

Document Title	SWS_FlexRayISOTransportLayer: Complete Change Documentation 4.3.0 - 4.3.1
Document Owner	AUTOSAR
Document Responsibility	AUTOSAR
Document Identification No	695

Document Status	Final
Part of AUTOSAR Standard	Classic Platform
Part of Standard Release	4.3.1

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1 SWS_FlexRayISOTransportLayer

1.1 Specification Item SWS_FrTp_00577

Trace References:

none

Content:

API function	Description
Det_ReportRuntimeError	Service to report runtime errors. If a callout has been configured then this callout shall be called.
FrIf_Transmit	Requests transmission of a PDU.
PduR_FrTpCopyRxData	This function is called to provide the received data of an I-PDU segment (N-PDU) to the upper layer. Each call to this function provides the next part of the I-PDU data. The size of the remaining data buffer is written to the position indicated by bufferSizePtr.
PduR_FrTpCopyTxData	This function is called to acquire the transmit data of an I-PDU segment (N-PDU). Each call to this function provides the next part of the I-PDU data unless retry->TpDataState is TP_DATARETRY. In this case the function restarts to copy the data beginning at the offset from the current position indicated by retry->TxTpData Cnt. The size of the remaining data is written to the position indicated by availableDataPtr.
PduR_FrTpRxIndication	Called after an I-PDU has been received via the TP API, the result indicates whether the transmission was successful or not.
PduR_FrTpStartOfReception	This function is called at the start of receiving an N-SDU. The N-SDU might be fragmented into multiple N-PDUs (FF with one or more following CFs) or might consist of a single N-PDU (SF). The service shall provide the currently available maximum buffer size when invoked with TpSduLength equal to 0.
PduR_FrTpTxConfirmation	This function is called after the I-PDU has been transmitted on its network, the result indicates whether the transmission was successful or not.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #59085: Rollout of 'Runtime errors'

Problem description:

Inconsistencies in SWS with semantics of Default errors
–Last change on issue 59085 comment 26–

Agreed solution:

solution in Column "G" of the new attachment
<https://www.autosar.org/bugzilla/attachment.cgi?id=4604>

Notes:

- It is not enough just to migrate the error from one classification table to another. Please also check the related requirements (and background information) which is referring to that error and adapt them if needed.
- The review task of the ITs shall be done by the WP to which the specification "belongs".

*** BSW UML Model ***

SWS_CanNm:

Chapter 8.6.1 Optional Interfaces:

Add within SWS_CanNm_00325 the API function Det_ReportRunTimeError

SWS_LinIf:

SWS_LinIf_00359: add Det_ReportRuntimeError

SWS_UdpNm:

Replace UDPNM_E_NO_INIT with UDPNM_E_UNINIT in description of API
UdpNm_MainFunction_<Instance Id> (SWS_UdpNm_00234)

*** ECUC XML ***

Not affected. No configuration of runtime error reporting required (see SWS BSW General).

—Last change on issue 59085 comment 88—

BW-C-Level:

Application	Specification	Bus
1	4	1

- RfC #77935: [PduR] Misleading description of CopyRxData

Problem description:

Name: Martin Schlodder
Role: Member of WP-A2

Description/Motivation:

The description of the CopyRxData API says: "The size of the remaining data is written to the position indicated by bufferSizePtr."

This text seems to have been copied from the CopyTxData call, where it is correct. CopyRxData should talk about "remaining buffer", not "remaining data".

Agreed solution:

In the description of the API PduR_<User:LoTp>CopyRxData (SWS_PduR_00512), replace "remaining data" by "remaining buffer".

BW-C-Level:

Application	Specification	Bus
1	1	1

1.2 Specification Item SWS_FrTp_01068

Trace References:

none

Content:

If the FrTpConnectionControl parameter FRTP_MULTIPLE_RECEIVER_CON (see section [REF]) for the corresponding FrTpConnection is set, the communication handler shall not process a segmentation of an N-SDU and take the following actions:

- shall raise a **development runtime** error FRTP_E_SEG_ERROR **when development error detection for the FrTp module is enabled** and
- shall abort the transmission of this message and notify the upper layer by calling the callback function PduR_FrTpTxConfirmation with the result E_NOT_OK.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #59085: Rollout of 'Runtime errors'

Problem description:

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–Last change on issue 59085 comment 26–

Agreed solution:

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SWS_LinIf:

SWS_LinIf_00359: add Det_ReportRuntimeError

SWS_UdpNm:

Replace UDPNM_E_NO_INIT with UDPNM_E_UNINIT in description of API
UdpNm_MainFunction_<Instance Id> (SWS_UdpNm_00234)

***** ECUC XML *****

Not affected. No configuration of runtime error reporting required (see SWS BSW General).

–Last change on issue 59085 comment 88–

BW-C-Level:

Application	Specification	Bus
1	4	1

1.3 Specification Item SWS_FrTp_01185

Trace References:

none

Content:

The FrTp module shall raise an development a runtime error FRTP_E_NO_CHANNEL when development error detection for the FrTp module is enabled.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #59085: Rollout of 'Runtime errors'

Problem description:

Inconsistencies in SWS with semantics of Default errors
–Last change on issue 59085 comment 26–

Agreed solution:

solution in Column "G" of the new attachment
<https://www.autosar.org/bugzilla/attachment.cgi?id=4604>

Notes:

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*** BSW UML Model ***

SWS_CanNm:

Chapter 8.6.1 Optional Interfaces:

Add within SWS_CanNm_00325 the API function Det_ReportRunTimeError

SWS_LinIf:

SWS_LinIf_00359: add Det_ReportRuntimeError

SWS_UdpNm:

Replace UDPNM_E_NO_INIT with UDPNM_E_UNINIT in description of API
UdpNm_MainFunction_<Instance Id> (SWS_UdpNm_00234)

*** ECUC XML ***

Not affected. No configuration of runtime error reporting required (see SWS BSW General).

–Last change on issue 59085 comment 88–

BW-C-Level:

Application	Specification	Bus
1	4	1

1.4 Specification Item SWS_FrTp_01186

Trace References:

none

Content:

The FrTp module shall raise an development a runtime error FRTP_E_NO_CHANNEL when development error detection for the FrTp module is enabled .()

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #59085: Rollout of 'Runtime errors'

Problem description:

Inconsistencies in SWS with semantics of Default errors

–Last change on issue 59085 comment 26–

Agreed solution:

solution in Column "G" of the new attachment <https://www.autosar.org/bugzilla/attachment.cgi?id=4604>

Notes:

- It is not enough just to migrate the error from one classification table to another. Please also check the related requirements (and background information) which is referring to that error and adapt them if needed.
- The review task of the ITs shall be done by the WP to which the specification "belongs".

*** BSW UML Model ***

SWS_CanNm:

Chapter 8.6.1 Optional Interfaces:

Add within SWS_CanNm_00325 the API function Det_ReportRunTimeError

SWS_LinIf:

SWS_LinIf_00359: add Det_ReportRuntimeError

SWS_UdpNm:

Replace UDPNM_E_NO_INIT with UDPNM_E_UNINIT in description of API UdpNm_MainFunction_<Instance Id> (SWS_UdpNm_00234)

*** ECUC XML ***

Not affected. No configuration of runtime error reporting required (see SWS BSW General).

–Last change on issue 59085 comment 88–

BW-C-Level:

Application	Specification	Bus
1	4	1

1.5 Specification Item SWS_FrTp_01187

Trace References:

none

Content:

The FrTp module shall raise an development a runtime error FRTP_E_SEG_ERROR when

- a) development error detection for the FrTp module is enabled and
- b) a 1:n connection is requested as described in SWS_FrTp_01063.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #59085: Rollout of 'Runtime errors'

Problem description:

Inconsistencies in SWS with semantics of Default errors

–Last change on issue 59085 comment 26–

Agreed solution:

solution in Column "G" of the new attachment
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Notes:

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Add within SWS_CanNm_00325 the API function Det_ReportRuntimeError

SWS_LinIf:

SWS_LinIf_00359: add Det_ReportRuntimeError

SWS_UdpNm:

Replace UDPNM_E_NO_INIT with UDPNM_E_UNINIT in description of API
UdpNm_MainFunction_<Instance Id> (SWS_UdpNm_00234)

***** ECUC XML *****

Not affected. No configuration of runtime error reporting required (see SWS BSW General).

–Last change on issue 59085 comment 88–

BW-C-Level:

Application	Specification	Bus
1	4	1

1.6 Specification Item SWS_FrTp_01201

Trace References:

none

Content:

Development Error Types

Type of error	Relevance	Related error code	Value [hex]
API service call without module initialization: Exception: <ul style="list-style-type: none"> FrTp_Init() FrTp_GetVersionInfo() 	Dev.	F RTP_E_UNINIT	0x01
NULL-Pointer on any API call	Dev.	F RTP_E_PARAM_POINTER	0x02
API call with invalid SDU-ID (PduR) or PDU-ID (Frlf)	Dev.	F RTP_E_INVALID_PDU_ID	0x03
API call with invalid Parameter	Dev.	F RTP_E_INVALID_PARAMETER	0x04
Segmentation is required for a 1:n connection	Dev.	F RTP_E_SEG_ERROR	0x05
Transmission of unknown message length is detected but not configured.	Dev.	F RTP_E_UMSG_LENGTH_ERROR	0x06
No free channel available[35]	Dev.	F RTP_E_NO_CHANNEL	0x07
FrTp initialization has been failed; e.g. selected configuration set doesn't exist.	Dev.	F RTP_E_INIT_FAILED	0x08
Dev. Prod.	.. Development .. Production		

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #59085: Rollout of 'Runtime errors'

Problem description:

Inconsistencies in SWS with semantics of Default errors
–Last change on issue 59085 comment 26–

Agreed solution:

solution in Column "G" of the new attachment
<https://www.autosar.org/bugzilla/attachment.cgi?id=4604>

Notes:

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- The review task of the ITs shall be done by the WP to which the specification

"belongs".

*** BSW UML Model ***

SWS_CanNm:

Chapter 8.6.1 Optional Interfaces:

Add within SWS_CanNm_00325 the API function Det_ReportRuntimeError

SWS_LinIf:

SWS_LinIf_00359: add Det_ReportRuntimeError

SWS_UdpNm:

Replace UDPNM_E_NO_INIT with UDPNM_E_UNINIT in description of API
UdpNm_MainFunction_<Instance Id> (SWS_UdpNm_00234)

*** ECUC XML ***

Not affected. No configuration of runtime error reporting required (see SWS BSW
General).

–Last change on issue 59085 comment 88–

BW-C-Level:

Application	Specification	Bus
1	4	1

1.7 Specification Item SWS_FrTp_01208

Trace References:

none

Content:

Type of error	Relevance	Related error code	Value [hex]
Segmentation is required for a 1:n connection	Run.	FRTP_E_SEG_ERROR	0x05
No free channel available[35]	Run.	FRTP_E_NO_CHANNEL	0x07

Type of error	Relevance	Related error code	Value [hex]
Run.	.. Runtime Error		

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #59085: Rollout of 'Runtime errors'

Problem description:

Inconsistencies in SWS with semantics of Default errors
–Last change on issue 59085 comment 26–

Agreed solution:

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<https://www.autosar.org/bugzilla/attachment.cgi?id=4604>

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*** BSW UML Model ***

SWS_CanNm:

Chapter 8.6.1 Optional Interfaces:

Add within SWS_CanNm_00325 the API function Det_ReportRunTimeError

SWS_LinIf:

SWS_LinIf_00359: add Det_ReportRuntimeError

SWS_UdpNm:

Replace UDPNM_E_NO_INIT with UDPNM_E_UNINIT in description of API
UdpNm_MainFunction_<Instance Id> (SWS_UdpNm_00234)

*** ECUC XML ***

Not affected. No configuration of runtime error reporting required (see SWS BSW General).

–Last change on issue 59085 comment 88–

BW-C-Level:

Application	Specification	Bus
1	4	1