny \*a-ContextData=NULL)=0
- virtual OSCL\_IMPORT\_REF PVCommandId GetSDKModuleInfo (PVSDKModuleInfo &a-SDKModuleInfo, OsclAny \*aContextData=NULL)=0
- virtual OSCL\_IMPORT\_REF PVCommandId Init (PV2WayInitInfo &aInitInfo, OsclAny \*a-ContextData=NULL)=0
- virtual OSCL\_IMPORT\_REF PVCommandId Reset (OsclAny \*aContextData=NULL)=0
- virtual OSCL\_IMPORT\_REF PVCommandId AddDataSource (PVTrackId aTrackId, PVMFNode-Interface &aDataSource, OsclAny \*aContextData=NULL)=0
- virtual OSCL\_IMPORT\_REF PVCommandId RemoveDataSource (PVMFNodeInterface &aData-Source, OsclAny \*aContextData=NULL)=0
- virtual OSCL\_IMPORT\_REF PVCommandId AddDataSink (PVTrackId aTrackId, PVMFNode-Interface &aDataSink, OsclAny \*aContextData=NULL)=0
- virtual OSCL\_IMPORT\_REF PVCommandId RemoveDataSink (PVMFNodeInterface &aDataSink, OsclAny \*aContextData=NULL)=0
- virtual OSCL\_IMPORT\_REF PVCommandId Connect (const PV2WayConnectOptions &aOptions, PVMFNodeInterface \*aCommServer=NULL, OsclAny \*aContextData=NULL)=0
- virtual OSCL\_IMPORT\_REF PVCommandId Disconnect (OsclAny \*aContextData=NULL)=0
- virtual OSCL\_IMPORT\_REF PVCommandId GetState (PV2WayState &aState, OsclAny \*a-ContextData=NULL)=0
- virtual OSCL\_IMPORT\_REF PVCommandId Pause (PV2WayDirection aDirection, PVTrackId a-TrackId, OsclAny \*aContextData=NULL)=0
- virtual OSCL\_IMPORT\_REF PVCommandId Resume (PV2WayDirection aDirection, PVTrackId aTrackId, OsclAny \*aContextData=NULL)=0
- virtual OSCL\_IMPORT\_REF PVCommandId SetLogAppender (const char \*aTag, OsclSharedPtr
   PVLoggerAppender > &aAppender, OsclAny \*aContextData=NULL)=0
- virtual OSCL\_IMPORT\_REF PVCommandId RemoveLogAppender (const char \*aTag, Oscl-SharedPtr< PVLoggerAppender > &aAppender, OsclAny \*aContextData=NULL)=0
- virtual OSCL\_IMPORT\_REF PVCommandId SetLogLevel (const char \*aTag, int32 aLevel, bool aSetSubtree=false, OsclAny \*aContextData=NULL)=0
- virtual OSCL\_IMPORT\_REF PVCommandId GetLogLevel (const char \*aTag, int32 &aLogInfo, OsclAny \*aContextData=NULL)=0
- virtual OSCL\_IMPORT\_REF PVCommandId QueryInterface (const PVUuid &aUuid, PVInterface \*&aInterfacePtr, OsclAny \*aContext=NULL)=0
- virtual OSCL\_IMPORT\_REF PVCommandId CancelAllCommands (OsclAny \*aContext-Data=NULL)=0

#### **4.2.1 Detailed Description**

#### CPV2WayInterface Class

CPV2WayInterface is the interface to the pv2way SDK, which allows initialization, control, and termination of a two-way (3g-324m, SIP) terminal. The application is expected to contain and maintain a pointer to the CPV2WayInterface instance at all times that a call is active. The CPV2WayFactory factory class is to be used to create and delete instances of this class

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#### 4.2.2 Constructor & Destructor Documentation

#### **4.2.2.1** virtual CPV2WayInterface::~CPV2WayInterface() [inline, virtual]

Object destructor function Releases Resources prior to destruction

#### 4.2.3 Member Function Documentation

## 4.2.3.1 virtual OSCL\_IMPORT\_REF PVCommandId CPV2WayInterface::AddDataSink (PVTrackId aTrackId, PVMFNodeInterface & aDataSink, OsclAny \* aContextData = NULL) [pure virtual]

This function allows the user to specify the media sink for an incoming track. AddDataSinkL can be called only for established incoming tracks identified by a unique track id. Incoming tracks are initiated by the peer and their establishment is indicated using the PVT\_INDICATION\_INCOMING\_TRACK notification which provides the media type and a unique track id. The format type is indicated using the PV2WayTrack-InfoInterface extension interface in the PVAsyncInformationalEvent. Data sinks could be of the following types: a)raw media sinks like video display sinks for RGB and YUV formats, audio rendering sinks for PCM. b)sources of compressed data like file, combined decode and render devices.

#### **Parameters:**

aTrackId Indicates the unique track id to be associated with this sink.

aDataSink The data sink to be added

aContextData Optional opaque data that will be passed back to the user with the command response

#### **Returns:**

A unique command id for asynchronous completion

## 4.2.3.2 virtual OSCL\_IMPORT\_REF PVCommandId CPV2WayInterface::AddDataSource (PVTrackId aTrackId, PVMFNodeInterface & aDataSource, OsclAny \* aContextData = NULL) [pure virtual]

This function allows the user to specify the media source for an outgoing track. Sources should be added after the PVT\_INDICATION\_OUTGOING\_TRACK is received which specifies the format type and the unique track id. The format type is indicated using the PV2WayTrackInfoInterface extension interface in the PVAsyncInformationalEvent. Data sources could be of the following types: a)raw media sources like camera, microphone etc. b)sources of compressed data like file, combined capture and encode devices.

#### **Parameters:**

aTrackId The outgoing track id

aDataSource Reference to the data source for this track

aContextData Optional opaque data that will be passed back to the user with the command response @leave This method can leave with one of the following error codes PVMFErrNotSupported if the format of the sources/sinks is incomtible with what the SDK can handle KPVErrInvalidState if invoked in the incorrect state KErrNoMemory if the SDK failed to allocate memory during this operation

#### **Returns:**



## **4.2.3.3** virtual OSCL\_IMPORT\_REF PVCommandId CPV2WayInterface::CancelAllCommands (OsclAny \* aContextData = NULL) [pure virtual]

This API is to allow the user to cancel all pending requests. The current request being processed, if any, will also be aborted.

#### **Parameters:**

aContextData Optional opaque data that will be passed back to the user with the command response

#### **Returns:**

A unique command id for asynchronous completion

## 4.2.3.4 virtual OSCL\_IMPORT\_REF PVCommandId CPV2WayInterface::Connect (const PV2WayConnectOptions & aOptions, PVMFNodeInterface \* aCommServer = NULL, OsclAny \* aContextData = NULL) [pure virtual]

This function can be invoked only in the ESetup state. The terminal starts connecting with the remote terminal based on the specified options and capabilities. Incoming tracks may be opened before ConnectL completes and will be indicated via the PVT\_INDICATION\_INCOMING\_TRACK event.

#### **Parameters:**

aOptions Optional additional information for call setup.

aCommServer An optional pointer to a comm server to provide comm source and sink end-points.aContextData Optional opaque data that will be passed back to the user with the command response

#### **Returns:**

A unique command id for asynchronous completion

### **4.2.3.5** virtual OSCL\_IMPORT\_REF PVCommandId CPV2WayInterface::Disconnect (OsclAny \* aContextData = NULL) [pure virtual]

The Disconnect call is valid only when invoked in the EConnecting, and EConnected states. It causes the terminal to transition to the EDisconnecting state. All the media tracks both incoming and outgoing will be closed on invoking Disconnect. On completion, the terminal goes to the ESetup state. The statistics of the previous call shall still be available until Connect is invoked again.

It is a no-op when called in any other state.

The post disconnect option specifies what this terminal wishes to do after the data call is terminated, whether it wants to disconnect the line or continue the call as a voice only call.

This is an asynchronous request.

#### **Parameters:**

aContextData Optional opaque data that will be passed back to the user with the command response

#### **Returns:**



## **4.2.3.6 virtual OSCL\_IMPORT\_REF PVCommandId CPV2WayInterface::GetLogLevel (const char** \* *aTag*, **int32** & *aLogInfo*, **OsclAny** \* *aContextData* = **NULL**) [pure virtual]

Allows the logging level to be queried for a particular logging tag. A larger log level will result in more messages being logged.

In the asynchronous response, this should return the log level along with an indication of where the level was inherited (i.e., the ancestor tag).

#### **Parameters:**

**aTag** Specifies the logger tree tag where the log level should be retrieved.

aLogInfo an output parameter which will be filled in with the log level information.

aContextData Optional opaque data that will be passed back to the user with the command response

#### **Exceptions:**

*memory\_error* leaves on memory allocation error.

#### Returns

A unique command id for asynchronous completion

## **4.2.3.7 virtual OSCL\_IMPORT\_REF PVCommandId CPV2WayInterface::GetSDKInfo** (**PVSDKInfo &** *aSDKInfo*, **OsclAny** \* *aContextData* = **NULL**) [pure virtual]

Returns version information about the SDK

#### **Parameters:**

aSDKInfo A reference to a PVSDKInfo structure which contains the product label and date
 aContextData Optional opaque data that will be passed back to the user with the command response
 @leave This method can leave with one of the following error codes PVMFErrNoMemory if the SDK failed to allocate memory during this operation

#### **Returns:**

A unique command id for asynchronous completion

## 4.2.3.8 virtual OSCL\_IMPORT\_REF PVCommandId CPV2WayInterface::GetSDKModuleInfo (PVSDKModuleInfo & aSDKModuleInfo, OsclAny \* aContextData = NULL) [pure virtual]

Returns information about all modules currently used by the SDK.

#### **Parameters:**

aSDKModuleInfo A reference to a PVSDKModuleInfo structure which contains the number of modules currently used by pv2way SDK and the PV UID and description string for each module. The PV UID and description string for modules will be returned in one string buffer allocated by the client. If the string buffer is not large enough to hold the all the module's information, the information will be written up to the length of the buffer and truncated.

aContextData Optional opaque data that will be passed back to the user with the command response
 @leave This method can leave with one of the following error codes PVMFErrNoMemory if the SDK failed to allocate memory during this operation

#### **Returns:**



### **4.2.3.9 virtual OSCL\_IMPORT\_REF PVCommandId CPV2WayInterface::GetState**(PV2WayState & aState, OsclAny \* aContextData = NULL) [pure virtual]

This function returns the current state of the pv2way. Application may use this info for updating display or determine if the pv2way is ready for the next request.

#### **Parameters:**

aState Reflects the state of the PV 2Way engine when the command was received.

aContextData Optional opaque data that will be passed back to the user with the command response

#### **Returns:**

value indicating the current pv2way state

### **4.2.3.10 virtual OSCL\_IMPORT\_REF PVCommandId CPV2WayInterface::Init**(PV2WayInitInfo & aInitInfo, OsclAny \* aContextData = NULL) [pure virtual]

This function is valid only in the EIdle state. It is a no-op when invoked in any other state. It causes the pv2way to transition to the ESetup state. The terminal remains in the EInitializing state during the transition.

While initializing, the pv2way tries to allocate system resources needed for a two-way call. If it fails for some reason, and the pv2way reverts to the Eldle state. All the resources are de-allocated.

#### **Parameters:**

*aInitInfo* A reference to a CPV2WayInitInfo structure which contains the capabilities of the applications sinks and sources to handle compressed and uncompressed formats.

aContextData Optional opaque data that will be passed back to the user with the command response @leave This method can leave with one of the following error codes PVMFErrArgument if more tx and rx codecs are set than engine can handle, or the mandatory codecs are not in the list. PVMFErrNotSupported if the format of the sources/sinks is incomtible with what the SDK can handle PVMFErrInvalidState if invoked in the incorrect state PVMFErrNoMemory if the SDK failed to allocate memory during this operation

#### **Returns:**

A unique command id for asynchronous completion

## 4.2.3.11 virtual OSCL\_IMPORT\_REF PVCommandId CPV2WayInterface::Pause (PV2WayDirection aDirection, PVTrackId aTrackId, OsclAny \* aContextData = NULL) [pure virtual]

For an incoming track this function pauses sending media to the sink (output device) and stops the sink.

For outgoing, it pauses the sending of media from the source and stops the source.

#### **Parameters:**

**aDirection** Specifies the direction of the track - incoming or outgoing **aTrackId** Specifies which track is to be paused.

aContextData Optional opaque data that will be passed back to the user with the command response

#### **Returns:**



## 4.2.3.12 virtual OSCL\_IMPORT\_REF PVCommandId CPV2WayInterface::QueryInterface (const PVUuid & aUuid, PVInterface \*& aInterfacePtr, OsclAny \* aContext = NULL) [pure virtual]

This API is to allow for extensibility of the pv2way interface. It allows a caller to ask for an instance of a particular interface object to be returned. The mechanism is analogous to the COM IUnknown method. The interfaces are identified with an interface ID that is a UUID as in DCE and a pointer to the interface object is returned if it is supported. Otherwise the returned pointer is NULL. TBD: Define the UIID, InterfacePtr structures

#### **Parameters:**

aUuid The UUID of the desired interfaceaInterfacePtr The output pointer to the desired interface

#### **Exceptions:**

*not\_supported* leaves if the specified interface id is not supported.

## 4.2.3.13 virtual OSCL\_IMPORT\_REF PVCommandId CPV2WayInterface::RemoveDataSink (PVMFNodeInterface & aDataSink, OsclAny \* aContextData = NULL) [pure virtual]

This function unbinds a previously added sink.

#### **Parameters:**

aDataSink pointer to the media sink node

aContextData Optional opaque data that will be passed back to the user with the command response

#### **Returns:**

A unique command id for asynchronous completion

## **4.2.3.14** virtual OSCL\_IMPORT\_REF PVCommandId CPV2WayInterface::RemoveDataSource (PVMFNodeInterface & aDataSource, OsclAny \* aContextData = NULL) [pure virtual]

This function unbinds a previously added source.

#### **Parameters:**

aDataSource pointer to the media source node

aContextData Optional opaque data that will be passed back to the user with the command response

#### **Returns:**

A unique command id for asynchronous completion

#### 4.2.3.15 virtual OSCL\_IMPORT\_REF PVCommandId CPV2WayInterface::RemoveLog-Appender (const char \* aTag, OsclSharedPtr< PVLoggerAppender > & aAppender, OsclAny \* aContextData = NULL) [pure virtual]

Allows a logging appender to be removed from the logger tree at the point specified by the input tag. The input tag cannot be NULL.

PV2Way Engine 11 Confidential/Proprietary



#### **Parameters:**

aTag Specifies the logger tree tag where the appender should be removed.

aAppender The log appender to remove. Must be a reference to the same object that was set.

aContextData Optional opaque data that will be passed back to the user with the command response

#### **Exceptions:**

*memory\_error* leaves on memory allocation error.

#### **Returns:**

A unique command id for asynchronous completion

### **4.2.3.16** virtual OSCL\_IMPORT\_REF PVCommandId CPV2WayInterface::Reset (OsclAny \* aContextData = NULL) [pure virtual]

This function is valid only in the ESetup and EInitializing state. It is a no-op when invoked in the EIdle state and returns PVMFErrInvalidState if invoked in any other state.

It causes the pv2way to transition back to the EIdle state. The terminal remains in the EResetting state during the transition.

While resetting, the pv2way de-allocates all resources resources that had been previously allocated. When it completes, ResetComplete is called and the pv2way reverts to the EIdle state.

#### **Parameters:**

aContextData Optional opaque data that will be passed back to the user with the command response @leave This method can leave with one of the following error codes PVMFErrInvalidState if invoked in the incorrect state PVMFErrNoMemory if the SDK failed to allocate memory during this operation

#### **Returns:**

A unique command id for asynchronous completion

## 4.2.3.17 virtual OSCL\_IMPORT\_REF PVCommandId CPV2WayInterface::Resume (PV2WayDirection aDirection, PVTrackId aTrackId, OsclAny \* aContextData = NULL) [pure virtual]

Resume a previously paused incoming or outgoing track. For incoming, this function starts resumes playing out the media to the appropriate sink based on the current settings. For outgoing it resumes encoding and sending media from the source.

#### **Parameters:**

aDirection Specifies the direction of the track - incoming or outgoing

aTrackId Specifies which track is to be paused.

aContextData Optional opaque data that will be passed back to the user with the command response

#### **Returns:**



## 4.2.3.18 virtual OSCL\_IMPORT\_REF PVCommandId CPV2WayInterface::SetLogAppender (const char \* aTag, OsclSharedPtr< PVLoggerAppender > & aAppender, OsclAny \* aContextData = NULL) [pure virtual]

Allows a logging appender to be attached at some point in the logger tag tree. The location in the tag tree is specified by the input tag string. A single appender can be attached multiple times in the tree, but it may result in duplicate copies of log messages if the appender is not attached in disjoint portions of the tree. A logging appender is responsible for actually writing the log message to its final location (e.g., memory, file, network, etc). This API can be called anytime after creation of the terminal.

#### **Parameters:**

**aTag** Specifies the logger tree tag where the appender should be attached.

aAppender The log appender to attach.

aContextData Optional opaque data that will be passed back to the user with the command response

#### **Exceptions:**

*memory\_error* leaves on memory allocation error.

#### **Returns:**

A unique command id for asynchronous completion

## **4.2.3.19 virtual OSCL\_IMPORT\_REF PVCommandId CPV2WayInterface::SetLogLevel (const char** \* *aTag*, int32 *aLevel*, bool *aSetSubtree* = false, OsclAny \* *aContextData* = NULL) [pure virtual]

Allows the logging level to be set for the logging node specified by the tag. A larger log level will result in more messages being logged. A message will only be logged if its level is LESS THAN or equal to the current log level. The set\_subtree flag will allow an entire subtree, with the specified tag as the root, to be reset to the specified value.

#### **Parameters:**

aTag Specifies the logger tree tag where the log level should be set.

aLevel Specifies the log level to set.

*aSetSubtree* Specifies whether the entire subtree with aTag as the root should be reset to the log level. *aContextData* Optional opaque data that will be passed back to the user with the command response

#### **Exceptions:**

memory\_error leaves on memory allocation error.

#### **Returns:**

A unique command id for asynchronous completion

The documentation for this class was generated from the following file:

• pv\_2way\_interface.h



#### 4.3 CPV2WayProxyFactory Class Reference

#include <pv\_2way\_proxy\_factory.h>

#### **Static Public Methods**

- OSCL\_IMPORT\_REF void Init ()
- OSCL\_IMPORT\_REF void Cleanup ()
- OSCL\_IMPORT\_REF CPV2WayInterface \* CreateTerminal (TPVTerminalType aTerminalType, PVCommandStatusObserver \*aCmdStatusObserver, PVInformationalEventObserver \*aInfoEventObserver, PVErrorEventObserver \*aErrorEventObserver)
- OSCL\_IMPORT\_REF void DeleteTerminal (CPV2WayInterface \*terminal)

#### **4.3.1** Member Function Documentation

#### **4.3.1.1** OSCL\_IMPORT\_REF void CPV2WayProxyFactory::Cleanup() [static]

4.3.1.2 OSCL\_IMPORT\_REF CPV2WayInterface\* CPV2WayProxyFactory::CreateTerminal (TPVTerminalType aTerminalType, PVCommandStatusObserver \* aCmdStatusObserver, PVInformationalEventObserver \* aInfoEventObserver, PVErrorEventObserver \* aErrorEventObserver) [static]

Creates an instance of a terminal of a particular type. Initially, this will support 324m type terminals.

#### **Parameters:**

```
aTerminalType the type of terminal to be created.
aCmdStatusObserver the observer for command status
aInfoEventObserver the observer for unsolicited informational events
aErrorEventObserver the observer for unsolicited error events
```

#### **Returns:**

A pointer to a terminal or leaves if the type is invalid or the system is out of resources

## 4.3.1.3 OSCL\_IMPORT\_REF void CPV2WayProxyFactory::DeleteTerminal (CPV2WayInterface \* terminal) [static]

This function allows the application to delete an instance of a terminal and reclaim all allocated resources. A terminal should be deleted only in the Eldle state. An attempt to delete a terminal in any other state will result in unpredictable behavior.

#### **Parameters:**

terminal to be deleted.

#### **4.3.1.4** OSCL\_IMPORT\_REF void CPV2WayProxyFactory::Init() [static]

The documentation for this class was generated from the following file:

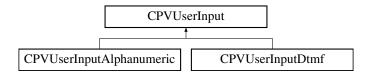
• pv\_2way\_proxy\_factory.h



#### 4.4 CPVUserInput Class Reference

#include <pv\_2way\_h324m\_types.h>

Inheritance diagram for CPVUserInput::



#### **Public Methods**

- OSCL\_IMPORT\_REF CPVUserInput ()
- virtual ~CPVUserInput ()
- virtual PV2WayUserInputType GetType ()=0
- void addRef ()
- void removeRef ()

#### 4.4.1 Detailed Description

CPVUserInput class Base class for User Input mesages

#### 4.4.2 Constructor & Destructor Documentation

#### 4.4.2.1 OSCL\_IMPORT\_REF CPVUserInput::CPVUserInput()

Constructor of CPVUserInputDtmf class.

**4.4.2.2 virtual CPVUserInput::**~**CPVUserInput**() [inline, virtual]

Virtual destructor

#### 4.4.3 Member Function Documentation

#### **4.4.3.1 void CPVUserInput::addRef**() [inline]

#### **4.4.3.2 virtual PV2WayUserInputType CPVUserInput::GetType ()** [pure virtual]

Virtual function to return the user input type

Implemented in CPVUserInputDtmf, and CPVUserInputAlphanumeric.

#### **4.4.3.3 void CPVUserInput::removeRef**() [inline]

The documentation for this class was generated from the following file:

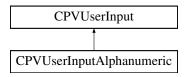
• pv\_2way\_h324m\_types.h



#### 4.5 CPVUserInputAlphanumeric Class Reference

#include <pv\_2way\_h324m\_types.h>

Inheritance diagram for CPVUserInputAlphanumeric::



#### **Public Methods**

- OSCL\_IMPORT\_REF CPVUserInputAlphanumeric (uint8 \*apInput, uint16 aLen)
- OSCL\_IMPORT\_REF ~CPVUserInputAlphanumeric ()
- OSCL\_IMPORT\_REF PV2WayUserInputType GetType ()
- OSCL\_IMPORT\_REF uint8 \* GetInput ()
- OSCL\_IMPORT\_REF uint16 GetLength ()

#### **Protected Attributes**

- uint8 \* ipInput
- uint16 iLength

#### 4.5.1 Detailed Description

CPVUserInputAlphanumeric Class

CPVUserInputAlphanumeric class contains an alphanumeric string from an H.245 UserInputIndication message.

#### 4.5.2 Constructor & Destructor Documentation

## 4.5.2.1 OSCL\_IMPORT\_REF CPVUserInputAlphanumeric::CPVUserInputAlphanumeric (uint8 \* apInput, uint16 aLen)

Constructor of CPVUserInputAlphanumeric class.

#### Parameters:

apInput The input alphanumeric string (T.50 encoded).

aLen The lenght of alphanumeric string in bytes

#### **Returns:**

none @leave This method can leave with one of the following error codes OsclErrGeneral memory copy failed



#### $\textbf{4.5.2.2} \quad \textbf{OSCL\_IMPORT\_REF} \ \textbf{CPVUserInputAlphanumeric::} \sim \textbf{CPVUserInputAlphanumeric} \ ()$

Destructor.

#### 4.5.3 Member Function Documentation

#### 4.5.3.1 OSCL\_IMPORT\_REF uint8\* CPVUserInputAlphanumeric::GetInput ()

Return the user input alphanumeric user input

#### **Returns:**

Returns pointer to alphanumeric user input.

#### 4.5.3.2 OSCL\_IMPORT\_REF uint16 CPVUserInputAlphanumeric::GetLength ()

Return the size of alphanumeric user input

#### **Returns:**

Returns size of alphanumeric user input.

## **4.5.3.3** OSCL\_IMPORT\_REF PV2WayUserInputType CPVUserInputAlphanumeric::GetType () [virtual]

Virtual function to return the user input type

Implements CPVUserInput.

#### 4.5.4 Field Documentation

#### 4.5.4.1 uint16 CPVUserInputAlphanumeric::iLength [protected]

#### 4.5.4.2 uint8\* CPVUserInputAlphanumeric::ipInput [protected]

The input alphanumeric string.

The documentation for this class was generated from the following file:

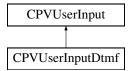
• pv\_2way\_h324m\_types.h



#### 4.6 CPVUserInputDtmf Class Reference

#include <pv\_2way\_h324m\_types.h>

Inheritance diagram for CPVUserInputDtmf::



#### **Public Methods**

- OSCL\_IMPORT\_REF CPVUserInputDtmf (uint8 aInput, bool aUpdate, uint16 aDuration=0)
- OSCL\_IMPORT\_REF ~CPVUserInputDtmf ()
- OSCL\_IMPORT\_REF PV2WayUserInputType GetType ()
- OSCL\_IMPORT\_REF uint8 GetInput ()
- OSCL\_IMPORT\_REF bool IsUpdate ()
- OSCL\_IMPORT\_REF uint16 GetDuration ()

#### 4.6.1 Detailed Description

CPVUserInputDtmf Class

CPVUserInputDtmf class contains DTMF signal information from an H.245 UserInputIndication message.

#### 4.6.2 Constructor & Destructor Documentation

### **4.6.2.1** OSCL\_IMPORT\_REF CPVUserInputDtmf::CPVUserInputDtmf (uint8 aInput, bool aUpdate, uint16 aDuration = 0)

Constructor of CPVUserInputDtmf class.

#### **Parameters:**

aInput The input DTMF tone.

aUpdate Indicates if this is an update to a continuing DTMF tone.

**aDuration** The duration of the update in milli-seconds. @leave This method can leave with one of the following error codes KErrNoMemory if the SDK failed to allocate memory during this operation.

#### **Returns:**

void

#### 4.6.2.2 OSCL\_IMPORT\_REF CPVUserInputDtmf::~CPVUserInputDtmf()

Destructor.



#### 4.6.3 Member Function Documentation

#### 4.6.3.1 OSCL\_IMPORT\_REF uint16 CPVUserInputDtmf::GetDuration ()

Return the duration of the update.

#### **Returns:**

Returns the duration of the update.

#### 4.6.3.2 OSCL\_IMPORT\_REF uint8 CPVUserInputDtmf::GetInput ()

Return the user input DTMF tone

#### **Returns:**

Returns the input DTMF tone.

## **4.6.3.3** OSCL\_IMPORT\_REF PV2WayUserInputType CPVUserInputDtmf::GetType () [virtual]

Virtual function to return the user input type

Implements CPVUserInput.

#### 4.6.3.4 OSCL\_IMPORT\_REF bool CPVUserInputDtmf::IsUpdate ()

Return if the DTMF tone is an update

#### **Returns:**

Returns if the input DTMF tone is an update.

The documentation for this class was generated from the following file:

• pv\_2way\_h324m\_types.h



#### 4.7 H324MConfigInterface Class Reference

#include <tsc\_h324m\_config\_interface.h>

#### **Public Methods**

- virtual void SetObserver (H324MConfigObserver \*aObserver)=0
- virtual PVMFCommandId SetMultiplexLevel (TPVH223Level aLevel, OsclAny \*aContext-Data=NULL)=0
- virtual PVMFCommandId SetMaxSduSize (TPVAdaptationLayer aLayer, int32 aSize, OsclAny \*a-ContextData=NULL)=0
- virtual PVMFCommandId SetMaxSduSizeR (TPVAdaptationLayer aLayer, int32 aSize, OsclAny \*aContextData=NULL)=0
- virtual PVMFCommandId SetCodecPreference (Oscl\_Vector< PVMFFormatType, OsclMem-Allocator > &aIncomingAudio, Oscl\_Vector< PVMFFormatType, OsclMemAllocator > &a-IncomingVideo, Oscl\_Vector< PVMFFormatType, OsclMemAllocator > &aOutGoingAudio, Oscl\_Vector< PVMFFormatType, OsclMemAllocator > &aOutGoingVideo, OsclAny \*aContext-Data=NULL)=0
- virtual PVMFCommandId SetFormatSpecificInfo (PVMFFormatType aMediaFormat, const uint8 \*apFormatSpecificInfo, uint32 aFormatSpecificInfoLen, OsclAny \*aContextData=NULL)=0
- virtual PVMFCommandId SetAl2SequenceNumbers (int32 aSeqNumWidth, OsclAny \*aContext-Data=NULL)=0
- virtual PVMFCommandId SetAl3ControlFieldOctets (int32 aCfo, OsclAny \*aContext-Data=NULL)=0 \*\*\*
- virtual PVMFCommandId SetMaxPduSize (int32 aMaxPduSize, OsclAny \*aContext-Data=NULL)=0
- virtual PVMFCommandId SetTerminalType (uint8 aTerminalType, OsclAny \*aContext-Data=NULL)=0
- virtual PVMFCommandId SetALConfiguration (TPVMediaType\_t aMediaType, TPVAdaptation-Layer aLayer, bool aAllow, bool aUse=true, OsclAny \*aContextData=NULL)=0
- virtual PVMFCommandId SendRme (OsclAny \*aContextData=NULL)=0
- virtual PVMFCommandId SetMaxMuxPduSize (int32 aRequestMaxMuxPduSize, OsclAny \*a-ContextData=NULL)=0
- virtual PVMFCommandId SetMaxMuxCcsrlSduSize (int32 aMaxCcsrlSduSize, OsclAny \*a-ContextData=NULL)=0
- virtual PVMFCommandId FastUpdate (PVMFNodeInterface &aTrack, OsclAny \*aContext-Data=NULL)=0
- virtual PVMFCommandId SendRtd (OsclAny \*aContextData=NULL)=0
- virtual PVMFCommandId SetVendor (uint8 cc, uint8 ext, uint32 mc, const uint8 \*aProduct, uint16 aProductLen, const uint8 \*aVersion, uint16 aVersionLen, OsclAny \*aContextData=NULL)=0
- virtual PVMFCommandId SendEndSession (OsclAny \*aContextData=NULL)=0
- virtual PVMFCommandId SetEndSessionTimeout (uint32 aTimeout, OsclAny \*aContext-Data=NULL)=0 \*\*NULL\*\*
- virtual PVMFCommandId SetTimerCounter (TPVH324TimerCounter aTimerCounter, uint8 aSeries, uint32 aSeriesOffset, uint32 aValue, OsclAny \*aContextData=NULL)=0
- virtual PVMFCommandId SetVideoResolutions (TPVDirection aDirection, Oscl\_Vector 
   PVMFVideoResolutionRange, OsclMemAllocator > &aResolutions, OsclAny \*aContext-Data=NULL)=0
- virtual PVMFCommandId SendVendorId (OsclAny \*aContextData=NULL)=0
- virtual PVMFCommandId SendVideoTemporalSpatialTradeoffCommand (TPVChannelId aLogical-Channel, uint8 aTradeoff, OsclAny \*aContextData=NULL)=0

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- virtual PVMFCommandId SendVideoTemporalSpatialTradeoffIndication (TPVChannelId aLogical-Channel, uint8 aTradeoff, OsclAny \*aContextData=NULL)=0
- virtual PVMFCommandId SendLogicalChannelActiveIndication (TPVChannelId aLogicalChannel, OsclAny \*aContextData=NULL)=0
- virtual PVMFCommandId SendLogicalChannelInactiveIndication (TPVChannelId aLogical-Channel, OsclAny \*aContextData=NULL)=0
- virtual PVMFCommandId SendSkewIndication (TPVChannelId aLogicalChannel1, TPVChannelId aLogicalChannel2, uint16 aSkew, OsclAny \*aContextData=NULL)=0
- virtual PVMFCommandId <u>SetLogicalChannelBufferingMs</u> (uint32 aInBufferingMs, uint32 aOut-BufferingMs, OsclAny \*aContextData=NULL)=0
- virtual PVMFCommandId SendUserInput (CPVUserInput \*user\_input, OsclAny \*aContext-Data=NULL)=0
- virtual PVMFCommandId SetWnsrp (const bool aEnableWnsrp, OsclAny \*aContext-Data=NULL)=0

#### 4.7.1 Member Function Documentation

### **4.7.1.1 virtual PVMFCommandId H324MConfigInterface::FastUpdate (PVMFNodeInterface &** *aTrack*, **OsclAny** \* *aContextData* = **NULL**) [pure virtual]

This API may be called only after the media source has been successfully added to the pv2way engine. It causes the 2way engine to immediately send out a fast update frame specific to the media type identified by the aTrack parameter.

#### **Parameters:**

aContextData Optional opaque data that will be passed back to the user with the command responseaTrack The identifier for the track

#### **Returns:**

A unique command id for asynchronous completion

### **4.7.1.2 virtual PVMFCommandId H324MConfigInterface::SendEndSession (OsclAny** \* *aContextData* = **NULL**) [pure virtual]

Sends an end session command to the peer. Only to be used for testing purposes.

#### **Parameters:**

aContextData Optional opaque data that will be passed back to the user with the command response

#### **Returns:**

A unique command id for asynchronous completion

## 4.7.1.3 virtual PVMFCommandId H324MConfigInterface::SendLogicalChannelActiveIndication (TPVChannelId aLogicalChannel, OsclAny \* aContextData = NULL) [pure virtual]

This API allows the user to send a logicalChannelActive indication to the peer. It is an indication to the peer that the channel that was paused and for which it received logicalChannelInactive indication is now ready to send data on the channel defined by Logical channel Id



## 4.7.1.4 virtual PVMFCommandId H324MConfigInterface::SendLogicalChannelInactive-Indication (TPVChannelId aLogicalChannel, OsclAny \* aContextData = NULL) [pure virtual]

This API allows the user to send a logicalChannelInactive indication to the peer. It is an indication to the peer that the channel has been paused the channel and will not send any data on the channel defined by Logical channel Id

## **4.7.1.5** virtual PVMFCommandId H324MConfigInterface::SendRme (OsclAny \* aContextData = NULL) [pure virtual]

This API allows the user to specify whether Request Multiplex Entry is sent to the remote terminal after TCS

#### **Parameters:**

aSendRme If true, RME is sent to the peer after TCS

aContextData Optional opaque data that will be passed back to the user with the command response

#### **Returns:**

A unique command id for asynchronous completion

## **4.7.1.6** virtual PVMFCommandId H324MConfigInterface::SendRtd (OsclAny \* aContextData = NULL) [pure virtual]

Sends a Round Trip Determination message to the peer and indicates the round trip delay to the caller on completion of the command. The round trip delay is stored in 4 bytes in the local buffer of the completion event in network byte order.

#### **Parameters:**

aContextData Optional opaque data that will be passed back to the user with the command response

#### **Returns:**

A unique command id for asynchronous completion

## 4.7.1.7 virtual PVMFCommandId H324MConfigInterface::SendSkewIndication (TPVChannelId aLogicalChannelI, TPVChannelId aLogicalChannel2, uint16 aSkew, OsclAny \* aContextData = NULL) [pure virtual]

This API allows the user to send a SkewIndication to the peer. Skew is measured in milliseconds, and indicates the maximum number of milliseconds that the data on logicalChannel2 is delayed from the data on logicalChannel1 as delivered to the network transport.

### **4.7.1.8 virtual PVMFCommandId H324MConfigInterface::SendUserInput (CPVUserInput \*** *user input*, **OsclAny** \* *aContextData* = **NULL**) [pure virtual]

Causes the pv2way to send the specified user input to the remote terminal using control channel. The user input can be either DTMF ot Alphanumeric

#### **Parameters:**

user input A pointer to either CPVUserInputDtmf or CPVUserInputAlphanumeric



aContextData Optional opaque data that will be passed back to the user with the command response

#### **Returns:**

A unique command id for asynchronous completion

### 4.7.1.9 virtual PVMFCommandId H324MConfigInterface::SendVendorId (OsclAny \* aContextData = NULL) [pure virtual]

This API allows the user to send the vendor id info to the peer. Note: Calling this API during call-setup negotiations can affect the time for call-setup adversely.

## 4.7.1.10 virtual PVMFCommandId H324MConfigInterface::SendVideoTemporalSpatialTradeoff-Command (TPVChannelId aLogicalChannel, uint8 aTradeoff, OsclAny \* aContextData = NULL) [pure virtual]

This API allows the user to send a videoTemporalSpatialTradeOff command to the peer. It is a request to the remote encoder to adjust its encoding in accordance with the tradeoff value. A value of 0 indicates a high spatial resolution and a value of 31 indicates a high frame rate. The values from 0 to 31 indicate monotonically a higher frame rate. Actual values do not correspond to precise values of spatial resolution or frame rate.

## 4.7.1.11 virtual PVMFCommandId H324MConfigInterface::SendVideoTemporalSpatialTradeoff-Indication (TPVChannelId aLogicalChannel, uint8 aTradeoff, OsclAny \* aContextData = NULL) [pure virtual]

This API allows the user to send a videoTemporalSpatialTradeOff command to the peer. It is an indication to the remote decoder that the local encoder has adjusted its encoding parameters according to the tradeoff value. A value of 0 indicates a high spatial resolution and a value of 31 indicates a high frame rate. The values from 0 to 31 indicate monotonically a higher frame rate. Actual values do not correspond to precise values of spatial resolution or frame rate.

### 4.7.1.12 virtual PVMFCommandId H324MConfigInterface::SetAl2SequenceNumbers (int32 aSeqNumWidth, OsclAny \* aContextData = NULL) [pure virtual]

This API allows the user to specify the sequence number field for AL2

#### **Parameters:**

aSeqNumWidth The number of octets to use for AL2 sequence numbers. Allowed values are 0, 1.aContextData Optional opaque data that will be passed back to the user with the command response

#### **Returns:**

A unique command id for asynchronous completion

### **4.7.1.13 virtual PVMFCommandId H324MConfigInterface::SetAl3ControlFieldOctets (int32** aCfo, **OsclAny** \* aContextData = **NULL**) [pure virtual]

This API allows the user to specify the control field octets field for AL3



#### **Parameters:**

aCfo The number of octets to use for AL3 CFO. Allowed values are 0, 1, 2.

aContextData Optional opaque data that will be passed back to the user with the command response

#### **Returns:**

A unique command id for asynchronous completion

## 4.7.1.14 virtual PVMFCommandId H324MConfigInterface::SetALConfiguration (TPVMediaType\_t aMediaType, TPVAdaptationLayer aLayer, bool aAllow, bool aUse = true, OsclAny \* aContextData = NULL) [pure virtual]

This API allows the user to specify the allowable adaptation layers for audio and video. By default AL2 is allowed for audio and AL2, AL3 are allowed for video

#### **Parameters:**

```
aMediaType The media type, i.e audio, video, data
aLayer The adaptation layer
aAllow Is this adaptation layer allowed for this media type?
aUse Is this adaptation layer used for video media type?
aContextData Optional opaque data that will be passed back to the user with the command response
```

#### Returns:

A unique command id for asynchronous completion

# 4.7.1.15 virtual PVMFCommandId H324MConfigInterface::SetCodecPreference (Oscl\_Vector < PVMFFormatType, OsclMemAllocator > & aIncomingAudio, Oscl\_Vector < PVMFFormatType, OsclMemAllocator > & aIncomingVideo, Oscl\_Vector < PVMFFormatType, OsclMemAllocator > & aOutGoingAudio, Oscl\_Vector < PVMFFormatType, OsclMemAllocator > & aOutGoingVideo, OsclAny \* aContextData = NULL) [pure virtual]

This API allows the user to specify the preference order for supported media codecs. If input vector has elements, then only these elements are used in terminal capabilities exchange.

#### **Parameters:**

```
aIncomingAudio The incoming audio decoder preference order
aIncomingVideo The incoming video decoder preference order
aOutgoingAudio The outgoing audio encoder preference order
aOutgoingVideo The outgoing video decoder preference order
aContextData Optional opaque data that will be passed back to the user with the command response
```

#### **Returns:**



### 4.7.1.16 virtual PVMFCommandId H324MConfigInterface::SetEndSessionTimeout (uint32 aTimeout, OsclAny \* aContextData = NULL) [pure virtual]

Sets the disconnect timeout interval.

#### **Parameters:**

aTimeout The timeout value in seconds

aContextData Optional opaque data that will be passed back to the user with the command response

#### **Returns:**

A unique command id for asynchronous completion

## 4.7.1.17 virtual PVMFCommandId H324MConfigInterface::SetFormatSpecificInfo (PVMFFormatType aMediaFormat, const uint8 \* apFormatSpecificInfo, uint32 aFormatSpecificInfoLen, OsclAny \* aContextData = NULL) [pure virtual]

This API allows the user to specify the format specific info for supported media encoders.

#### **Parameters:**

aMediaFormat The outgoing media format

apFormatSpecificInfo The format specific info

aFormatSpecificInfoLen The length of the format specific info in bytes

aContextData Optional opaque data that will be passed back to the user with the command response

#### **Returns:**

A unique command id for asynchronous completion

## 4.7.1.18 virtual PVMFCommandId H324MConfigInterface::SetLogicalChannelBufferingMs (uint32 aInBufferingMs, uint32 aOutBufferingMs, OsclAny \* aContextData = NULL) [pure virtual]

This API allows the user to configure the logical channel buffer sizes for incoming and outgoing logical channels.

#### **Parameters:**

aDirection The direction (Rx or Tx).

aBufferingMs The amount of buffering in milliseconds.

aContextData Optional opaque data that will be passed back to the user with the command response

### **4.7.1.19 virtual PVMFCommandId H324MConfigInterface::SetMaxMuxCcsrlSduSize (int32** aMaxCcsrlSduSize, OsclAny \* aContextData = NULL) [pure virtual]

This API sets the max ccsrl sdu size

#### **Parameters:**

aMaxCcsrlSduSize The max ccsrl sdu size

aContextData Optional opaque data that will be passed back to the user with the command response

#### **Returns:**



### **4.7.1.20 virtual PVMFCommandId H324MConfigInterface::SetMaxMuxPduSize (int32** aRequestMaxMuxPduSize, OsclAny \* aContextData = NULL) [pure virtual]

This API causes a maxMuxPduSize request to be sent to the remote terminal if set to a valid value (64 - 255). This is done after TCS if the remote terminal supports the maxMuxPduCapability

#### Parameters:

aRequestMaxMuxPduSize The max mux pdu size

aContextData Optional opaque data that will be passed back to the user with the command response

#### **Returns:**

A unique command id for asynchronous completion

### 4.7.1.21 virtual PVMFCommandId H324MConfigInterface::SetMaxPduSize (int32 aMaxPduSize, OsclAny \* aContextData = NULL) [pure virtual]

This API allows the user to limit the size of the outgoing h223 pdus

#### **Parameters:**

aMaxPduSize The max pdu size

aContextData Optional opaque data that will be passed back to the user with the command response

#### **Returns:**

A unique command id for asynchronous completion

## **4.7.1.22 virtual PVMFCommandId H324MConfigInterface::SetMaxSduSize**(TPVAdaptationLayer aLayer, int32 aSize, OsclAny \* aContextData = NULL) [pure virtual]

This API allows the user to specify maximum outgoing sdu sizes for each adaptation layer

#### Parameters:

aLayer The h223 adaptation layer type

aSize The sdu size

aContextData Optional opaque data that will be passed back to the user with the command response

#### **Returns:**

A unique command id for asynchronous completion

## 4.7.1.23 virtual PVMFCommandId H324MConfigInterface::SetMaxSduSizeR (TPVAdaptationLayer aLayer, int32 aSize, OsclAny \* aContextData = NULL) [pure virtual]

This API allows the user to specify maximum incoming sdu sizes for each adaptation layer. This is indicated to the peer via the TCS

#### **Parameters:**

aLayer The h223 adaptation layer type



aSize The sdu size

aContextData Optional opaque data that will be passed back to the user with the command response

#### **Returns:**

A unique command id for asynchronous completion

### **4.7.1.24 virtual PVMFCommandId H324MConfigInterface::SetMultiplexLevel (TPVH223Level** *aLevel*, **OsclAny** \* *aContextData* = **NULL**) [pure virtual]

This API allows the user to specify the starting H223 multiplex level

#### **Parameters:**

*aLevel* The starting H223 multiplex level. Note that the final level that is neotiated will depend on the starting level of the peer

aContextData Optional opaque data that will be passed back to the user with the command response

#### **Returns:**

A unique command id for asynchronous completion

### **4.7.1.25 virtual void H324MConfigInterface::SetObserver (H324MConfigObserver** \* *aObserver*) [pure virtual]

This API allows the user to specify separate observers for the 324m interface. Otherwise, the default observers will be used

#### **Parameters:**

aObserver the observer for command status and for unsolicited informational events

## **4.7.1.26 virtual PVMFCommandId H324MConfigInterface::SetTerminalType (uint8** *aTerminalType*, **OsclAny** \* *aContextData* = **NULL**) [pure virtual]

This API allows the user to specify the terminal type that is advertized to the peer. This can be used to force the local terminal to be master/slave when communicating with a peer 324m terminal for testing purposes.

#### **Parameters:**

aTerminalType The terminal type

aContextData Optional opaque data that will be passed back to the user with the command response

#### **Returns:**

A unique command id for asynchronous completion

## 4.7.1.27 virtual PVMFCommandId H324MConfigInterface::SetTimerCounter (TPVH324TimerCounter aTimerCounter, uint8 aSeries, uint32 aSeriesOffset, uint32 aValue, OsclAny \* aContextData = NULL) [pure virtual]

Sets an H.324 timer/counter value. This should be called before ConnectL is invoked. The supported timers are: T106 Master Slave Determination (in units of 1s) T101 Capability Exchange (in units of 1s) T103 Unidirectional and Bi-directional Logical Channel Signalling (in units of 1s) T108 Close Logical Channel (in



units of 1s) T104 H.223 Multiplex Table (in units of 1s) T109 Mode Request (in units of 1s) T105 Round Trip Delay (in units of 1s) T107 Request Multiplex Entry (in units of 100ms) T401 SRP retransmission (in units of 100ms) The supported counters are: N100 H245 (TCS, MSD) N401 SRP retransmission

#### **Parameters:**

aTimerCounter Identifies whether a timer or counter is being set.

aSeries Identifies the H.324 timer/counter series.

aSeriesOffset Specifies the offset within a particular series. E.g. aTimerCounter=EH324Timer, a-Series=1, aSeriesOffset=1 indicates T101. aTimerCounter=EH324Timer, aSeries=4, aSeriesOffset=1 indicates T401. aTimerCounter=EH324Counter, aSeries=4, aSeriesOffset=1 indicates T401.

aValue The new value for the H.324 timer/counter

aContextData Optional opaque data that will be passed back to the user with the command response

4.7.1.28 virtual PVMFCommandId H324MConfigInterface::SetVendor (uint8 cc, uint8 ext, uint32 mc, const uint8 \* aProduct, uint16 aProductLen, const uint8 \* aVersion, uint16 aVersionLen, OsclAny \* aContextData = NULL) [pure virtual]

Sets the vendor identification data. This does not cause the stack to issue a vendor identification request. Set to NULL to disable sending vendor id. If set to a valid parameter before Connect, it will cause the stack to automatically send it along with the TCS message.

#### **Parameters:**

cc T35 Country code

ext T35 Extension

mc T35 Manufacturer code

aProduct Product number

aVersion Version number

aContextData Optional opaque data that will be passed back to the user with the command response

#### **Returns:**

A unique command id for asynchronous completion

4.7.1.29 virtual PVMFCommandId H324MConfigInterface::SetVideoResolutions (TPVDirection aDirection, Oscl\_Vector < PVMFVideoResolutionRange, OsclMemAllocator > & aResolutions, OsclAny \* aContextData = NULL) [pure virtual]

This API allows the user to specify the supported resolutions for video for transmit and receive.

#### **Parameters:**

aDirection The direction (Tx/Rx) for which the capability is specified.

aResolutions An array of resolutions.

aContextData Optional opaque data that will be passed back to the user with the command response



## 4.7.1.30 virtual PVMFCommandId H324MConfigInterface::SetWnsrp (const bool aEnableWnsrp, OsclAny \* aContextData = NULL) [pure virtual]

Causes the pv2way to send the specified user input to the remote terminal using control channel.

#### **Parameters:**

aEnableWnsrp Boolean whether to enable Wnsrp or notaContextData Optional opaque data that will be passed back to the user with the command response

#### **Returns:**

A unique command id for asynchronous completion

The documentation for this class was generated from the following file:

• tsc\_h324m\_config\_interface.h



#### 4.8 H324MConfigObserver Class Reference

#include <tsc\_h324m\_config\_interface.h>

#### **Public Methods**

- virtual ~H324MConfigObserver ()
- virtual void H324MConfigCommandCompletedL (PVMFCmdResp &aResponse)=0
- virtual void H324MConfigHandleInformationalEventL (PVMFAsyncEvent &aNotification)=0

#### 4.8.1 Constructor & Destructor Documentation

- **4.8.1.1** virtual H324MConfigObserver::~H324MConfigObserver() [inline, virtual]
- 4.8.2 Member Function Documentation
- **4.8.2.1 virtual void H324MConfigObserver::H324MConfigCommandCompletedL** (**PVMFCmdResp &** *aResponse*) [pure virtual]
- **4.8.2.2 virtual void H324MConfigObserver::H324MConfigHandleInformationalEventL** (**PVMFAsyncEvent &** *aNotification*) [pure virtual]

The documentation for this class was generated from the following file:

• tsc\_h324m\_config\_interface.h



#### 4.9 H324MReverseParametersExtensionInterface Class Reference

#include <tsc\_h324m\_config\_interface.h>

#### **Public Methods**

- virtual const PvmfMimeString \* GetFormatCapabilities ()=0
- virtual void SetPortTag (int32 aPortTag)=0
- virtual int32 GetPortTag () const=0

#### 4.9.1 Detailed Description

Extension interface to indicate reverse logical channel parameters to the user of the stack node

#### **4.9.2** Member Function Documentation

### **4.9.2.1** virtual const PvmfMimeString\* H324MReverseParametersExtensionInterface::Get-FormatCapabilities () [pure virtual]

#### Returns

The reverse media format and capabilities.

## **4.9.2.2 virtual int32 H324MReverseParametersExtensionInterface::GetPortTag** () [pure virtual]

#### **Returns:**

The port tag for the reverse channel

## **4.9.2.3 virtual void H324MReverseParametersExtensionInterface::SetPortTag (int32** *aPortTag*) [pure virtual]

#### **Parameters:**

**aPortTag** The port tag to use for the reverse channel if it is accepted.

The documentation for this class was generated from the following file:

• tsc\_h324m\_config\_interface.h



#### 4.10 PV2Way324ConnectOptions Class Reference

#include <pv\_2way\_h324m\_types.h>

Inheritance diagram for PV2Way324ConnectOptions::



#### **Public Methods**

- PV2Way324ConnectOptions (uint32 aDisconnectTimeoutInterval)
- PV2Way324ConnectOptions ()
- virtual ~PV2Way324ConnectOptions ()
- virtual void GetConnectInfoClassName (OSCL\_wString &aClassName)

#### **Data Fields**

• uint32 iDisconnectTimeoutInterval

#### 4.10.1 Detailed Description

PV2Way324ConnectOptions Class

PV2Way324ConnectOptions implements the PV2WayConnectOptions interface and is used for 324M specific initialization.

#### 4.10.2 Constructor & Destructor Documentation

## 4.10.2.1 PV2Way324ConnectOptions::PV2Way324ConnectOptions (uint32 aDisconnectTimeoutInterval) [inline]

Constructor

#### **Parameters:**

disconnectTimeout The interval to wait after initiating a disconnect before stopping signalling

PV2Way Engine 32 Confidential/Proprietary



- 4.10.2.2 PV2Way324ConnectOptions::PV2Way324ConnectOptions() [inline]
- **4.10.2.3 virtual PV2Way324ConnectOptions::**~**PV2Way324ConnectOptions**() [inline, virtual]

#### 4.10.3 Member Function Documentation

**4.10.3.1** virtual void PV2Way324ConnectOptions::GetConnectInfoClassName (OSCL\_wString & aClassName) [inline, virtual]

Retrieves the class name

#### **Parameters:**

aClassName A reference to an OSCL\_wString, which is to hold the subclass name, this class will assign the string "CPV2Way324ConnectInfo"

#### **Returns:**

void

Implements PV2WayConnectOptions.

#### 4.10.4 Field Documentation

#### 4.10.4.1 uint32 PV2Way324ConnectOptions::iDisconnectTimeoutInterval

The disconnect timeout interval in units of 100ms

The documentation for this class was generated from the following file:

• pv\_2way\_h324m\_types.h

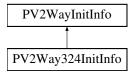
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### 4.11 PV2Way324InitInfo Class Reference

#include <pv\_2way\_h324m\_types.h>

Inheritance diagram for PV2Way324InitInfo::



#### **Public Methods**

- virtual void GetInitInfoClassName (OSCL\_wString &aClassName)
- PV2Way324InitInfo ()
- virtual ~PV2Way324InitInfo ()

#### **Data Fields**

• uint16 iMultiplexingDelayMs

#### 4.11.1 Detailed Description

PV2Way324InitInfo Class

PV2Way324InitInfo implements the PV2Way324InitInfo interface and is used for 324M specific initialization.

#### 4.11.2 Constructor & Destructor Documentation

- 4.11.2.1 PV2Way324InitInfo::PV2Way324InitInfo() [inline]
- 4.11.2.2 virtual PV2Way324InitInfo::~PV2Way324InitInfo() [inline, virtual]

#### 4.11.3 Member Function Documentation

## **4.11.3.1 virtual void PV2Way324InitInfo::GetInitInfoClassName (OSCL\_wString &** *aClassName***)** [inline, virtual]

Retrieves the class name

#### **Parameters:**

aClassName A reference to an OSCL\_wString, which is to hold the subclass name, this class will assign the string "CPV2Way324InitInfo"

#### **Returns:**

void

Implements PV2WayInitInfo.



#### **4.11.4 Field Documentation**

## ${\bf 4.11.4.1} \quad uint 16\ PV2 Way 324 Init Info:: iMultiplexing Delay Ms$

The Multiplexing delay in Milliseconds

The documentation for this class was generated from the following file:



### 4.12 PV2WayConnectOptions Class Reference

#include <pv\_2way\_basic\_types.h>

Inheritance diagram for PV2WayConnectOptions::



#### **Public Methods**

- PV2WayConnectOptions ()
- PV2WayConnectOptions (TPVLoopbackMode aLoopbackMode, uint8 \*aLocalId, uint32 aLocalId-Size, uint8 \*aRemoteId, uint32 aRemoteIdSize)
- virtual ~PV2WayConnectOptions ()
- virtual void GetConnectInfoClassName (OSCL\_wString &aClassName)=0

#### **Data Fields**

- TPVLoopbackMode iLoopbackMode
- uint8 \* iLocalId
- uint32 iLocalIdSize
- uint8 \* iRemoteId
- uint32 iRemoteIdSize

#### **4.12.1 Detailed Description**

PV2WayConnectOptions Class

PV2WayConnectOptions class contains options to be specified during connect

#### 4.12.2 Constructor & Destructor Documentation

#### 4.12.2.1 PV2WayConnectOptions::PV2WayConnectOptions() [inline]

**Default Constructor** 

# 4.12.2.2 PV2WayConnectOptions::PV2WayConnectOptions (TPVLoopbackMode aLoopbackMode, uint8 \* aLocalId, uint32 aLocalIdSize, uint8 \* aRemoteId, uint32 aRemoteIdSize) [inline]

Constructor

#### **Parameters:**

aLoopbackMode The loopback mode to used during ConnectaLocalId, aLocalIdSize A unique octet string identifying the local terminal



aRemoteId, aRemoteIdSize A unique octet string identifying the peer (Used only in 2-Stage dialling)

#### **Returns:**

void

**4.12.2.3** virtual PV2WayConnectOptions::~PV2WayConnectOptions() [inline, virtual]

#### 4.12.3 Member Function Documentation

## **4.12.3.1 virtual void PV2WayConnectOptions::GetConnectInfoClassName (OSCL\_wString & aClassName)** [pure virtual]

Pure virtual method that must be overridden. Retrieves class name

#### **Parameters:**

aClassName A reference to an OSCL\_wString, which is to hold the subclass name

#### **Returns:**

void

Implemented in PV2Way324ConnectOptions.

#### 4.12.4 Field Documentation

#### 4.12.4.1 uint8\* PV2WayConnectOptions::iLocalId

The id of the local terminal

#### 4.12.4.2 uint32 PV2WayConnectOptions::iLocalIdSize

The size of the local id

#### 4.12.4.3 TPVLoopbackMode PV2WayConnectOptions::iLoopbackMode

The loopback mode

#### 4.12.4.4 uint8\* PV2WayConnectOptions::iRemoteId

The id of the peer

#### 4.12.4.5 uint32 PV2WayConnectOptions::iRemoteIdSize

The size of the remote id

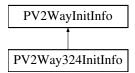
The documentation for this class was generated from the following file:

• pv 2way basic types.h



### 4.13 PV2WayInitInfo Class Reference

#include <pv\_2way\_basic\_types.h>
Inheritance diagram for PV2WayInitInfo::



#### **Public Methods**

- virtual void GetInitInfoClassName (OSCL wString &aClassName)=0
- virtual ~PV2WayInitInfo ()

#### **Data Fields**

- Oscl\_Vector< PVMFFormatType, OsclMemAllocator > iOutgoingAudioFormats
- Oscl\_Vector< PVMFFormatType, OsclMemAllocator > iOutgoingVideoFormats
- Oscl\_Vector< PVMFFormatType, OsclMemAllocator > iIncomingAudioFormats
- Oscl\_Vector< PVMFFormatType, OsclMemAllocator > iIncomingVideoFormats

#### 4.13.1 Detailed Description

PV2WayInitInfo Class

PV2WayInitInfo is an interface required for protocols specific classes pass to the PV2WayInterface's Init-L() method

#### 4.13.2 Constructor & Destructor Documentation

**4.13.2.1 virtual PV2WayInitInfo::**~PV2WayInitInfo() [inline, virtual]

#### 4.13.3 Member Function Documentation

## **4.13.3.1 virtual void PV2WayInitInfo::GetInitInfoClassName (OSCL\_wString &** *aClassName***)** [pure virtual]

pure virtual method that must be overridden to return the classname of the actual subclass Implemented in PV2Way324InitInfo.

#### **4.13.4** Field Documentation

## 4.13.4.1 Oscl\_Vector<PVMFFormatType, OsclMemAllocator> PV2WayInitInfo::iIncoming-AudioFormats

The list of audio formats that can be received



## ${\bf 4.13.4.2} \quad Oscl\_Vector < PVMFFormatType, OsclMemAllocator > PV2WayInitInfo:: iIncoming-VideoFormats$

The list of video formats that can be received

## ${\bf 4.13.4.3} \quad Oscl\_Vector < PVMFFormatType, \ OsclMemAllocator > PV2WayInitInfo::iOutgoing-AudioFormats$

The list of audio formats that can be transmitted

## ${\bf 4.13.4.4} \quad Oscl\_Vector < PVMFFormatType, OsclMemAllocator > PV2WayInitInfo:: iOutgoing-VideoFormats$

The list of video formats that can be transmitted

The documentation for this class was generated from the following file:

• pv\_2way\_basic\_types.h

PV2Way Engine 39 Confidential/Proprietary



## 4.14 PV2WayTestExtensionInterface Class Reference

#include <pv\_2way\_test\_extension\_interface.h>

#### **Public Methods**

- virtual void addRef ()=0
- virtual void removeRef ()=0
- virtual bool queryInterface (const PVUuid &uuid, PVInterface \*&iface)=0
- virtual bool NegotiatedFormatsMatch (Oscl\_Vector< FormatCapabilityInfo, OsclMemAllocator > &iInAudFormatCapability, Oscl\_Vector< FormatCapabilityInfo, OsclMemAllocator > &i-OutAudFormatCapability, Oscl\_Vector< FormatCapabilityInfo, OsclMemAllocator > &iInVid-FormatCapability, Oscl\_Vector< FormatCapabilityInfo, OsclMemAllocator > &iOutVidFormat-Capability)=0

#### 4.14.1 Member Function Documentation

#### **4.14.1.1 virtual void PV2WayTestExtensionInterface::addRef**() [pure virtual]

Increment reference counter for this interface.

4.14.1.2 virtual bool PV2WayTestExtensionInterface::NegotiatedFormatsMatch (Oscl\_Vector < FormatCapabilityInfo, OsclMemAllocator > & iInAudFormatCapability, Oscl\_Vector < FormatCapabilityInfo, OsclMemAllocator > & iOutAudFormatCapability, Oscl\_Vector < FormatCapabilityInfo, OsclMemAllocator > & iInVidFormatCapability, Oscl\_Vector < FormatCapabilityInfo, OsclMemAllocator > & iOutVidFormatCapability) [pure virtual]

## 4.14.1.3 virtual bool PV2WayTestExtensionInterface::queryInterface (const PVUuid & uuid, PVInterface \*& iface) [pure virtual]

Query for a pointer to an instance of the interface specified by the UUID.

#### **Parameters:**

uuid UUID of the interface to be queried.

*iface* Output parameter where a pointer to an instance of the requested interface is stored if the interface is supported.

#### **Returns:**

True if successful, else false.

#### **4.14.1.4 virtual void PV2WayTestExtensionInterface::removeRef** () [pure virtual]

Decrement reference counter for this interface.

The documentation for this class was generated from the following file:

• pv 2way test extension interface.h



## 4.15 PVH223Al1Config Class Reference

#include <pv\_2way\_h324m\_types.h>
Inheritance diagram for PVH223AllConfig::



#### **Public Methods**

• PVH223AlIndex IsA () const

#### **Data Fields**

· bool iFramed

#### 4.15.1 Detailed Description

PVH223Al1Config class

This class defines configuration information for H.223 Adaptation Layer 1

#### **4.15.2** Member Function Documentation

4.15.2.1 PVH223AlIndex PVH223Al1Config::IsA () const [inline, virtual]

Implements PVH223AlConfig.

#### 4.15.3 Field Documentation

#### 4.15.3.1 bool PVH223Al1Config::iFramed

The documentation for this class was generated from the following file:



## 4.16 PVH223Al2Config Class Reference

#include <pv\_2way\_h324m\_types.h>
Inheritance diagram for PVH223Al2Config::



#### **Public Methods**

• PVH223AlIndex IsA () const

#### **Data Fields**

• bool iUseSequenceNumbers

### 4.16.1 Detailed Description

PVH223Al2Config class

This class defines configuration information for H.223 Adaptation Layer 2

#### **4.16.2** Member Function Documentation

4.16.2.1 PVH223AlIndex PVH223Al2Config::IsA () const [inline, virtual]

Implements PVH223AlConfig.

#### 4.16.3 Field Documentation

#### 4.16.3.1 bool PVH223Al2Config::iUseSequenceNumbers

The documentation for this class was generated from the following file:



### 4.17 PVH223Al3Config Class Reference

#include <pv\_2way\_h324m\_types.h>
Inheritance diagram for PVH223Al3Config::



#### **Public Methods**

• PVH223AlIndex IsA () const

#### **Data Fields**

- uint32 iControlFieldOctets
- uint32 iSendBufferSize

#### 4.17.1 Detailed Description

PVH223Al3Config class

This class defines configuration information for H.223 Adaptation Layer 3

#### **4.17.2** Member Function Documentation

4.17.2.1 PVH223AlIndex PVH223Al3Config::IsA () const [inline, virtual]

Implements PVH223AlConfig.

#### 4.17.3 Field Documentation

#### 4.17.3.1 uint32 PVH223Al3Config::iControlFieldOctets

#### 4.17.3.2 uint32 PVH223Al3Config::iSendBufferSize

The documentation for this class was generated from the following file:



### 4.18 PVH223AlConfig Class Reference

#include <pv\_2way\_h324m\_types.h>

Inheritance diagram for PVH223AlConfig::



### **Public Types**

enum PVH223AlIndex { PVH223\_AL1 = 1, PVH223\_AL2 = 2, PVH223\_AL3 = 4 }

#### **Public Methods**

- virtual ~PVH223AlConfig ()
- virtual PVH223AlIndex IsA () const=0

#### 4.18.1 Detailed Description

PVH223AlConfig class

This is the base class for H.223 Adaptation Layer configuration

#### **4.18.2** Member Enumeration Documentation

#### 4.18.2.1 enum PVH223AlConfig::PVH223AlIndex

**Enumeration values:** 

PVH223 AL1

PVH223\_AL2

PVH223\_AL3

#### 4.18.3 Constructor & Destructor Documentation

4.18.3.1 virtual PVH223AlConfig::~PVH223AlConfig() [inline, virtual]

#### **4.18.4** Member Function Documentation

#### 4.18.4.1 virtual PVH223AlIndex PVH223AlConfig::IsA () [pure virtual]

Implemented in PVH223Al1Config, PVH223Al2Config, and PVH223Al3Config.

The documentation for this class was generated from the following file:



## 4.19 PVMFComponentInterface Class Reference

#include <tsc\_h324m\_config\_interface.h>

#### **Public Methods**

- PVMFComponentInterface ()
- void addRef ()
- void removeRef ()

#### **Protected Attributes**

• int32 iReferenceCount

#### 4.19.1 Constructor & Destructor Documentation

- 4.19.1.1 PVMFComponentInterface::PVMFComponentInterface() [inline]
- 4.19.2 Member Function Documentation
- **4.19.2.1 void PVMFComponentInterface::addRef**() [inline]
- **4.19.2.2 void PVMFComponentInterface::removeRef**() [inline]
- **4.19.3** Field Documentation
- **4.19.3.1** int32 PVMFComponentInterface::iReferenceCount [protected]

The documentation for this class was generated from the following file:

• tsc\_h324m\_config\_interface.h

## Chapter 5

## pv2way\_engine File Documentation

### 5.1 pv\_2way\_basic\_types.h File Reference

```
#include "pvmf_format_type.h"
#include "oscl_vector.h"
#include "oscl_mem.h"
```

#### **Data Structures**

- class PV2WayConnectOptions
- class PV2WayInitInfo

#### **Typedefs**

- typedef enum TPVTerminalType PV2WayTerminalType
- typedef enum TPVLoopbackMode PV2WayLoopbackMode
- typedef enum TPVDirection PV2WayDirection
- typedef enum TPVMediaType\_t PV2WayMediaType
- typedef unsigned int PVTrackId

#### **Enumerations**

- enum TPVTerminalType { PV\_323, PV\_324M, PV\_SIP, PV\_TERMINAL\_TYPE\_NONE }
- enum TPVLoopbackMode { PV\_LOOPBACK\_NONE, PV\_LOOPBACK\_COMM, PV\_LOOPBACK\_ENGINE, PV\_LOOPBACK\_MUX }
- enum TPVDirection { PV\_DIRECTION\_NONE = 0, INCOMING = 1, OUTGOING = 2, PV\_DIRECTION\_BOTH = 3 }
- enum TPVMediaType\_t { PV\_MEDIA\_NONE = 0, PV\_CONTROL = 1, PV\_AUDIO = 2, PV\_VIDEO = 4, PV\_DATA = 8, PV\_USER\_INPUT = 16, PV\_MULTIPLEXED = 32, PV\_MEDIA\_ALL = 0xFFFF }
- enum PV2WayState { EIdle = 0, EInitializing, ESetup, EConnecting, EConnected, EDisconnecting, EResetting }



• enum TPVTIndicationType { PVT\_INDICATION\_INCOMING\_TRACK, PVT\_INDICATION\_OUTGOING\_TRACK, PVT\_INDICATION\_DISCONNECT, PVT\_INDICATION\_CLOSING\_TRACK, PVT\_INDICATION\_CLOSE\_TRACK, PVT\_INDICATION\_PAUSE\_TRACK, PVT\_INDICATION\_RESUME\_TRACK, PVT\_INDICATION\_INTERNAL\_ERROR }

#### **Variables**

- const int PV2WayErrorStatusStart = (-10500)
- const int PV2WayDispatchError = PV2WayErrorStatusStart 1
- const int PV2WayDisconnectError = PV2WayErrorStatusStart 2
- const int PV2WayErrorRejected = PV2WayErrorStatusStart 5
- const int PV2WayErrReplaced = PV2WayErrorStatusStart 6

#### **5.1.1** Typedef Documentation

#### 5.1.1.1 typedef enum TPVDirection PV2WayDirection

**TPVDirection Enum** 

TPVDirection emumerates the direction of the track.

#### 5.1.1.2 typedef enum TPVLoopbackMode PV2WayLoopbackMode

TPVLoopbackMode Enum

TPVLoopbackMode emumerates the possible loopback options that can be used with the pv2way SDK

#### 5.1.1.3 typedef enum TPVMediaType\_t PV2WayMediaType

Enumeration of high level media types supported by the SDK

#### 5.1.1.4 typedef enum TPVTerminalType PV2WayTerminalType

TPVTerminalType enum TPVTerminalType enumerates the possible 2-way protocols

#### 5.1.1.5 typedef unsigned int PVTrackId

PVTrackId uniquely identifies a track for transferring audio/video in a particular direction - receive or transmit.

#### **5.1.2** Enumeration Type Documentation

#### 5.1.2.1 enum PV2WayState

TPV2WayState Class

An enumeration of the major states of the pv2way engine.



#### **Enumeration values:**

**EIdle** The state immediately after the pv2way instance has been successfully created or instantiated. No resources have been allocated yet.

**EInitializing** The pv2way is in this state when it is initializing from the EIdle to the ESetup state. The terminal queries the available device capabilities (encode, decode, mux), acquires resources to make a two-way call (codecs, formats, memory etc) and transitions to the ESetup state when it will be ready to accept setup parameters and Connect. If initializing fails, the pv2way relinquishes the resources and reverts to the EIdle state.

**ESetup** The state where the pv2way instance is in the process of receiving setup parameters from the application, for encoding, multiplexing, capturing and rendering. Each time a new set of parameters is passed in, validation will take place and a status will be returned accordingly. A valid data source and data sink for the communications port are to be added to the terminal in this state before it can be transitioned to the Econnecting state. Media sources and sinks can also be added at this time.

**EConnecting** The state where the pv2way instance has received a call to start connecting. It starts communication with the remote terminal to exchange media capabilities and channel configuration in preparation for the establishment of media channels.

**EConnected** The state after all control signaling is completed. The terminal is now able to open media tracks for audio and video.

**EDisconnecting** The state where the terminal is shutting down all tracks and the multiplex.

**EResetting** The state where the terminal is releasing all resources and transitioning to the EIdle state.

#### 5.1.2.2 enum TPVDirection

**TPVDirection Enum** 

TPVDirection emumerates the direction of the track.

#### **Enumeration values:**

PV\_DIRECTION\_NONE

**INCOMING** 

**OUTGOING** 

PV\_DIRECTION\_BOTH

#### 5.1.2.3 enum TPVLoopbackMode

TPVLoopbackMode Enum

TPVLoopbackMode emumerates the possible loopback options that can be used with the pv2way SDK

#### **Enumeration values:**

PV LOOPBACK NONE

PV\_LOOPBACK\_COMM

PV\_LOOPBACK\_ENGINE

PV\_LOOPBACK\_MUX



#### 5.1.2.4 enum TPVMediaType\_t

Enumeration of high level media types supported by the SDK

#### **Enumeration values:**

PV\_MEDIA\_NONE

PV\_CONTROL

PV\_AUDIO

PV VIDEO

PV DATA

PV\_USER\_INPUT

PV\_MULTIPLEXED

PV\_MEDIA\_ALL

#### 5.1.2.5 enum TPVTerminalType

TPVTerminalType enum TPVTerminalType enumerates the possible 2-way protocols

#### **Enumeration values:**

PV\_323

PV\_324M

PV SIP

PV TERMINAL TYPE NONE

#### 5.1.2.6 enum TPVTIndicationType

TPVTIndicationType enum

Enumeration of unsolicited indications from pv2way.

#### **Enumeration values:**

- **PVT\_INDICATION\_INCOMING\_TRACK** Indicates that the peer terminal has established an incoming track. The local buffer specifies the media type associated with the track. The first octet of the local buffer indicates the media type. The second, third and fourth octets are reserved. The four octets from five to eight are to be interpreted as a unique track id. The format type and additional capabilities are indicated using the PV2WayTrackInfoInterface extension interface.
- PVT\_INDICATION\_OUTGOING\_TRACK Indicates that the local terminal has established an outgoing track that is acceptable to the peer. The local buffer specifies the media type associated with the track. The first octet of the local buffer indicates the media type. The second, third and fourth octets are reserved. The four octets from five to eight are to be interpreted as a unique track id. The format type and additional capabilities are indicated using the PV2WayTrackInfo-Interface extension interface.
- **PVT\_INDICATION\_DISCONNECT** Indicates that 2way engine has ended the current telephony session. The app can now either reset the engine or make a subsequent call.
- **PVT\_INDICATION\_CLOSING\_TRACK** Indicates the start of unsolicited closure of an incoming/outgoing track. The PVT\_INDICATION\_CLOSE\_TRACK indication will be sent when the track is completely close. The first octet of the local buffer indicates the direction of the track. The second and third octets indicates the track id.



- **PVT\_INDICATION\_CLOSE\_TRACK** Indicates an unsolicited closure of an incoming/outgoing track. Any media sink/source associated with this will be stopped and returned to the application. The first octet of the local buffer indicates the media type of the track. The second octet indicates the direction. The third octet indicates whether there is a replacement for this track available. If true, the application may add data source/sink for this track again.
- **PVT\_INDICATION\_PAUSE\_TRACK** Indicates that local terminal has paused an incoming track. Any media sink associated with this will be stopped. The first octet of the local buffer indicates the direction of the track. The second and third octets indicates the track id.
- **PVT\_INDICATION\_RESUME\_TRACK** Indicates that local terminal has resumed an incoming track. Any media sink associated with this will be restarted. The first octet of the local buffer indicates the direction of the track. The second and third octets indicates the track id.
- **PVT\_INDICATION\_INTERNAL\_ERROR** Indicates an internal error in the pv2way engine. The derived class provides further information about the actual error.

#### 5.1.3 Variable Documentation

#### 5.1.3.1 const int PV2WayDisconnectError = PV2WayErrorStatusStart - 2

The peer disconnected without endsession command \*

#### 5.1.3.2 const int PV2WayDispatchError = PV2WayErrorStatusStart - 1

There was an error dispatching muxed data to the downstream node \*

#### 5.1.3.3 const int PV2WayErrorRejected = PV2WayErrorStatusStart - 5

The request was rejected by the peer \*

#### 5.1.3.4 const int PV2WayErrorStatusStart = (-10500)

The starting error code for 2way specific errors \*

#### 5.1.3.5 const int PV2WayErrReplaced = PV2WayErrorStatusStart - 6

Signals replacement of an existing resource \*



## 5.2 pv\_2way\_engine\_factory.h File Reference

#include "pv\_2way\_basic\_types.h"

### **Data Structures**

• class CPV2WayEngineFactory

PV2Way Engine 51 Confidential/Proprietary



## 5.3 pv\_2way\_h324m\_types.h File Reference

```
#include "pv_2way_basic_types.h"
#include "pv_uuid.h"
#include "pv_interface.h"
```

#### **Data Structures**

- class CPVUserInput
- class CPVUserInputAlphanumeric
- class CPVUserInputDtmf
- class PV2Way324ConnectOptions
- class PV2Way324InitInfo
- class PVH223Al1Config
- class PVH223Al2Config
- class PVH223Al3Config
- class PVH223AlConfig

#### **Defines**

- #define PV\_2WAY\_MAX\_USER\_INPUT\_FORMATS 4
- #define PV\_2WAY\_MAX\_SKEW\_MS 1000

#### **Typedefs**

- typedef enum TPVPostDisconnectOption PV2WayPostDisconnectOption
- typedef enum UserInputType PV2WayUserInputType

#### **Enumerations**

- enum TPVPostDisconnectOption { EDisconnectLine, EAnalogueTelephony }
- enum UserInputType { PV\_ALPHANUMERIC = 0, PV\_DTMF }

#### **5.3.1** Define Documentation

#### **5.3.1.1** #define PV 2WAY MAX SKEW MS 1000

The maximum skew that can be taken into account for both outgoing and incoming sides \*

#### 5.3.1.2 #define PV\_2WAY\_MAX\_USER\_INPUT\_FORMATS 4

The maximum number of supported formats for user input  $\ast$ 



### **5.3.2** Typedef Documentation

#### 5.3.2.1 typedef enum TPVPostDisconnectOption PV2WayPostDisconnectOption

TPVPostDisconnectOption Enum

TPVPostDisconnectOption emumerates the mode the peer wants to transition to after the disconnect

#### 5.3.2.2 typedef enum UserInputType PV2WayUserInputType

UserInputType enum Enumeration of user input types

#### **5.3.3** Enumeration Type Documentation

#### 5.3.3.1 enum TPVPostDisconnectOption

TPVPostDisconnectOption Enum

TPVPostDisconnectOption emumerates the mode the peer wants to transition to after the disconnect

#### **Enumeration values:**

**EDisconnectLine** 

**EAnalogueTelephony** 

#### 5.3.3.2 enum UserInputType

UserInputType enum Enumeration of user input types

#### **Enumeration values:**

PV\_ALPHANUMERIC

PV\_DTMF



## 5.4 pv\_2way\_interface.h File Reference

```
#include "pv_common_types.h"
#include "oscl_vector.h"
#include "pvt_common.h"
#include "pvmf_node_interface.h"
#include "pvlogger_accessories.h"
#include "pv_engine_types.h"
#include "pv_2way_basic_types.h"
#include "pv_2way_h324m_types.h"
```

#### **Data Structures**

• class CPV2WayInterface

PV2Way Engine 54 Confidential/Proprietary



## 5.5 pv\_2way\_proxy\_factory.h File Reference

```
#include "pv_common_types.h"
#include "pv_2way_interface.h"
#include "pv_engine_observer.h"
```

#### **Data Structures**

• class CPV2WayProxyFactory

PV2Way Engine 55 Confidential/Proprietary



## 5.6 pv\_2way\_test\_extension\_interface.h File Reference

```
#include "oscl_base.h"
#include "oscl_string.h"
#include "oscl_refcounter_memfrag.h"
#include "pv_uuid.h"
#include "pv_interface.h"
```

#### **Data Structures**

• class PV2WayTestExtensionInterface

#### **Defines**

 $* \# define \ PV2Way TestEnc Extension UUID \ PVU uid (0x19b53654, 0x2dd4, 0x4469, 0xa9, 0xdb, 0x86, 0x28, 0xa7, 0x69, 0x92, 0xe3, 0xe3, 0xe469, 0xe$ 

#### **5.6.1** Define Documentation

5.6.1.1 #define PV2WayTestEncExtensionUUID PVUuid(0x19b53654, 0x2dd4,0x4469,0xa9,0xdb,0x86,0x28,0xa7,0x69,0x92,0xe3)

PV2Way Engine 56 Confidential/Proprietary



### 5.7 tsc\_h324m\_config\_interface.h File Reference

```
#include "oscl_base.h"
#include "pvt_common.h"
#include "pv_uuid.h"
#include "pvmf_node_interface.h"
```

#### **Data Structures**

- class H324MConfigInterface
- class H324MConfigObserver
- class H324MReverseParametersExtensionInterface
- class PVMFComponentInterface

#### **Defines**

- #define PVH324MConfigUuid PVUuid(0x2b0b54e2,0x7079,0x46c6,0xb2,0x3e,0x04,0xff,0xd3,0x0e,0x14,0x36)
- #define PVUuidH324ComponentInterface PVUuid(0xf6b47190,0xf88d,0x4cbf,0xa6,0xf6,0xc6,0x1e,0xfe,0x98,0x05,0x3f)

### **Typedefs**

- typedef uint32 H324MConfigInformationalEvent
- typedef uint32 H324MConfigStatusResponse

#### **Enumerations**

 enum PVH324MIndicationType { PV\_INDICATION\_VIDEO\_SPATIAL\_TEMPORAL\_-TRADEOFF\_COMMAND, PV\_INDICATION\_VIDEO\_SPATIAL\_TEMPORAL\_TRADEOFF\_-INDICATION, PV\_INDICATION\_FAST\_UPDATE, PV\_INDICATION\_RTD, PV\_-INDICATION\_RME, PV\_INDICATION\_VENDOR\_ID, PV\_INDICATION\_USER\_-INPUT\_CAPABILITY, PV\_INDICATION\_USER\_INPUT, PV\_INDICATION\_SKEW, PV\_-INDICATION\_LOGICAL\_CHANNEL\_ACTIVE, PV\_INDICATION\_LOGICAL\_CHANNEL\_-INACTIVE }

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#### 5.7.1 Define Documentation

- 5.7.1.1 #define PVH324MConfigUuid PVUuid(0x2b0b54e2,0x7079,0x46c6,0xb2,0x3e,0x04,0xff,0xd3,0x0e,0x14,0x36)
- 5.7.1.2 #define PVUuidH324ComponentInterface PVUuid(0xf6b47190,0xf88d,0x4cbf,0xa6,0xf6,0xc6,0x1e,0xfe,0x98,0x05,0x3f)
- **5.7.2** Typedef Documentation
- 5.7.2.1 typedef uint32 H324MConfigInformationalEvent
- 5.7.2.2 typedef uint32 H324MConfigStatusResponse
- **5.7.3** Enumeration Type Documentation
- 5.7.3.1 enum PVH324MIndicationType

PVH324MIndicationType enum

Enumeration of unsolicited H324m specific indications from pv2way.

#### **Enumeration values:**

- **PV\_INDICATION\_VIDEO\_SPATIAL\_TEMPORAL\_TRADEOFF\_COMMAND** Indicates the receipt of a videoSpatialTemporalTradeoff command from the peer. The first 2 bytes of the event local buffer indicate the logical channel (network byte order) and the 3rd byte indicates the tradeoff value.
- **PV\_INDICATION\_VIDEO\_SPATIAL\_TEMPORAL\_TRADEOFF\_INDICATION** Indicates the receipt of a videoSpatialTemporalTradeoff indication from the peer. The first 2 bytes of the event local buffer indicate the logical channel (network byte order) and the 3rd byte indicates the tradeoff value.
- **PV\_INDICATION\_FAST\_UPDATE** Indicates a fast update message from the remote terminal. The first two bytes of the local buffer encode the logical channel number in network byte order
- **PV\_INDICATION\_RTD** Indicates an incoming RTD command.
- PV\_INDICATION\_RME Indicates an incoming request multiplex entry command.
- PV\_INDICATION\_VENDOR\_ID Indicates an incoming vendor id indication message.
- **PV\_INDICATION\_USER\_INPUT\_CAPABILITY** Indicates the receipt of user input capability from the remote terminal. The first byte in local buffer contains the user input formats supported by the peer. The least significant stands for basicString, 2nd bit defines support for iA5String, 3rd for generalString and 4th dtmf.
- **PV\_INDICATION\_USER\_INPUT** Indicates the receipt of user input from the remote terminal. Event extension interface contains pointer to **CPVUserInput** that holds the actual user input sequences received.
- **PV\_INDICATION\_SKEW** Indicates the receipt of a an h223SkewIndication indication from the peer. The first 2 bytes of the event local buffer indicate the first logical channel, the 3rd and 4th bytes the second logical channel and the 5th and 6th bytes the value of the skew in milliseconds. All values are in network byte order.
- **PV\_INDICATION\_LOGICAL\_CHANNEL\_ACTIVE** Indicates a Active Logical Channel message from the remote terminal. The first two bytes of the local buffer encode the logical channel number in network byte order.



**PV\_INDICATION\_LOGICAL\_CHANNEL\_INACTIVE** Indicates a Inactive Logical Channel message from the remote terminal. The first two bytes of the local buffer encode the logical channel number in network byte order.

PV2Way Engine 59 Confidential/Proprietary

## **Index**

~CPV2WayInterface	~CPV2WayInterface, 7
CPV2WayInterface, 7	AddDataSink, 7
~CPVUserInput	AddDataSource, 7
CPVUserInput, 15	CancelAllCommands, 7
~CPVUserInputAlphanumeric	Connect, 8
CPVUserInputAlphanumeric, 16	Disconnect, 8
~CPVUserInputDtmf	GetLogLevel, 8
CPVUserInputDtmf, 18	GetSDKInfo, 9
~H324MConfigObserver	GetSDKModuleInfo, 9
H324MConfigObserver, 30	GetState, 9
~PV2Way324ConnectOptions	Init, 10
PV2Way324ConnectOptions, 33	Pause, 10
~PV2Way324InitInfo	QueryInterface, 10
PV2Way324InitInfo, 34	RemoveDataSink, 11
~PV2WayConnectOptions	RemoveDataSource, 11
PV2WayConnectOptions, 37	RemoveLogAppender, 11
~PV2WayInitInfo	Reset, 12
PV2WayInitInfo, 38	Resume, 12
~PVH223AlConfig	SetLogAppender, 12
PVH223AlConfig, 44	SetLogLevel, 13
1	CPV2WayProxyFactory, 14
AddDataSink	CPV2WayProxyFactory
CPV2WayInterface, 7	Cleanup, 14
AddDataSource	CreateTerminal, 14
CPV2WayInterface, 7	DeleteTerminal, 14
addRef	Init, 14
CPVUserInput, 15	CPVUserInput, 15
PV2WayTestExtensionInterface, 40	CPVUserInput, 15
PVMFComponentInterface, 45	CPVUserInput
	~CPVUserInput, 15
CancelAllCommands	addRef, 15
CPV2WayInterface, 7	CPVUserInput, 15
Cleanup	GetType, 15
CPV2WayEngineFactory, 4	removeRef, 15
CPV2WayProxyFactory, 14	CPVUserInputAlphanumeric, 16
Connect	CPVUserInputAlphanumeric, 16
CPV2WayInterface, 8	CPVUserInputAlphanumeric
CPV2WayEngineFactory, 4	~CPVUserInputAlphanumeric, 16
CPV2WayEngineFactory	CPVUserInputAlphanumeric, 16
Cleanup, 4	GetInput, 17
CreateTerminal, 4	GetLength, 17
DeleteTerminal, 4	GetType, 17
Init, 5	iLength, 17
CPV2WayInterface, 6	ipInput, 17
CPV2WayInterface	CPVUserInputDtmf, 18
	Ci i Oscimpuidini, 10



CPVUserInputDtmf, 18	GetLength
CPVUserInputDtmf	CPVUserInputAlphanumeric, 17
~CPVUserInputDtmf, 18	GetLogLevel
CPVUserInputDtmf, 18	CPV2WayInterface, 8
GetDuration, 19	GetPortTag
GetInput, 19	H324MReverseParametersExtension-
GetType, 19	Interface, 31
IsUpdate, 19	GetSDKInfo
CreateTerminal	CPV2WayInterface, 9
CPV2WayEngineFactory, 4	GetSDKModuleInfo
CPV2WayProxyFactory, 14	CPV2WayInterface, 9
Ci v 2 wayi loxyi actory, 14	GetState
DeleteTerminal	CPV2WayInterface, 9
CPV2WayEngineFactory, 4	GetType
CPV2WayProxyFactory, 14	CPVUserInput, 15
Disconnect	-
CPV2WayInterface, 8	CPVUserInputAlphanumeric, 17
Ci vzwayimeriace, 6	CPVUserInputDtmf, 19
EAnalogueTelephony	H324MConfigCommandCompletedL
pv_2way_h324m_types.h, 53	H324MConfigObserver, 30
EConnected	H324MConfigHandleInformationalEventL
pv_2way_basic_types.h, 48	H324MConfigObserver, 30
EConnecting	H324MConfigInformationalEvent
pv_2way_basic_types.h, 48	tsc_h324m_config_interface.h, 58
EDisconnecting	H324MConfigInterface, 20
pv_2way_basic_types.h, 48	H324MConfigInterface
EDisconnectLine	FastUpdate, 21
pv_2way_h324m_types.h, 53	SendEndSession, 21
Eldle	SendLogicalChannelActiveIndication, 21
pv_2way_basic_types.h, 48	SendLogicalChannelInactiveIndication, 21
EInitializing	SendRme, 22
pv_2way_basic_types.h, 48	SendRtd, 22
EResetting	SendSkewIndication, 22
pv_2way_basic_types.h, 48	SendUserInput, 22
ESetup	SendVendorId, 23
pv_2way_basic_types.h, 48	
pv_2way_basic_types.ii, 40	SendVideoTemporalSpatialTradeoffCom-
FastUpdate	mand, 23
H324MConfigInterface, 21	SendVideoTemporalSpatialTradeoffIndica-
1132-twicomignituriace, 21	tion, 23
GetConnectInfoClassName	SetAl2SequenceNumbers, 23
PV2Way324ConnectOptions, 33	SetAl3ControlFieldOctets, 23
PV2WayConnectOptions, 37	SetALConfiguration, 24
GetDuration	SetCodecPreference, 24
CPVUserInputDtmf, 19	SetEndSessionTimeout, 24
GetFormatCapabilities	SetFormatSpecificInfo, 25
H324MReverseParametersExtension-	SetLogicalChannelBufferingMs, 25
Interface, 31	SetMaxMuxCcsrlSduSize, 25
GetInitInfoClassName	SetMaxMuxPduSize, 25
PV2Way324InitInfo, 34	SetMaxPduSize, 26
	SetMaxSduSize, 26
PV2WayInitInfo, 38	SetMaxSduSizeR, 26
GetInput  CDVI IcarInput Alphanumaria 17	SetMultiplexLevel, 27
CPVUserInputAlphanumeric, 17	SetObserver, 27
CPVUserInputDtmf, 19	SetTerminalType, 27



SetTimerCounter, 27	PV2WayConnectOptions, 37
SetVendor, 28	iRemoteIdSize
SetVideoResolutions, 28	PV2WayConnectOptions, 37
SetWnsrp, 28	IsA
H324MConfigObserver, 30	PVH223Al1Config, 41
H324MConfigObserver	PVH223Al2Config, 42
~H324MConfigObserver, 30	PVH223Al3Config, 43
H324MConfigCommandCompletedL, 30	PVH223AlConfig, 44
H324MConfigHandleInformationalEventL,	iSendBufferSize
30	PVH223Al3Config, 43
H324MConfigStatusResponse	IsUpdate
tsc_h324m_config_interface.h, 58	CPVUserInputDtmf, 19
H324MReverseParametersExtensionInterface,	iUseSequenceNumbers
31	PVH223Al2Config, 42
H324MReverseParametersExtensionInterface	1 V11223/112Comig, 42
	NegotiatedFormatsMatch
GetFormatCapabilities, 31	PV2WayTestExtensionInterface, 40
GetPortTag, 31	r v z way restExtensionmerrace, 40
SetPortTag, 31	OUTGOING
10 10 10	
iControlFieldOctets	pv_2way_basic_types.h, 48
PVH223Al3Config, 43	Davida
iDisconnectTimeoutInterval	Pause
PV2Way324ConnectOptions, 33	CPV2WayInterface, 10
iFramed	PV2Way324ConnectOptions, 32
PVH223Al1Config, 41	PV2Way324ConnectOptions, 32
iIncomingAudioFormats	PV2Way324ConnectOptions
PV2WayInitInfo, 38	~PV2Way324ConnectOptions, 33
iIncoming Video Formats	GetConnectInfoClassName, 33
	iDisconnectTimeoutInterval, 33
PV2WayInitInfo, 38	PV2Way324ConnectOptions, 32
iLength	PV2Way324InitInfo, 34
CPVUserInputAlphanumeric, 17	
iLocalId	PV2Way324InitInfo, 34
PV2WayConnectOptions, 37	PV2Way324InitInfo
iLocalIdSize	~PV2Way324InitInfo, 34
PV2WayConnectOptions, 37	GetInitInfoClassName, 34
iLoopbackMode	iMultiplexingDelayMs, 35
PV2WayConnectOptions, 37	PV2Way324InitInfo, 34
iMultiplexingDelayMs	PV2WayConnectOptions, 36
PV2Way324InitInfo, 35	PV2WayConnectOptions, 36
INCOMING	PV2WayConnectOptions
	~PV2WayConnectOptions, 37
pv_2way_basic_types.h, 48	GetConnectInfoClassName, 37
Init	iLocalId, 37
CPV2WayEngineFactory, 5	iLocalIdSize, 37
CPV2WayInterface, 10	
CPV2WayProxyFactory, 14	iLoopbackMode, 37
iOutgoingAudioFormats	iRemoteId, 37
PV2WayInitInfo, 39	iRemoteIdSize, 37
iOutgoingVideoFormats	PV2WayConnectOptions, 36
PV2WayInitInfo, 39	PV2WayDirection
•	pv_2way_basic_types.h, 47
ipInput  CPVI Isouringut Alphanumania 17	PV2WayDisconnectError
CPVUserInputAlphanumeric, 17	pv_2way_basic_types.h, 50
iReferenceCount	PV2WayDispatchError
PVMFComponentInterface, 45	pv_2way_basic_types.h, 50
iRemoteId	pv_zway_basic_types.ii, 50





PV2WayErrorRejected	PV_LOOPBACK_NONE, 48
pv_2way_basic_types.h, 50	PV_MEDIA_ALL, 49
PV2WayErrorStatusStart	PV_MEDIA_NONE, 49
pv_2way_basic_types.h, 50	PV_MULTIPLEXED, 49
PV2WayErrReplaced	PV_SIP, 49
pv_2way_basic_types.h, 50	PV_TERMINAL_TYPE_NONE, 49
PV2WayInitInfo, 38	PV_USER_INPUT, 49
PV2WayInitInfo	PV_VIDEO, 49
~PV2WayInitInfo, 38	PVT_INDICATION_CLOSE_TRACK, 49
GetInitInfoClassName, 38	PVT_INDICATION_CLOSING_TRACK,
iIncomingAudioFormats, 38	49
iIncomingVideoFormats, 38	PVT_INDICATION_DISCONNECT, 49
iOutgoingAudioFormats, 39	PVT_INDICATION_INCOMING
iOutgoingVideoFormats, 39	TRACK, 49
PV2WayLoopbackMode	PVT_INDICATION_INTERNAL
pv_2way_basic_types.h, 47	ERROR, 50
PV2WayMediaType	PVT_INDICATION_OUTGOING
pv_2way_basic_types.h, 47	TRACK, 49
	PVT_INDICATION_PAUSE_TRACK, 50
PV2WayPostDisconnectOption	
pv_2way_h324m_types.h, 53	PVT_INDICATION_RESUME_TRACK, 50
PV2WayState	
pv_2way_basic_types.h, 47	pv_2way_basic_types.h, 46
PV2WayTerminalType	PV2WayDirection, 47
pv_2way_basic_types.h, 47	PV2WayDisconnectError, 50
PV2WayTestEncExtensionUUID	PV2WayDispatchError, 50
pv_2way_test_extension_interface.h, 56	PV2WayErrorRejected, 50
PV2WayTestExtensionInterface, 40	PV2WayErrorStatusStart, 50
PV2WayTestExtensionInterface	PV2WayErrReplaced, 50
addRef, 40	PV2WayLoopbackMode, 47
NegotiatedFormatsMatch, 40	PV2WayMediaType, 47
queryInterface, 40	PV2WayState, 47
removeRef, 40	PV2WayTerminalType, 47
PV2WayUserInputType	PVTrackId, 47
pv_2way_h324m_types.h, 53	TPVDirection, 48
pv_2way_basic_types.h	TPVLoopbackMode, 48
EConnected, 48	TPVMediaType_t, 48
EConnecting, 48	TPVTerminalType, 49
EDisconnecting, 48	TPVTIndicationType, 49
EIdle, 48	pv_2way_engine_factory.h, 51
EInitializing, 48	pv_2way_h324m_types.h
EResetting, 48	EAnalogueTelephony, 53
ESetup, 48	EDisconnectLine, 53
INCOMING, 48	PV_ALPHANUMERIC, 53
OUTGOING, 48	PV_DTMF, 53
PV_323, 49	pv_2way_h324m_types.h, 52
PV_324M, 49	PV2WayPostDisconnectOption, 53
PV_AUDIO, 49	PV2WayUserInputType, 53
PV_CONTROL, 49	PV_2WAY_MAX_SKEW_MS, 52
PV_DATA, 49	PV_2WAY_MAX_USER_INPUT
PV_DIRECTION_BOTH, 48	FORMATS, 52
PV_DIRECTION_NONE, 48	TPVPostDisconnectOption, 53
PV_LOOPBACK_COMM, 48	UserInputType, 53
PV_LOOPBACK_ENGINE, 48	pv_2way_interface.h, 54
PV LOOPBACK MUX 48	PV 2WAY MAX SKEW MS



pv_2way_h324m_types.h, 52 PV_2WAY_MAX_USER_INPUT_FORMATS	pv_2way_basic_types.h, 48 PV_LOOPBACK_ENGINE
pv_2way_h324m_types.h, 52 pv_2way_proxy_factory.h, 55	pv_2way_basic_types.h, 48 PV_LOOPBACK_MUX
pv_2way_test_extension_interface.h, 56 PV2WayTestEncExtensionUUID, 56	pv_2way_basic_types.h, 48 PV_LOOPBACK_NONE
PV_323	pv_2way_basic_types.h, 48
pv_2way_basic_types.h, 49 PV 324M	PV_MEDIA_ALL pv_2way_basic_types.h, 49
pv_2way_basic_types.h, 49 PV_ALPHANUMERIC	PV_MEDIA_NONE pv_2way_basic_types.h, 49
pv_2way_h324m_types.h, 53	PV_MULTIPLEXED
PV_AUDIO pv_2way_basic_types.h, 49	pv_2way_basic_types.h, 49 PV SIP
PV_CONTROL	pv_2way_basic_types.h, 49
pv_2way_basic_types.h, 49 PV_DATA	PV_TERMINAL_TYPE_NONE pv_2way_basic_types.h, 49
pv_2way_basic_types.h, 49 PV DIRECTION BOTH	PV_USER_INPUT pv_2way_basic_types.h, 49
pv_2way_basic_types.h, 48	PV_VIDEO
PV_DIRECTION_NONE pv_2way_basic_types.h, 48	pv_2way_basic_types.h, 49 PVH223_AL1
PV_DTMF pv_2way_h324m_types.h, 53	PVH223AlConfig, 44 PVH223 AL2
PV_INDICATION_FAST_UPDATE	PVH223AlConfig, 44
tsc_h324m_config_interface.h, 58 PV_INDICATION_LOGICAL_CHANNEL	PVH223_AL3 PVH223AlConfig, 44
ACTIVE tsc_h324m_config_interface.h, 58	PVH223A11Config, 41 iFramed, 41
PV_INDICATION_LOGICAL_CHANNEL	IsA, 41
INACTIVE tsc_h324m_config_interface.h, 58	PVH223Al2Config, 42 IsA, 42
PV_INDICATION_RME	iUseSequenceNumbers, 42
tsc_h324m_config_interface.h, 58 PV_INDICATION_RTD	PVH223Al3Config, 43 iControlFieldOctets, 43
tsc_h324m_config_interface.h, 58	IsA, 43
PV_INDICATION_SKEW	iSendBufferSize, 43
tsc_h324m_config_interface.h, 58 PV_INDICATION_USER_INPUT	PVH223AlConfig, 44 PVH223_AL1, 44
tsc_h324m_config_interface.h, 58	PVH223_AL2, 44
PV_INDICATION_USER_INPUT CAPABILITY	PVH223_AL3, 44 PVH223AlConfig
tsc_h324m_config_interface.h, 58	~PVH223AlConfig, 44
PV_INDICATION_VENDOR_ID	IsA, 44
tsc_h324m_config_interface.h, 58 PV_INDICATION_VIDEO_SPATIAL	PVH223AlIndex, 44 PVH223AlIndex
TEMPORAL_TRADEOFF	PVH223AlConfig, 44
COMMAND	PVH324MConfigUuid
tsc_h324m_config_interface.h, 58	tsc_h324m_config_interface.h, 58
PV_INDICATION_VIDEO_SPATIAL	PVH324MIndicationType
TEMPORAL_TRADEOFF	tsc_h324m_config_interface.h, 58
INDICATION	PVMFComponentInterface, 45
tsc_h324m_config_interface.h, 58	PVMFComponentInterface, 45
PV LOOPBACK COMM	PVMFComponentInterface



addRef, 45	H324MConfigInterface, 22
iReferenceCount, 45	SendSkewIndication
PVMFComponentInterface, 45	H324MConfigInterface, 22
removeRef, 45	SendUserInput
PVT_INDICATION_CLOSE_TRACK	H324MConfigInterface, 22
pv_2way_basic_types.h, 49	SendVendorId
PVT_INDICATION_CLOSING_TRACK	H324MConfigInterface, 23
pv_2way_basic_types.h, 49	SendVideoTemporalSpatialTradeoffCommand
PVT_INDICATION_DISCONNECT	H324MConfigInterface, 23
pv_2way_basic_types.h, 49	SendVideoTemporalSpatialTradeoffIndication
PVT_INDICATION_INCOMING_TRACK	H324MConfigInterface, 23
pv_2way_basic_types.h, 49	SetAl2SequenceNumbers
PVT_INDICATION_INTERNAL_ERROR	-
	H324MConfigInterface, 23 SetAl3ControlFieldOctets
pv_2way_basic_types.h, 50	
PVT_INDICATION_OUTGOING_TRACK	H324MConfigInterface, 23
pv_2way_basic_types.h, 49	SetALConfiguration
PVT_INDICATION_PAUSE_TRACK	H324MConfigInterface, 24
pv_2way_basic_types.h, 50	SetCodecPreference
PVT_INDICATION_RESUME_TRACK	H324MConfigInterface, 24
pv_2way_basic_types.h, 50	SetEndSessionTimeout
PVTrackId	H324MConfigInterface, 24
pv_2way_basic_types.h, 47	SetFormatSpecificInfo
PVUuidH324ComponentInterface	H324MConfigInterface, 25
tsc_h324m_config_interface.h, 58	SetLogAppender
	CPV2WayInterface, 12
QueryInterface	SetLogicalChannelBufferingMs
CPV2WayInterface, 10	H324MConfigInterface, 25
queryInterface	SetLogLevel
PV2WayTestExtensionInterface, 40	CPV2WayInterface, 13
	SetMaxMuxCcsrlSduSize
RemoveDataSink	H324MConfigInterface, 25
CPV2WayInterface, 11	SetMaxMuxPduSize
RemoveDataSource	H324MConfigInterface, 25
CPV2WayInterface, 11	SetMaxPduSize
RemoveLogAppender	H324MConfigInterface, 26
CPV2WayInterface, 11	SetMaxSduSize
removeRef	
CPVUserInput, 15	H324MConfigInterface, 26
PV2WayTestExtensionInterface, 40	SetMaxSduSizeR
PVMFComponentInterface, 45	H324MConfigInterface, 26
Reset	SetMultiplexLevel
CPV2WayInterface, 12	H324MConfigInterface, 27
Resume	SetObserver
	H324MConfigInterface, 27
CPV2WayInterface, 12	SetPortTag
SendEndSession	H324MReverseParametersExtension-
	Interface, 31
H324MConfigInterface, 21	SetTerminalType
SendLogicalChannelActiveIndication	H324MConfigInterface, 27
H324MConfigInterface, 21	SetTimerCounter
SendLogicalChannelInactiveIndication	H324MConfigInterface, 27
H324MConfigInterface, 21	SetVendor
SendRme	H324MConfigInterface, 28
H324MConfigInterface, 22	SetVideoResolutions
SendRtd	H324MConfigInterface, 28
	110 = 11.1 = 01111 <u>1111011400</u> , <del>10</del>



```
SetWnsrp
   H324MConfigInterface, 28
TPVDirection
    pv_2way_basic_types.h, 48
TPVLoopbackMode
    pv_2way_basic_types.h, 48
TPVMediaType_t
   pv_2way_basic_types.h, 48
TPVPostDisconnectOption
   pv_2way_h324m_types.h, 53
TPVTerminalType
    pv_2way_basic_types.h, 49
TPVTIndicationType
   pv_2way_basic_types.h, 49
tsc h324m config interface.h
   PV_INDICATION_FAST_UPDATE, 58
   PV_INDICATION_LOGICAL_-
       CHANNEL_ACTIVE, 58
   PV_INDICATION_LOGICAL_-
        CHANNEL_INACTIVE, 58
   PV_INDICATION_RME, 58
   PV_INDICATION_RTD, 58
   PV_INDICATION_SKEW, 58
   PV_INDICATION_USER_INPUT, 58
   PV_INDICATION_USER_INPUT_-
       CAPABILITY, 58
   PV_INDICATION_VENDOR_ID, 58
   PV INDICATION VIDEO SPATIAL -
        TEMPORAL_TRADEOFF_-
       COMMAND, 58
   PV_INDICATION_VIDEO_SPATIAL_-
       TEMPORAL TRADEOFF -
       INDICATION, 58
tsc_h324m_config_interface.h, 57
    H324MConfigInformationalEvent, 58
   H324MConfigStatusResponse, 58
   PVH324MConfigUuid, 58
   PVH324MIndicationType, 58
   PVUuidH324ComponentInterface, 58
UserInputType  
   pv_2way_h324m_types.h, 53
```