

# MCAL Configuration Verification Manual for CanTrcv\_17\_V9251

**32-bit TriCore™ AURIX™ TC3xx microcontroller family**

## About this document

### Scope and purpose

This Configuration Data Reference document is applicable to all TC3xx devices in the TriCore™ AURIX™ family of 32-bit microcontrollers.

The purpose of this document is to facilitate the integrator to verify the generated code based on the input configuration parameters. This document describes details of structures, defines, macros and variables generated from the configuration parameters.

### Intended audience

This document is intended for integrators who need to understand the logic of the generated configuration code of AURIX™ AUTOSAR MCAL.

### Reference documents

This document should be read in conjunction with the following documents:

- AURIX™ TC3xx MCAL User Manual CanTrcv\_17\_V9251

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## CANTRCV\_17\_V9251 driver

This chapter describes the details of the configuration data generated from the CAN transceiver V9251 driver.

### 1.1 File: CANTRCV\_17\_V9251\_Cfg.h

The generated header file contains all pre-compile configuration parameters. Pre-compile time configuration allows decoupling of the static configuration from implementation. The file is generated in 'inc' folder.

#### 1.1.1 Macro: CANTRCV\_17\_V9251\_AR\_RELEASE\_MAJOR\_VERSION

**Table 1** CANTRCV\_17\_V9251\_AR\_RELEASE\_MAJOR\_VERSION

<b>Name</b>	CANTRCV_17_V9251_AR_RELEASE_MAJOR_VERSION	
<b>Description</b>	Major version number of AUTOSAR release on which the CANTRCV_17_V9251 implementation is based on.	
<b>Verification method</b>	The macro is generated with the value present in 'CommonPublishedInformation/ArMajorVersion'.  <i>Note: The macro is not user configurable.</i>	
<b>Example(s)</b>	<b>Action</b>	<b>Generated output</b>
	Generate CANTRCV_17_V9251_Cfg.h file with ArMajorVersion 4	#define CANTRCV_17_V9251_AR_RELEASE_MAJOR_VERSION (4U)

#### 1.1.2 Macro: CANTRCV\_17\_V9251\_AR\_RELEASE\_MINOR\_VERSION

**Table 2** CANTRCV\_17\_V9251\_AR\_RELEASE\_MINOR\_VERSION

<b>Name</b>	CANTRCV_17_V9251_AR_RELEASE_MINOR_VERSION	
<b>Description</b>	Minor version number of AUTOSAR release on which the CANTRCV_17_V9251 implementation is based on.	
<b>Verification method</b>	The macro is generated with the value present in 'CommonPublishedInformation/ArMinorVersion'.  <i>Note: The macro is not user configurable.</i>	
<b>Example(s)</b>	<b>Action</b>	<b>Generated output</b>
	Generate CANTRCV_17_V9251_Cfg.h file with ArMinorVersion 2	#define CANTRCV_17_V9251_AR_RELEASE_MINOR_VERSION (2U)

#### 1.1.3 Macro: CANTRCV\_17\_V9251\_AR\_RELEASE\_REVISION\_VERSION

**Table 3** CANTRCV\_17\_V9251\_AR\_RELEASE\_REVISION\_VERSION

<b>Name</b>	CANTRCV_17_V9251_AR_RELEASE_REVISION_VERSION	
<b>Description</b>	Revision version number of AUTOSAR release on which the CANTRCV_17_V9251 implementation is based on.	
<b>Verification method</b>	<p>The macro is generated with the value present in 'CommonPublishedInformation/ArPatchVersion'.</p> <p><i>Note: The macro is not user configurable.</i></p>	
<b>Example(s)</b>	<b>Action</b>	<b>Generated output</b>
	Generate CANTRCV_17_V9251_Cfg.h file with ArPatchVersion 2	#define CANTRCV_17_V9251_AR_RELEASE_REVISION_VERSION (2U)

#### 1.1.4 Macro: CANTRCV\_17\_V9251\_SW\_MAJOR\_VERSION

**Table 4 CANTRCV\_17\_V9251\_SW\_MAJOR\_VERSION**

<b>Name</b>	CANTRCV_17_V9251_SW_MAJOR_VERSION	
<b>Description</b>	Major version number of the CANTRCV_17_V9251 module.	
<b>Verification method</b>	<p>The macro is generated with the value present in 'CommonPublishedInformation/SwMajorVersion'.</p> <p><i>Note: The macro is not user configurable.</i></p>	
<b>Example(s)</b>	<b>Action</b>	<b>Generated output</b>
	Generate CANTRCV_17_V9251_Cfg.h file with SwMajorVersion 10	#define CANTRCV_17_V9251_SW_MAJOR_VERSION (10U)

#### 1.1.5 Macro: CANTRCV\_17\_V9251\_SW\_MINOR\_VERSION

**Table 5 CANTRCV\_17\_V9251\_SW\_MINOR\_VERSION**

<b>Name</b>	CANTRCV_17_V9251_SW_MINOR_VERSION	
<b>Description</b>	Minor version number of the CANTRCV_17_V9251 module.	
<b>Verification method</b>	<p>The macro is generated with the value present in 'CommonPublishedInformation/SwMinorVersion'.</p> <p><i>Note: The macro is not user configurable.</i></p>	
<b>Example(s)</b>	<b>Action</b>	<b>Generated output</b>
	Generate CANTRCV_17_V9251_Cfg.h file with SwMinorVersion 30	#define CANTRCV_17_V9251_SW_MINOR_VERSION (30U)

### 1.1.6 Macro: CANTRCV\_17\_V9251\_SW\_PATCH\_VERSION

**Table 6** CANTRCV\_17\_V9251\_SW\_PATCH\_VERSION

<b>Name</b>	CANTRCV_17_V9251_SW_PATCH_VERSION	
<b>Description</b>	Patch version number of the CANTRCV_17_V9251 module.	
<b>Verification method</b>	<p>The macro is generated with the value present in 'CommonPublishedInformation/SwPatchVersion'.</p> <p><i>Note: The macro is not user configurable.</i></p>	
<b>Example(s)</b>	<b>Action</b>	<b>Generated output</b>
	Generate CANTRCV_17_V9251_Cfg.h file with SwPatchVersion 0	<pre>#define CANTRCV_17_V9251_SW_PATCH_VERSION (0U)</pre>

### 1.1.7 Macro: CANTRCV\_17\_V9251\_DEV\_ERROR\_DETECT

**Table 7** CANTRCV\_17\_V9251\_DEV\_ERROR\_DETECT

<b>Name</b>	CANTRCV_17_V9251_DEV_ERROR_DETECT	
<b>Description</b>	Enables/disables the Development Error Detection.	
<b>Verification method</b>	The macro is generated as STD_ON if CanTrcvDevErrorDetect configuration parameter is set to 'True' else the macro is generated as STD_OFF.	
<b>Example(s)</b>	<b>Action</b>	<b>Generated output</b>
	CanTrcvDevErrorDetect = True	<pre>#define CANTRCV_17_V9251_DEV_ERROR_DETECT (STD_ON)</pre>
	CanTrcvDevErrorDetect = False	<pre>#define CANTRCV_17_V9251_DEV_ERROR_DETECT (STD_OFF)</pre>

### 1.1.8 Macro: CANTRCV\_17\_V9251\_WAIT\_COUNT

**Table 8** CANTRCV\_17\_V9251\_WAIT\_COUNTME

<b>Name</b>	CANTRCV_17_V9251_WAIT_COUNT	
<b>Description</b>	Indicates wait time for transceiver mode changes	
<b>Verification method</b>	<p>The macro is generated as a numeric value which corresponds to the value configured in 'CanTrcvGeneral/CanTrcvWaitTime/*[1]' in nanoseconds.</p> <p><i>Note: The macro is not user configurable.</i></p>	
<b>Example(s)</b>	<b>Action</b>	<b>Generated output</b>

	Configure CanTrcvWaitTime = 2e-5. The parameter is configured in seconds.	#define CANTRCV_17_V9251_WAIT_COUNT (20000U)
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### 1.1.9 Macro: CANTRCV\_17\_V9251\_GET\_VERSION\_INFO

**Table 9** CANTRCV\_17\_V9251\_GET\_VERSION\_INFO

<b>Name</b>	CANTRCV_17_V9251_GET_VERSION_INFO	
<b>Description</b>	Enables/disables CANTRCV_17_V9251_GetVersionInfo API	
<b>Verification method</b>	The macro is generated as STD_ON if CanTrcvGetVersionInfo configuration parameter is set to 'True' else the macro is generated as STD_OFF.	
<b>Example(s)</b>	<b>Action</b>	<b>Generated output</b>
	CanTrcvGetVersionInfo = True	#define CANTRCV_17_V9251_GET_VERSION_INFO (STD_ON)
	CanTrcvGetVersionInfo = False	#define CANTRCV_17_V9251_GET_VERSION_INFO (STD_OFF)

### 1.1.10 Macro: CANTRCV\_17\_V9251\_GENERAL\_WAKE\_UP\_SUPPORT

**Table 10** CANTRCV\_17\_V9251\_GENERAL\_WAKE\_UP\_SUPPORT

<b>Name</b>	CANTRCV_17_V9251_GENERAL_WAKE_UP_SUPPORT	
<b>Description</b>	Indicates wake up support type of CANTRCV_17_V9251 module.	
<b>Verification method</b>	The macro is generated as CANTRCV_17_V9251_WAKE_UP_BY_INTERRUPT since only interrupt mode is supported.	
<b>Example(s)</b>	<b>Action</b>	<b>Generated output</b>
	Configure CanTrcvWakeUpSupport = CANTRCV_17_V9251_WAKE_UP_BY_INTERRUPT	#define CANTRCV_17_V9251_GENERAL_WAKE_UP_SUPPORT \\ (CANTRCV_17_V9251_WAKE_UP_BY_INTERRUPT)

### 1.1.11 Macro: CANTRCV\_17\_V9251\_INSTANCE\_ID

**Table 11** CANTRCV\_17\_V9251\_INSTANCE\_ID

<b>Name</b>	CANTRCV_17_V9251_INSTANCE_ID	
<b>Description</b>	Instance ID of CANTRCV_17_V9251 module.	
<b>Verification method</b>	The macro is generated as a numeric value set in the configuration parameter 'CanTrcvGeneral/CanTrcvIndex'	

Example(s)	Action	Generated output
	Set CanTrcvIndex as 0	#define CANTRCV_17_V9251_INSTANCE_ID ((uint8)0)
	Set CanTrcvIndex as 2	#define CANTRCV_17_V9251_INSTANCE_ID ((uint8)2)

### 1.1.12 Macro: CanTrcv\_17\_V9251Conf\_CanTrcvChannel\_<channel name>

**Table 12** CanTrcv\_17\_V9251Conf\_CanTrcvChannel\_<channel name>

Name	CanTrcv_17_V9251Conf_CanTrcvChannel_<channel name>	
Description	The macro is the symbolic name generated for the configuration parameter 'CanTrcvConfigSet/ CanTrcvChannel/CanTrcvChannelId'	
Verification method	<p>The macro is generated as a numeric value which is configured in 'CanTrcvConfigSet/ CanTrcvChannel'. &lt;channel name&gt; is the symbolic name of the transceiver channel.</p> <p><i>Note: This macro is present only for the channels which have the parameter 'CanTrcvChannel/CanTrcvChannelUsed' set to true.</i></p>	
Example(s)	Action	Generated output
	<ul style="list-style-type: none"> <li>Configure 4 transceiver channels (CanTrcvChannel_0 to CanTrcvChannel_3)</li> <li>Configure CanTrcvChannel_1 and CanTrcvChannel_3 as used channels</li> </ul>	<pre>#ifndef CanTrcv_17_V9251Conf_CanTrcvChannel_CanTrcvChannel_1 #define CanTrcv_17_V9251Conf_CanTrcvChannel_CanTrcvChannel_1 ((uint8)1U) #endif  #ifndef CanTrcv_17_V9251Conf_CanTrcvChannel_CanTrcvChannel_3 #define CanTrcv_17_V9251Conf_CanTrcvChannel_CanTrcvChannel_3 ((uint8)3U) #endif</pre>
	<ul style="list-style-type: none"> <li>Configure 4 transceiver channels (CanTrcvChannel_0 to CanTrcvChannel_3)</li> <li>Configure CanTrcvChannel_0 and CanTrcvChannel_2 as used channels</li> </ul>	<pre>#ifndef CanTrcv_17_V9251Conf_CanTrcvChannel_CanTrcvChannel_0 #define CanTrcv_17_V9251Conf_CanTrcvChannel_CanTrcvChannel_0 ((uint8)0U) #endif  #ifndef CanTrcv_17_V9251Conf_CanTrcvChannel_CanTrcvChannel_2</pre>

	<pre>#define CanTrcv_17_V9251Conf_CanTrcvChannel_CanTrcvChannel_2 ((uint8)2U) #endif</pre>
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### 1.1.13 Macro: CANTRCV\_17\_V9251\_CH\_<x>\_MAX\_BAUDRATE\_SUPPORT

**Table 13** CANTRCV\_17\_V9251\_CH\_<x>\_MAX\_BAUDRATE\_SUPPORT

<b>Name</b>	CANTRCV_17_V9251_CH_<x>_MAX_BAUDRATE_SUPPORT	
<b>Description</b>	Indicates the baudrate configured for channel<x>.	
<b>Verification method</b>	<p>The macro is generated as a numeric value which is configured in 'CanTrcvMaxBaudrate' for every channel.</p> <p><i>Note: This macro is present only for the channels which have the parameter 'CanTrcvChannel/CanTrcvChannelUsed' set to true.</i></p>	
<b>Example(s)</b>	<b>Action</b>	<b>Generated output</b>
	<ul style="list-style-type: none"> <li>Configure 4 transceiver channels (CanTrcvChannel_0 to CanTrcvChannel_3)</li> <li>Configure CanTrcvChannel_1 and CanTrcvChannel_3 as used channels</li> <li>Configure parameter 'CanTrcvMaxBaudrate' for all the channels with the value 1000</li> </ul>	<pre>#define CANTRCV_17_V9251_CH_1_MAX_BAUDRATE_SUPPORT (1000U) #define CANTRCV_17_V9251_CH_3_MAX_BAUDRATE_SUPPORT (1000U)</pre>
	<ul style="list-style-type: none"> <li>Configure 4 transceiver channels (CanTrcvChannel_0 to CanTrcvChannel_3)</li> <li>Configure CanTrcvChannel_0 and CanTrcvChannel_2 as used channels</li> <li>Configure parameter 'CanTrcvMaxBaudrate' for all the channels with the value 5000</li> </ul>	<pre>#define CANTRCV_17_V9251_CH_0_MAX_BAUDRATE_SUPPORT (5000U) #define CANTRCV_17_V9251_CH_2_MAX_BAUDRATE_SUPPORT (5000U)</pre>



### 1.1.14 Macro: CANTRCV\_17\_V9251\_CH\_<x>\_ICU\_REF

**Table 14** CANTRCV\_17\_V9251\_CH\_<x>\_ICU\_REF

<b>Name</b>	CANTRCV_17_V9251_CH_<x>_ICU_REF	
<b>Description</b>	The macro is the symbolic name generated for the configuration parameter 'CanTrcvConfigSet/CanTrcvChannel/ CanTrcvIcuChannelRef' for channel <x>.	
<b>Verification method</b>	<p>The macro is generated as a symbolic name which corresponds to the ICU channel referenced by the transceiver channel &lt;x&gt; if CanTrcvIcuChannelRef parameter is referenced and is generated as ICU_REFERENCE_NOT_CONFIGURED if not referenced.</p> <p><i>Note: This macro is present only for the channels which have the parameter 'CanTrcvChannel/CanTrcvChannelUsed' set to true.</i></p>	
<b>Example(s)</b>	<b>Action</b>	<b>Generated output</b>
	<ul style="list-style-type: none"> <li>Configure 4 transceiver channels (CanTrcvChannel_0 to CanTrcvChannel_3)</li> <li>Configure 'CanTrcvWakeUpSupport' as CANTRCV_17_V9251_WAKE_UP_BY_INTERRUPT</li> <li>Enable CanTrcvChannelUsed for channels CanTrcvChannel_0 and CanTrcvChannel_3</li> <li>Enable 'CanTrcvWakeupByBusUsed' for channel CanTrcvChannel_0 and disable it for channel CanTrcvChannel_3</li> </ul>	<pre>#define CANTRCV_17_V9251_CH_0_ICU_REF (IcuConf_IcuChannel_IcuChannel_ 0)  #define CANTRCV_17_V9251_CH_3_ICU_REF (ICU_REFERENCE_NOT_CONFIGURED)</pre>
<b>Example(s)</b>	<ul style="list-style-type: none"> <li>Configure 4 transceiver channels (CanTrcvChannel_0 to CanTrcvChannel_3)</li> <li>Configure 'CanTrcvWakeUpSupport' as CANTRCV_17_V9251_WAKE_UP_BY_INTERRUPT</li> <li>Enable CanTrcvChannelUsed for channels CanTrcvChannel_1 and CanTrcvChannel_2</li> <li>Enable 'CanTrcvWakeupByBusUsed' for channel CanTrcvChannel_1 and disable it for channel CanTrcvChannel_2</li> </ul>	<pre>#define CANTRCV_17_V9251_CH_1_ICU_REF (IcuConf_IcuChannel_IcuChannel_ 0)  #define CANTRCV_17_V9251_CH_2_ICU_REF (ICU_REFERENCE_NOT_CONFIGURED)</pre>

### 1.1.15 Macro: CANTRCV\_17\_V9251\_CHANNELS\_USED

**Table 15** CANTRCV\_17\_V9251\_CHANNELS\_USED

<b>Name</b>	CANTRCV_17_V9251_CHANNELS_USED	
<b>Description</b>	Indicates the total number of enabled channels.	
<b>Verification method</b>	The macro is generated as a numeric value which corresponds to the number of channels in the container 'CanTrcvConfigSet/CanTrcvChannel' which have the parameter 'CanTrcvChannelUsed' set to 'True'.	
<b>Example(s)</b>	<b>Action</b>	<b>Generated output</b>

<ul style="list-style-type: none"> <li>Configure 4 transceiver channels.</li> <li>Set 'CanTrcvChannelUsed' parameter to 'True' for any 2 configured channels</li> </ul>	<pre>#define CANTRCV_17_V9251_CHANNELS_USED ((uint8)2U)</pre>
<ul style="list-style-type: none"> <li>Configure 4 transceiver channels.</li> <li>Set 'CanTrcvChannelUsed' parameter to 'True' for all the configured channels</li> </ul>	<pre>#define CANTRCV_17_V9251_CHANNELS_USED ((uint8)4U)</pre>

### 1.1.16 Macro: CANTRCV\_17\_V9251\_CHANNELS\_CFG

**Table 16** CANTRCV\_17\_V9251\_CHANNELS\_CFG

<b>Name</b>	CANTRCV_17_V9251_CHANNELS_CFG	
<b>Description</b>	Indicates the total number of channels configured.	
<b>Verification method</b>	The macro is generated as a numeric value which corresponds to the number of channels in the container 'CanTrcvConfigSet/CanTrcvChannel'.	
<b>Example(s)</b>	<b>Action</b>	<b>Generated output</b>
	Configure 4 transceiver channels. (CanTrcvChannel_0 to CanTrcvChannel_3)	<pre>#define CANTRCV_17_V9251_CHANNELS_CFG ((uint8)4U)</pre>
	Configure 8 transceiver channels. (CanTrcvChannel_0 to CanTrcvChannel_7)	<pre>#define CANTRCV_17_V9251_CHANNELS_CFG ((uint8)8U)</pre>

## 1.2 File: CANTRCV\_17\_V9251\_Cfg.c

The generated header file contains all pre compile configuration parameters. The file is generated in 'src' folder.

### 1.2.1 Structure: CanTrcv\_17\_V9251\_ChannelConfig [CANTRCV\_17\_V9251\_CHANNELS\_USED]

**Table 17** CanTrcv\_17\_V9251\_ChannelConfig[CANTRCV\_17\_V9251\_CHANNELS\_USED]

<b>Name</b>	CanTrcv_17_V9251_ChannelConfig[CANTRCV_17_V9251_CHANNELS_USED]
<b>Type</b>	CanTrcv_17_V9251_ChannelInfoType
<b>Description</b>	Channel configuration structure of CANTRCV_17_V9251 driver
<b>Verification method</b>	The generated structure is present in CANTRCV_17_V9251_Cfg.c file. The macro CANTRCV_17_V9251_CHANNELS_USED is defined in CANTRCV_17_V9251_Cfg.h file. The size of the structure depends on the number of channels enabled.

	<p><i>Note:</i> A channel can be enabled/disabled by the 'CanTrcvChannel/CanTrcvChannelUsed' configuration parameter.</p>	
Example(s)	Action	Generated output
	Configure 4 channels and enable channels with Ids 1 and 3 among them.	<pre>const CanTrcv_17_V9251_ChannelInfoType CanTrcv_17_V9251_ChannelConfig[CANTRCV_17_V9251_CHANNELS_USED] = {     /* CanTransceiver Channel 1 Specific Information */     {         CANTRCV_TRCVMODE_STANDBY,         4U,         DioConf_DioChannel_DioChannel_STB_0,         CANTRCV_17_V9251_STANDBY_MODE,         1U,         TRUE     },     /* CanTransceiver Channel 3 Specific Information */     {         CANTRCV_TRCVMODE_NORMAL,         WAKEUP_SOURCE_NOT_CONFIGURED,         DioConf_DioChannel_DioChannel_STB_2,         CANTRCV_17_V9251_NORMAL_MODE,         3U,         FALSE     } };</pre>
	Configure 4 channels and enable channels with Ids 0 and 2 among them	<pre>const CanTrcv_17_V9251_ChannelInfoType CanTrcv_17_V9251_ChannelConfig[CANTRCV_17_V9251_CHANNELS_USED] = {     /* CanTransceiver Channel 0 Specific Information */     {         CANTRCV_TRCVMODE_NORMAL,         4U,         DioConf_DioChannel_DioChannel_STB_0,         CANTRCV_17_V9251_NORMAL_MODE,         0U,         TRUE     } };</pre>

```

    },
    /* CanTransceiver Channel 2 Specific Information */
    {
        CANTRCV_TRCVMODE_NORMAL,
        WAKEUP_SOURCE_NOT_CONFIGURED,
        DioConf_DioChannel_DioChannel_STB_2,
        CANTRCV_17_V9251_NORMAL_MODE,
        2U,
        FALSE
    }
};

```

### 1.2.1.1 Member: CanTrcv\_17\_V9251\_NetworkMode

**Table 18** CanTrcv\_17\_V9251\_NetworkMode

<b>Name</b>	CanTrcv_17_V9251_NetworkMode	
<b>Type</b>	CanTrcv_TrcvModeType	
<b>Description</b>	State of the transceiver channel after initialization.	
<b>Verification method</b>	The structure member is generated as an enum value of type CanTrcv_TrcvModeType according to the mode configured in the CanTrcvInitState parameter.	
<b>Example(s)</b>	<b>Action</b>	<b>Generated output</b>
	Configure CanTrcvInitState parameter of Channel 1 as CANTRCV_17_V9251_OP_MODE_NORMAL	CANTRCV_TRCVMODE_NORMAL
	Configure CanTrcvInitState parameter of Channel 1 as CANTRCV_17_V9251_OP_MODE_STANDBY	CANTRCV_TRCVMODE_STANDBY

### 1.2.1.2 Member: CanTrcv\_17\_V9251\_WakeupSourceRef

**Table 19** CanTrcv\_17\_V9251\_WakeupSourceRef

<b>Name</b>	CanTrcv_17_V9251_WakeupSourceRef
<b>Type</b>	EcuM_WakeupSourceType
<b>Description</b>	Reference to the wakeup source of the channel.
<b>Verification method</b>	If CanTrcvWakeupByBusUsed configuration parameter is enabled, the structure member is generated with the value of EcuMWakeupSourceId referenced using CanTrcvWakeupSourceRef parameter. If CanTrcvWakeupByBusUsed configuration parameter is disabled, the structure member is generated as WAKEUP_SOURCE_NOT_CONFIGURED.

	<p><i>Note:</i> The configuration parameter CanTrcvWakeupSourceRef is not user configurable if CanTrcvWakeupByBusUsed configuration parameter is disabled.</p>	
Example(s)	Action	Generated output
	Enable CanTrcvWakeupByBusUsed for Channel Id 1. Refer EcuMWakeupSourceId 2 in CanTrcvWakeupSourceRef configuration parameter of Channel Id 1.	2U
	Disable CanTrcvWakeupByBusUsed configuration parameter for Channel Id 2.	WAKEUP_SOURCE_NOT_CONFIGURED

### 1.2.1.3 Member: CanTrcv\_17\_V9251\_DioChannel

**Table 20** CanTrcv\_17\_V9251\_DioChannel

<b>Name</b>	CanTrcv_17_V9251_DioChannel	
<b>Type</b>	Dio_ChannelType	
<b>Description</b>	Reference to the DIO channel configured for the respective transceiver channel.	
<b>Verification method</b>	The structure member is generated with the symbolic name of the DIO channel referenced by the CanTrcvDioSymNameRef configuration parameter for the respective transceiver channel.	
<b>Example(s)</b>	<b>Action</b>	<b>Generated output</b>
	Refer DioChannelId 1 in CanTrcvDioSymNameRef configuration parameter of transceiver Channel Id 0	DioConf_DioChannel_DioChannel_STB_0
	Refer DioChannelId 4 in CanTrcvDioSymNameRef configuration parameter of transceiver Channel Id 1	DioConf_DioChannel_DioChannel_STB_2

### 1.2.1.4 Member: CanTrcv\_17\_V9251\_DioPinLevel

**Table 21** CanTrcv\_17\_V9251\_DioPinLevel

<b>Name</b>	CanTrcv_17_V9251_DioPinLevel	
<b>Type</b>	Dio_LevelType	
<b>Description</b>	Internal value for setting DIO Level based on the init state of the transceiver.	
<b>Verification method</b>	The structure member is generated as a macro name depending on the configuration in ‘CanTrcvChannel/CanTrcvInitState’ parameter. CANTRCV_17_V9251_NORMAL_MODE is printed if CanTrcvInitState is set to CANTRCV_17_V9251_OP_MODE_NORMAL and CANTRCV_17_V9251_STANDBY_MODE is printed if CanTrcvInitState is set to CANTRCV_17_V9251_OP_MODE_STANDBY	
<b>Example(s)</b>	<b>Action</b>	<b>Generated output</b>
	Configure CanTrcvInitState parameter of Channel 1 as CANTRCV_17_V9251_OP_MODE_NORMAL	CANTRCV_17_V9251_NORMAL_MODE

Configure CanTrcvInitState parameter of Channel 1 as CANTRCV_17_V9251_OP_MODE_STANDBY	CANTRCV_17_V9251_STANDBY_MODE
--	-------------------------------

### 1.2.1.5 Member: CanTrcv\_17\_V9251\_ChannelId

**Table 22** CanTrcv\_17\_V9251\_ChannelId

<b>Name</b>	CanTrcv_17_V9251_ChannelId	
<b>Type</b>	uint8	
<b>Description</b>	Channel Id of the channel.	
<b>Verification method</b>	The structure member is generated as the channel Id of the respective transceiver channel configured in the CanTrcvChannelId configuration parameter.	
<b>Example(s)</b>	<b>Action</b>	<b>Generated output</b>
	Add a channel instance CanTrcvChannel_0 in the CanTrcvChannel container and configure value 0 in the CanTrcvChannelId configuration parameter of that instance	0U
	Add a channel instance CanTrcvChannel_1 in the CanTrcvChannel container and configure value 1 in the CanTrcvChannelId configuration parameter of that instance	1U

### 1.2.1.6 Member: CanTrcv\_17\_V9251\_WakeupbyBus

**Table 23** CanTrcv\_17\_V9251\_WakeupbyBus

<b>Name</b>	CanTrcv_17_V9251_WakeupbyBus	
<b>Type</b>	boolean	
<b>Description</b>	Wake-up by bus status of the channel.	
<b>Verification method</b>	The structure member is generated as TRUE if the parameter CanTrcvWakeupByBusUsed is set true and FALSE if the parameter is set false.	
<b>Example(s)</b>	<b>Action</b>	<b>Generated output</b>
	Configure a transceiver channel with CanTrcvWakeupByBusUsed = True	TRUE
	Configure a transceiver channel with CanTrcvWakeupByBusUsed = False	FALSE

### 1.2.2 Array: CanTrcv\_17\_V9251\_ChannelUsed [CANTRCV\_17\_V9251\_CHANNELS\_CFG]

**Table 1** CanTrcv\_17\_V9251\_ChannelUsed[CANTRCV\_17\_V9251\_CHANNELS\_CFG]

<b>Name</b>	CanTrcv_17_V9251_ChannelUsed[CANTRCV_17_V9251_CHANNELS_CFG]
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<b>Type</b>	uint8	
<b>Description</b>	Each array element represents the index for a channel which is enabled.	
<b>Verification method</b>	<p>The array contains the index for each enabled channel. This index is used to access the 'CanTrcv_17_V9251_ChannelConfig' channel configuration structure.</p> <p><i>Note: If a channel is disabled, 0xFFU is generated as the index value for the respective channel. Atleast one channel is to be enabled.</i></p>	
<b>Examples</b>	<b>Action</b>	<b>Generated output</b>
	<ul style="list-style-type: none"> <li>Configure 3 transceiver channels.</li> <li>Set 'CanTrcvChannelUsed' parameter to 'True' for channels with Ids 0 and 2</li> </ul>	<pre>const uint8 CanTrcv_17_V9251_ChannelUsed[CANTRCV_17_V9251_CHANNELS_CFG] = {     /* Index of CAN Transceiver Channel_0 is used */     0U,     /* CAN Transceiver Channel_1 is not used */     0xFFU,     /* Index of CAN Transceiver Channel_2 is used */     1U };</pre>
	<ul style="list-style-type: none"> <li>Configure 3 transceiver channels.</li> <li>Set 'CanTrcvChannelUsed' parameter to 'True' for channel with Id 0</li> </ul>	<pre>const uint8 CanTrcv_17_V9251_ChannelUsed[CANTRCV_17_V9251_CHANNELS_CFG] = {     /* Index of CAN Transceiver Channel_0 is used */     0U,     /* CAN Transceiver Channel_1 is not used */     0xFFU,     /* CAN Transceiver Channel_2 is not used */     0xFFU };</pre>

## Revision history

## Revision history

## Major changes since the last revision

Date	Version	Description
2020-11-02	1.0	<ul style="list-style-type: none"><li>Released.</li></ul>
2020-11-02	0.1	<ul style="list-style-type: none"><li>Added additional examples for CANTRCV_17_V9251_CH_&lt;x&gt;_MAX_BAUDRATE_SUPPORT, CANTRCV_17_V9251_CH_&lt;x&gt;_ICU_REF, updated examples for CanTrcv_17_V9251_DioChannel, updated type for CanTrcv_17_V9251_DioPinLevel, updated verification method for CanTrcv_17_V9251_WakeupSourceRef, Updated output generated for example 2 in table 1.1.12</li><li>CanTrcv_17_V9251 driver chapter moved from MC-ISAR_TC3xx_Config_Verification_Manual_Basic.pdf to this document.</li></ul>



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**Email:** [erratum@infineon.com](mailto:erratum@infineon.com)

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