ACT (Advanced Configuration Tool)

Version 5.22.6451.1 2024/04/04

Content of Release

Туре	File/Subcomponents	File updated in this release
Document	ACT_ReleaseNotes_5.22.6451.1.pdf	Yes
Setup	Windows 8, Windows 8.1, Windows 10, Windows 11	Yes

Reason for Release

- New functionality
 - o DoIP functionality integrated.
 - o Discontinued support for HMS-Hub.
 - o Scaling graphical view in WebSocket.
- Bug fixes

Update recommendation

	Description
	Corresponding Firmware version is at minimum BSP V1.3.4004
☑ Only devices in the field showing problems	
☐ All devices in the field	

Supported Hardware Products

The following Products are supported by the ACT release. Drivers that are affected by the current release are marked.

	Product	Product version
\boxtimes	CANnector S - 1.01.0091.00000	All
\boxtimes	CANnector L - 1.01.0091.00010	All
\boxtimes	CANnector LA – 1.01.0091.00011	All
\boxtimes	CANnector SE - 1.01.0091.00100	All
\boxtimes	CANnector LE - 1.01.0091.00200	All
\boxtimes	CANnector Log - 1.01.0091.01000	All
\boxtimes	CANnector Range - 1.01.0091.02000	All
\boxtimes	CANnector Bridge - 1.01.0091.00200	All
	FRC-EP190 CANonly – 1.01.0094.10000	Obsolete article – may be not supported in future releases
\boxtimes	FRC-EP190 FlexRay – 1.01.0094.10010	Obsolete article – may be not supported in future releases
	FRC-EP190 Plus CANonly – 1.01.0094.10020	Obsolete article – may be not supported in future releases

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	Product	Product version
\boxtimes	FRC-EP190 Plus CANonly - 1.01.0094.10022	All
\boxtimes	FRC-EP190 FlexRay plus - 1.01.0094.10030	All
	FRC-EP190 EtherCAT - 1.01.0094.10040	Obsolete article – Full support only with ACT version until 5.6.2603.x-BETA
	FRC-EP190 FlexRay plus 4 - 1.01.0094.10050	All
\boxtimes	FRC-EP190 FlexRay plus 4 - 1.01.0094.10052	All
	FRC-EP190 Plus EtherCAT – 1.01.0094.10060	All
×	FRC-EP190 Max EtherCAT - 1.01.0094.10070	All
	FRC-EP170 - 1.01.0142.00000	All
\boxtimes	FRC-EP170 Plus - 1.01.0142.00010	All
	FRC-EP170 WLAN - 1.01.0142.00020	Obsolete article – may be not supported in future releases
×	FRC-EP170 WLAN Plus 1.01.0142.00030	Obsolete article – may be not supported in future releases

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Release History

Version 5.22.6451.1 (2024-04-04)

Component	Solution	Description
Application	New functionality	Show outputs of pre-build step and post-build step in event log
	New functionality	Replaced 'Ascending order' by 'Adopt source bus frame identifier' as default setting for creating dynamic bus descriptions.
	New functionality	Porting a project to new bus description(s) resulted in a corrupted project if the new bus description(s) contained ECU families.
	Bugfix	Wrong revision number shown in About Box.
	Bugfix	A new RBS project with ECU family selection may have got corrupted after reloading it. This was caused by inconsistent ECU family compilations across the various vehicle buses.
	Bugfix	Added missing icons to source view context menu.
	Bugfix	Event log window position was not restored correctly.
	Bugfix	Fixed potential exception on closing a project.
Generic Ethernet	New functionality	Improved usability of the configuration dialog by extracting functionality to an expert mode view.
	Bugfix	Fixed potential latencies when communicating between two FRC-EP1xx devices.
	Bugfix	Timestamp handling fixed in CAN@net NT/VCI protocol.
	Bugfix	CAN@net NT/VCI flow control protocol revised.
	Bugfix	CAN@net NT/VCI protocol: VCI message overrun flag was not set.
	Bugfix	Prevent allocating CAN-FD message for CAN@net II protocol.
EtherCAT	Bugfix	Revised layout of the EtherCAT configuration dialog.
System Bus	Bugfix	Extend logger status message on system bus by several logger related status signals.
WebSocket	New functionality	Added scaling graphical signal view.
RBS	New functionality	Assert the existence of the static RBS object files.
	Bugfix	Make project version number available to RBS generator plug-ins.
	Bugfix	Wrong E2E Profile-5 CRC calculation
Logger	New functionality	Fixed generating MDF-4 formatted logs. - Changed SI comment for standard CAN frame: "Standard" => "" - Changed SI comment for standard CAN FD frame: "FD" => "Standard FD"
	New functionality	Fixed BLF format problems: - prevent loss of bus data when internal events were logged - increase container size to 100kb to increase performance
	Bugfix	Renaming a trigger signal affected start/stop trigger selection for the logger.
Ixxat.Adaption RBS Plug-in	New functionality	Added support of end-to-end protection profile 5
	Bugfix	Mixed end-to-end profiles was not supported
	Bugfix	Version number was not incremented

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Component	Solution	Description
	Bugfix	Prevent cryptic error message in case of configured E2E protection profile detection from database and database lacking this information.
AUTOSAR-Import	New functionality	Added support of AUTOSAR System Template XML formats R19.11, R20.11, R21.11, R22.11
FIBEX-Import	Bugfix	Loading a FIBEX with bit field text table resulted in a StackOverflowException.
Help System	New functionality	Describe how to implement End-to-End Protection.
	New functionality	Documented the RBS OnTimer timer value resolution.
	New functionality	Improve help for EtherCAT settings
	New functionality	Added missing help texts for stopping/starting CAN/FlexRay buses via the System bus.
	Bugfix	Typo in Generic Ethernet help
	Bugfix	Specify the supported file systems for mass storages used by the logger.
	Bugfix	Describe number of entries in a FlexRay Rx FIFO.
	Bugfix	Add missing help texts for configuration control commands on the System bus.
	Bugfix	Document active switch in mapping sequence halp diagam.
	Bugfix	Add data-flow diagram to the help for committing and transmitting mapped data.
FRC-EP170	Bugfix	Generic Ethernet: Ring buffer handling revised.
FRC-EP190 CANnector	Bugfix	WebSocket: Fixed memory leak regarding connection initialization.
O/Williams	Bugfix	Fixed container-PDU processing rearding queued collection.
	Bugfix	Fixed container-PDU processing rearding contained secured PDUs.
	Bugfix	Extended Logger status message on System bus.
	Bugfix	Prevent log output for frames with zero length.
	Bugfix	Processing of container PDUs with dynamic mapping was erroneous.
	Bugfix	RBS_USR_triggerCanPdu() did not work for containered secured PDUs.

Version 5.20.6038.1 (2023-01-31)

Component	Solution	Description
Application	New functionality	.NET Framework 4.8 is needed, now
	New functionality	Feature #5412: Bus-specific tool bars in the source view and direct access to the bus configuration.
	New functionality	Feature #5878: New bus connectors can be added directly in the source view.
	New functionality	Bus configuration dialog: Replaced combo box and button for adding bus connectors by a drop-down button to harmonize with the signal view.

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Component	Solution	Description
	New functionality	AUTOSAR End-to-End protection visualized in property window.
	New functionality	Feature #5944: Show signal value text table in properties window.
	New functionality	Upgraded WIBU CodeMeter Runtime to V7.51.
	Bugfix	Defect #8282: Edited project version number was not applied.
	Bugfix	Defect #8106: A pinned EventLogForm was no longer shown if the main window restored to "minimized" on startup.
	Bugfix	Defect #8284: Build number > 255 was not supported. Thus, building device configuration failed after 255 builds.
	Bugfix	Source view did not correctly show a message's mapped state if the message was mapped indirectly via a transport layer bus (e.g., DiagTP).
	Bugfix	Most recently used map subject was not restored with application restart.
	Bugfix	Defect #8331: Application language settings were not applied to the about box dialog.
	Bugfix	Defect #8362: PDU editor used signal computation min/max limits as physical constraint instead of as domain.
	Bugfix	Defect #8407: Source View tab pages disappeared with moving a bus to another connector.
	Bugfix	Defect #8346: Abnormal program termination trying to edit a PDU with length > 64 bytes.
	Bugfix	Defect #8322: Error if IEEE FLOAT64 max value is entered in signal properties dialog.
	Bugfix	Defect #8330: Signal byte order was not editable.
	Bugfix	Defect #8372: Zero authentication info transmitted for secured PDU with update bit.
CAN	New functionality	Bit rate switch is configurable.
	New functionality	Feature #5680: Bus specific options for the message edit dialog: Editing of frame format added (standard/extended and FD/noFD)
	New functionality	Feature #5899: Added echo command to switch off BRS bit for CAN-FD messages of a specific bus
	Bugfix	Defect #8317: Signals contained by a secured PDU that is nested into a container PDU did not work as source for signal mappings.
	Bugfix	Defect #8221: Leading and trailing message bytes that are not covered by signals were not part of a PDU imported from a CANdb file. This led to CRC calculation issues for RBS projects.
FlexRay	Bugfix	Defect #8317 : Signals contained by a secured PDU that is nested into a container PDU did not work as source for signal mappings.
Generic Ethernet	New functionality	Feature #5859:For GebEthernet-to-CAN wildcard mapping self-reception messages are retransmitted on GenEthernet CAN@net II binary protocol as confirmation of the actual transmission on CAN.
	New functionality	Feature #5790: FRC binary protocol V3 was introduced (including: Support of multiple channels, Self-reception flag was added). FRC binary protocol V3 is the default protocol for new projects, now.
	Bugfix	Defect 8303: No error result on failed starting of a GenEthernet.
	Bugfix	Defect #8303: Configuring GenEthernet with not available network interface did not retrieve an error.

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Component	Solution	Description
Component	Bugfix	Defect #8281: Virtual self-reception message on VCI protocol can be activated via echo command for a dedicated connection and channel. This can be needed if there is no GenEthernet-to-CAN wildcard mapping which would implicitly forward the CAN self-receptions to the GenEthernet.
	Bugfix	Defect #8235: Connection was denied if network interface 'ALL' was configured.
	Bugfix	Defect #8238: Establishing ECI connection may have failed while having high bus load
	Bugfix	Defect #8239: Optimized CPU load for establishing ECI connection
	Bugfix	Defect #8241: Revised log outputs
	Bugfix	Defect #8285: Sporadically crashed when closing multiple connections simultaneously.
	Bugfix	Connection was closed in case of missing remote device.
	Bugfix	Auto-reconnect did not work under all circumstances.
	Bugfix	Defect #8377: Configuration download failed if there was not at least one gateway mapping for an allocated Generic Ethernet channel.
	Bugfix	Defect #8403: Message frame format was not editable.
EtherCAT	Bugfix	Defect #8242: Padding object not created if PDO consists of only one bit sub item.
HMS-Hub	Removed	Functionality removed
User Code	New functionality	Feature #5412: Bus-specific tool bars in the source view and direct access to the bus configuration: Start tool button for Eclipse in the user code source view
MATLAB	New functionality	Feature #5412: Bus-specific tool bars in the source view and direct access to the bus configuration: Start tool button for MATLAB in the MATLAB source view
System Bus	New functionality	New signals for switching between multiple applications of a device configurations.
Virtual Bus	New functionality	Bus description can be imported/exported form/to a CANdb file.
RBS	New functionality	Introduced event for self-reception messages.
	New functionality	Introduced access to Generic Ethernet gateway buses.
	New functionality	Introduced access to System gateway bus.
	New functionality	AUTOSAR End-to-End protection profile name provided to RBS Lua data.
	New functionality	Feature #6030: IXXAT sample RBS plug-in implements AUTOSAR End-to-End Protection Profile 1B and 1C.
	Bugfix	Defect #8373: White space in plug-in name caused RBS compile error.
	Bugfix	Defect #8355: Manipulation was not possible for PDUs/signals within container-PDUs or secured-PDUs.
	Bugfix	Defect #8308: Building the device configuration failed if the origin source ECU of a secured PDU had to be substituted by the Ixxat dummy ECU. Preconditions for this scenario: The origin source ECU was disabled by the ECU family selection. OR - The bus description database for an RBS project only defines exactly one ECU. Problematic consequence: The TX key-id for the secured PDU is unknown because of the missing IncludedSecuredPdu element. Solution: Use the receiver side key-id as substitute value.

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Component	Solution	Description
	Bugfix	Defect #8309: Building device configuration for RBS project failed if manipulation was activated and container-PDUs or secured-PDUs were simulated.
	Bugfix	Defect #8358: SecOC RBS crashed if no OnGetKey event handler was registered.
	Bugfix	Defect #8372: Zero authentication info transmitted for secured PDU with update bit.
	Bugfix	Defect #8301: RBS generator define value with linefeed resulted in RBS code generation error.
	Bugfix	Defect #8307: Printing a warning in RBS plug-in Lua code stopped the RBS code generation with error.
	Bugfix	Defect #8297: Generating a device configuration for an RBS gateway project failed if IOs were part of the project.
	Bugfix	Defect #8248: Optimized build performance.
	Bugfix	Defect #8283: RBS configuration .NET API for Secured-PDUs was not installed.
	Bugfix	Defect #8169: Fixed layout of DefineControl for display scaling > 100%
Logger	New functionality	CAN-FD support for ASC format
	New functionality	Feature 5669: BLF format: Increased timestamp accuracy from seconds to ms
	Bugfix	BLF format: FlexRay messages were not logged correctly under all circumstances.
	Bugfix	BLF format: Trigger/marker flags were not logged correctly.
	Bugfix	BLF format: Wrong or negative timestamps were possible.
	Bugfix	BLF format: Fixed issue for log file change
	Bugfix	Defect #8204: Logging User Code messages was not supported for BLF and ASC file format.
Trigger	Bugfix	Defect #8039: Trigger nodes may have not been removed if an add operation was canceled.
AUTOSAR-Import	New functionality	Set default offsets and calculation methods for End-to-End protection profiles 1,2,4,5,6,7,11,22
	Bugfix	Defect #8349:Signal value constraints were not imported
	Bugfix	Defect #8277: End-to-End profile 1C DATA-ID-NIBBLE signal was not marked as CRC signal.
CANdb-Import	New functionality	Meaningful warning message in case of SIG_VALTYPE referencing an unknown CAN message.
	Bugfix	Defect #8316: An explicit error message is logged instead of cryptic one in case of unsupported extended multiplexing.
FRC-EP170	Bugfix	Defect #8217: Optimized gateway start-up time
FRC-EP190 CANnector	Bugfix	Configuration switching may have failed.
5, ii ii iootoi	Bugfix	Generic Ethernet status was missing in Dashboard.
	Bugfix	Self-reception for message mapping did not work.

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Version 5.17.5436.1 (2022-03-23)

Component	Solution	Description
CAN / GenEthernet	Bugfix	CANdb default ECU was imported as Ixxat Dummy ECU. Results in potentially incompatible project files for future releases – fixed. This bug was introduced with 5.16.5238.1.

Version 5.16.5238.1 (2021-11-23)

Component	Solution	Description
Application	New functionality	Support of AUTOSAR Secured-PDUs (SecOC)
	New functionality	Integrated database editor for signal PDUs
	New functionality	Import mappings from GatewayMapping.xml
	New functionality	Optionally excluding CRC-/AliveCounter signals from new mappings
	Improved functionality	Improved usability of editing signals
	Improved functionality	Editing a signal's unit
	Improved functionality	Mapping assistant also works for buses with static bus description.
	Bug fix	Upgraded WIBU CodeMeter Runtime to V7.30a because of security issues.
	Bug fix	FIBEX import: SIGNAL-GROUPS caused import errors.
	Bug fix	ACT did not reliably become the foreground window after closing the IxAdmin window.
	Bug fix	Searching for a signal in the mapping view failed.
	Bug fix	Improved user experience of multiple message transmitters dialog.
	Bug fix	Added support of partial resolution for messages with multiple transmitters.
	Bug fix	Fixed exception when cleaning up a bus description.
	Bug fix	Duplicated ECU short names shall lead to warnings when loading a bus description database.
CAN	New functionality	Predefined CAN timings
	New functionality	CAN baud rate detection
	Bug fix	Debounce Time of 1ms leads to sporadic transmit freezes
Generic Ethernet	Bug fix	Exception when saving a GenEthernet project to a new location.
	Bug fix	Fixed CAN@net NT protocol flow control. Message communication could have been aborted.
	Bug fix	Incomplete messages could have been transmitted.
	Bug fix	GenEthernet/VCI configuration was invalid if no first channel had been defined (GenEthernet-x.1).
	Bug fix	Debounce Time of 1ms led to sporadic transmission freezes
HMS-Hub	Improved functionality	Updated certificate.

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Component	Solution	Description	
User Code	New functionality	Added wake-up-on-CAN sample code for CANnector LA.	
	Improved functionality	Enabled clean command for Eclipse project.	
	Bug fix	Improved source code comments.	
	Bug fix	User Code was not ported when upgrading to a new User Code adapter version.	
	Bug fix	Upgrading the adapter version moved files without warning.	
MATLAB	New functionality	Import model from an existing project including the related gateway mappings.	
Virtual	Bug fix	Unused signal could not have been removed.	
RBS	New functionality	LIN RBS	
	New functionality	Accessing database manufacturer extensions via RBS AddInView API.	
	New functionality	Additional RBS event handler	
	Bug fix	Generating RBS source code failed for bigger projects.	
	Bug fix	Generating RBS source code could have failed for extensive projects.	
FRC-EP170 FRC-EP190 CANnector	Improved functionality	Optimized configuration start-up.	
Event log	Improved functionality	Added save button	
	Improved functionality	Added support for Ctrl+A shortcut	
Help	Improved functionality	Added description for OnMessageReceiveEvent.	
	Bug fix	Manipulation A2L filename format was missing for the ETAS A2L chapter.	
	Bug fix	LED description for 8 CAN devices was missing.	
IxAdmin	Improved functionality	Copy&paste support for IP addresses in the network configuration	
	Improved functionality	SSH.NET : Upgraded to V2020.0.1	
	Improved functionality	Added support of predefined CAN timings	
	Improved functionality	Added support of automatic CAN timing detection	
	Bug fix	Device with high CPU load could not be reached	

Version 5.13.4725.1 (2021-07-26)

Solution	Component	Description	Fixed with
Improved functionality	Application	Message transmitter conflicts: Alphabetically sorted the tree views.	V5.13.4725.x
Improved functionality	Application	Message transmitter conflicts: Allowed ignoring conflicts.	V5.13.4725.x

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Solution	Component	Description	Fixed with
Bug fix	Application	Message transmitter conflict:Changed keyboard shortcut to resolve conflicts from Ctrl+Arrow to space key. Ctrl+Arrow also affected the scroll bars.	V5.13.4725.x
Bug fix	Application	Exception when porting a project to a new bus description with conflicting transmitters for at least one message.	V5.13.4725.x
Bug fix	Application	Database import failed if an ECU with related TP connection(s) was excluded by an ECU family selection.	V5.13.4725.x
Bug fix	Application	Upgraded WIBU Codemeter to version to V7.21a because of security issues.	V5.13.4725.x
Bug fix	Application	RBS view / Mapping view: Wrong search image displayed for German language settings.	V5.13.4725.x
Bug fix	Application	Mapping view: Bus name visualized as connector name instead of its logical name.	V5.13.4725.x
Bug fix	Application	Message edit dialog: Error icons were covered partially.	V5.13.4725.x
Bug fix	Application	Exception when moving a bus to another bus connector via drag&drop.	V5.13.4725.x
Bug fix	EtherCAT	Building the device configuration could have failed for EtherCAT buses with assigned ESI file.	V5.13.4725.x
Improved functionality	Logger	Enabled logging of TP messages.	V5.13.4725.x
Bug fix	MATLAB	Exception when changing cycle-time.	V5.13.4725.x
New functionality	UserCode	Introduced function USR_model_send_single_frame() for transmitting messages with reduced data length.	V5.13.4725.x
Bug fix	UserCode	Exception when changing cycle-time.	V5.13.4725.x
Bug fix	UserCode	Smart update mode is deactivated by default. Initial activation caused led to problems for user	V5.13.4725.x
Bug fix	CANnector/FRC- EP170/FRC-EP190	Frame mapping did not work under certain circumstances.	V5.13.4725.x
Improved functionality	Application	Bus Configuration Dialog: Bus type icons shown by the toolbar combo box.	V5.13.4604.x-BETA
Improved functionality	Application	Added support of AUTOSAR Container-PDUs.	V5.13.4604.x-BETA
New functionality	Application	Added HSFZ bus	V5.13.4604.x-BETA
New functionality	Application	Added DiagTP bus.	V5.13.4604.x-BETA

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Solution	Component	Description	Fixed with
New functionality	Application	Added support for HMS-Hub	V5.13.4604.x-BETA
Improved functionality	Application	Added support of data active switch for gateway mappings.	V5.13.4604.x-BETA
Improved functionality	Application	Resolving conflicts regarding multiple source ECUs for the same frame-triggering.	V5.13.4604.x-BETA
Bug fix	Application	Upgraded Codemeter to version 7.20a	V5.13.4604.x-BETA
Bug fix	Application	Adapted splash screen and about box to modified product name.	V5.13.4604.x-BETA
Bug fix	Application	Inconsistent icons for a magnifier with German language setting	V5.13.4604.x-BETA
Bug fix	Application	Help image too large for default main window size.	V5.13.4604.x-BETA
Bug fix	Application	Removed useless entry in mapping-view context menu.	V5.13.4604.x-BETA
Improved functionality	FRC-EP170/FRC-EP190	 Upgraded FRC-EP190 BSP to V1.3.3800_BETA Added device discovery IP assignment overhaul, allowing the use of DHCP clients and static network configurations Added WebSocket frame mapping feature Bugfix for FlexRay TX buffer dual controller issue when no key slot id is configured 	V5.13.4604.x-BETA
New functionality	CANnector	Added support of Power-Hold feature	V5.13.4604.x-BETA
Improved functionality	RBS	Accessing manufacturer specified database contents via RBS Plug-ins	V5.13.4604.x-BETA
Improved functionality	RBS	Unified support of manufacturer extensions for FIBEX, AUTOSAR and CANdb	V5.13.4604.x-BETA
Improved functionality	EtherCAT	Added performance related settings.	V5.13.4604.x-BETA
Bug fix	EtherCAT	Help: Fixed value table for EtherCAT bus states.	V5.13.4604.x-BETA
Bug fix	Logger	Assured valid frame identifiers. The valid range is limited by the embedded runtime module to [0x0000; 0xFFFF].	V5.13.4604.x-BETA
Bug fix	Logger	Mapping assistant did not work for the logger bus.	V5.13.4604.x-BETA
Bug fix	Logger	Changing the logging format caused an exception.	V5.13.4604.x-BETA

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Solution	Component	Description	Fixed with
Bug fix	Generic Ethernet	The configure capabilities of GenEthernet channels were not ported to the PC VCI CANs.	V5.13.4604.x-BETA
New functionality	WebSocket	Added frame mapping support.	V5.13.4604.x-BETA
Bug fix	MATLAB	Added Supervision feature	V5.13.4604.x-BETA
Bug fix	UserCode	Added Supervision feature	V5.13.4604.x-BETA
Bug fix	Console API	Invalid relative paths in created project when project target directory was the working directory.	V5.13.4604.x-BETA
Bug fix	Application	Wrong frame direction in GatewayMapping.xml	V5.11.3958.x-BETA
New functionality	UserCode	Power hold implementation	V5.11.3958.x-BETA
Bug fix	UserCode	Upgraded GTW firmware to V3.9.1145-BETA (user code bugfix: copy data length corrected (driver crashed), behavior at default value update corrected (will not send signals out then anymore); changed data length parameter from UINT8 to UINT16; added missing parameter to receive_anonymous_frame function)	V5.11.3892.x-BETA
Bug fix	MATLAB	Upgraded GTW firmware to V3.9.1145-BETA (MATLAB bugfix: copy data length corrected (driver crashed))	V5.11.3892.x-BETA
Bug fix	Application	Project Wizard: Back button was not greyed.	V5.11.3812.x-BETA
Bug fix	Fibex Import	Floating point numbers in exponential notation were not imported correctly.	V5.11.3812.x-BETA
Bug fix	Help System	Improved help manual for GenEthernet settings dialog.	V5.11.3812.x-BETA
Bug fix	UserCode	Assured comparability of source files.	
New functionality	CAN/CAN FD	Bus type HMS Hub added to set up connections to the HMS cloud.	V5.11.3747.x-BETA
New functionality	EtherCAT	Added EtherCAT support to freeware variant. Lite license is no longer needed for EtherCAT.	V5.11.3747.x-BETA
Bug fix	Application	Added support of AUTOSAR container PDUs. Container-PDUs are visualized by the database window and can be used for gateway mappings. Container related PDU properties are visualized by the properties Window. Embedded runtime modules do not support container PDUs, yet.	V5.13.3726.x-ALPHA
Bug fix	Application	Added HSFZ bus and TL bus. The functionality development of the HSFZ bus and the TL bus in ACT as well as in the embedded runtime modules is not completed, yet.	V5.13.3726.x-ALPHA

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Solution	Component	Description	Fixed with
Bug fix	Application	Added support of data active switch mappings. The embedded runtime modules do not support data active switch mappings, yet.	V5.13.3726.x-ALPHA
Bug fix	RBS	Container PDU related data is provided for - RBS configuration plug-ins (.NET) - RBS generation plug-ins (LUA)	V5.13.3726.x-ALPHA
Improved functionality	AUTOSAR Import	Added support of container PDUs.	V5.13.3726.x-ALPHA
Improved functionality	AUTOSAR Import	Added support of AUTOSAR XML V3.2 format.	V5.13.3726.x-ALPHA
Improved functionality	AUTOSAR Import	AUTOSAR End-to-End protection is imported from <end-to-end-profile> and <end-to-end-transformation-i-signal-props> elements. The imported data is visualized with the properties of a signal PDU and provided to the RBS generation LUA plug-ins.</end-to-end-transformation-i-signal-props></end-to-end-profile>	V5.13.3726.x-ALPHA
Bug fix	Database Import	Signals without coding are ignored.	V5.13.3726.x-ALPHA
Bug fix	Database Import	Removed database import warning	V5.13.3726.x-ALPHA
Improved functionality	Database Import	Permitted multiplexer dynamic part without any switched PDU instances.	V5.13.3726.x-ALPHA
Improved functionality	Database Import	Improved logging by adding debug log messages	V5.13.3726.x-ALPHA
Bug fix	Application	PDUs can be filled up with byte signals.	V5.11.3687.x-BETA
Bug fix	Application	Bus Configuration Dialog: RBS bus connectors were not marked as such ones.	V5.11.3687.x-BETA
Bug fix	Application	Help: Added missing documentation for bus description clean-up.	V5.11.3687.x-BETA
Bug fix	CAN/CAN FD	CANdb Import : Messages without signals are imported as a zero length PDU.	V5.11.3687.x-BETA
Bug fix	EtherCAT	Prevent build error is last signal of a PDO is not mapped.	V5.11.3687.x-BETA
Bug fix	Generic Ethernet	Prevent build error is last signal of a PDO is not mapped.	V5.11.3687.x-BETA
Bug fix	Generic Ethernet	Porting a CAN@net II protocol project to a new bus description failed.	V5.11.3687.x-BETA
Bug fix	UserCode	Added function USR_data_writeRawOnOutputSignal to write RAW values to an output signal.	V5.11.3687.x-BETA

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Solution	Component	Description	Fixed with
Bug fix	UserCode	Fixed integer signal value calculation from floating point by rounding.	V5.11.3687.x-BETA
Bug fix	Application	Upgraded WIBU CodeMeter Runtime to V7.10a because of security issues.	V5.11.3687.x-BETA
Bug fix	Logger	Not supported SD card was selectable for CANnector target device.	V5.11.3687.x-BETA
Bug fix	Application	upgraded WIBU CodeMeter Runtime to V7.10a because of security issues	V5.10.3459.x-HOTFIX
Bug fix	GenericEthernet	Fixed RX issue CAN@net II. TCP flush for performance mode added.	V5.10.3459.x-HOTFIX
Other change	Application	Event log: Added optional support of Debug log level messages.	V5.11.3427.x-BETA
Improved functionality	AUTOSAR Import	Added support of AUTOSAR XML V3.2 format.	V5.11.3427.x-BETA
Bug fix	AUTOSAR Import	Log transformation steps.	V5.11.3427.x-BETA
Bug fix	AUTOSAR Import	Prevent import cancellation because of duplicated coding short names.	V5.11.3427.x-BETA
Bug fix	Database Import	Signals without coding are ignored.	V5.11.3427.x-BETA
Bug fix	Database Import	Removed warning 'Missing PDU triggering for standard PDU <pdu name=""> required for ECU port <port name="">.'. This was logged if an ECU port does not explicitly specify it's included PDUs and thus implicitly all PDUs contained by the referenced frame (-triggering) are included. The warning was removed because it's not mandatory to specify a PDU triggering for each standard PDU.</port></pdu>	V5.11.3427.x-BETA
Bug fix	Database Import	Removed warning 'PDU triggering <refid>: Referenced PDU <pdu name=""> is not a standard PDU.' Although this is unexpected it has not negative impact.</pdu></refid>	V5.11.3427.x-BETA
Bug fix	Database Import	Multiplexer dynamic part do not mandatorily have to contain switched PDU instances. This was permitted now. At least one switched PDU instance was expected until now.	V5.11.3427.x-BETA
Bug fix	Database Import	Added debug log messages	V5.11.3427.x-BETA
Bug fix	GenericEthernet	CANnector CAN settings, low speed erroneously enabled for CAN1 and CAN2	V5.10.3354.x-HOTFIX
Bug fix	AUTOSAR Import	Multiplexer static parts are not imported.	V5.10.3331.x-HOTFIX
Bug fix	AUTOSAR Import	Import failed for multiplexed PDUs without dynamic part.	V5.10.3331.x-HOTFIX
Bug fix	AUTOSAR Import	Import failed if a PDUs length was not defined.	V5.10.3331.x-HOTFIX

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