

XSOFT-CODESYS-3 PLC programming system



CODESYS



Powering Business Worldwide

Manufacturer

Eaton Automation GmbH
Spinnereistrasse 8-14
CH-9008 St. Gallen
Schweiz
www.eaton-automation.com
www.eaton.eu

Support

Region North America

Eaton Corporation
Electrical Sector
1111 Superior Ave.
Cleveland, OH 44114
United States
877-ETN-CARE (877-386-2273)
www.eaton.com

Other regions

Please contact your local distributor or send an
e-mail to: automation@eaton.com

Original instructions

English

Redaction

HermannHaemmerle@Eaton.com

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1 XSOF-CDSESYS V3.5.17

1.1 Release information

1 XSOF-CDSESYS V3.5.17

1.1 Release information

Product	XSOF-CDSESYS-3
Release	3.5.17
Profile specification	XSOF-CDSESYS V3.5.17
Build	V3.5.17
Setup	Setup_XSOF_CDSESYS_V3.5.17_x64.exe
Test Management	A. Schmid
Quality Management	P. Zuber

1.2 Version information

1.2.1 Programming system

Component	Actual Version
CDSESYS V3	3.5 SP17 Patch 3

1.2.2 Target firmware

Firmware	Actual Version
RTS for XV-1xx, XV-3xx, XC-152 <i>firmware.exe</i>	3.5.17.30
RTS for XC-202 <i>firmware.exe (XC202.bin)</i>	3.5.17.30
RTS for XC-303	3.5.17.30
RTS for CEAG_HMI	3.5.17.30

1.2.3 Target systems

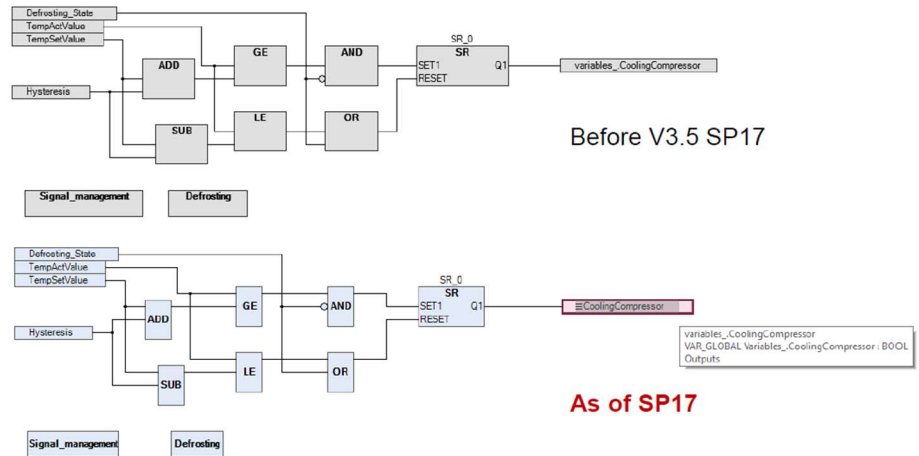
Target system	Actual Version
XV-1xx	3.5.17.30
XV-3xx	3.5.17.30
XC-202	3.5.17.30
XC-152	3.5.17.30
XC-303	3.5.17.30
CEAG_HMI	3.5.17.30

1.3

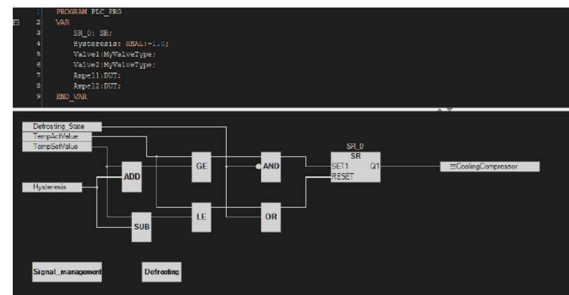
Features and changes

CFC improvements

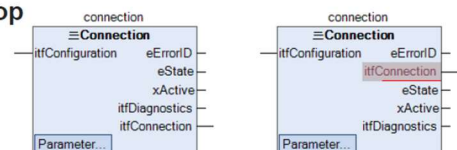
General space optimization



Dark theme



Pin rearrangement by drag and drop

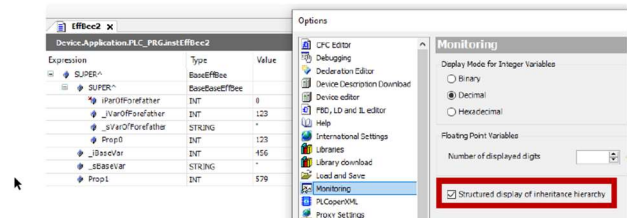


- Increased drop area for connections
- Keyboard shortcuts
- Dropping objects and symbols into the canvas

1 XSOFT-CODESYS V3.5.17

1.3 Features and changes

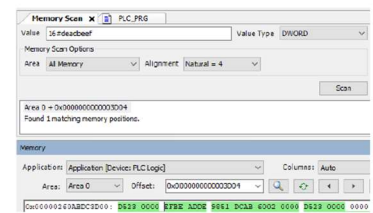
- **Watch list:**
Structured display of inherited variables of an FB



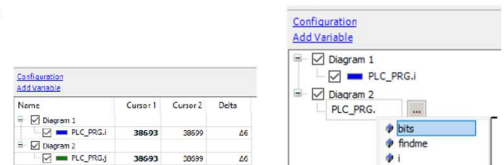
- **Force list:**
Display of recent process value of a forced variable

Expression	Type	Value	Prepos...	Overwritten value at start of cycle	Overwritten value at end of cycle
Device.Application.PLC_PRG...	DINT	55	55	1523	1523
Device.Application.PLC_PRG...	DINT	75	75	1523	1523

- **Memory view: Search for specific values in the memory of the IEC application**
 - Supported in Core Dump, too

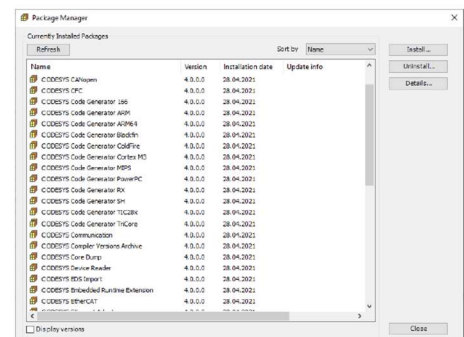


- **Trace**
 - Simplified adding and editing of variables
 - Improved work with multiple diagrams
 - Improved usage of cursor



Modularization of the CODESYS Development System

- **CODESYS Development System**
 - Unmodifiable core system: "CODESYS Essentials"
 - Mandatory in order to work
 - Various individual modules
 - Installed with the standard setup
 - Own versioning (4.x.x.x)
 - Update of individual modules possible without changing "CODESYS Essentials"
 - Functional updates at any time
 - Immediate benefit from improvements



1 XSOFT-CODESYS V3.5.17

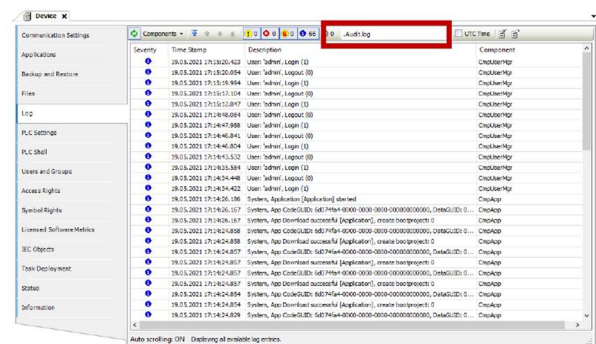
1.3 Features and changes

OPC UA Server / Client

- Support of OPC UA Methods
- Support of OPC UA Alarms & Conditions
- Support of user-defined information models / companion specifications
- Implementation of new security profiles defined in OPC UA 1.04

Further improvements

- Logging of user actions
 - Login successful / failed / logout
 - Download / create / start / stop / reset / delete application

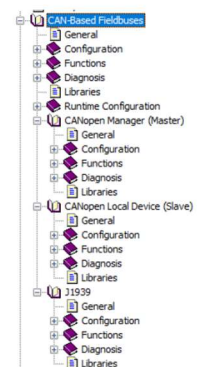


EtherNet/IP

- Scanner
 - LargeForwardOpen for Scanner and Adapter:
Up to 65527 bytes per connection (before: 512 bytes)!
 - EtherNet/IP Scanner:
Possibility of enabling filling bytes in I/O mapping
 - Stability improvements for multiple connections per slave
 - GUI: Many bug fixes and performance improvements
→ Update recommended!

CAN (CANopen/J1939)

- General rework of online help with focus on diagnosis
 - New structure: Configuration, Functions, Libraries, Diagnosis
- Diagnosis chapter added
 - Diagnosis in application
 - Diagnosis in user interface
 - Troubleshooting



CAN (CANopen/J1939)

Troubleshooting

Problem	Possible Solution
The CANbus is not in the device tree directly after the application download.	<p>Check the status page and log page of the CAN bus. You will find more information here.</p> <p>Possible causes:</p> <ul style="list-style-type: none"> The driver could not be opened: <ul style="list-style-type: none"> The network ID is not set large enough. In the CAN bus, a network ID was set for which there is no driver instance (if interfaces, then valid values for the network ID are only 0 and 1). This other component was not loaded in the runtime. Check whether the CAN driver component has been loaded correctly (see the configuration). The memory is insufficient. Opening the CAN driver requires memory. Too little memory may be available. A bus error has occurred: <ul style="list-style-type: none"> The CAN chip signals a bus error. See the chapter "Diagnosis of Hardware Failures".

Diagnosis of Hardware Failures

Most CAN problems are traced back to incorrect wiring or faulty CAN devices. Potential errors include the following:

- Missing or incorrectly dimensioned terminal resistors
- The bus has to be terminated exactly with a 120 Ω terminal resistance at the beginning and at the end.
- Different baud rates
- All subscribers have to use the same baud rate
- Short circuit between CAN-Low, CAN-High, CAN-Ground, V+
- CAN-Low and CAN-High interchanged
- Different lengths of cables and CANopen
- CANopen and CANopen are not a formal part. As a result, signals can be interrupted more easily.
- Different grounding schemes for CANopen
- Two-wire grounding of the CAN bus cable
- When both ends of the wiring of the CAN bus cable are grounded, grounding loops can form which can cause interruptions
- Use cable test ring
- The maximum bus length depends on the set baud rate (see table).

Baud Rate	Cable Length
10 kbps	0.7 km
20 kbps	0.3 km
50 kbps	1.0 km
125 kbps	500 m
250 kbps	250 m
500 kbps	125 m
1 Mbps	25 m

Detecting hardware failures

Modularization

- Stack library placeholders:
Now part of the CANopenManager, CANopenSlave, and J1939Manager device
- Using new protocol stack:
Before: „Update device“ for PLC necessary → New runtime required
New: „Update device“ on the corresponding stack device (e.g. CANopenManager) possible

CANopen Manager

- Improved COB-ID collision detection and intelligent suggestions
 - Additional check for EMCY, SYNC and TIME COB-ID
 - Check & Fix dialog suggests COB-ID formulas where possible.

Name	Object	Bit length
✓ 16#1400: Receive PDO Communication Parameter	16#202	16
DigOutput#_1	16#6200:16#01	8
DigOutput#_2	16#6200:16#02	8
✓ 16#1401: Receive PDO Communication Parameter	16#202	64
Write Analogue Output 1	16#6411:16#01	16
Write Analogue Output 2	16#6411:16#02	16
Write Analogue Output 3	16#6411:16#03	16
Write Analogue Output 4	16#6411:16#04	16

Wrong and Double Assigned COB-IDs

Device name	Node-ID	Object	Formula	Conflicted COB-ID	Automatic Suggestion
BK5120	1	PDO 16#1400	16#202	16#00000202	\$NODEID+16#200
BK5120	1	PDO 16#1401	16#202	16#00000202	\$NODEID+16#300

CANopen Slave

- PDO/SRDO communication settings of I/O areas can be edited.

J1939

Import function for DBC

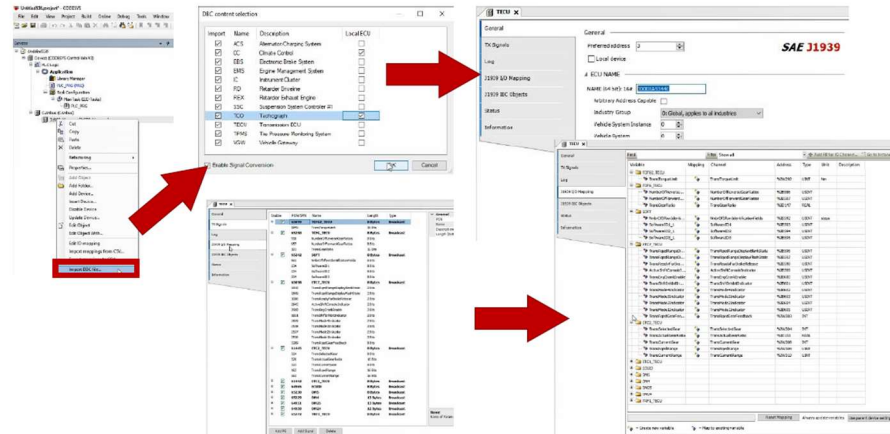
- Proprietary file format from Vector Informatik for defining CAN messages and ECUs
- Widely used by Commercial Vehicle Manufacturers
- Different use cases (see following slides)

1 XSOFT-CODESYS V3.5.17

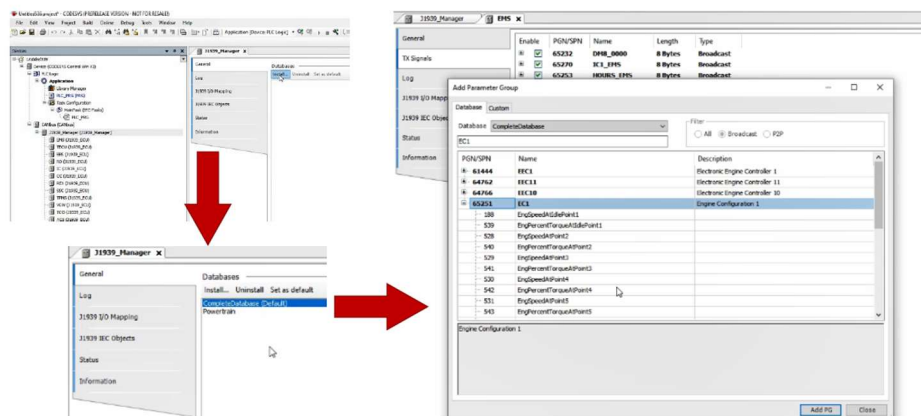
1.3 Features and changes

J1939

Use case 1: Import a complete network



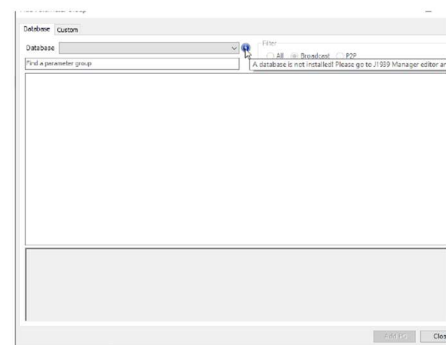
Use case 2: Install as database



Removal of standard database

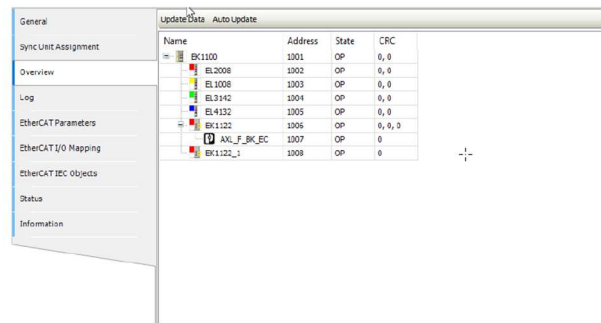
- Tooltip and online help notice the user!
- User has to buy a DBC database e.g. from <https://www.csselectronics.com/>

Discount Code (5%):
J1939DBC_CODESYS



EtherCAT

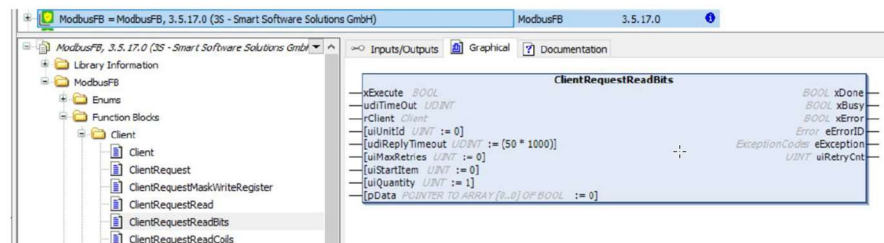
- Online page shows Link-Status
- Routing of EoE
- Overview page for device status



Name	Address	State	CRC
EL1100	1001	OP	0, 0
EL2008	1002	OP	0, 0
EL3108	1003	OP	0, 0
EL3142	1004	OP	0, 0
EL4132	1005	OP	0, 0
EL1122	1006	OP	0, 0, 0
AXI_F_BK_EC	1007	OP	0
EL1122_1	1008	OP	0

MODBUS

- MODBUS function block library
 - Completely programmatic, function block-based configuration and communication
 - Client + server
 - TCP + serial
 - Various examples in CODESYS Forge



1.4

Documentation

The target system specific programming manuals are not part of this distribution. They are published on our web site www.eaton-automation.com in order to provide you the latest version.

1 XSOFT-CODESYS V3.5.17

1.5 Addressed Defects and Changes

1.5

Addressed Defects and Changes

Ticket	Summary	Target	State
3040	XC303 Linux changes Functional changes: <ul style="list-style-type: none"> - Folder structure in '/home' directory changed. - NBNS protocol disabled on default. (InitPlc --> ENABLE_SAMBA=0) - Codesys SCAN-Function usable on ETH0 and ETH1. ETH2 reserved for EtherCAT. - NTP server access included. Various PlcShell commands can be used to setup and use this functionality. Modification of configuration files: <ul style="list-style-type: none"> - Having finished the firmware update the folder /home/ will be deleted. 	XC303	fixed
3027 2986	XC204/XC104: add preview version	XC104 XC204	fixed
2959	Add OpenSource License Info		fixed
2958	OpenSSL: Update to 1.1.1.n		fixed
2945	FOSS component in XSOFT missing (Open source license)		fixed
2878	XC303: Target-/Webvisu - Recipe handling does not work as expected		fixed
2869	Add new DeviceDescriptions for Drives		fixed
2864	1.5 Stopbit not supported (was never supported on our targets!)		fixed
2861	CEAG: update OS	CEAG_HMI	fixed
2846	Retain Persistent Data decreased 400bytes on all targets		fixed
2811	Remove needless packages from installation		fixed
2808	Implement Dynamic Licensing for IIoT (1st step)		fixed
2800	Update XV300 OS to version 3.8.1	XV300	fixed
2734	Update Rts to 3.5.17.30		fixed
2708	Modbus TCP Master 3.5.16.0 causes high system load		fixed
2660	Update Codemeter Runtime to V7.30a		fixed
2508	ENIP: ENIPScannerIOTask does not react within timeout switching to stop	XC303	fixed
2484	Update Security Agent		fixed
2343	CEAG: BACnet AO,BO,MSO Present Value are updated even in OOS state		fixed
2191	SysDir.SysDirCopy not working on XV300 InternalStorage if Destination-Dir does not exist		fixed
1951	EtherCAT don't restart EU5C-SWD Slave		fixed
1566	CDS-26309: lecVarAccess: Access rights of structures are handled not correctly		fixed

1.6

Known restrictions

Ticket	Summary
2447	lecVarAccess: Using symbol sets with Galileo Communication not possible
2441	Incorrect log error "LicenseFile to write not found: 3SLicense.wbb" This is not an error, the file is not needed
2409	Modbus TCP Master 3.5.16.0 causes high system load on some Targets (e.g. XV100)
2342	XC303: EtherCAT EoE: Stack crashes and PLC stops with exception
2328	NetVar Rx not working if NetVar Task is Buscycle Task and Modbus_COM is in project Workarounds: Delete Modbus_COM from configuration Change BusCycleTask or change network variables RX Task (different task)
2041	XV300: Sporadic error after powercycle of ECAT slave
2030	XC303: Sporadic error and loss of comm. after powercycle of ECAT slave
1971	Data source manager error at login: needs always 2 tries to login after project change
1673 CDS-45928	Library Analyze: SFC diagnosis should be supported as in CODESYS V2
1672 CDS-46286	Intellisense: Library objects (data types, etc.) are not shown properly. The visibility pragma of objects does not work properly.
1611	Target visu: Alpha blending is not supported. Windows CE does not support alpha blending.
1610	Target visu: Antialiasing is not supported.
1342	Target system XV-1xx, XVS-4xx and XC-152, function block DiagGetBusState(): A diagnostic message which is pending before start will not be detected.
1341	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: If a reset operation is performed with a quickly following start operation, the connection to the gateway cannot always be established. ➔ Workaround: Until this issue is fixed, use a longer break between reset and start operation
1315	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: On initialization with baud rate 9600 bit/s and 19200 bit/s communication problems can occur.
1313	CAN: gc_bReadQueueSize has no effect on XV-1xx, XV-4xx, XC-152 => fixed value of 256 is used for Input-Queue-Sizes
1269	Data server: If the PC has multiple network adapters, the connection to data server does not work as documented in the online help. ➔ The best way to get a connection is to search the target device by a network scan and to configure the specified node name of the device as data source. Please note: In the log file of the PLC with the configured data server you can see if the connection is established or with which error it fails.
1233	CANopen Inputs of missing nodes keep their values and are not set to default values
1162	Udp network variables: If acknowledgment is selected, the response messages are missing
1161	Target system XV-1xx, XV-4xx, XVS-4xx and XV-152, support of onboard flash is not yet included. The functions Sys_FlashInit(), Sys_FlashErase(), Sys_FlashWrite() and Sys_FlashRead() are not supported yet.

1 XSOF-CDSESYS V3.5.17

1.6 Known restrictions

1143 CDS-31058	Retain Persistent Array with constant index: A compiler error appears if Retain Persistent Array with constant index was renamed afterwards. ➔ Workaround: Delete the object PersistentVars to fix this bug
1138	Device editor, online view: The profibus diagnostics is only partially implemented. Not all functionalities are supported yet.

2 XSOF-TCODESYS V3.5.16 – Bugfix 4

2.1 Release information

Product	XSOF-TCODESYS-3
Release	3.5.16 BF4
Profile specification	XSOF-TCODESYS V3.5.16 BF4
Build	V3.5.16 BF4
Setup	Setup_XSOF_TCODESYS_V3.5.16_BF4.exe Setup_XSOF_TCODESYS_V3.5.16_x64_BF4.exe
Test Management	A. Schmid
Quality Management	P. Zuber

2.2 Version information

2.2.1 Programming system

Component	Actual Version
CODESYS V3	3.5 SP16 Patch 6

2.2.2 Target firmware

Firmware	Actual Version
RTS for XV-1xx, XV-3xx, XC-152 <i>firmware.exe</i>	3.5.16.60
RTS for XC-202 <i>firmware.exe (XC202.bin)</i>	3.5.16.60
RTS for XC-303	3.5.16.60
RTS for CEAG_HMI	3.5.16.60

2.2.3 Target systems

Target system	Actual Version
XV-1xx	3.5.16.60
XV-3xx	3.5.16.60
XC-202	3.5.16.60
XC-152	3.5.16.60
XC-303	3.5.16.60
CEAG_HMI	3.5.16.60

2 XSOFT-CODESYS V3.5.16 – Bugfix 4

2.3 Features and changes

2.3

Features and changes

- Cybersecurity Fixes

2.4

Addressed Defects and Changes

Ticket	Summary	Target	State
2683 2684 2685	Update CODESYS and RTS to 3.5.16.60		fixed
2733	New EDS, GSD, XML for new SWD devices (PXR-RCAM-SWD)		fixed
2731	ENIPScannerIOTask does not react within timeout switching to stop		fixed
2707	Update OS 3.8.1	XV300	fixed
2693	Update Codemeter Runtime to V7.30a		fixed
2604	XC303 displays wrong Ethernet configuration	XC303	fixed
2686	OpenSSL: update to 1.1.1l	XV300 CEAG_HMI	fixed

2.5

Known restrictions

Ticket	Summary
2481 CDS-75177	Persistence Manager Error "Object reference not set to an instance of an object" at Login: happens in a PLC-Project with more than one PLC
2349 CDS-73658	Library repository: crash after adding library repository
2441	Incorrect log error "LicenseFile to write not found: 3SLicense.wbb" This is not an error, the file is not needed
2409	Modbus TCP Master 3.5.15.0/3.5.16.0 causes high system load on some Targets (e.g. XV100)
2342	XC303: EtherCAT EoE: Stack crashes and PLC stops with exception
2328	NetVar Rx not working if NetVar Task is Buscycle Task and Modbus_COM is in project Workarounds: Delete Modbus_COM from configuration Change BusCycleTask or change network variables RX Task (different task)
2300	BACnet/IP: Only ENET1 is working and enumeration of ENET adapter is not correspondign
2041	XV300: Sporadic error after powercycle of ECAT slave
2034	XC303: Encrypted Bootproject is not working
2030	XC303: Sporadic error and loss of comm. after powercycle of ECAT slave
1971	Data source manager error at login: needs always 2 tries to login after project change
1673 CDS-45928	Library Analyze: SFC diagnosis should be supported as in CODESYS V2
1672 CDS-46286	Intellisense: Library objects (data types, etc.) are not shown properly. The visibility pragma of objects does not work properly.

1611	Target visu: Alpha blending is not supported (Windows CE)
1610	Target visu: Antialiasing is not supported.
1342	Target system XV-1xx, XVS-4xx and XC-152, function block DiagGetBusState(): A diagnostic message which is pending before start will not be detected.
1341	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: If a reset operation is performed with a quickly following start operation, the connection to the gateway cannot always be established. ➔ Workaround: Until this issue is fixed, use a longer break between reset and start operation
1315	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: On initialization with baud rate 9600 bit/s and 19200 bit/s communication problems can occur.
1313	CAN: gc_bReadQueueSize has no effect on XV-1xx, XV-4xx, XC-152 => fixed value of 256 is used for Input-Queue-Sizes
1269	Data server: If the PC has multiple network adapters, the connection to data server does not work as documented in the online help. ➔ The best way to get a connection is to search the target device by a network scan and to configure the specified node name of the device as data source. Please note: In the log file of the PLC with the configured data server you can see if the connection is established or with which error it fails.
1233	CANopen Inputs of missing nodes keep their values and are not set to default values
1162	Udp network variables: If acknowledgment is selected, the response messages are missing
1161	Target system XV-1xx, XV-4xx, XVS-4xx and XV-152, support of onboard flash is not yet included. The functions Sys_FlashInit(), Sys_FlashErase(), Sys_FlashWrite() and Sys_FlashRead() are not supported yet.
1143 CDS-31058	Retain Persistent Array with constant index: A compiler error appears if Retain Persistent Array with constant index was renamed afterwards. ➔ Workaround: Delete the object PersistentVars to fix this bug
1138	Device editor, online view: The profibus diagnostics is only partially implemented. Not all functionalities are supported yet.

3 XSOFTECODESYS V3.5.16 – Bugfix 3

3.1 Release information

3 XSOFTECODESYS V3.5.16 – Bugfix 3

3.1 Release information

Product	XSOFTECODESYS-3
Release	3.5.16 BF3
Profile specification	XSOFTECODESYS V3.5.16 BF3
Build	V3.5.16 BF3
Setup	Setup_XSOFTECODESYS_V3.5.16_BF3.exe Setup_XSOFTECODESYS_V3.5.16_x64_BF3.exe
Test Management	A. Schmid
Quality Management	P. Zuber

3.2 Version information

3.2.1 Programming system

Component	Actual Version
CODESYS V3	3.5 SP16 Patch 5

3.2.2 Target firmware

Firmware	Actual Version
RTS for XV-1xx, XV-3xx, XC-152 <i>firmware.exe</i>	3.5.16.50
RTS for XC-202 <i>firmware.exe (XC202.bin)</i>	3.5.16.50
RTS for XC-303	3.5.16.50
RTS for CEAG_HMI	3.5.16.50

3.2.3 Target systems

Target system	Actual Version
XV-1xx	3.5.16.50
XV-3xx	3.5.16.50
XC-202	3.5.16.50
XC-152	3.5.16.50
XC-303	3.5.16.50
CEAG_HMI	3.5.16.50

3.3

Features and changes

- Base64 Encode / Decode
- Ed25519 verify
- Cybersecurity Fixes

3.4

Addressed Defects and Changes

Ticket	Summary	Target	State
2561 CDS-76457	Web server crashes when subjected to HTTP header memory exhaustion attack For more details see Advisory 2021-09, which is available on the CODESYS website: https://customers.codesys.com/index.php?eID=dumpFile&t=f&f=14805&token=f0b86f99bb302ddd4aadec483aed5f5d3fddbf1a&download=		fixed
2557	Update RTS to 3.5.16.50		fixed
2554	Update OS 3.8.0	XV300	fixed
2552	XV300/XV100: Add ed25519 verify function	XV100 XV300	fixed
2551	XV300/XV100: Add Base64 Decode/Encode Functions: Service_Base64 Service_Unbase64	XV100 XV300	fixed
2537	Increase number of communication connections	XV100 XV300	fixed

3.5

Known restrictions

Ticket	Summary
2481 CDS-75177	Persistence Manager Error "Object reference not set to an instance of an object" at Login: happens in a PLC-Project with more than one PLC
2349 CDS-73658	Library repository: crash after adding library repository
2441	Incorrect log error "LicenseFile to write not found: 3SLicense.wbb" This is not an error, the file is not needed
2409	Modbus TCP Master 3.5.15.0/3.5.16.0 causes high system load on some Targets (e.g. XV100)
2342	XC303: EtherCAT EoE: Stack crashes and PLC stops with exception
2328	NetVar Rx not working if NetVar Task is Buscycle Task and Modbus_COM is in project Workarounds: Delete Modbus_COM from configuration Change BusCycleTask or change network variables RX Task (different task)
2300	BACnet/IP: Only ENET1 is working and enumeration of ENET adapter is not correspondign
2041	XV300: Sporadic error after powercycle of ECAT slave
2034	XC303: Encrypted Bootproject is not working

3 XSOFT-CODESYS V3.5.16 – Bugfix 3

3.5 Known restrictions

2030	XC303: Sporadic error and loss of comm. after powercycle of ECAT slave
1971	Data source manager error at login: needs always 2 tries to login after project change
1673 CDS-45928	Library Analyze: SFC diagnosis should be supported as in CODESYS V2
1672 CDS-46286	Intellisense: Library objects (data types, etc.) are not shown properly. The visibility pragma of objects does not work properly.
1611	Target visu: Alpha blending is not supported (Windows CE)
1610	Target visu: Antialiasing is not supported.
1342	Target system XV-1xx, XVS-4xx and XC-152, function block DiagGetBusState(): A diagnostic message which is pending before start will not be detected.
1341	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: If a reset operation is performed with a quickly following start operation, the connection to the gateway cannot always be established. ➔ Workaround: Until this issue is fixed, use a longer break between reset and start operation
1315	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: On initialization with baud rate 9600 bit/s and 19200 bit/s communication problems can occur.
1313	CAN: gc_bReadQueueSize has no effect on XV-1xx, XV-4xx, XC-152 => fixed value of 256 is used for Input-Queue-Sizes
1269	Data server: If the PC has multiple network adapters, the connection to data server does not work as documented in the online help. ➔ The best way to get a connection is to search the target device by a network scan and to configure the specified node name of the device as data source.
Please note: In the log file of the PLC with the configured data server you can see if the connection is established or with which error it fails.	
1233	CANopen Inputs of missing nodes keep their values and are not set to default values
1162	Udp network variables: If acknowledgment is selected, the response messages are missing
1161	Target system XV-1xx, XV-4xx, XVS-4xx and XV-152, support of onboard flash is not yet included. The functions Sys_FlashInit(), Sys_FlashErase(), Sys_FlashWrite() and Sys_FlashRead() are not supported yet.
1143 CDS-31058	Retain Persistent Array with constant index: A compiler error appears if Retain Persistent Array with constant index was renamed afterwards. ➔ Workaround: Delete the object PersistentVars to fix this bug
1138	Device editor, online view: The profibus diagnostics is only partially implemented. Not all functionalities are supported yet.

4 XSOF-CDSESYS V3.5.16 – Bugfix 2

4.1 Release information

Product	XSOF-CDSESYS-3
Release	3.5.16 BF2
Profile specification	XSOF-CDSESYS V3.5.16 BF2
Build	V3.5.16 BF2
Setup	Setup_XSOF_CDSESYS_V3.5.16_BF2.exe Setup_XSOF_CDSESYS_V3.5.16_x64_BF2.exe
Test Management	A. Schmid
Quality Management	P. Zuber

4.2 Version information

4.2.1 Programming system

Component	Actual Version
CDSESYS V3	3.5 SP16 Patch 4

4.2.2 Target firmware

Firmware	Actual Version
RTS for XV-1xx, XV-3xx, XC-152 <i>firmware.exe</i>	3.5.16.40
RTS for XC-202 <i>firmware.exe (XC202.bin)</i>	3.5.16.40
RTS for XC-303	3.5.16.40
RTS for CEAG_HMI	3.5.16.40

4.2.3 Target systems

Target system	Actual Version
XV-1xx	3.5.16.40
XV-3xx	3.5.16.40
XC-202	3.5.16.40
XC-152	3.5.16.40
XC-303	3.5.16.40
CEAG_HMI	3.5.16.40

4 XSOFT-CODESYS V3.5.16 – Bugfix 2

4.3 Features and changes

4.3

Features and changes

- Possibility to read out OpenSSL versions
PLC Browser: getsslversion
EA Service: Service_GetSSLVersion(pSSLVersion:= ADR(STRING))

4.4

Addressed Defects and Changes

Ticket	Summary	Target	State
2520	XV300, XC303: allow 2 applications	XC303 XV300	fixed
2519	Add OPC UA Client (Demo)	XV300 CEAG_HMI	fixed
2507	Update Softmotion Package to 4.10.0.0		fixed
2506	Update Security Agent to 1.2.1.0		fixed
2502	Update OS 3.7.2	XV300	fixed
2501	Update RTS to 3.5.16.40		fixed
2497	XN300: Import INI file entry is missing in menu		fixed
2496	OpenSSL: Update to 1.1.1.j	XV300 CEAG_HMI	fixed
2495	Link to add License-Info is missing		fixed
2491	Library documentation is not working		fixed
2490	SysDrv3sCE.dll is not unloaded at PLC shutdown	XV100 XV300	fixed
2485	XC303 PlcShell command 'canload' not working.	XC303	fixed
2480	XC303 OPC-UA Namespace	XC303	fixed
2479	XC303 local IO used as Interrupt input should be available as local input.	XC303	fixed
2472	EasyNet not starting after powercycle under special circumstances	XV300	fixed
2473	XV300: Codesys-RTS shutdown not successful	XV300	fixed
2472	XC303 reduce jitter for EtherCAT devices	XC303	fixed
2440	Possibility to read out OpenSSL versions	XV300 CEAG_HMI	fixed

4.5

Known restrictions

Ticket	Summary
2481 CDS-75177	Persistence Manager Error "Object reference not set to an instance of an object" at Login: happens in a PLC-Project with more than one PLC
2349 CDS-73658	Library repository: crash after adding library repository
2441	Incorrect log error "LicenseFile to write not found: 3SLicense.wbb" This is not an error, the file is not needed
2409	Modbus TCP Master 3.5.15.0/3.5.16.0 causes high system load on some Targets (e.g. XV100)

2342	XC303: EtherCAT EoE: Stack crashes and PLC stops with exception
2328	NetVar Rx not working if NetVar Task is Buscycle Task and Modbus_COM is in project Workarounds: Delete Modbus_COM from configuration Change BusCycleTask or change network variables RX Task (different task)
2300	BACnet/IP: Only ENET1 is working and enumeration of ENET adapter is not correspondign
2041	XV300: Sporadic error after powercycle of ECAT slave
2034	XC303: Encrypted Bootproject is not working
2030	XC303: Sporadic error and loss of comm. after powercycle of ECAT slave
1971	Data source manager error at login: needs always 2 tries to login after project change
1673 CDS-45928	Library Analyze: SFC diagnosis should be supported as in CODESYS V2
1672 CDS-46286	Intellisense: Library objects (data types, etc.) are not shown properly. The visibility pragma of objects does not work properly.
1611	Target visu: Alpha blending is not supported (Windows CE)
1610	Target visu: Antialiasing is not supported.
1342	Target system XV-1xx, XVS-4xx and XC-152, function block DiagGetBusState(): A diagnostic message which is pending before start will not detected.
1341	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: If a reset operation is performed with a quickly following start operation, the connection to the gateway cannot always be established. ➔ Workaround: Until this issue is fixed, use a longer break between reset and start operation
1315	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: On initialization with baud rate 9600 bit/s and 19200 bit/s communication problems can occur.
1313	CAN: gc_bReadQueueSize has no effect on XV-1xx, XV-4xx, XC-152 => fixed value of 256 is used for Input-Queue-Sizes
1269	Data server: If the PC has multiple network adapters, the connection to data server does not work as documented in the online help. ➔ The best way to get a connection is to search the target device by a network scan and to configure the specified node name of the device as data source. Please note: In the log file of the PLC with the configured data server you can see if the connection is established or with which error it fails.
1233	CANopen Inputs of missing nodes keep their values and are not set to default values
1162	Udp network variables: If acknowledgment is selected, the response messages are missing
1161	Target system XV-1xx, XV-4xx, XVS-4xx and XV-152, support of onboard flash is not yet included. The functions Sys_FlashInit(), Sys_FlashErase(), Sys_FlashWrite() and Sys_FlashRead() are not supported yet.
1143 CDS-31058	Retain Persistent Array with constant index: A compiler error appears if Retain Persistent Array with constant index was renamed afterwards. ➔ Workaround: Delete the object PersistentVars to fix this bug
1138	Device editor, online view: The profibus diagnostics is only partially implemented. Not all functionalities are supported yet.

5 XSOFTECODESYS V3.5.16 – Bugfix 1

5.1 Release information

5 XSOFTECODESYS V3.5.16 – Bugfix 1

5.1 Release information

Product	XSOFTECODESYS-3
Release	3.5.16 BF1
Profile specification	XSOFTECODESYS V3.5.16 BF1
Build	V3.5.16 BF1
Setup	Setup_XSOFTECODESYS_V3.5.16_BF1.exe Setup_XSOFTECODESYS_V3.5.16_x64_BF1.exe
Test Management	A. Schmid
Quality Management	P. Zuber

5.2 Version information

5.2.1 Programming system

Component	Actual Version
CODESYS V3	3.5 SP16 Patch 3

5.2.2 Target firmware

Firmware	Actual Version
RTS for XV-1xx, XV-3xx, XC-152 <i>firmware.exe</i>	3.5.16.30
RTS for XC-202 <i>firmware.exe (XC202.bin)</i>	3.5.16.30
RTS for XC-303	3.5.16.30
RTS for CEAG_HMI	3.5.16.30

5.2.3 Target systems

Target system	Actual Version
XV-1xx	3.5.16.30
XV-3xx	3.5.16.30
XC-202	3.5.16.30
XC-152	3.5.16.30
XC-303	3.5.16.30
CEAG_HMI	3.5.16.30

5.3

Features and changes

- New Feature: Softmotion Light (CANopen/EtherCAT)
- New Security Feature: possibility to disable Ctrl-Button on XV300 with Registry Value
[HKEY_LOCAL_MACHINE\SOFTWARE\Eaton\PLC RuntimeSystem]
"ButtonDisable"=DWORD:1
Add the entry (if required) e.g. in /PlcRts/PlcRtsUser.reg on the target

5 XSOFT-CODESYS V3.5.16 – Bugfix 1

5.4 Addressed Defects and Changes

5.4

Addressed Defects and Changes

Ticket	Summary	Target	State
2483	Update OS 3.7.1	XV300	fixed
2469	New Feature: Softmotion Light		fixed
2467	RTS update: 3.5.16.30		fixed
2465	XV300: add possibility to disable Ctrl-Button	XV300	fixed
2462	EtherCAT: Support of FoE with Busy Indication		fixed
2461	Visu Style XV100/XV300 not included in package		fixed
2447	IecVarAccess: Using Symbol Sets with Galileo communication not possible		fixed
2420 2419	Firmware Installation should support remove of User Management	XC303 CEAG_HMI	fixed

5.5

Known restrictions

Ticket	Summary
2481 CDS-75177	Persistence Manager Error "Object reference not set to an instance of an object" at Login: happens in a PLC-Project with more than one PLC
2449	Security Agent 1.2.0.0 is not compatible with Targets without SSL (XV100, XV400, XC202)
2349 CDS-73658	Library repository: crash after adding library repository
2441	Incorrect log error "LicenseFile to write not found: 3SLicense.wbb" This is not an error, the file is not needed
2409	Modbus TCP Master 3.5.15.0/3.5.16.0 causes high system load on some Targets (e.g. XV100)
2342	XC303: EtherCAT EoE: Stack crashes and PLC stops with exception
2328	NetVar Rx not working if NetVar Task is Buscycle Task and Modbus_COM is in project Workarounds: Delete Modbus_COM from configuration Change BusCycleTask or change network variables RX Task (different task)
2300	BACnet/IP: Only ENET1 is working and enumeration of ENET adapter is not correspondign
2041	XV300: Sporadic error after powercycle of ECAT slave
2034	XC303: Encrypted Bootproject is not working
2030	XC303: Sporadic error and loss of comm. after powercycle of ECAT slave
1971	Data source manager error at login: needs always 2 tries to login after project change
1673 CDS-45928	Library Analyze: SFC diagnosis should be supported as in CODESYS V2
1672 CDS-46286	Intellisense: Library objects (data types, etc.) are not shown properly. The visibility pragma of objects does not work properly.

1611	Target visu: Alpha blending is not supported. Windows CE does not support alpha blending.
1610	Target visu: Antialiasing is not supported.
1342	Target system XV-1xx, XVS-4xx and XC-152, function block DiagGetBusState(): A diagnostic message which is pending before start will not be detected.
1341	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: If a reset operation is performed with a quickly following start operation, the connection to the gateway cannot always be established. ➔ Workaround: Until this issue is fixed, use a longer break between reset and start operation
1315	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: On initialization with baud rate 9600 bit/s and 19200 bit/s communication problems can occur.
1313	CAN: gc_bReadQueueSize has no effect on XV-1xx, XV-4xx, XC-152 => fixed value of 256 is used for Input-Queue-Sizes
1269	Data server: If the PC has multiple network adapters, the connection to data server does not work as documented in the online help. ➔ The best way to get a connection is to search the target device by a network scan and to configure the specified node name of the device as data source. Please note: In the log file of the PLC with the configured data server you can see if the connection is established or with which error it fails.
1233	CANopen Inputs of missing nodes keep their values and are not set to default values
1162	Udp network variables: If acknowledgment is selected, the response messages are missing
1161	Target system XV-1xx, XV-4xx, XVS-4xx and XV-152, support of onboard flash is not yet included. The functions Sys_FlashInit(), Sys_FlashErase(), Sys_FlashWrite() and Sys_FlashRead() are not supported yet.
1143 CDS-31058	Retain Persistent Array with constant index: A compiler error appears if Retain Persistent Array with constant index was renamed afterwards. ➔ Workaround: Delete the object PersistentVars to fix this bug
1138	Device editor, online view: The profibus diagnostics is only partially implemented. Not all functionalities are supported yet.

6 XSOF-CDSEYS V3.5.16

6.1 Release information

6 XSOF-CDSEYS V3.5.16

6.1 Release information

Product	XSOF-CDSEYS-3
Release	3.5.16
Profile specification	XSOF-CDSEYS V3.5.16
Build	V3.5.16
Setup	Setup_XSOF_CDSEYS_V3.5.16.exe Setup_XSOF_CDSEYS_V3.5.16_x64.exe
Test Management	A. Schmid
Quality Management	P. Zuber

6.2 Version information

6.2.1 Programming system

Component	Actual Version
CDSEYS V3	3.5 SP16 Patch 2

6.2.2 Target firmware

Firmware	Actual Version
RTS for XV-1xx, XV-3xx, XC-152 <i>firmware.exe</i>	3.5.16.20
RTS for XC-202 <i>firmware.exe (XC202.bin)</i>	3.5.16.20
RTS for XC-303	3.5.16.20
RTS for CEAG_HMI	3.5.16.20

6.2.3 Target systems

Target system	Actual Version
XV-1xx	3.5.16.20
XV-3xx	3.5.16.20
XC-202	3.5.16.20
XC-152	3.5.16.20
XC-303	3.5.16.20
CEAG_HMI	3.5.16.20

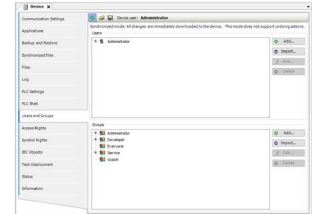
6.3 Features and changes

6.3.1 Programming system

Device User Management

- Secure, encrypted transmission of user names and passwords
- New services: asymmetrical procedure for the transmission of passwords at login
- Forwarding of client type to the controller (e.g. CODESYS Development System or CODESYS Automation Server)
- Now only possible online: handling of users, passwords, groups
- Export/import: Still possible - password required
- User Interface: Almost unchanged
- Workflows: Slightly different

Benefit for CODESYS users:
Secured passwords - even without encrypted communication

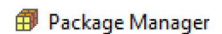


Integrated web browser: Chromium Embedded Framework (CEF)

- Security update
- Used for access to CODESYS Store, library documentation, and overlay visualization
- No change to the user interface

Benefit for CODESYS users:
Reduced risk of attacks when surfing, e.g. in the CODESYS Store

Package Manager



- Faster package installation
- Installation of interface components directly through a package
- New hooks for device manufacturers for rejecting a package

64 Bit Version

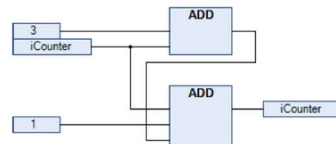
6 XSOFT-CODESYS V3.5.16

6.3 Features and changes

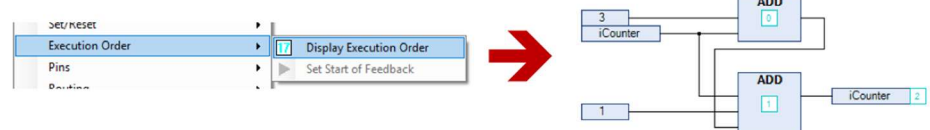
Codesys is now available as 64-Bit Version (support of “big” PLC-Projects).

CFC: Update of the Editor

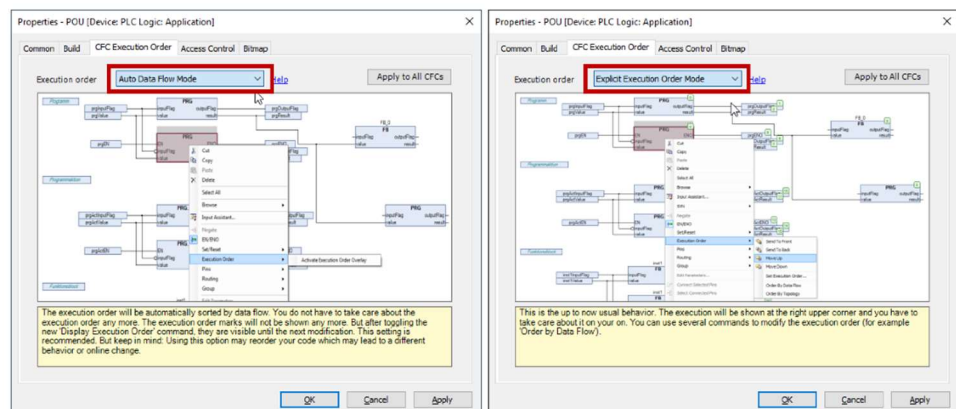
- **Auto Dataflow Mode as new default setting:**
 - Execution order automatically according to data flow – top to bottom, left to right
 - Starting at the start point of each data flow



- **Execution order display: now temporary as overlay**



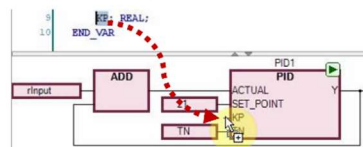
- **CFC execution order adaptable in POU properties**



- **Explicit start point for feedback loops**



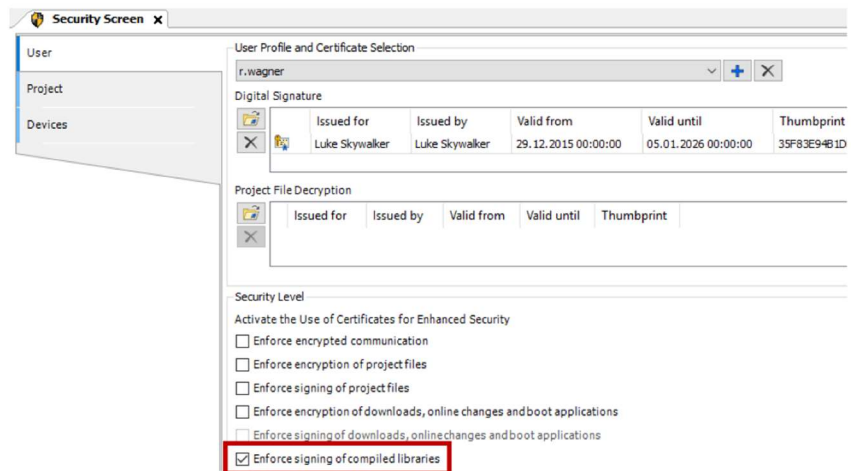
- **Drag and drop of variables**



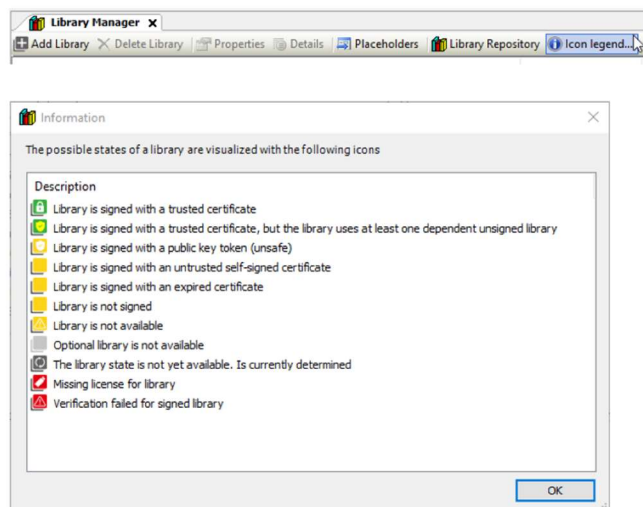
- **Autorouting errors for connection lines fixed**

Signing of Libraries

- Signing of compiled libraries supported
- Activation via the Security Screen



- New labeling of icons in the Library Manager




6 XSOFT-CODESYS V3.5.16

6.3 Features and changes

Converter for CODESYS V2.3 objects

- Converter moved from the standard installation to a separate package
- Package available at the CODESYS Store free of charge:
<https://store.codesys.com/codesys-v23-converter.html>



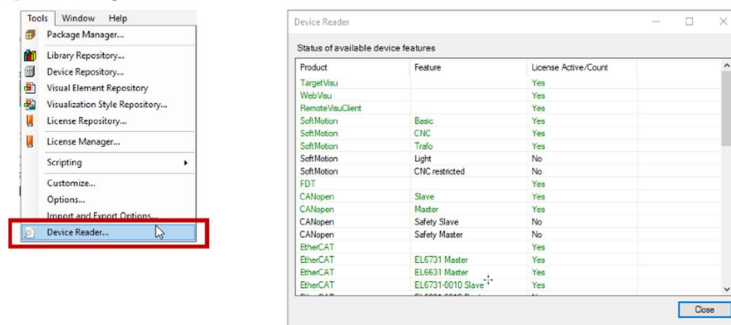
CODESYS V2.3 Converter
The CODESYS V2.3 Converter enables you to open and import projects edited with CODESYS V2.3 with CODESYS V3.5.
Version: 3.5.15.0
Order number: 000109

☆☆☆☆
No rating available
Add Your Review

€0.00
plus VAT

CODESYS Device Reader

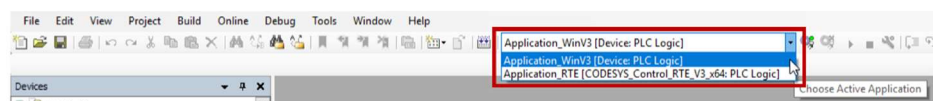
- New as of SP15: CODESYS Device Reader as plug-in for the CODESYS Development System



- Still available: CODESYS Device Reader at the CODESYS Store free of charge
<https://store.codesys.com/device-reader.html>

Further improvements

- Drop down box for selection of active application



6.3.2

PLC Runtime System

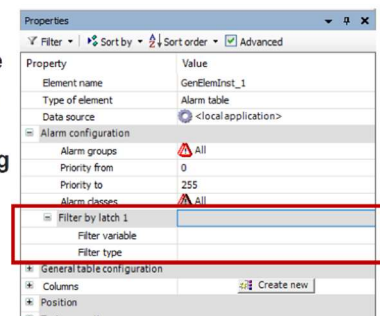
- **CmpLog**
 - Logger time stamp for console windows and log files in ISO8601 format
- **IecVarAccess**
 - Significant read/write access improvements (~ access time halved)

6.3.3

Visualization

New alarm table feature: Filter by latch variable

- Filtering by arbitrary values of the latch1 variable
- Optimized implementation for high-performance filtering of a large number of alarms
- Filtering on controller / database side for avoiding unnecessary data transfer (in case of HMI)
- Four filter options: unfiltered, by string comparison, by IEC literal, by integer



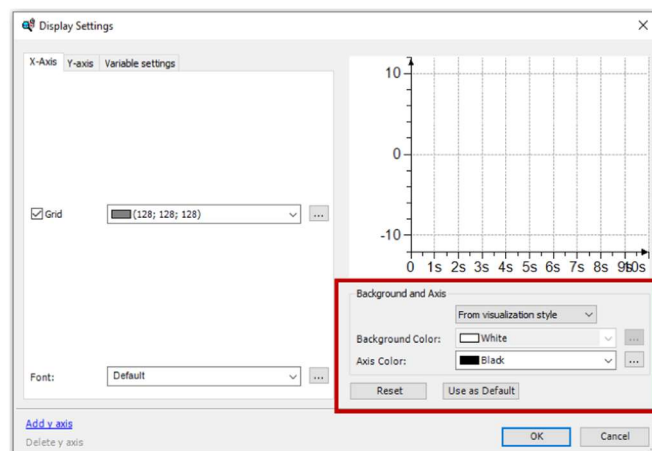
ID	Observation Type	Details	Deactivation	Class	Message	Min. Pend. Time	Latch Var 1	Latch Var 2	Higher Prio. Alarm
11	Digital	PLC_PRG.xAlarm11 = TRUE		Warning	Alarm 11 aktiv, this is a v...		PLC_PRG.xTrigger		
12	Digital	PLC_PRG.xAlarm12 = TRUE		WarningOrange	Hallo world Test				
13	Digital	PLC_PRG.xAlarm13 = TRUE		Warning	Alarm 13 active				

Combo box

- Combo box supports dynamically selected text list
- Easy handover of text list by a string variable

Trace and trend

- Additional color configuration for traces and trends, e.g. support for dark backgrounds



6 XSOFT-CODESYS V3.5.16

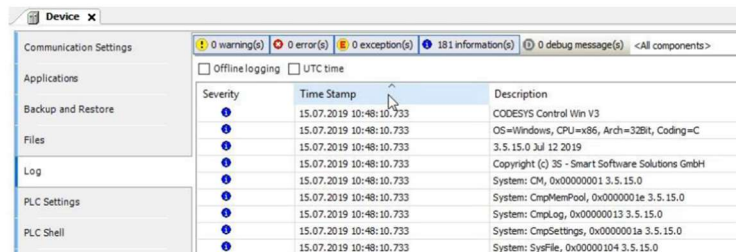
6.3 Features and changes

6.3.4

Fieldbus

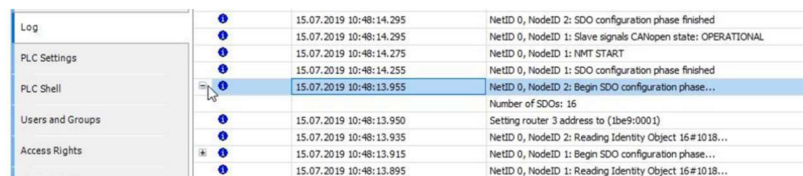
Extensive improvements of diagnostic capabilities

- PLC Log: User defined sorting of table columns



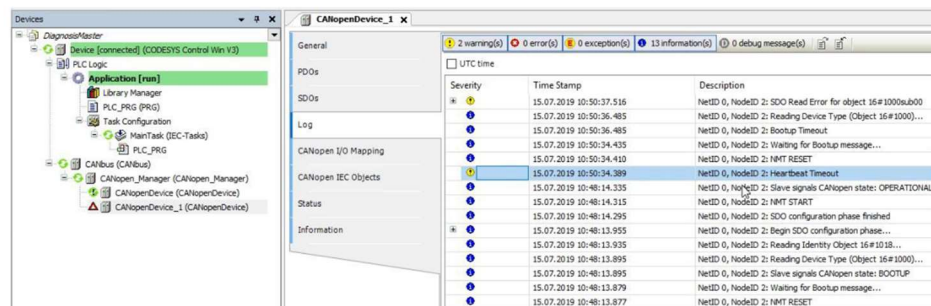
Severity	Time Stamp	Description
Information	15.07.2019 10:48:10.733	CODESYS Control Win V3
Information	15.07.2019 10:48:10.733	OS=Windows, CPU=x86, Arch=32Bit, Coding=C
Information	15.07.2019 10:48:10.733	3.5.15.0 Jul 12 2019
Information	15.07.2019 10:48:10.733	Copyright (c) 3S - Smart Software Solutions GmbH
Information	15.07.2019 10:48:10.733	System: CM, 0x00000001 3.5.15.0
Information	15.07.2019 10:48:10.733	System: CmpMemPool, 0x0000001e 3.5.15.0
Information	15.07.2019 10:48:10.733	System: CmpLog, 0x00000013 3.5.15.0
Information	15.07.2019 10:48:10.733	System: CmpSettings, 0x0000001a 3.5.15.0
Information	15.07.2019 10:48:10.733	System: SysFile, 0x00000104 3.5.15.0

- Expandable logger messages



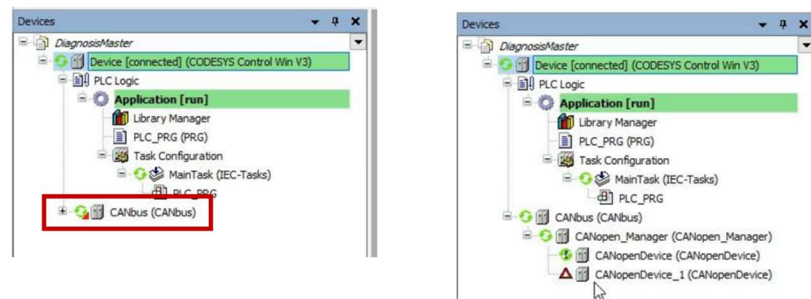
Severity	Time Stamp	Description
Information	15.07.2019 10:48:14.295	NetID 0, NodeID 2: SDO configuration phase finished
Information	15.07.2019 10:48:14.295	NetID 0, NodeID 1: Slave signals CANopen state: OPERATIONAL
Information	15.07.2019 10:48:14.275	NetID 0, NodeID 1: NMT START
Information	15.07.2019 10:48:14.255	NetID 0, NodeID 1: SDO configuration phase finished
Information	15.07.2019 10:48:13.955	NetID 0, NodeID 2: Begin SDO configuration phase...
Information	15.07.2019 10:48:13.950	Number of SDOs: 16
Information	15.07.2019 10:48:13.950	Setting router 3 address to (1be9-0001)
Information	15.07.2019 10:48:13.935	NetID 0, NodeID 2: Reading Identity Object 16#1018...
Information	15.07.2019 10:48:13.915	NetID 0, NodeID 1: Begin SDO configuration phase...
Information	15.07.2019 10:48:13.895	NetID 0, NodeID 1: Reading Identity Object 16#1018...

- Separate logger page for each device with specifically filtered error messages



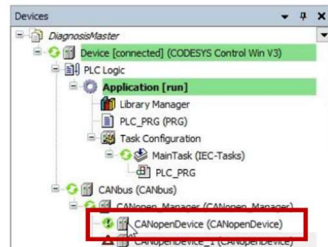
Severity	Time Stamp	Description
Warning	15.07.2019 10:50:37.516	NetID 0, NodeID 2: SDO Read Error for object 16#1000a000
Information	15.07.2019 10:50:36.485	NetID 0, NodeID 2: Reading Device Type (Object 16#1000)...
Information	15.07.2019 10:50:36.485	NetID 0, NodeID 2: Bootup Timeout
Information	15.07.2019 10:50:34.435	NetID 0, NodeID 2: Waiting for Bootup message...
Information	15.07.2019 10:50:34.410	NetID 0, NodeID 2: NMT RESET
Warning	15.07.2019 10:50:34.389	NetID 0, NodeID 2: Heartbeat Timeout
Information	15.07.2019 10:48:14.335	NetID 0, NodeID 2: Slave signals CANopen state: OPERATIONAL
Information	15.07.2019 10:48:14.315	NetID 0, NodeID 2: NMT START
Information	15.07.2019 10:48:14.295	NetID 0, NodeID 2: SDO configuration phase finished
Information	15.07.2019 10:48:13.955	NetID 0, NodeID 2: Begin SDO configuration phase...
Information	15.07.2019 10:48:13.935	NetID 0, NodeID 2: Reading Identity Object 16#1018...
Information	15.07.2019 10:48:13.895	NetID 0, NodeID 2: Slave signals CANopen state: BOOTUP
Information	15.07.2019 10:48:13.879	NetID 0, NodeID 2: Waiting for Bootup message...
Information	15.07.2019 10:48:13.877	NetID 0, NodeID 2: NMT RESET

- Device tree: Errors visible even at collapsed device tree

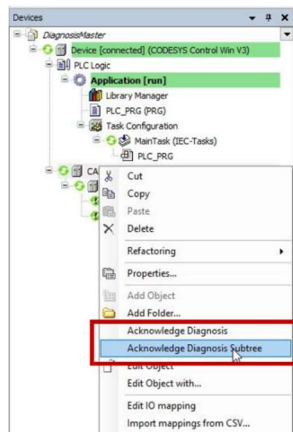


Severity	Time Stamp	Description
Warning	15.07.2019 10:50:37.516	NetID 0, NodeID 2: SDO Read Error for object 16#1000a000
Information	15.07.2019 10:50:36.485	NetID 0, NodeID 2: Reading Device Type (Object 16#1000)...
Information	15.07.2019 10:50:36.485	NetID 0, NodeID 2: Bootup Timeout
Information	15.07.2019 10:50:34.435	NetID 0, NodeID 2: Waiting for Bootup message...
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Warning	15.07.2019 10:50:34.389	NetID 0, NodeID 2: Heartbeat Timeout
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Information	15.07.2019 10:48:14.315	NetID 0, NodeID 2: NMT START
Information	15.07.2019 10:48:14.295	NetID 0, NodeID 2: SDO configuration phase finished
Information	15.07.2019 10:48:13.955	NetID 0, NodeID 2: Begin SDO configuration phase...
Information	15.07.2019 10:48:13.935	NetID 0, NodeID 2: Reading Identity Object 16#1018...
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Information	15.07.2019 10:48:13.879	NetID 0, NodeID 2: Waiting for Bootup message...
Information	15.07.2019 10:48:13.877	NetID 0, NodeID 2: NMT RESET

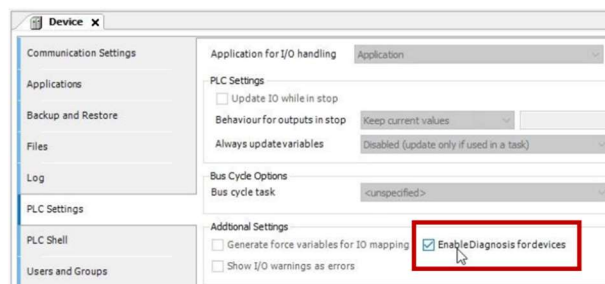
- Notification about sporadic and self-healing cleared errors



- Acknowledgement of errors via context menu, even including subtree elements



- CAA device diagnosis activated by default
(for runtime systems with sufficient memory)



CODESYS EtherCAT

- **Specific fieldbus diagnosis**
 - Diagnosis page for safety modules (FSOE diagnosis data)
 - Display of differences between configured devices and scan result after device scan
- **ESI file import**
 - Support of ESI file icons, e.g. for display in device tree and device repository
 - Significant performance improvement when importing large ESI files

CODESYS ETHERNET/IP Scanner

- **Usability improvements**
 - Scanner configurator
 - Copy, cut and paste available in the assembly editor
 - Display of parameter groups shown in the configuration data view
 - In the I/O mapping I/O channels are grouped as folders by I/O connections
 - Display of EDS enumeration strings at connection configuration

CODESYS CAN

- **Specific fieldbus diagnosis**
 - Display of diagnostic data on status page for CANbus

CODESYS Modbus

- **Usability**
 - Move up / down buttons for channels
 - Channels can be renamed
- **Miscellaneous**
 - Holding register with bidirectional I/O channels for Modbus Slave, I/O channel can be written by stack and application

Further improvements

- **Multiple selection for enabling / disabling devices**

Various library changes

Device descriptions updated

6.4

Documentation

The target system specific programming manuals are not part of this distribution. They are published on our web site www.eaton-automation.com in order to provide you the latest version.

6.5

Addressed Defects and Changes

Ticket	Summary	Target	State
2024	Read only files (attribute 444) will be overwritten by SysFileOpen in write mode --> in Linux files must be set to immutable but chattr needs root rights	CEAG_HMI	fixed
2034	XC303: encrypted bootproject not supported anymore	XC303	fixed
2253	XC303: ECAT - Power off/on of an EtherCAT slave can cause task jitter of EtherCAT task	XC303	fixed
2254	Device type Ethernet: Option "Adjust Operating System Settings" should be readonly		fixed
2260	XC303: Sporadic loss of communication after Powercycle		fixed
2264	Remove XV400 Targets from Setup and include as Package	XV400	fixed
2267	OPC UA error message when logging in with IP address instead of server name		fixed
2268	Visu style: Various objects are missing in XV100 Style (3.5.11.0)	XV100	fixed
2320	XV300: WSA-Functions not working	XV300	fixed
2327	XC303: connection problem without projected XN-Modules	XC303	fixed
2341	XC303: WIBU dongle not working anymore since 3.5.15	XC303	fixed
2349	EA_SysLibMail Support StartTLS		fixed
2382	EA_SysLibMail Support Office365 account		fixed
2391	XV300, SysSocket2 not working correctly.	XV300	fixed
2402	CODESYS: Licensing to softcontainer does not work/is not supported		fixed
2405	XN-312-GW-CAN device description is missing in installation		fixed
2407	Add Compiler Defines to DeviceDescriptions: WINCE5, WINCE6, WINCE7, LINUX XV100, XV300, XV400, XV400S, XV152, XC202, XC303, CEAG, NO_SSL for all devices that do not support SSL		fixed
2416	Windows 7 not supported anymore		fixed
2417	Add EtherCAT Gateway DeviceDescription (XN-312-GW)		fixed
2418	Update OS for XV100/XV152 to 2.29.2	XV100	fixed
2421	CEAG: allow 2 applications	CEAG_HMI	fixed
2426	XV300: Increase max. Code and Data Memorysize	XV300	fixed
2431	Multiclient: A login of a second instance of CODESYS on the same application must be avoided		fixed
2432	CodeMeter: Update to current version 7.10a		fixed
2436	XV300: Creating certificates can take very long time Workaround: use the function only in PLC-Stop	XV300	fixed
2437	XC303: Check Return-Values from InitPlc	XC303	fixed
2442	XC303: Increase max. Code and Data Memorysize	XC303	fixed
2443	XC202: Increase max. Code and Data Memorysize	XC202	fixed
2450 CDS-68412	WebServer: Heap Buffer overflow vulnerability		fixed

6 XSOFT-CODESYS V3.5.16

6.6 Known restrictions

	For more details see Advisory 2019-10, which is available on the CODESYS website: https://customers.codesys.com/fileadmin/data/customers/security/2019/Advisory2019-10_CDS-68341.pdf	
2451 CDS-69655	Webserver: Remote heap buffer overflow vulnerability For more details see Advisory 2020-03, which is available on the CODESYS website: https://customers.codesys.com/index.php?eID=dumpFile&t=f&f=13078&token=de344ca65252463cc581ef144e0c53bd97b8f211&download=	fixed
2452 CDS-68994	ChannelServer: Memory allocation DoS For more details see Advisory 2020-01, which is available on the CODESYS website: https://customers.codesys.com/index.php?eID=dumpFile&t=f&f=12977&token=33f948eed0c2fd69d238d9515779be337ef7592d&download=	fixed
2453 CDS-69698 CDS-69663	CmpRouter/CmpBlkDrvTcp: Crafted packets may cause a DoS For more details see Advisory 2020-02, which is available on the CODESYS website: https://customers.codesys.com/index.php?eID=dumpFile&t=f&f=13077&token=3bfc6d1d08415a6260b96093520071f5786e7fd4&download=	fixed
2455 CDS-69663	Webvisu, Webserver: PLC crashes with crafted request For more details see Advisory 2019-10, which is available on the CODESYS website: https://customers.codesys.com/fileadmin/data/customers/security/2019/Advisory2019-10_CDS-68341.pdf	fixed
2456 CDS-66210	Visu: Only configured startvisualizations should be accessible For more details see Advisory 2020-04, which is available on the CODESYS website: https://customers.codesys.com/index.php?eID=dumpFile&t=f&f=13136&token=c267875c01ea70bc9613bc39c684eedc17f55420&download= For security reasons only the configured start visualizations (in the visualization clients below the Visualization Manager) are allowed to be accessed when using a visualization profile >= V3.5.16.0. The previous behavior can be restored by setting the compiler define VISU_NO_STARTVISU_CHECK. However, this should be used only if necessary for compatibility reasons to prevent opening this security problem for the application. Instead of this compiler define consider if adding additional start visualizations by adding additional visualization client objects is an option.	fixed

6.6

Known restrictions

Ticket	Summary
2447	lecVarAccess: Using symbol sets with Galileo Communication not possible
2441	Incorrect log error "LicenseFile to write not found: 3SLicense.wbb" This is not an error, the file is not needed
2409	Modbus TCP Master 3.5.16.0 causes high system load on some Targets (e.g. XV100)
2342	XC303: EtherCAT EoE: Stack crashes and PLC stops with exception

2328	NetVar Rx not working if NetVar Task is Buscycle Task and Modbus_COM is in project Workarounds: Delete Modbus_COM from configuration Change BusCycleTask or change network variables RX Task (different task)
2041	XV300: Sporadic error after powercycle of ECAT slave
2030	XC303: Sporadic error and loss of comm. after powercycle of ECAT slave
1971	Data source manager error at login: needs always 2 tries to login after project change
1673 CDS-45928	Library Analyze: SFC diagnosis should be supported as in CODESYS V2
1672 CDS-46286	Intellisense: Library objects (data types, etc.) are not shown properly. The visibility pragma of objects does not work properly.
1611	Target visu: Alpha blending is not supported. Windows CE does not support alpha blending.
1610	Target visu: Antialiasing is not supported.
1342	Target system XV-1xx, XVS-4xx and XC-152, function block DiagGetBusState(): A diagnostic message which is pending before start will not be detected.
1341	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: If a reset operation is performed with a quickly following start operation, the connection to the gateway cannot always be established. ➔ Workaround: Until this issue is fixed, use a longer break between reset and start operation
1315	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: On initialization with baud rate 9600 bit/s and 19200 bit/s communication problems can occur.
1313	CAN: gc_bReadQueueSize has no effect on XV-1xx, XV-4xx, XC-152 => fixed value of 256 is used for Input-Queue-Sizes
1269	Data server: If the PC has multiple network adapters, the connection to data server does not work as documented in the online help. ➔ The best way to get a connection is to search the target device by a network scan and to configure the specified node name of the device as data source. Please note: In the log file of the PLC with the configured data server you can see if the connection is established or with which error it fails.
1233	CANopen Inputs of missing nodes keep their values and are not set to default values
1162	Udp network variables: If acknowledgment is selected, the response messages are missing
1161	Target system XV-1xx, XV-4xx, XVS-4xx and XV-152, support of onboard flash is not yet included. The functions Sys_FlashInit(), Sys_FlashErase(), Sys_FlashWrite() and Sys_FlashRead() are not supported yet.
1143 CDS-31058	Retain Persistent Array with constant index: A compiler error appears if Retain Persistent Array with constant index was renamed afterwards. ➔ Workaround: Delete the object PersistentVars to fix this bug
1138	Device editor, online view: The profibus diagnostics is only partially implemented. Not all functionalities are supported yet.

7 XSOFT-CODESYS V3.5.15 – Bugfix 2

7.1 Release information

7 XSOFT-CODESYS V3.5.15 – Bugfix 2

7.1 Release information

Product	XSOFT-CODESYS-3
Release	3.5.15 BF2
Profile specification	XSOFT-CODESYS V3.5.15 BF2
Build	V3.5.15 BF2
Setup	Setup_XSOFT_CODESYS_V3.5.15_BF2.exe Setup_XSOFT_CODESYS_V3.5.15_x64_BF2.exe
Test Management	A. Schmid
Quality Management	P. Zuber

7.2 Version information

7.2.1 Programming system

Component	Actual Version
CODESYS V3	3.5 SP15 Patch 5

7.2.2 Target firmware

Firmware	Actual Version
RTS for XV-1xx, XV-3xx, XV-4xx, XVS-4xx, XC-152 <i>firmware.exe</i>	3.5.15.50
RTS for XC-202 <i>firmware.exe (XC202.bin)</i>	3.5.15.50
RTS for XC-303 <i>(Image-Revision 604)</i>	3.5.15.50
RTS for CEAG_HMI	3.5.15.50

7.2.3 Target systems

Target system	Actual Version
XV-1xx	3.5.15.50
XV-3xx	3.5.15.50
XV-4xx	3.5.15.50
XVS-4xx	3.5.15.50
XC-202	3.5.15.50
XC-152	3.5.15.50
XC-303	3.5.15.50
CEAG_HMI	3.5.15.50

7.3

Addressed Defects and Changes

Ticket	Summary	Target	State
2399	Implement Functionality of Import Assistant (Import of Packages from previous Versions)		fixed
2398	XC303: checksum problem in the local XN-300 Master some XN modules with firmware version 4.xx are not recognized on the local XN300 master of the XC303, e.g.: 8AIO-I, 8AIO-U2, 7AI-U2PT	XC303	fixed
2396	Update Codemeter Runtime Kit		fixed
2395	CODESYS: Licensing to softcontainer does not work/is not supported		fixed

7.4

Known restrictions

Ticket	Summary
2342	XC303: EtherCAT EoE: Stack crashes and PLC stops with exception
2328	NetVar Rx not working if NetVar Task is Buscycle Task and Modbus_COM is in project Workarounds: Delete Modbus_COM from configuration Change BusCycleTask or change network variables RX Task (different task)
2041	XV300: Sporadic error after powercycle of ECAT slave
2030	XC303: Sporadic error and loss of comm. after powercycle of ECAT slave
1971	Data source manager error at login: needs always 2 tries to login after project change
1673 CDS-45928	Library Analyze: SFC diagnosis should be supported as in CODESYS V2
1672 CDS-46286	Intellisense: Library objects (data types, etc.) are not shown properly. The visibility pragma of objects does not work properly.
1611	Target visu: Alpha blending is not supported. Windows CE does not support alpha blending.
1610	Target visu: Antialiasing is not supported.
1342	Target system XV-1xx, XVS-4xx and XC-152, function block DiagGetBusState(): A diagnostic message which is pending before start will not be detected.
1341	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: If a reset operation is performed with a quickly following start operation, the connection to the gateway cannot always be established. ➔ Workaround: Until this issue is fixed, use a longer break between reset and start operation
1315	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: On initialization with baud rate 9600 bit/s and 19200 bit/s communication problems can occur.
1313	CAN: gc_bReadQueueSize has no effect on XV-1xx, XV-4xx, XC-152 => fixed value of 256 is used for Input-Queue-Sizes
1269	Data server: If the PC has multiple network adapters, the connection to data server does not work as documented in the online help.

7 XSOFT-CODESYS V3.5.15 – Bugfix 2

7.4 Known restrictions

	<p>➔ The best way to get a connection is to search the target device by a network scan and to configure the specified node name of the device as data source.</p> <p>Please note: In the log file of the PLC with the configured data server you can see if the connection is established or with which error it fails.</p>
1233	CANopen Inputs of missing nodes keep their values and are not set to default values
1162	Udp network variables: If acknowledgment is selected, the response messages are missing
1161	Target system XV-1xx, XV-4xx, XVS-4xx and XV-152, support of onboard flash is not yet included. The functions Sys_FlashInit(), Sys_FlashErase(), Sys_FlashWrite() and Sys_FlashRead() are not supported yet.
1143 CDS-31058	<p>Retain Persistent Array with constant index: A compiler error appears if Retain Persistent Array with constant index was renamed afterwards.</p> <p>➔ Workaround: Delete the object PersistentVars to fix this bug</p>
1138	Device editor, online view: The profibus diagnostics is only partially implemented. Not all functionalities are supported yet.

8 XSOF-CDSESYS V3.5.15 – Bugfix 1

8.1 Release information

Product	XSOF-CDSESYS-3
Release	3.5.15 BF1
Profile specification	XSOF-CDSESYS V3.5.15 BF1
Build	V3.5.15 BF1
Setup	Setup_XSOF_CDSESYS_V3.5.15_BF1.exe Setup_XSOF_CDSESYS_V3.5.15_x64_BF1.exe
Test Management	A. Schmid
Quality Management	P. Zuber

8.2 Version information

8.2.1 Programming system

Component	Actual Version
CODESYS V3	3.5 SP15 Patch 5

8.2.2 Target firmware

Firmware	Actual Version
RTS for XV-1xx, XV-3xx, XV-4xx, XVS-4xx, XC-152 <i>firmware.exe</i>	3.5.15.50
RTS for XC-202 <i>firmware.exe (XC202.bin)</i>	3.5.15.50
RTS for XC-303	3.5.15.50
RTS for CEAG_HMI	3.5.15.50

8.2.3 Target systems

Target system	Actual Version
XV-1xx	3.5.15.50
XV-3xx	3.5.15.50
XV-4xx	3.5.15.50
XVS-4xx	3.5.15.50
XC-202	3.5.15.50
XC-152	3.5.15.50
XC-303	3.5.15.50
CEAG_HMI	3.5.15.50

8 XSOFT-CODESYS V3.5.15 – Bugfix 1

8.3 Addressed Defects and Changes

8.3

Addressed Defects and Changes

Ticket	Summary	Target	State
2164	Service_GetBootdevInfo returns wrong value as bootdevice	XC303	fixed
2261	SysRtcSetTime / SysTimeRtcSet blocks task for > 16ms	XC303	fixed
2316	Plc Shell: Setdisplaytimeout value should be allowed from 0 to 86399 i.e (23:59:59)	CEAG_HMI	fixed
2330	Firmware Installer: Possibility to select file from network mapped drive		fixed
2331	Implement EA_Service.Service.GetDeviceBrandName()	XVxxx	fixed
2332	Firmware Installation is not possible to downgrade to V3.5.14 with Firmware.exe from 3.5.14	XC303	fixed
2351	EA_SysLibMail naming of attachments		fixed
2372	Target Visu: VisuGradient not working (RenderUtils.dll missing)	XVxxx	fixed
2376	SysLib_Add.lib Sys_DiskSpace function for drives with more than 4GB	XVxxx	fixed
2377	Update OS 3.7.0	XV300	fixed
2379	SysTimeRtc.SysTimeRtcHighResSet not working reliable	XVxxx	fixed
2383	EA_SysLibMail GMX not working anymore		fixed
2392	EtherCAT Gateway: Wrong order of the startup parameters		fixed
CDS-70811			
CDS-71467	Reset Origin doesn't write outputs to default value		fixed
CDS-70812	Ethernet/IP Scanner: IO Mapping gets overwritten if using Bit parameter		fixed
CDS-70640	IoDrvEtherCAT: watchdog exception could occur with option "autorestart slaves" on some runtimes		fixed

8.4

Known restrictions

Ticket	Summary
2342	XC303: EtherCAT EoE: Stack crashes and PLC stops with exception
2328	NetVar Rx not working if NetVar Task is Buscycle Task and Modbus_COM is in project Workarounds: Delete Modbus_COM from configuration Change BusCycleTask or change network variables RX Task (different task)
2041	XV300: Sporadic error after powercycle of ECAT slave
2030	XC303: Sporadic error and loss of comm. after powercycle of ECAT slave
1971	Data source manager error at login: needs always 2 tries to login after project change
1673	Library Analyze: SFC diagnosis should be supported as in CODESYS V2
CDS-45928	
1672	Intellisense: Library objects (data types, etc.) are not shown properly. The visibility pragma of objects does not work properly.
CDS-46286	

8 XSOFT-CODESYS V3.5.15 – Bugfix 1

8.4 Known restrictions

1611	Target visu: Alpha blending is not supported. Windows CE does not support alpha blending.
1610	Target visu: Antialiasing is not supported.
1342	Target system XV-1xx, XVS-4xx and XC-152, function block DiagGetBusState(): A diagnostic message which is pending before start will not be detected.
1341	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: If a reset operation is performed with a quickly following start operation, the connection to the gateway cannot always be established. ➔ Workaround: Until this issue is fixed, use a longer break between reset and start operation
1315	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: On initialization with baud rate 9600 bit/s and 19200 bit/s communication problems can occur.
1313	CAN: gc_bReadQueueSize has no effect on XV-1xx, XV-4xx, XC-152 => fixed value of 256 is used for Input-Queue-Sizes
1269	Data server: If the PC has multiple network adapters, the connection to data server does not work as documented in the online help. ➔ The best way to get a connection is to search the target device by a network scan and to configure the specified node name of the device as data source. Please note: In the log file of the PLC with the configured data server you can see if the connection is established or with which error it fails.
1233	CANopen Inputs of missing nodes keep their values and are not set to default values
1162	Udp network variables: If acknowledgment is selected, the response messages are missing
1161	Target system XV-1xx, XV-4xx, XVS-4xx and XV-152, support of onboard flash is not yet included. The functions Sys_FlashInit(), Sys_FlashErase(), Sys_FlashWrite() and Sys_FlashRead() are not supported yet.
1143 CDS-31058	Retain Persistent Array with constant index: A compiler error appears if Retain Persistent Array with constant index was renamed afterwards. ➔ Workaround: Delete the object PersistentVars to fix this bug
1138	Device editor, online view: The profibus diagnostics is only partially implemented. Not all functionalities are supported yet.

9 XSOFT-CODESYS V3.5.15

9.1 Release information

9 XSOFT-CODESYS V3.5.15

9.1 Release information

Product	XSOFT-CODESYS-3
Release	3.5.15
Profile specification	XSOFT-CODESYS V3.5.15
Build	V3.5.15
Setup	Setup_XSOFT_CODESYS_V3.5.15.exe
Test Management	A. Schmid
Quality Management	P. Zuber

9.2 Version information

9.2.1 Programming system

Component	Actual Version
CODESYS V3	3.5 SP15 Patch 2

9.2.2 Target firmware

Firmware	Actual Version
RTS for XV-1xx, XV-3xx, XV-4xx, XVS-4xx, XC-152 <i>firmware.exe</i>	3.5.15
RTS for XC-202 <i>firmware.exe (XC202.bin)</i>	3.5.15
RTS for XC-303	3.5.15.20
RTS for CEAG_HMI	3.5.15.20

9.2.3 Target systems

Target system	Actual Version
XV-1xx	3.5.15.0
XV-3xx	3.5.15.0
XV-4xx	3.5.15.0
XVS-4xx	3.5.15.0
XC-202	3.5.15.0
XC-152	3.5.15.0
XC-303	3.5.15.20
CEAG_HMI	3.5.15.20

9.3 Features and changes

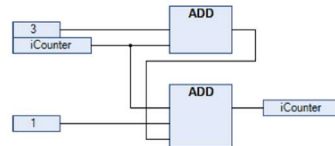
9.3.1 Programming system

64 Bit Version

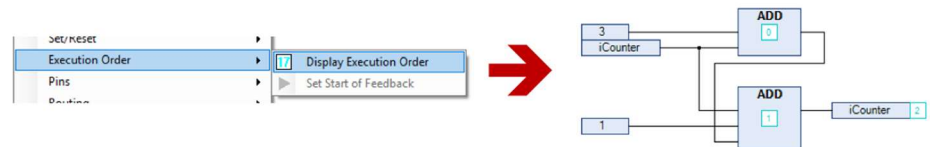
Codesys is now available as 64-Bit Version (support of “big” PLC-Projects).

CFC: Update of the Editor

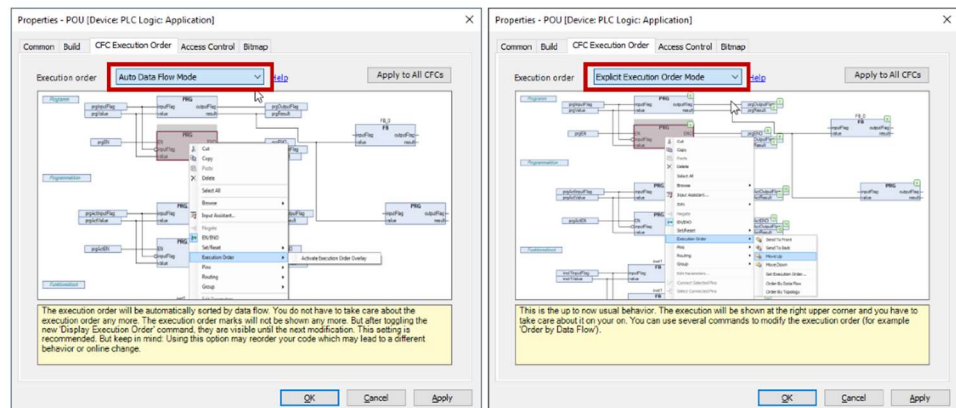
- **Auto Dataflow Mode as new default setting:**
 - Execution order automatically according to data flow – top to bottom, left to right
 - Starting at the start point of each data flow



- **Execution order display: now temporary as overlay**



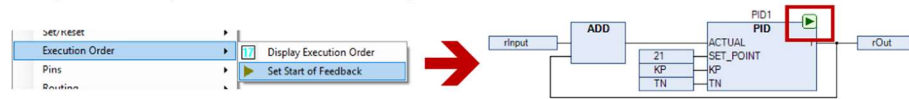
- **CFC execution order adaptable in POU properties**



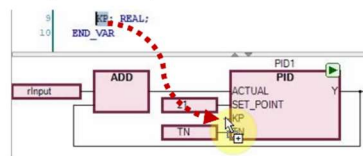
9 XSOFT-CODESYS V3.5.15

9.3 Features and changes

- Explicit start point for feedback loops



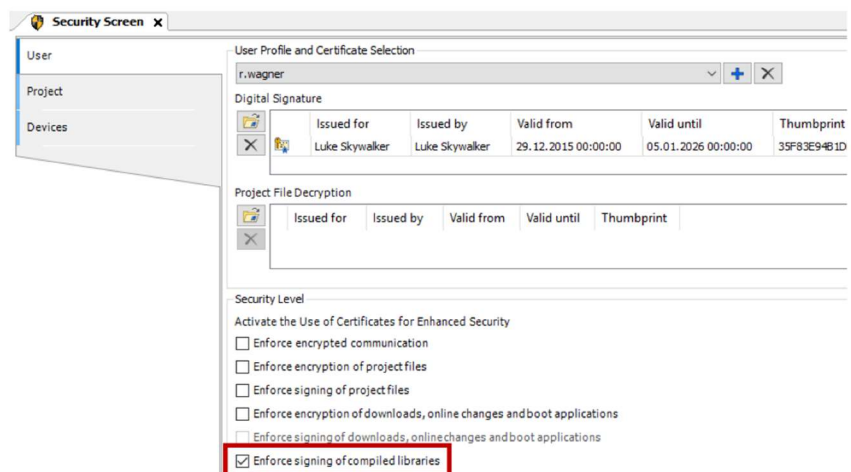
- Drag and drop of variables



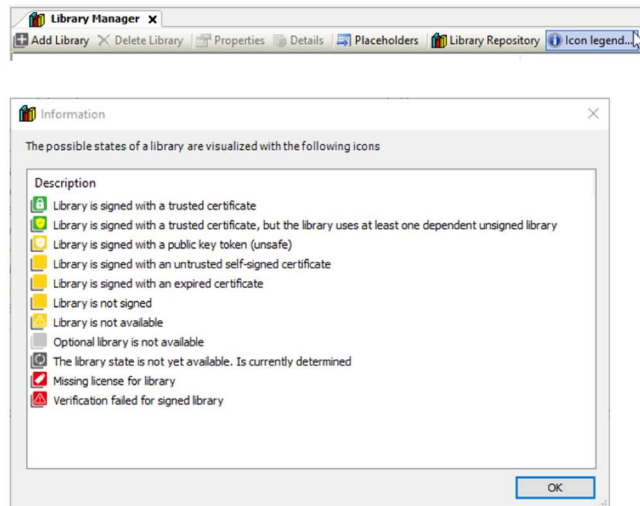
- Autorouting errors for connection lines fixed

Signing of Libraries

- Signing of compiled libraries supported
- Activation via the Security Screen




- **New labeling of icons in the Library Manager**



Converter for CODESYS V2.3 objects

- Converter moved from the standard installation to a separate package
- Package available at the CODESYS Store free of charge:
<https://store.codesys.com/codesys-v23-converter.html>



CODESYS V2.3 Converter

The CODESYS V2.3 Converter enables you to open and import projects edited with CODESYS V2.3 with CODESYS V3.5.

Version: 3.5.15.0
Order number: 000109

☆☆☆☆
No rating available
Add Your Review

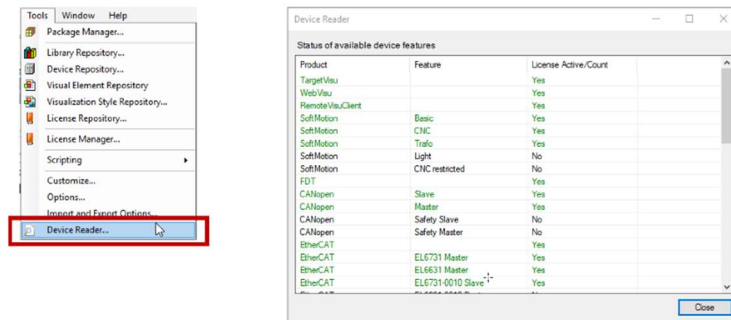
€0.00
plus VAT

9 XSOFT-CODESYS V3.5.15

9.3 Features and changes

CODESYS Device Reader

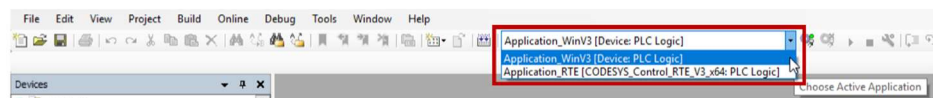
- New as of SP15: CODESYS Device Reader as plug-in for the CODESYS Development System



- Still available: CODESYS Device Reader at the CODESYS Store free of charge <https://store.codesys.com/device-reader.html>

Further improvements

- Drop down box for selection of active application



9.3.2

PLC Runtime System

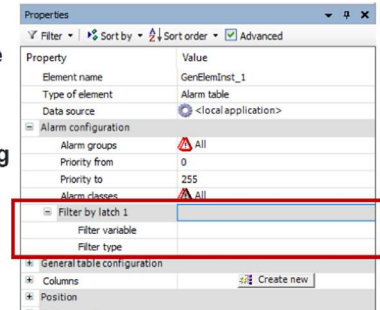
- **CmpLog**
 - Logger time stamp for console windows and log files in ISO8601 format
- **IecVarAccess**
 - Significant read/write access improvements (~ access time halved)

9.3.3

Visualization

New alarm table feature: Filter by latch variable

- Filtering by arbitrary values of the latch1 variable
- Optimized implementation for high-performance filtering of a large number of alarms
- Filtering on controller / database side for avoiding unnecessary data transfer (in case of HMI)
- Four filter options: unfiltered, by string comparison, by IEC literal, by integer



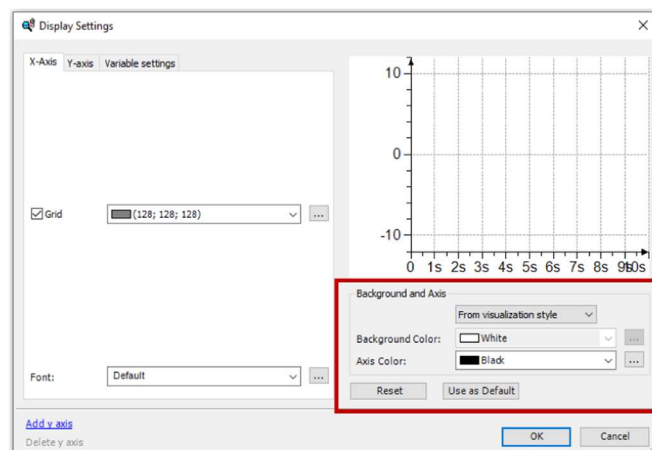
AlarmGroup									
ID	Observation Type	Details	Deactivation	Class	Message	Min. Pend. Time	Latch Var 1	Latch Var 2	Higher Prio. Alarm
11	Digital	PLC_PRG.xAlarm11 = TRUE	<input type="checkbox"/>	Warning	Alarm 11 aktiv, this is a v...		PLC_PRG.xTrigger	<input type="checkbox"/>	<input type="checkbox"/>
12	Digital	PLC_PRG.xAlarm12 = TRUE	<input type="checkbox"/>	WarningOrange	Hallo world Test			<input type="checkbox"/>	<input type="checkbox"/>
13	Digital	PLC_PRG.xAlarm13 = TRUE	<input type="checkbox"/>	Warning	Alarm 13 active			<input type="checkbox"/>	<input type="checkbox"/>

Combo box

- Combo box supports dynamically selected text list
- Easy handover of text list by a string variable

Trace and trend

- Additional color configuration for traces and trends, e.g. support for dark backgrounds



9 XSOFT-CODESYS V3.5.15

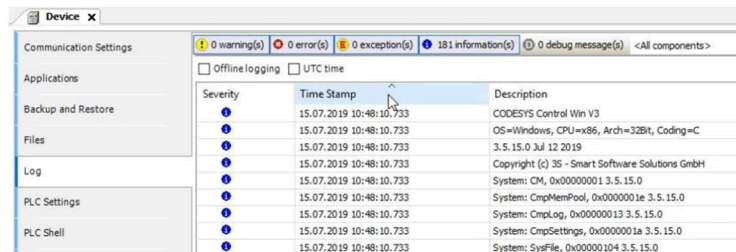
9.3 Features and changes

9.3.4

Fieldbus

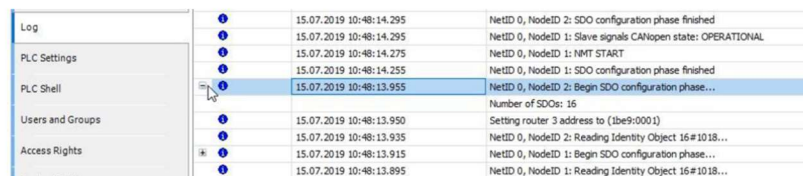
Extensive improvements of diagnostic capabilities

- PLC Log: User defined sorting of table columns



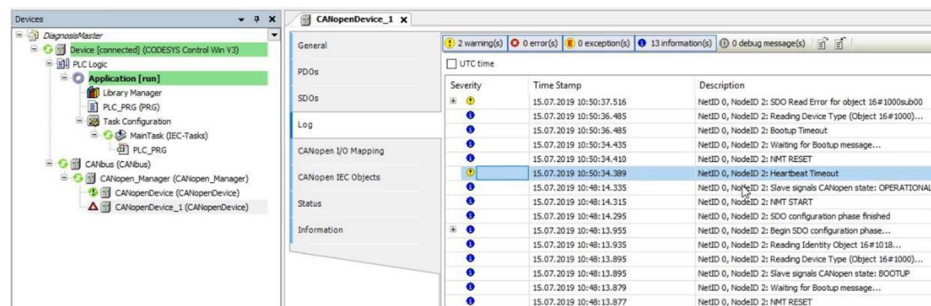
Severity	Time Stamp	Description
Information	15.07.2019 10:48:10.733	CODESYS Control Win V3
Information	15.07.2019 10:48:10.733	OS=Windows, CPU=x86, Arch=32Bit, Coding=C
Information	15.07.2019 10:48:10.733	3.5.15.0 Jul 12 2019
Information	15.07.2019 10:48:10.733	Copyright (c) 3S - Smart Software Solutions GmbH
Information	15.07.2019 10:48:10.733	System: CM, 0x00000001 3.5.15.0
Information	15.07.2019 10:48:10.733	System: CmpMemPool, 0x0000001e 3.5.15.0
Information	15.07.2019 10:48:10.733	System: CmpLog, 0x00000013 3.5.15.0
Information	15.07.2019 10:48:10.733	System: CmpSettings, 0x0000001a 3.5.15.0
Information	15.07.2019 10:48:10.733	System: SysFile, 0x00000104 3.5.15.0

- Expandable logger messages



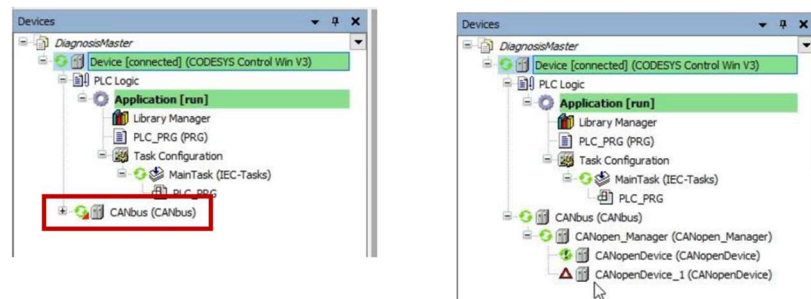
Severity	Time Stamp	Description
Information	15.07.2019 10:48:14.295	NetID 0, NodeID 2: SDO configuration phase finished
Information	15.07.2019 10:48:14.295	NetID 0, NodeID 1: Slave signals CANopen state: OPERATIONAL
Information	15.07.2019 10:48:14.275	NetID 0, NodeID 1: NMT START
Information	15.07.2019 10:48:14.255	NetID 0, NodeID 1: SDO configuration phase finished
Information	15.07.2019 10:48:13.955	NetID 0, NodeID 2: Begin SDO configuration phase...
Information	15.07.2019 10:48:13.950	Number of SDOs: 16
Information	15.07.2019 10:48:13.950	Setting router 3 address to (1be9-0001)
Information	15.07.2019 10:48:13.935	NetID 0, NodeID 2: Reading Identity Object 16#1018...
Information	15.07.2019 10:48:13.915	NetID 0, NodeID 1: Begin SDO configuration phase...
Information	15.07.2019 10:48:13.895	NetID 0, NodeID 1: Reading Identity Object 16#1018...

- Separate logger page for each device with specifically filtered error messages

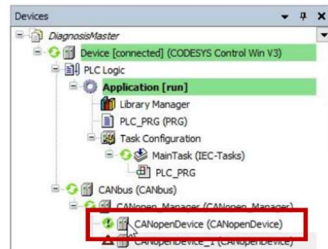


Severity	Time Stamp	Description
Error	15.07.2019 10:50:37.516	NetID 0, NodeID 2: SDO Read Error for object 16#1000a000
Information	15.07.2019 10:50:36.485	NetID 0, NodeID 2: Reading Device Type (Object 16#1000)...
Information	15.07.2019 10:50:36.485	NetID 0, NodeID 2: Bootup Timeout
Information	15.07.2019 10:50:34.435	NetID 0, NodeID 2: Waiting for Bootup message...
Information	15.07.2019 10:50:34.410	NetID 0, NodeID 2: NMT RESET
Information	15.07.2019 10:50:34.389	NetID 0, NodeID 2: Heartbeat Timeout
Information	15.07.2019 10:48:14.335	NetID 0, NodeID 2: Slave signals CANopen state: OPERATIONAL
Information	15.07.2019 10:48:14.315	NetID 0, NodeID 2: NMT START
Information	15.07.2019 10:48:14.295	NetID 0, NodeID 2: SDO configuration phase finished
Information	15.07.2019 10:48:13.955	NetID 0, NodeID 2: Begin SDO configuration phase...
Information	15.07.2019 10:48:13.935	NetID 0, NodeID 2: Reading Identity Object 16#1018...
Information	15.07.2019 10:48:13.895	NetID 0, NodeID 2: Slave signals CANopen state: BOOTUP
Information	15.07.2019 10:48:13.879	NetID 0, NodeID 2: Waiting for Bootup message...
Information	15.07.2019 10:48:13.877	NetID 0, NodeID 2: NMT RESET

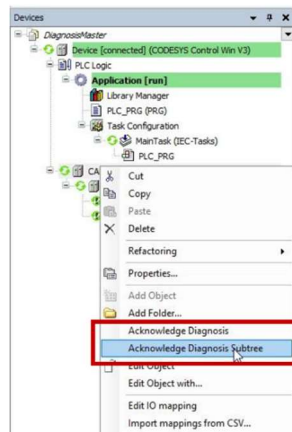
- Device tree: Errors visible even at collapsed device tree



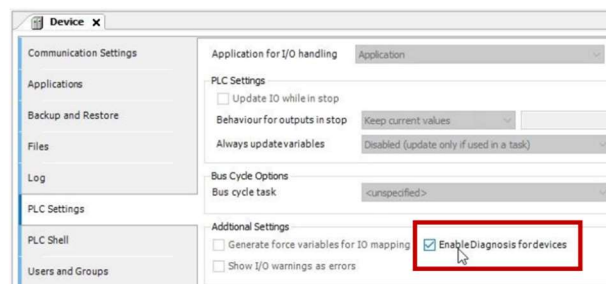
- Notification about sporadic and self-healing cleared errors



- Acknowledgement of errors via context menu, even including subtree elements



- CAA device diagnosis activated by default
(for runtime systems with sufficient memory)



CODESYS EtherCAT

- **Specific fieldbus diagnosis**
 - Diagnosis page for safety modules (FSOE diagnosis data)
 - Display of differences between configured devices and scan result after device scan
- **ESI file import**
 - Support of ESI file icons, e.g. for display in device tree and device repository
 - Significant performance improvement when importing large ESI files

CODESYS ETHERNET/IP Scanner

- **Usability improvements**
 - Scanner configurator
 - Copy, cut and paste available in the assembly editor
 - Display of parameter groups shown in the configuration data view
 - In the I/O mapping I/O channels are grouped as folders by I/O connections
 - Display of EDS enumeration strings at connection configuration

CODESYS CAN

- **Specific fieldbus diagnosis**
 - Display of diagnostic data on status page for CANbus

CODESYS Modbus

- **Usability**
 - Move up / down buttons for channels
 - Channels can be renamed
- **Miscellaneous**
 - Holding register with bidirectional I/O channels for Modbus Slave, I/O channel can be written by stack and application

Further improvements

- **Multiple selection for enabling / disabling devices**

Various library changes

Device descriptions updated

9.4

Documentation

The target system specific programming manuals are not part of this distribution. They are published on our web site www.eaton-automation.com in order to provide you the latest version.

9.5

Addressed Defects and Changes

Ticket	Summary	Target	State
1908	CODESYS 64 Bit Version		fixed
2039	XC303: EA_CAN.CAN_CyclicTransmission.dwCycleTime not correct	XC303	fixed
2213	XC303: EtherCAT EoE (Ethernet over EtherCAT): basic Implementation	XC303	fixed
2220	XC303: device not reachable over hostname		fixed
2244	Update Rts to 3.5.15.20		fixed
2258	BACnet/IP component for CEAG_HMI	CEAG_HMI	fixed
2261	XC303: SysRtcSetTime / SysTimeRtcSet blocks task for > 16ms	XC303	fixed
2263	CODESYS V2.3 Converter removed from installation: Installation Package available at the CODESYS Store.		fixed
2269	CEAG: Implement Unmount (USB/SD) functionality	CEAG_HMI	fixed
2273	XV300: OPC UA possibility to remove Version and IP-Address from Devicename	XV300	fixed
2275	Gateway service not running on XC303	XC303	fixed
2281	XV300: PLC Configuration Plugin: OPC UA enties missing	XV300	fixed
2284	XC303: Rework Firmware Installation because of new asymeric memory image	XC303	fixed
2286	CEAG: Functionality of the Target-Config-Tool in Codesys, based on shell-functions (Plugin)	CEAG_HMI	fixed
2289	CEAG: possibility to read/write some bytes of retain data	CEAG_HMI	fixed
2294	CAN: update DeviceDescriptions to V3.5.15		fixed
2295	XC303: does not work with XN-322-4DO-RNO as local IO	XC303	fixed
2299	Error importing ini-File for SWD-CAN Gateway		fixed
2306	XC303: missing entries in CODESYScontrol.cfg for EoE	XC303	fixed
2314	CEAG: Update OS to 1.1.1.4	CEAG_HMI	fixed
2329	CEAG: Timestamp functionality support (Powerloss Timestamp)	CEAG_HMI	fixed
2337	Library "EA_Udp": Update library due to incompatibility caused by the syssocket library		fixed
2344	CODESYS TaskConfigEditor: NullReferenceException during login via Scripting and noUI		fixed
2348	New EDS, GSD, XML and DevDesc		fixed
2357	Webserver: Remote heap buffer overflow vulnerability fixes Security Advisory 2020-03	CEAG_HMI XVxxx	fixed
2358	CmpRouter: DoS vulnerability fixes Security Advisory 2020-02	CEAG_HMI XVxxx	fixed
2359	ChannelServer: Memory allocation DoS vulnerability fixes Security Advisory 2020-01	CEAG_HMI XVxxx	fixed

9.6

Known restrictions

Ticket	Summary
2342	XC303: EtherCAT EoE: Stack crashes and PLC stops with exception
2328	NetVar Rx not working if NetVar Task is Buscycle Task and Modbus_COM is in project Workarounds: Delete Modbus_COM from configuration Change BusCycleTask or change network variables RX Task (different task)
2041	XV300: Sporadic error after powercycle of ECAT slave
2030	XC303: Sporadic error and loss of comm. after powercycle of ECAT slave
1971	Data source manager error at login: needs always 2 tries to login after project change
1673 CDS-45928	Library Analyze: SFC diagnosis should be supported as in CODESYS V2
1672 CDS-46286	Intellisense: Library objects (data types, etc.) are not shown properly. The visibility pragma of objects does not work properly.
1611	Target visu: Alpha blending is not supported. Windows CE does not support alpha blending.
1610	Target visu: Antialiasing is not supported.
1342	Target system XV-1xx, XVS-4xx and XC-152, function block DiagGetBusState(): A diagnostic message which is pending before start will not be detected.
1341	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: If a reset operation is performed with a quickly following start operation, the connection to the gateway cannot always be established. ➔ Workaround: Until this issue is fixed, use a longer break between reset and start operation
1315	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: On initialization with baud rate 9600 bit/s and 19200 bit/s communication problems can occur.
1313	CAN: gc_bReadQueueSize has no effect on XV-1xx, XV-4xx, XC-152 => fixed value of 256 is used for Input-Queue-Sizes
1269	Data server: If the PC has multiple network adapters, the connection to data server does not work as documented in the online help. ➔ The best way to get a connection is to search the target device by a network scan and to configure the specified node name of the device as data source. Please note: In the log file of the PLC with the configured data server you can see if the connection is established or with which error it fails.
1233	CANopen Inputs of missing nodes keep their values and are not set to default values
1162	Udp network variables: If acknowledgment is selected, the response messages are missing
1161	Target system XV-1xx, XV-4xx, XVS-4xx and XV-152, support of onboard flash is not yet included. The functions Sys_FlashInit(), Sys_FlashErase(), Sys_FlashWrite() and Sys_FlashRead() are not supported yet.
1143 CDS-31058	Retain Persistent Array with constant index: A compiler error appears if Retain Persistent Array with constant index was renamed afterwards. ➔ Workaround: Delete the object PersistentVars to fix this bug

1138	Device editor, online view: The profibus diagnostics is only partially implemented. Not all functionalities are supported yet.
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10 XSOFT-CODESYS V3.5.14 – Bugfix 2

10.1 Release information

10 XSOFT-CODESYS V3.5.14 – Bugfix 2

10.1 Release information

Product	XSOFT-CODESYS-3
Release	3.5.14
Profile specification	XSOFT-CODESYS V3.5.14
Build	V3.5.14
Setup	Setup_XSOFT_CODESYS_V3.5.14.exe
Test Management	A. Schmid
Quality Management	P. Zuber

10.2 Version information

10.2.1 Programming system

Component	Actual Version
CODESYS V3	3.5 SP14 Patch 2

10.2.2 Target firmware

Firmware	Actual Version
RTS for XV-1xx, XV-3xx, XV-4xx, XVS-4xx, XC-152 <i>firmware.exe</i>	3.5.14
RTS for XC-202 <i>firmware.exe (XC202.bin)</i>	3.5.14
RTS for XC-303	3.5.14.20
RTS for CEAG_HMI	3.5.14.20

10.2.3 Target systems

Target system	Actual Version
XV-1xx	3.5.14.0
XV-3xx	3.5.14.0
XV-4xx	3.5.14.0
XVS-4xx	3.5.14.0
XC-202	3.5.14.0
XC-152	3.5.14.0
XC-303	3.5.14.20
CEAG_HMI	3.5.14.20

10.3

Addressed Defects and Changes

Ticket	Summary	Target	State
2272	OPC UA: possibility to remove Version and IP-Address from Devicename in .cfg [SysTarget] DeviceNameAddVersionIp=0 (default=1)	XV300	Fixed
2274	Gateway service no longer running on XV100/XV300		Fixed

11 XSOFTE-CODESYS V3.5.14 – Bugfix 1

11.1 Release information

11 XSOFTE-CODESYS V3.5.14 – Bugfix 1

11.1 Release information

Product	XSOFTE-CODESYS-3
Release	3.5.14
Profile specification	XSOFTE-CODESYS V3.5.14
Build	V3.5.14
Setup	Setup_XSOFTE_CODESYS_V3.5.14.exe
Product Management	T. Hettwer
Test Management	A. Schmid
Quality Management	P. Zuber

11.2 Version information

11.2.1 Programming system

Component	Actual Version
CODESYS V3	3.5 SP14 Patch 2

11.2.2 Target firmware

Firmware	Actual Version
RTS for XV-1xx, XV-3xx, XV-4xx, XVS-4xx, XC-152 <i>firmware.exe</i>	3.5.14
RTS for XC-202 <i>firmware.exe (XC202.bin)</i>	3.5.14
RTS for XC-303	3.5.14.20
RTS for CEAG_HMI	3.5.14.20

11.2.3 Target systems

Target system	Actual Version
XV-1xx	3.5.14.0
XV-3xx	3.5.14.0
XV-4xx	3.5.14.0
XVS-4xx	3.5.14.0
XC-202	3.5.14.0
XC-152	3.5.14.0
XC-303	3.5.14.20
CEAG_HMI	3.5.14.20

11.3

Addressed Defects and Changes

Ticket	Summary	Target	State
2265	OPC UA Problem: The registration of the OPC UA lecVarAccess provider was not successful	XV300	Fixed
2266	Large PLC Projects may cause "SystemOutOfMemory Exception"		Fixed

12 XSOFT-CODESYS V3.5.14

12.1 Release information

12 XSOFT-CODESYS V3.5.14

12.1 Release information

Product	XSOFT-CODESYS-3
Release	3.5.14
Profile specification	XSOFT-CODESYS V3.5.14
Build	V3.5.14
Setup	Setup_XSOFT_CODESYS_V3.5.14.exe
Product Management	T. Hettwer
Test Management	A. Schmid
Quality Management	P. Zuber

12.2 Version information

12.2.1 Programming system

Component	Actual Version
CODESYS V3	3.5 SP14 Patch 2

12.2.2 Target firmware

Firmware	Actual Version
RTS for XV-1xx, XV-3xx, XV-4xx, XVS-4xx, XC-152 <i>firmware.exe</i>	3.5.14
RTS for XC-202 <i>firmware.exe (XC202.bin)</i>	3.5.14
RTS for XC-303	3.5.14.20
RTS for CEAG_HMI	3.5.14.20

12.2.3 Target systems

Target system	Actual Version
XV-1xx	3.5.14.0
XV-3xx	3.5.14.0
XV-4xx	3.5.14.0
XVS-4xx	3.5.14.0
XC-202	3.5.14.0
XC-152	3.5.14.0
XC-303	3.5.14.20
CEAG_HMI	3.5.14.20

12.3

Documentation

The target system specific programming manuals are not part of this distribution. They are published on our web site www.eaton-automation.com in order to provide you the latest version.

12 XSOFT-CODESYS V3.5.14

12.4 Addressed Defects and Changes

12.4

Addressed Defects and Changes

Ticket	Summary	Target	State
1857	CDS-57847 Device configuration: After an update/change of a modular EtherCAT device the IO mapping is not updated correctly		fixed
1974	Ethercat SWD-GW insert device -> wrong IO profile: If a device ist included to the io-configuration using "insert device" to an Ethercat SWD gateway on Codesys-V3.5.11 the resulting io mapping is buggy		fixed
1979	Add compatible versions to device description to make automatic update possible		fixed
1985	BACnet/IP component (Preview)	XV300 XC303	fixed
2002	ENIP: Ressource consumption 3.5.12 is significant higher than 3.5.11		fixed
2031	OPC UA events supported		fixed
2060	DP-Master Statemachine: Problems with Get_Config on some DP-Slaves		fixed
2099	SWD-CAN: Plugin: Additional settings/ support universal module buggy		fixed
2107	XC303 Source Code Download	XC303	fixed
2114	Add XV363 Target	XV300	fixed
2123	EA_SysLibMail for Linux	XC303	fixed
2135	XN-322 Filter Settings All XN-322 analog modules need additional filter setting of 1Hz		fixed
2144	Update easy800-Libs		fixed
2154	XC303: SDIAS Input Update An active input will take 2,5 sec. to be detected after program start (bootproject only)	XC303	fixed
2155	XC303: Function to check battery not implemented	XC303	fixed
2156	XC303: Function Save Retain, Restore Retain missing	XC303	fixed
2159	XC303: EA_Network: NET_SetIPDNS affects all the ports	XC303	fixed
2161	XC303: DHCP: IP Address is assigned only after subnet mask is set	XC303	fixed
2166	XC303: EA_Network.NET_GetKeepAliveTime: Cyclic (<=10ms) calling of the NET_GetKeepAliveTime function or other scripted functions in a high priority task (IEC-Prio = 1) leads to a plc reboot. Using a lower priority (31) or using a slower cycle time (e.g. 20ms) will shadow the effect.	XC303	fixed
2168	XC303: CAN-LED off after changing Application	XC303v	fixed
2169	XC303: InitPLC: ENABLE_SFTP without effekt	XC303	fixed
2170	XC303: Changing network settings using file networkconfig.templ	XC303	fixed
2171	XC303 PlcShell command "canload" inaccurate	XC303	fixed
2179	XC303: Create direct access to On-Board IOs	XC303	fixed
2181	XC303: Firmware installation: The same language as the codesys programming system language should be used	XC303	fixed
2182	New EDS, GSD and Device Descriptions		fixed

2185	local SWD: Online replacement not working		fixed
2195	XV300: Update OS 3.6.1	XV300	fixed
2214	XC303: PLC browser command isdhcpenabled not implemented yet	XC303	fixed
2219	XC303: setipdns not correct	XC303	fixed
2235	XV300/XV100: PLC Shell saveretain/restoreretain missing	XV100 XV300	fixed
2257	XSOFT-CODESYS default installation folder has changed		fixed

12.5

Known restrictions

Ticket	Summary
2041	XV300: Sporadic error after powercycle of ECAT slave
2030	XC303: Sporadic error and loss of comm. after powercycle of ECAT slave
1971	Data source manager error at login: needs always 2 tries to login after project change
1673 CDS-45928	Library Analyze: SFC diagnosis should be supported as in CODESYS V2
1672 CDS-46286	Intellisense: Library objects (data types, etc.) are not shown properly. The visibility pragma of objects does not work properly.
1611	Target visu: Alpha blending is not supported. Windows CE does not support alpha blending.
1610	Target visu: Antialiasing is not supported.
1342	Target system XV-1xx, XVS-4xx and XC-152, function block DiagGetBusState(): A diagnostic message which is pending before start will not be detected.
1341	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: If a reset operation is performed with a quickly following start operation, the connection to the gateway cannot always be established. ➔ Workaround: Until this issue is fixed, use a longer break between reset and start operation
1315	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: On initialization with baud rate 9600 bit/s and 19200 bit/s communication problems can occur.
1313	CAN: gc_bReadQueueSize has no effect on XV-1xx, XV-4xx, XC-152 => fixed value of 256 is used for Input-Queue-Sizes
1269	Data server: If the PC has multiple network adapters, the connection to data server does not work as documented in the online help. ➔ The best way to get a connection is to search the target device by a network scan and to configure the specified node name of the device as data source. Please note: In the log file of the PLC with the configured data server you can see if the connection is established or with which error it fails.
1233	CANopen Inputs of missing nodes keep their values and are not set to default values
1162	Udp network variables: If acknowledgment is selected, the response messages are missing

12 XSOFT-CODESYS V3.5.14

12.5 Known restrictions

1161	Target system XV-1xx, XV-4xx, XVS-4xx and XV-152, support of onboard flash is not yet included. The functions Sys_FlashInit(), Sys_FlashErase(), Sys_FlashWrite() and Sys_FlashRead() are not supported yet.
1143 CDS-31058	Retain Persistent Array with constant index: A compiler error appears if Retain Persistent Array with constant index was renamed afterwards. ➔ Workaround: Delete the object PersistentVars to fix this bug
1138	Device editor, online view: The profibus diagnostics is only partially implemented. Not all functionalities are supported yet.

13 XSOF-TCODESYS V3.5.12 – Bugfix 2

13.1 Release information

Product	XSOF-TCODESYS-3
Release	3.5.12
Profile specification	XSOF-TCODESYS V3.5.12
Build	Bugfix 2
Setup	Setup_XSOF_TCODESYS_V3.5.12.exe
Product Management	H. Heck
Test Management	A. Schmid
Quality Management	P. Zuber

13.1.1 Bugfix information

→ This version is released as typical full installation. It replaces the existing version XSOF-TCODESYS V3.5.12

13.1.2 Target systems

Target system	Actual Version
XV-1xx	3.5.12.0
XV-3xx	3.5.12.0
XV-4xx	3.5.12.0
XVS-4xx	3.5.12.0
XC-202	3.5.12.0
XC-152	3.5.12.0
XC-303	3.5.12.70

13.2 Fixes and changes

New Firmware for XC303 released.

13 XSOFTE-CODESYS V3.5.12 – Bugfix 2

13.3 Known restrictions

13.3

Known restrictions

Following restrictions are additionally to already known restrictions.

Ticket	Summary
-	-

13.4

Addressed Defects and Changes

Ticket	Summary	Target	State
2172	Add new Firmware Build 503 for XC-303	XC303	fixed

14 XSOF-TCODESYS V3.5.12 – Bugfix 1

14.1 Release information

Product	XSOF-TCODESYS-3
Release	3.5.12
Profile specification	XSOF-TCODESYS V3.5.12
Build	Bugfix 1
Setup	Setup_XSOF_TCODESYS_V3.5.12.exe
Product Management	H. Heck
Test Management	A. Schmid
Quality Management	P. Zuber

14.1.1 Bugfix information

→ This version is released as typical full installation. It replaces the existing version XSOF-TCODESYS V3.5.12

14.1.2 Target systems

Target system	Actual Version
XV-1xx	3.5.12.0
XV-3xx	3.5.12.0
XV-4xx	3.5.12.0
XVS-4xx	3.5.12.0
XC-202	3.5.12.0
XC-152	3.5.12.0
XC-303	3.5.12.70

14.2 Fixes and changes

New Firmware for XC303 released.

Firmware installation: Operating system for XV-3xx (CE7.0) updated.

14 XSOFT-CODESYS V3.5.12 – Bugfix 1

14.3 Known restrictions

14.3

Known restrictions

Following restrictions are additionally to already known restrictions.

Ticket	Summary
-	-

14.4

Addressed Defects and Changes

Ticket	Summary	Target	State
2081	EA_XC303Events.lib missing	XC303	fixed
2086	Security Agent Package is not installed		fixed
2134	DP-Master Statemachine: Problems with Get_Config on some DP-Slaves	XV100 XV300	fixed
2136	XV300: Update OS 3.6.0	XV300	fixed
2137	XC303: New Firmware Release (Cybersecurity)	XC303	fixed
2138	CODESYS V3: Scripting does not work		fixed
2141	XN-322 Filter Settings for analog modules added		fixed
2142	XC303: Firmware Update Problem	XC303	fixed

15 XSOFT-CODESYS V3.5.12

15.1 Release information

Product	XSOFT-CODESYS-3
Release	3.5.12
Profile specification	XSOFT-CODESYS V3.5.12
Build	V3.5.12
Setup	Setup_XSOFT_CODESYS_V3.5.12.exe
Product Management	H. Heck
Test Management	A. Schmid
Quality Management	P. Zuber

15.2 Version information

15.2.1 Programming system

Component	Actual Version
CODESYS V3	3.5 SP12 Patch 4

15.2.2 Target firmware

Firmware	Actual Version
RTS for XV-1xx, XV-3xx, XV-4xx, XVS-4xx, XC-152 <i>firmware.exe</i>	3.5.12
RTS for XC-202 <i>firmware.exe (XC202.bin)</i>	3.5.12
RTS for XC-303	3.5.12

15 XSOFT-CODESYS V3.5.12

15.3 Features and changes

15.2.3

Target systems

Target system	Actual Version
XV-1xx	3.5.12.0
XV-3xx	3.5.12.0
XV-4xx	3.5.12.0
XVS-4xx	3.5.12.0
XC-202	3.5.12.0
XC-152	3.5.12.0
XC-303	3.5.12.60

15.3

Features and changes

Components of PLC programming system CODESYS updated

Components of PLC runtime system CODESYS updated

Various security features added

Various firmware updates

Various library changes

Device descriptions SWD (local, CAN, Profibus, EtherCAT) updated

New Function: Config Editor

Firmware installation: Operating system for XV-1xx, XV-4xx, XVS-4xx and XC-152 (CE5.0) updated.

Firmware installation: Operating system for XV-3xx (CE7.0) updated.

15.4

Documentation

The target system specific programming manuals are not part of this distribution. They are published on our web site www.eaton-automation.com in order to provide you the latest version.

15.5 Addressed Defects and Changes

15.5.1 XSOFT-CODESYS V3.5.12

Ticket	Summary	Target	State
1907	Plugin to edit parameters in Plc3.cfg	XV	fixed
1978	EA_Network: new version 3.5.3		fixed
1980	Add Operating system release notes to installation		fixed
1982	Show Open Source License Info in CODESYS		fixed
1983	Show Open Source License Info in Setup		fixed
1987	EA23_FtpClient Library: new FB FTP_ReadDirectory_Ex that returns File-Date/Time		fixed
1996	New functions to get/set serial status signals	XV100 XV300	fixed
1998	XV300: Update OS 3.5.7 (2198, Startup problem, Firmware Update Tool, ENET1 Phy initialization)	XV300	fixed
2027	XC303 Firmware Update Tool is not accepting IP Address which contains "0"	XC303	fixed
2028	OPC UA settings in .cfg aren't working since 3.5.10	XV300 XC303	fixed
1972	XV100/XV300 -SWD RTS crashing with 99 modules	XV100 XV300	fixed
1981	Tools from "Lamps/Switches/Bitmaps" group of Visualization are visible in Editor screen only with XV100 Style		fixed
2011	XN-322-1CNT: The Parameter "SignalConfig" should have a Default value of 48 instead of 0		fixed

15.6 Known restrictions

Ticket	Summary
2041	XV300: Sporadic error after powercycle of ECAT slave
2030	XC303: Sporadic error and loss of comm. after powercycle of ECAT slave
2010	ENIP: performance of V3.5.12 is significant lower than V3.5.11
1971	Data source manager error at login: needs always 2 tries to login after project change
1673 CDS-45928	Library Analyze: SFC diagnosis should be supported as in CODESYS V2
1672 CDS-46286	Intellisense: Library objects (data types, etc.) are not shown properly. The visibility pragma of objects does not work properly.
1611	Target visu: Alpha blending is not supported. Windows CE does not support alpha blending.
1610	Target visu: Antialiasing is not supported.
1342	Target system XV-1xx, XVS-4xx and XC-152, function block DiagGetBusState(): A diagnostic message which is pending before start will not be detected.

15 XSOFT-CODESYS V3.5.12

15.6 Known restrictions

1341	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: If a reset operation is performed with a quickly following start operation, the connection to the gateway cannot always be established. ➔ Workaround: Until this issue is fixed, use a longer break between reset and start operation
1315	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: On initialization with baud rate 9600 bit/s and 19200 bit/s communication problems can occur.
1313	CAN: gc_bReadQueueSize has no effect on XV-1xx, XV-4xx, XC-152 => fixed value of 256 is used for Input-Queue-Sizes
1269	Data server: If the PC has multiple network adapters, the connection to data server does not work as documented in the online help. ➔ The best way to get a connection is to search the target device by a network scan and to configure the specified node name of the device as data source. Please note: In the log file of the PLC with the configured data server you can see if the connection is established or with which error it fails.
1233	CANopen Inputs of missing nodes keep their values and are not set to default values
1162	Udp network variables: If acknowledgment is selected, the response messages are missing
1161	Target system XV-1xx, XV-4xx, XVS-4xx and XV-152, support of onboard flash is not yet included. The functions Sys_FlashInit(), Sys_FlashErase(), Sys_FlashWrite() and Sys_FlashRead() are not supported yet.
1143 CDS-31058	Retain Persistent Array with constant index: A compiler error appears if Retain Persistent Array with constant index was renamed afterwards. ➔ Workaround: Delete the object PersistentVars to fix this bug
1138	Device editor, online view: The profibus diagnostics is only partially implemented. Not all functionalities are supported yet.

15.6.1

Target system XV-1xx

Ticket	Summary	Status
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet in the plc runtime system. The functions are not supported yet.	open

15.6.2

Target system XV-3xx

Ticket	Summary	Status
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet in the plc runtime system. The functions are not supported yet.	open
-	Operation system: 2D acceleration leads to plc task jitters. ➔ Workaround: disable the 2D acceleration in config tool.	open
-	Operation system: From operating system image version 3.0.0.1055, the NAND flash memory structure on operating system has changed.	fixed

-
- ➔ With an update of a device with operating system image version < 3.0.0.1055, all data of the internal storage (\InternalStorage) will be lost. Please contact the support to get information about the correct update process!
-

15.6.3

Target system XV-4xx

Ticket	Summary	Status
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet in the plc runtime system. The functions are not supported yet.	open

15 XSOFT-CODESYS V3.5.12

15.6 Known restrictions

15.6.4

Target system XVS-4xx

Ticket	Summary	Status
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet in the plc runtime system. The functions are not supported yet.	open

15.6.5

Target system XC-152

Ticket	Summary	Status
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet in the plc runtime system. The functions are not supported yet.	open

16 XSOF-TCODESYS V3.5.11 – Bugfix 1

16.1 Release information

Product	XSOF-TCODESYS-3
Release	3.5.11
Profile specification	XSOF-TCODESYS V3.5.11
Build	Bugfix 1
Setup	Setup_XSOF_TCODESYS_V3.5.11.exe
Product Management	H. Heck
Test Management	A. Schmid
Quality Management	P. Zuber

16.1.1 Bugfix information

→ This version is released as typical full installation. It replaces the existing version XSOF-TCODESYS V3.5.11

16.1.2 Target systems

Target system	Actual Version
XV-1xx	3.5.11.0
XV-3xx	3.5.11.0
XV-4xx	3.5.11.0
XVS-4xx	3.5.11.0
XC-202	3.5.11.0
XC-152	3.5.11.0
XC-303	3.5.11.10

16.2 Fixes and changes

New Device XC303 released.

Firmware installation: Operating system for XV-3xx (CE7.0) updated.

16 XSOFT-CODESYS V3.5.11 – Bugfix 1

16.3 Known restrictions

16.3

Known restrictions

Following restrictions are additionally to already known restrictions.

Ticket	Summary
-	-

16.4

Addressed Defects and Changes

Ticket	Summary	Target	State
1818	Burst on SWD Powerplug can cause unknown SWD driver error state (EMC)	XV100 XV300	fixed
1970	CODESYS Data Sources Manager License added		fixed
1945	new functions to get/set serial status signals RTS/CTS, DTR/DSR	XV100 XV300	fixed
1956	EasyNet not starting on XV300 in some situations	XV300	fixed
1958	XC303 Device description update: Modbus RTU added	XC303	fixed
1960	XV300: Update OS 3.5.6 (because of TCP checksum problem)	XV300	fixed
1961	XC303 Release	XC303	fixed
1963	XC300 Assist import: Bit-fields not visible after import		fixed
1966	XC202: XIOC-12DO-R can no longer be accessed	XC202	fixed
1968	XC202 Startup.ini: Shell "createstartupini" shows wrong text and does not work	XC202	fixed

17 XSOF-ODESYS V3.5.11

17.1 Release information

Product	XSOF-ODESYS-3
Release	3.5.11
Profile specification	XSOF-ODESYS V3.5.11
Build	V3.5.11
Setup	Setup_XSOF_CODESYS_V3.5.11.exe
Product Management	H. Heck
Test Management	A. Schmid
Quality Management	P. Zuber

17.2 Version information

17.2.1 Programming system

Component	Actual Version
CODESYS V3	3.5 SP11 Patch 3

17.2.2 Target firmware

Firmware	Actual Version
RTS for XV-1xx, XV-3xx, XV-4xx, XVS-4xx, XC-152 <i>firmware.exe</i>	3.5.11
RTS for XC-202 <i>firmware.exe (XC202.bin)</i>	3.5.11
RTS for XC-303	3.5.11

17 XSOFT-CODESYS V3.5.11

17.3 Features and changes

17.2.3

Target systems

Target system	Actual Version
XV-1xx	3.5.11.0
XV-3xx	3.5.11.0
XV-4xx	3.5.11.0
XVS-4xx	3.5.11.0
XC-202	3.5.11.0
XC-152	3.5.11.0
XC-303 (Preview)	3.5.11.0

17.3

Features and changes

Components of PLC programming system CODESYS updated

Components of PLC runtime system CODESYS updated

Various security features added

Various firmware updates

Various library changes

Device descriptions SWD (local, CAN, Profibus, EtherCAT) updated

New Function: Ini-File-Import XN-Assist

Firmware installation: Operating system for XV-1xx, XV-4xx, XVS-4xx and XC-152 (CE5.0) updated.

Firmware installation: Operating system for XV-3xx (CE7.0) updated.

CODESYS Security Features: Encryption

OPC UA with SSL support

17.4

Documentation

The target system specific programming manuals are not part of this distribution. They are published on our web site www.eaton-automation.com in order to provide you the latest version.

17.5

Addressed Defects and Changes

17.5.1

XSOFT-CODESYS V3.5.11

Ticket	Summary	Target	State
1910	XC202:Boot from SD or USB not possible	XC202	fixed
1703	Ethernet/IP: EthernetIPScannerIOTask blocks the system at disconnecting all adapters simultaneously		fixed
1728	EA_CAN_ext failure on second CAN		fixed
1880	Visu Style Default 3.5.3 should be part of installation		fixed
1459	ENIP: Communication initialization leads to exception (watchdog/processor load)		fixed
1681	XV100: Not enough memory on device while download of another project.	XV100	fixed
1701 CDS-46687	Ethernet/IP: Reset causes multiple forward open		fixed
1724	XC202: Show Build-Number (PLC-Shell, Login)	XC202	fixed
1802	EA23_Easynet and EA23_SysLibEasynet use the same namespace		fixed
1684	EtherCAT functionality	XV300	fixed
1812	XC303 UserInterrupts enable/disable	XC303	fixed
1814	Development of local XN300 driver for XC303	XC303	fixed
1816	SWD IO Updatefehler		fixed
1820 CDS-50568	Textformat - Zeilenschaltung isn't working on XV Targets.		fixed
1830	SWD-Assist cannot reconnect when the ethernet is unplugged		fixed
1840	Processor load with EIP higher with 3.5.10 compared to 3.5.8 and 3.5.7		fixed
1841	Execution time of SysMemFree increased in 3.5.10 compared to 3.5.8		fixed
1859	XC202 with 10 EIP defined devices reboots	XC202	fixed
1868	Automatic IP scan is no longer working for Firmwaredownload.		fixed
1883	No retain memory available while downloading of a project		fixed
1884	Security level "signing of downloads, online changes and boot applications" does not work stable with XV-300 and XC-303		fixed
1885	Codesys V3 Installation not possible without Internet-Connection		fixed
1898	Automatic IP scan is not working for Remote Client.		fixed
1899	Create new Visu Style for XV100 and XV300 and add it to the installation	XV300	fixed
1903	EA_Network_ext: new Version 3.5.4		fixed
1912	XC202 Startup Ini Enhancements	XC202	fixed
1920	Import Ini File for XN300 and SWD CANopen Gateway		fixed
1922	XC303 Memory layout not correct	XC303	fixed
1932	Application folder will be erased at startup		fixed
1949	XV300: Increase max. Memorysize from 12MB to 16MB	XV300	fixed

17 XSOFT-CODESYS V3.5.11

17.6 Known restrictions

1797	Improve Floating Point Performance on XV300	XV300	fixed
	Firmware updated (PLC runtime system / operating system)	All	

17.6

Known restrictions

Ticket	Summary
1673 CDS-45928	Library Analyze: SFC diagnosis should be supported as in CODESYS V2
1672 CDS-46286	Intellisense: Library objects (data types, etc.) are not shown properly. The visibility pragma of objects does not work properly.
1611	Target visu: Alpha blending is not supported. Windows CE does not support alpha blending.
1610	Target visu: Antialiasing is not supported.
1342	Target system XV-1xx, XVS-4xx and XC-152, function block DiagGetBusState(): A diagnostic message which is pending before start will not be detected.
1341	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: If a reset operation is performed with a quickly following start operation, the connection to the gateway cannot always be established. ➔ Workaround: Until this issue is fixed, use a longer break between reset and start operation
1315	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: On initialization with baud rate 9600 bit/s and 19200 bit/s communication problems can occur.
1313	CAN: gc_bReadQueueSize has no effect on XV-1xx, XV-4xx, XC-152 => fixed value of 256 is used for Input-Queue-Sizes
1269	Data server: If the PC has multiple network adapters, the connection to data server does not work as documented in the online help. ➔ The best way to get a connection is to search the target device by a network scan and to configure the specified node name of the device as data source. Please note: In the log file of the PLC with the configured data server you can see if the connection is established or with which error it fails.
1233	CANopen Inputs of missing nodes keep their values and are not set to default values
1162	Udp network variables: If acknowledgment is selected, the response messages are missing
1161	Target system XV-1xx, XV-4xx, XVS-4xx and XV-152, support of onboard flash is not yet included. The functions Sys_FlashInit(), Sys_FlashErase(), Sys_FlashWrite() and Sys_FlashRead() are not supported yet.
1143 CDS-31058	Retain Persistent Array with constant index: A compiler error appears if Retain Persistent Array with constant index was renamed afterwards. ➔ Workaround: Delete the object PersistentVars to fix this bug
1138	Device editor, online view: The profibus diagnostics is only partially implemented. Not all functionalities are supported yet.

17.6.1

Target system XV-1xx

Ticket	Summary	Status
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet in the plc runtime system. The functions are not supported yet.	open

17.6.2

Target system XV-3xx

Ticket	Summary	Status
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet in the plc runtime system. The functions are not supported yet.	open
-	Operation system: 2D acceleration leads to plc task jitters. ➔ Workaround: disable the 2D acceleration in config tool.	open
-	Operation system: From operating system image version 3.0.0.1055, the NAND flash memory structure on operating system has changed. ➔ With an update of a device with operating system image version < 3.0.0.1055, all data of the internal storage (\InternalStorage) will be lost. Please contact the support to get information about the correct update process!	fixed

17.6.3

Target system XV-4xx

Ticket	Summary	Status
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet in the plc runtime system. The functions are not supported yet.	open

17 XSOFT-CODESYS V3.5.11

17.6 Known restrictions

17.6.4

Target system XVS-4xx

Ticket	Summary	Status
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet in the plc runtime system. The functions are not supported yet.	open

17.6.5

Target system XC-152

Ticket	Summary	Status
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet in the plc runtime system. The functions are not supported yet.	open

18 XSOF-CDSESYS V3.5.10 – Bugfix 1

18.1 Release information

Product	XSOF-CDSESYS-3
Release	3.5.10
Profile specification	XSOF-CDSESYS V3.5.10
Build	Bugfix 1
Setup	Setup_XSOF_CDSESYS_V3.5.10.exe
Product Management	H. Heck
Test Management	A. Schmid
Quality Management	P. Zuber

18.1.1 Bugfix information

→ This version is released as typical full installation. It replaces the existing version XSOF-CDSESYS V3.5.10

18.2 Fixes and changes

Firmware installation: Operating system for XV-3xx (CE7.0) updated.

18 XSOFT-CODESYS V3.5.10 – Bugfix 1

18.3 Known restrictions

18.3

Known restrictions

Following restrictions are additionally to already known restrictions.

Ticket	Summary
-	-

18.4

Addressed Defects and Changes

Ticket	Summary	Target	State
1713	CANopen Device Editor: Configuration of NOP module (placeholder) implemented (for CAN-SWD Gateway)		fixed
1881	Visu Dialog generates cyclically warnings	XV100 XV300	fixed
1887	Visu Style Default 3.5.3 should be part of the installation (transparency problems XV100)	XV100	fixed
1888	EtherNet/IP Scanner 3.5.8 missing in Installation	XV100 XC202	fixed
1889	Installation not possible without Internet (.NET Framework)		fixed
1891	Automatic IP Scan no longer working for Firmwaredownload		fixed
1893	XIOC-16DX module does not work with CODESYS V3	XC202	fixed
1895	XC303 Memory Layout changed	XC303	fixed
1897	Automatic IP Scan no longer working for Remote Client		fixed
1902	EA_Network_ext: new Version 3.5.4		fixed
1904	XC303: new Firmware	XC303	fixed
1905	XV300: new OS 3.5.4		

19 XSOF-ODESYS V3.5.10

19.1 Release information

Product	XSOF-ODESYS-3
Release	3.5.10
Profile specification	XSOF-ODESYS V3.5.10
Build	V3.5.10
Setup	Setup_XSOF_CODESYS_V3.5.10.exe
Product Management	H. Heck
Test Management	A. Schmid
Quality Management	P. Zuber

19.2 Version information

19.2.1 Programming system

Component	Actual Version
CODESYS V3	3.5 SP10 Patch 3

19.2.2 Target firmware

Firmware	Actual Version
RTS for XV-1xx, XV-3xx, XV-4xx, XVS-4xx, XC-152 <i>firmware.exe</i>	3.5.10
RTS for XC-202 <i>firmware.exe (XC202.bin)</i>	3.5.10
RTS for XC-303 (Preview)	3.5.10

19 XSOFT-CODESYS V3.5.10

19.3 Features and changes

19.2.3

Target systems

Target system	Actual Version
XV-1xx	3.5.10.0
XV-3xx	3.5.10.0
XV-4xx	3.5.10.0
XVS-4xx	3.5.10.0
XC-202	3.5.10.0
XC-152	3.5.10.0
XC-303	3.5.10.0

19.3

Features and changes

Components of PLC programming system CODESYS updated

Components of PLC runtime system CODESYS updated

Target XC303 is available as preview version

Various security features added

Various firmware updates

Various library changes

Device descriptions SWD (local, CAN, Profibus, EtherCAT) updated

Target system XV300

- Profibus DP Slave available

Firmware installation: Operating system for XV-1xx, XV-4xx, XVS-4xx and XC-152 (CE5.0) updated.

Firmware installation: Operating system for XV-3xx (CE7.0) updated.

CODESYS Security Features: Encryption

New runtime component: SecurityManager (XV300/XC303)

X.509 certificate management (XV300/XC303)

- Support of self-signed certificates
- Support of CA signed certificates
- Configuration via PLC shell commands and file transfer
- Runtime component OpenSSL required

19.4

Discontinued

CODESYS FDT Frame

CODESYS DeviceNet

AWL editor

- End of sales and care
- Deactivated, but usage still possible

19.5

Documentation

The target system specific programming manuals are not part of this distribution. They are published on our web site www.eaton-automation.com in order to provide you the latest version.

19 XSOFT-CODESYS V3.5.10

19.6 Addressed Defects and Changes

19.6 Addressed Defects and Changes

19.6.1 XSOFT-CODESYS V3.5.10

Ticket	Summary	Target	State
1020	It is now possible to add multiple CAN, SDO's (in "Expert Mode")		fixed
1040	Manual address configuration lost after device update		fixed
1143 CDS-31058	Retain Persistent Array with constant Index creates compiler error, if the constant is renamed		fixed
1370 CDS-35972	Exported Task Configuration cannot be imported		fixed
1502	EA_SysLibMail		fixed
1544	SSL Component	XV300	fixed
1578	Wrong SWD EtherCAT configuration issue (placeholders)		fixed
1604	Alarmtable History Issue		fixed
1653	ENIP Startup duration under special circumstances high		fixed
1684	EtherCAT functionality	XV300	fixed
1702 CDS-46694	EtherCAT: Master shows status stopped under special circumstances after reconnect but everything seems to be ok		fixed
1717 CDS-46475	Device configuration: After an update/change of a modular CAN device the IO mapping is not updated correctly.		fixed
1741	Modbus RTU: "Auto restart communication" does not work		fixed
1763	OPC UA server error when DHCP is set or ethernet is not connected at RTS startup		fixed
1766	Alarmhistory crashed		fixed
1777	Cycle times of all IEC tasks increase sporadically		fixed
1785 CDS-50258	Target Visu: Element table can cause misalignment fault		fixed
1788	Backup and Restore functionality		fixed
1797	Improve Floating Point Performance	XV300	fixed
1798	New PLC "XC303 (Preview)"	XC303	fixed
1800	SWD Parameter for EtherCAT: 4 Byte values not possible		fixed
1808	XC202 Error in XIOC-Bit access (Output)	XC202	fixed
1809	SWD: Error in bit-access		fixed
1810	XV-300: Two ethernet adapter must be supported	XV300	fixed
1815	In Simulation Mode old libraries are added to project		fixed
1817	New Feature: XV-300: Profibus DP-Slave	XV300	fixed
1822	EtherNet/IP Editor: Start connection numbering by one		fixed
1835	New Feature: XV-303 Firmware Installation Plugin	XC303	fixed
1839	ProfibusDP Master on XV100 isn't starting sporadically	XV100	fixed
1877	Motion-Control-Toolboxes: Bug Fixes		fixed
	Firmware updated (PLC runtime system / operating system)	All	

19.7

Known restrictions

Ticket	Summary
1703 CDS-45946	Ethernet/IP: EthernetIPScannerIOTask blocks the system at disconnecting all adapters simultaneously.
1701 CDS-46687	Ethernet/IP: Reset causes multiple forward open
1673 CDS-45928	Library Analyze: SFC diagnosis should be supported as in CODESYS V2
1672 CDS-46286	Intellisense: Library objects (data types, etc.) are not shown properly. The visibility pragma of objects does not work properly.
1611	Target visu: Alpha blending is not supported. Windows CE does not support alpha blending.
1610	Target visu: Antialiasing is not supported.
1342	Target system XV-1xx, XVS-4xx and XC-152, function block DiagGetBusState(): A diagnostic message which is pending before start will not be detected.
1341	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: If a reset operation is performed with a quickly following start operation, the connection to the gateway cannot always be established. ➔ Workaround: Until this issue is fixed, use a longer break between reset and start operation
1315	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: On initialization with baud rate 9600 bit/s and 19200 bit/s communication problems can occur.
1313	CAN: gc_bReadQueueSize has no effect on XV-1xx, XV-4xx, XC-152 => fixed value of 256 is used for Input-Queue-Sizes
1269	Data server: If the PC has multiple network adapters, the connection to data server does not work as documented in the online help. ➔ The best way to get a connection is to search the target device by a network scan and to configure the specified node name of the device as data source. Please note: In the log file of the PLC with the configured data server you can see if the connection is established or with which error it fails.
1233	CANopen Inputs of missing nodes keep their values and are not set to default values
1162	Udp network variables: If acknowledgment is selected, the response messages are missing
1161	Target system XV-1xx, XV-4xx, XVS-4xx and XV-152, support of onboard flash is not yet included. The functions Sys_FlashInit(), Sys_FlashErase(), Sys_FlashWrite() and Sys_FlashRead() are not supported yet.
1143 CDS-31058	Retain Persistent Array with constant index: A compiler error appears if Retain Persistent Array with constant index was renamed afterwards. ➔ Workaround: Delete the object PersistentVars to fix this bug
1138	Device editor, online view: The profibus diagnostics is only partially implemented. Not all functionalities are supported yet.

19 XSOFT-CODESYS V3.5.10

19.7 Known restrictions

19.7.1

Target system XV-1xx

Ticket	Summary	Status
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet in the plc runtime system. The functions are not supported yet.	open

19.7.2

Target system XV-3xx

Ticket	Summary	Status
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet in the plc runtime system. The functions are not supported yet.	open
-	Operation system: 2D acceleration leads to plc task jitters. ➔ Workaround: disable the 2D acceleration in config tool.	open
-	Operation system: From operating system image version 3.0.0.1055, the NAND flash memory structure on operating system has changed. ➔ With an update of a device with operating system image version < 3.0.0.1055, all data of the internal storage (\InternalStorage) will be lost. Please contact the support to get information about the correct update process!	fixed

19.7.3

Target system XV-4xx

Ticket	Summary	Status
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet in the plc runtime system. The functions are not supported yet.	open

19.7.4

Target system XVS-4xx

Ticket	Summary	Status
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet in the plc runtime system. The functions are not supported yet.	open

19.7.5

Target system XC-152

Ticket	Summary	Status
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet in the plc runtime system. The functions are not supported yet.	open

19 XSOFTECODESYS V3.5.10

19.7 Known restrictions

20 XSOF-CD-3 V3.5.8 – Bugfix 2

20.1 Release information

Product	XSOF-CD-3
Release	3.5.8
Profile specification	XSOF-CD-3 V3.5.8
Build	Bugfix2
Setup	Setup_XSOF_CD-3_V3.5.8
Product Management	H. Heck
Test Management	K. Rampelt
Quality Management	P. Zuber

20.1.1 Bugfix information

- This version is released as typical full installation. It replaces the existing version XSOF-CD-3 V3.5.8 Bugfix1.
The main changes are to the RTS-Firmware / OS

20.2 Fixes and changes

Firmware installation: Operating system for XV-3xx (CE7.0) updated.

20.3

Known restrictions

Following restrictions are additionally to already known restrictions.

Ticket	Summary
-	-

20.4

Addressed Defects and Changes

Following addressed defects and changes are additionally to already known addressed defects and changes.

20.4.1

RTS for XV-3xx

Ticket	Summary	Status
1806	XV300: Display can block after a multitouch-event (3 or more touches at the same time) on some devices	fixed

21 XSOF-CDSESYS V3.5.8 – Bugfix 1

21.1 Release information

Product	XSOF-CDSESYS-3
Release	3.5.8
Profile specification	XSOF-CDSESYS V3.5.8
Build	3248
Setup	Setup_XSOF_CDSESYS_V3.5.8
Product Management	H. Heck
Test Management	K. Rampelt
Quality Management	P. Zuber

21.1.1 Bugfix information

- This version is released as typical full installation. It replaces the existing version XSOF-CDSESYS V3.5.8 (Build 3210).
The main changes are to the RTS-Firmware / OS

21.2 Fixes and changes

Realtime EtherCAT driver for XV-3xx (ENET1).

Firmware installation: Operating system for XV-1xx, XV-4xx, XVS-4xx and XC-152 (CE5.0) updated.

Firmware installation: Operating system for XV-3xx (CE7.0) updated.

21 XSOFT-CODESYS V3.5.8 – Bugfix 1

21.3 Known restrictions

21.3

Known restrictions

Following restrictions are additionally to already known restrictions.

Ticket	Summary
-	-

21.4

Addressed Defects and Changes

Following addressed defects and changes are additionally to already known addressed defects and changes.

21.4.1

RTS for XV-3xx

Ticket	Summary	Status
1804	XV300: Add Realtime-EtherCAT driver	fixed

21.4.2

RTS for XV-1xx, XV-3xx, XV-4xx, XVS-4xx, XC-152

Ticket	Summary	Status
1805	Firmware installation: Operating system updated new OS V2.29.x (CE5.0) for XV-1xx, XV-4xx, XVS-4xx and XC-152	fixed
1805	Firmware installation: Operating system updated new OS V3.4.x (CE7.0) for XV-3xx	fixed

22 XSOF-ODESYS V3.5.8

22.1 Release information

Product	XSOF-ODESYS-3
Release	3.5.8
Profile specification	XSOF-ODESYS V3.5.8
Build	3210
Setup	Setup_XSOF_CODESYS_V3.5.8.exe
Product Management	H. Heck
Test Management	K. Rampelt
Quality Management	P. Zuber

22.2 Version information

22.2.1 Programming system

Component	Actual Version
CODESYS V3	3.5 SP8 Patch 3

22.2.2 Target firmware

Firmware	Actual Version
RTS for XV-1xx, XV-3xx, XV-4xx, XVS-4xx, XC-152 firmware.exe	3.5.8
RTS for XC-202 firmware.exe (XC202.bin)	3.5.8

22 XSOFT-CODESYS V3.5.8

22.3 Features and changes

22.2.3

Target systems

Target system	Actual Version
XV-1xx	3.5.8.0
XV-3xx	3.5.8.0
XV-4xx	3.5.8.0
XVS-4xx	3.5.8.0
XC-202	3.5.8.0
XC-152	3.5.8.0

22.3

Features and changes

Components of PLC programming system CODESYS updated

Components of PLC runtime system CODESYS updated

Functionality of "CODESYS remote target visualization" is available as preview version

Various firmware updates

Various library changes

Device descriptions for local SWD (XML) updated

- Modules "EU1E-SWD-1DX", "EU2E-SWD-2DX", "EU2E-SWD-4DD-1", "EU1E-SWD-1AX-1", "EU1E-SWD-1AX-2", "EU1E-SWD-1XA-1", "EU1E-SWD-1XA-2", "EU2E-SWD-2PT", "EU1E-SWD-1CX", "EU3E-SWD-X1H-1", "XNH-SWD-2DX-1", "XNH-SWD-2DX-3AX-1" and "OPEN-SWD-X8RCO" are now supported.

Device descriptions for CAN (EDS) updated

- Gateway "EU5C-SWD-CAN" updated: Module "OPEN-SWD-X8RCO" is now supported.

Device descriptions for Profibus (GSD) updated

- Gateway "EU5C-SWD-DP" updated: Module "OPEN-SWD-X8RCO" is now supported.

Device descriptions for EtherCAT (XML) added

- Gateway "EU5C-SWD-EtherCAT" updated: Module "OPEN-SWD-X8RCO" is now supported.

Target system XV300

- **PLC program memory has been increased. By default 12MB PLC program memory are now supported.**
- **The available PLC data memory has been increased. By default 12MB PLC data memory are now supported.**

Firmware installation: Operating system for XV-1xx, XV-4xx, XVS-4xx and XC-152 (CE5.0) updated.

Firmware installation: Operating system for XV-3xx (CE7.0) updated.

Firmware installation: The installation of component "remote target visu" is now supported.

Firmware installation/download: The option to edit/configure the plc startup behaviour is now supported.

Installation: The installation in silent mode is now supported. With parameter /SILENT and /SUPPRESSMSGBOXES the message boxes are suppressed. With parameter /LICENSEKEY="..." the license key can be passed.

22.4

Documentation

The system description for Windows Embedded Compact 7 is now available.

The target system specific programming manuals are not part of this distribution. They are published on our web site www.eaton-automation.com in order to provide you the latest version.

22.5

Known restrictions

Ticket	Summary
1721	Since change of static area for retain, the functions to get used retain size return always the maximum retain size.
1717 CDS-46475	Device configuration: After an update/change of a modular device the IO mapping is not updated correctly. ➔ Workaround: An update of the parent device should resolve the problem.
1703 CDS-45946	Ethernet/IP: EthernetIPScannerIOTask blocks the system at disconnecting all adapters simultaneously.
1702 CDS-46694	EtherCAT: Master shows status stopped under special circumstances after reconnect but everything seems to be ok.
1701 CDS-46687	Ethernet/IP: Reset causes multiple forward open
1673 CDS-45928	Library Analyze: SFC diagnosis should be supported as in CODESYS V2
1672 CDS-46286	Intellisense: Library objects (data types, etc.) are not shown properly. The visibility pragma of objects does not work properly.
1611	Target visu: Alpha blending is not supported. Windows CE does not support alpha blending.
1610	Target visu: Antialiasing is not supported yet.
1342	Target system XV-1xx, XVS-4xx and XC-152, function block DiagGetBusState(): A diagnostic message which is pending before start will not be detected.
1341	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: If a reset operation is performed with a quickly following start operation, the connection to the gateway cannot always be established. ➔ Workaround: Until this issue is fixed, use a longer break between reset and start operation
1315	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: On initialization with baud rate 9600 bit/s and 19200 bit/s communication problems can occur.
1313	CAN: gc_bReadQueueSize has no effect on XV-1xx, XV-4xx, XC-152 => fixed value of 256 is used for Input-Queue-Sizes
1269	Data server: If the PC has multiple network adapters, the connection to data server does not work as documented in the online help. ➔ The best way to get a connection is to search the target device by a network scan and to configure the specified node name of the device as data source. Please note: In the log file of the PLC with the configured data server you can see if the connection is established or with which error it fails.
1233	CANopen Inputs of missing nodes keep their values and are not set to default values
1162	Udp network variables: If acknowledgment is selected, the response messages are missing
1161	Target system XV-1xx, XV-4xx, XVS-4xx and XV-152, support of onboard flash is not yet included. The functions Sys_FlashInit(), Sys_FlashErase(), Sys_FlashWrite() and Sys_FlashRead() are not supported yet.
1148	RTS-WinCE: GUI not yet refactored

1143 CDS-31058	Retain Persistent Array with constant index: A compiler error appears if Retain Persistent Array with constant index was renamed afterwards. ➔ Workaround: Delete the object PersistentVars to fix this bug
1138	Device editor, online view: The profibus diagnostics is only partially implemented. Not all functionalities are supported yet.
1105	On PLC reset, the handles are not closed automatically.
1094	Various documentation not yet included
1044	IOassistant not yet included

22.5.1

Target system XV-1xx

Ticket	Summary	Status
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet in the plc runtime system. The functions are not supported yet.	open

22.5.2

Target system XV-3xx

Ticket	Summary	Status
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet in the plc runtime system. The functions are not supported yet.	open
-	EtherCAT functionality is not supported yet. ➔ Please contact the support to get further information about the EtherCAT functionality.	open
-	Operation system: 2D acceleration leads to plc task jitters. ➔ Workaround: Until this issue is fixed, disable the 2D acceleration in config tool.	open
-	Operation system: From operating system image version 3.0.0.1055, the NAND flash memory structure on operating system has changed. ➔ With an update of a device with operating system image version < 3.0.0.1055, all data of the internal storage (InternalStorage) will be lost. Please contact the support to get information about the correct update process!	fixed

22.5.3

Target system XV-4xx

Ticket	Summary	Status
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet in the plc runtime system. The functions are not supported yet.	open

22 XSOFT-CODESYS V3.5.8

22.5 Known restrictions

22.5.4

Target system XVS-4xx

Ticket	Summary	Status
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet in the plc runtime system. The functions are not supported yet.	open

22.5.5

Target system XC-152

Ticket	Summary	Status
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet in the plc runtime system. The functions are not supported yet.	open

22.6

Addressed Defects and Changes

22.6.1

XSOFT-CODESYS V3.5.8

Ticket	Summary	Status
1761	Device descriptions of local swd modules updated. Some text defines corrected.	fixed
1755	Library EA23_SuconetK_Master.lib: Library description updated.	fixed
1754	Device description(s): XML files for local SWD updated. Modules "EU1E-SWD-1DX", "EU2E-SWD-2DX", "EU2E-SWD-4DD-1", "EU1E-SWD-1AX-1", "EU1E-SWD-1AX-2", "EU1E-SWD-1XA-1", "EU1E-SWD-1XA-2", "EU2E-SWD-2PT", "EU1E-SWD-1CX", "EU3E-SWD-X1H-1", "XNH-SWD-2DX-1", "XNH-SWD-2DX-3AX-1" and "OPEN-SWD-X8RCO" are now supported.	fixed
1754	Device description(s): EDS file for gateway "EU5C-SWD-CAN" updated. Module "OPEN-SWD-X8RCO" is now supported.	fixed
1754	Device description(s): GSD file for gateway "EU5C-SWD-DP" updated. Module "OPEN-SWD-X8RCO" is now supported.	fixed
1754	Device description(s): EtherCAT XML files for gateway "EU5C-SWD-EtherCAT" updated. Module "OPEN-SWD-X8RCO" is now supported,	fixed
1748	Installation: The system description for Windows Embedded Compact 7 is now available.	fixed
1746	Library EA23_SysLib_Add.lib: The function block Sys_IpMaskAdd() and Sys_IpMaskAdd2() do not work correctly on devices with more than one Ethernet interface. With the operating system V3.2.0 the behaviour of system functionality has changed ➔ Use function block Sys_IpMaskAddr_Ex() to get correct information for Ethernet interfaces.	fixed
1738	Installation: Installation in silent mode is now supported. With parameter /SILENT and /SUPPRESSMSGBOXES the message boxes are suppressed. With parameter /LICENSEKEY="["..."]" the license key can be passed.	fixed
1731	Components of PLC programming system CODESYS updated. New basic version 3.5 SP8 Patch 3	fixed
1729	PLC programming system crashes in simulation mode if a visu editor page is active.	fixed
1700 CDS-41303	Ethernet/IP - IoDrvEtherNetIP, EtherNet/IP Editor: After selecting the network adapter of the Ethernet interface the connection does not work anymore. The Ethernet interface is not adapted to the new Ethernet settings of selected network adapter.	fixed
1699 CDS-15920	Library SysFile: AM_APPEND_PLUS does not append a new text to an existing file.	fixed
1171 CDS-22259	Libraries SysFile23, SysFile23Async: It is not possible to open a file with mode "append".	fixed

22 XSOFT-CODESYS V3.5.8

22.6 Addressed Defects and Changes

22.6.2

Target system XV-1xx

Ticket	Summary	Status
1729	PLC programming system crashes in simulation mode if a visu editor page is active. To solve the problem, the compiler-define VISU_NO_EXCEPTION_HANDLING is now set in the device description.	fixed
-	Firmware updated (PLC runtime system / operating system)	fixed

22.6.3

Target system XV-3xx

Ticket	Summary	Status
1760	CAN communication: The transmission of CAN messages may block. The problem is solved with the update of the operating system. Operating system ≥ V3.3.0 (CE7.0) is required.	fixed
1758	Default PLC program size changed: The available PLC program memory has been increased. By default 12MB PLC program memory are now supported.	fixed
1758	Default PLC data size changed: The available PLC data memory has been increased. By default 12MB PLC data memory are now supported.	fixed
1735	Target visu: "Absolute movement - interior rotation" should not be supported. The functionality is not yet supported on Windows CE.	fixed
1729	PLC programming system crashes in simulation mode if a visu editor page is active. To solve the problem, the compiler-define VISU_NO_EXCEPTION_HANDLING is now set in the device description.	fixed
-	Firmware updated (PLC runtime system / operating system)	fixed

22.6.4

Target system XV-4xx

Ticket	Summary	Status
1729	PLC programming system crashes in simulation mode if a visu editor page is active. To solve the problem, the compiler-define VISU_NO_EXCEPTION_HANDLING is now set in the device description.	fixed
-	Firmware updated (PLC runtime system / operating system)	fixed

22.6.5

Target system XVS-4xx

Ticket	Summary	Status
1729	PLC programming system crashes in simulation mode if a visu editor page is active. To solve the problem, the compiler-define VISU_NO_EXCEPTION_HANDLING is now set in the device description.	fixed
-	Firmware updated (PLC runtime system / operating system)	fixed

22.6.6

Target system XC-152

Ticket	Summary	Status
1729	PLC programming system crashes in simulation mode if a visu editor page is active. To solve the problem, the compiler-define VISU_NO_EXCEPTION_HANDLING is now set in the device description.	fixed
-	Firmware updated (PLC runtime system / operating system)	fixed

22.6.7

Target system XC-202

Ticket	Summary	Status
1734	XIOC: Sukonet K does not work. The problems are fixed with new version of module "XIOC-NET-SK-M" and new version of PLC runtime system.	fixed
1729	PLC programming system crashes in simulation mode if a visu editor page is active. To solve the problem, the compiler-define VISU_NO_EXCEPTION_HANDLING is now set in the device description.	fixed
-	Firmware updated (PLC runtime system / operating system)	fixed

22.6.8

RTS for XV-1xx, XV-3xx, XV-4xx, XVS-4xx, XC-152

Ticket	Summary	Status
1762	Firmware installation/download: The option to edit/configure the plc startup behaviour is now supported.	fixed
1751	Firmware installation, target system XV-3xx: The template for the start behaviour must be updated (file autoexec.bat)	fixed
1743	Firmware installation: Operating system updated new OS V2.28.2 (CE5.0) for XV-1xx, XV-4xx, XVS-4xx and XC-152	fixed
1743	Firmware installation: Operating system updated new OS V3.3.1 (CE7.0) for XV-3xx	fixed
1740	"SWD Power missing" message is not send to SWD-Assist	fixed
1732	PLC runtime system updated New basic version 3.5.8.30	fixed
1727	In some cases (high communication load), touch events are not detected. The priority of communication threads changed. The thread priority of communication threads are now defined in the cfg file. The plc runtime system gets the priority of communication threads from the cfg file.	fixed
1708	The functionality of "remote target visualization" is available as preview version.	fixed
1708	Firmware installation: The installation of component "remote target visu" is now supported.	fixed

22 XSOFT-CODESYS V3.5.8

22.6 Addressed Defects and Changes

22.6.9

RTS for XC-202

Ticket	Summary	Status
1734	XIOC: Sukonet K does not work.	fixed
1732	PLC runtime system updated New basic version 3.5.8.30	fixed

23 XSOF-ODESYS V3.5.7

23.1 Release information

Product	XSOF-ODESYS-3
Release	3.5.7
Profile specification	XSOF-ODESYS V3.5.7
Build	3094
Setup	Setup_XSOF_ODESYS_V3.5.7.exe
Product Management	H. Heck
Test Management	K. Rampelt
Quality Management	P. Zuber

23.2 Version information

23.2.1 Programming system

Component	Actual Version
ODESYS V3	3.5 SP7 Patch 3

23.2.2 Target firmware

Firmware	Actual Version
RTS for XV-1xx, XV-3xx, XV-4xx, XVS-4xx, XC-152 firmware.exe	3.5.7
RTS for XC-202 firmware.exe (XC202.bin)	3.5.7

23 XSOFT-CODESYS V3.5.7

23.2 Version information

23.2.3

Target systems

Target system	Actual Version
XV-1xx	3.5.7.0
XV-3xx	3.5.7.0
XV-4xx	3.5.7.0
XVS-4xx	3.5.7.0
XC-202	3.5.7.0
XC-152	3.5.7.0

23.3**Features and changes****Components of PLC programming system CODESYS updated****Components of PLC runtime system CODESYS updated****Various firmware updates****Various library changes****Device descriptions for CAN (EDS) updated**

- Gateway "EU5C-SWD-CAN" updated: Modules "EU1E-SWD-1DX", "EU2E-SWD-2DX", "EU2E-SWD-4DD-1", "EU1E-SWD-1AX-1", "EU1E-SWD-1AX-2", "EU1E-SWD-1XA-1", "EU1E-SWD-1XA-2", "EU2E-SWD-2PT", "EU1E-SWD-1CX", "EU3E-SWD-X1H-1", "XNH-SWD-2DX-1" and "XNH-SWD-2DX-3AX-1" are now supported.

Device descriptions for Profibus (GSD) updated

- Gateway "EU5C-SWD-DP" updated: Modules "EU1E-SWD-1DX", "EU2E-SWD-2DX", "EU2E-SWD-4DD-1", "EU1E-SWD-1AX-1", "EU1E-SWD-1AX-2", "EU1E-SWD-1XA-1", "EU1E-SWD-1XA-2", "EU2E-SWD-2PT", "EU1E-SWD-1CX", "EU3E-SWD-X1H-1", "XNH-SWD-2DX-1" and "XNH-SWD-2DX-3AX-1" are now supported.

Device descriptions for EtherCAT (XML) added

- Gateway "EU5C-SWD-EtherCAT" updated: Modules "EU1E-SWD-1DX", "EU2E-SWD-2DX", "EU2E-SWD-4DD-1", "EU1E-SWD-1AX-1", "EU1E-SWD-1AX-2", "EU1E-SWD-1XA-1", "EU1E-SWD-1XA-2", "EU2E-SWD-2PT", "EU1E-SWD-1CX", "EU3E-SWD-X1H-1", "XNH-SWD-2DX-1" and "XNH-SWD-2DX-3AX-1" are now supported.

Target system XV300

- **Profibus functionality is now supported. Baud rates ≤ 12 MBaud are supported.**
- **OPC UA Server functionality is now supported**

Firmware installation: Operating system for XV-3xx (CE7.0) updated**23.4****Documentation**

The target system specific programming manuals are not part of this distribution. They are published on our web site www.eaton-automation.com in order to provide you the latest version.

23.5

Known restrictions

Ticket	Summary
1721	Since change of static area for retain, the functions to get used retain size return always the maximum retain size.
1717 CDS-46475	Device configuration: After an update/change of a modular device the IO mapping is not updated correctly. ➔ Workaround: An update of the parent device should resolve the problem.
1703 CDS-45946	Ethernet/IP: EthernetIPScannerIOTask blocks the system at disconnecting all adapters simultaneously.
1702 CDS-46694	EtherCAT: Master shows status stopped under special circumstances after reconnect but everything seems to be ok.
1701 CDS-46687	Ethernet/IP: Reset causes multiple forward open
1700 CDS-41303	Ethernet/IP - IoDrvEtherNetIP, EtherNet/IP Editor: After selecting the network adapter of the Ethernet interface the connection does not work anymore. The Ethernet interface is not adapted to the new Ethernet settings of selected network adapter.
1699 CDS-15920	Library SysFile: AM_APPEND_PLUS does not append a new text to an existing file. ➔ Workaround: Use the file open function and set the file pointer to EOF to append file data.
1611	Target visu: Alpha blending is not supported. Windows CE does not support alpha blending.
1610	Target visu: Antialiasing is not supported yet.
1342	Target system XV-1xx, XVS-4xx and XC-152, function block DiagGetBusState(): A diagnostic message which is pending before start will not be detected.
1341	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: If a reset operation is performed with a quickly following start operation, the connection to the gateway cannot always be established. ➔ Workaround: Until this issue is fixed, use a longer break between reset and start operation
1315	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: On initialization with baud rate 9600 bit/s and 19200 bit/s communication problems can occur.
1313	CAN: gc_bReadQueueSize has no effect on XV-1xx, XV-4xx, XC-152 => fixed value of 256 is used for Input-Queue-Sizes
1269	Data server: If the PC has multiple network adapters, the connection to data server does not work as documented in the online help. ➔ The best way to get a connection is to search the target device by a network scan and to configure the specified node name of the device as data source. Please note: In the log file of the PLC with the configured data server you can see if the connection is established or with which error it fails.
1233	CANopen Inputs of missing nodes keep their values and are not set to default values
1162	Udp network variables: If acknowledgment is selected, the response messages are missing
1161	Target system XV-1xx, XV-4xx, XVS-4xx and XV-152, support of onboard flash is not yet included. The functions Sys_FlashInit(), Sys_FlashErase(), Sys_FlashWrite() and Sys_FlashRead() are not supported yet.

1148	RTS-WinCE: GUI not yet refactored
1143 CDS-31058	Retain Persistent Array with constant index: A compiler error appears if Retain Persistent Array with constant index was renamed afterwards. ➔ Workaround: Delete the object PersistentVars to fix this bug
1138	Device editor, online view: The profibus diagnostics is only partially implemented. Not all functionalities are supported yet.
1105	On PLC reset, the handles are not closed automatically.
1094	Various documentation not yet included
1044	IOassistant not yet included

23.5.1

Target system XV-1xx

Ticket	Summary	Status
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet in the plc runtime system. The functions are not supported yet.	open

23.5.2

Target system XV-3xx

Ticket	Summary	Status
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet in the plc runtime system. The functions are not supported yet.	open
-	EtherCAT functionality is not supported yet. ➔ Please contact the support to get further information about the EtherCAT functionality.	open
-	Operation system: 2D acceleration leads to plc task jitters. ➔ Workaround: Until this issue is fixed, disable the 2D acceleration in config tool.	open
-	Operation system: From operating system image version 3.0.0.1055, the NAND flash memory structure on operating system has changed. ➔ With an update of a device with operating system image version < 3.0.0.1055, all data of the internal storage (InternalStorage) will be lost. Please contact the support to get information about the correct update process!	fixed

23.5.3

Target system XV-4xx

Ticket	Summary	Status
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet in the plc runtime system. The functions are not supported yet.	open

23 XSOFT-CODESYS V3.5.7

23.5 Known restrictions

23.5.4

Target system XVS-4xx

Ticket	Summary	Status
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet in the plc runtime system. The functions are not supported yet.	open

23.5.5

Target system XC-152

Ticket	Summary	Status
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet in the plc runtime system. The functions are not supported yet.	open

23.6

Addressed Defects and Changes

23.6.1

XSOFT-CODESYS V3.5.7

Ticket	Summary	Status
1722	Device description(s): EDS file for gateway "EU5C-SWD-CAN" updated. Modules "EU1E-SWD-1DX", "EU2E-SWD-2DX", "EU2E-SWD-4DD-1", "EU1E-SWD-1AX-1", "EU1E-SWD-1AX-2", "EU1E-SWD-1XA-1", "EU1E-SWD-1XA-2", "EU2E-SWD-2PT", "EU1E-SWD-1CX", "EU3E-SWD-X1H-1", "XNH-SWD-2DX-1" and "XNH-SWD-2DX-3AX-1" are now supported.	fixed
1722	Device description(s): GSD file for gateway "EU5C-SWD-DP" updated. Modules "EU1E-SWD-1DX", "EU2E-SWD-2DX", "EU2E-SWD-4DD-1", "EU1E-SWD-1AX-1", "EU1E-SWD-1AX-2", "EU1E-SWD-1XA-1", "EU1E-SWD-1XA-2", "EU2E-SWD-2PT", "EU1E-SWD-1CX", "EU3E-SWD-X1H-1", "XNH-SWD-2DX-1" and "XNH-SWD-2DX-3AX-1" are now supported.	fixed
1722	Device description(s): EtherCAT XML files for gateway "EU5C-SWD-EtherCAT" updated. Modules "EU1E-SWD-1DX", "EU2E-SWD-2DX", "EU2E-SWD-4DD-1", "EU1E-SWD-1AX-1", "EU1E-SWD-1AX-2", "EU1E-SWD-1XA-1", "EU1E-SWD-1XA-2", "EU2E-SWD-2PT", "EU1E-SWD-1CX", "EU3E-SWD-X1H-1", "XNH-SWD-2DX-1" and "XNH-SWD-2DX-3AX-1" are now supported.	fixed
1689	Components of PLC programming system CODESYS updated. New basic version 3.5 SP7 Patch 3	fixed
1674	Library SysFileAsync23: The parallel multiple executing of asynchronous file operations fails.	fixed
1664	Library EA23_SwdUtil: Function block Swd_GetVersion() does not return version strings.	fixed
1650 CDS-45868	EtherCAT: Reconnect of single slaves does not work always after power off/on. Startup fails on unplug and plug in some cases.	fixed
1637 CDS-43600	Ethernet/IP - EtherNet/IP Services: Reset Services crashes after second execution.	fixed
1630	Library EA_SWD, EA_SWD_ext: Function blocks ReadAcyclic() and WriteAcyclic() work with restrictions.	fixed
1577 CDS-36844	EtherCAT: For gateway "EU5C-SWD-EtherCAT" a wrong configuration is generated if a placeholder module is configured. ➔ Workaround: Write the CoE mandatory object 0xF030 manually in the plc program.	fixed
1537	Library EA23_SysLib_Add.lib: Some library functions do not yet support the 2 nd Ethernet interface. ➔ New function block Sys_MacAddr_Ex() and function block Sys_IpMaskAddr_Ex() to support the 2 nd Ethernet interface added	fixed
1450 CDS-38067	Ethernet/IP - IoDrvEtherNetIP: Reconnect of Ethernet/IO device does not work sporadically after power off/on.	fixed
1240 CDS-28362	Modbus Slave: Unable to write Holding Register ➔ Holding registers are defined as Input Channels. Therefore the local slave application can only read these data, but is unable to update the	fixed

23 XSOFT-CODESYS V3.5.7

23.6 Addressed Defects and Changes

value of the holding registers. To enable this, the register shall be mapped to a global variable.		
1208 CDS-40511	XSOFT-CODESYS is working only with 96 DPI display size properly.	fixed
1177 CDS-4369	Library SysFileAsync23: Function block SysFileOpenAsync(): Output parameter bDone and bError are not compatible to CODESYS V2.3.	fixed

23.6.2

Target system XV-1xx

Ticket	Summary	Status
1529 CDS-36374	Exception handling on ARM platforms with Windows CE is now supported in IEC.	fixed
-	Firmware updated (PLC runtime system / operating system)	fixed

23.6.3

Target system XV-3xx

Ticket	Summary	Status
1529 CDS-36374	Exception handling on ARM platforms with Windows CE is now supported in IEC.	fixed
1640	OPC UA server functionality is now supported.	fixed
1139	Profibus functionality is now supported. Baud rates ≤ 12 MBaud are supported.	fixed
-	Firmware updated (PLC runtime system / operating system)	fixed

23.6.4

Target system XV-4xx

Ticket	Summary	Status
1529 CDS-36374	Exception handling on ARM platforms with Windows CE is now supported in IEC.	fixed
-	Firmware updated (PLC runtime system / operating system)	fixed

23.6.5

Target system XVS-4xx

Ticket	Summary	Status
1529 CDS-36374	Exception handling on ARM platforms with Windows CE is now supported in IEC.	fixed
-	Firmware updated (PLC runtime system / operating system)	fixed

23.6.6

Target system XC-152

Ticket	Summary	Status
1529 CDS-36374	Exception handling on ARM platforms with Windows CE is now supported in IEC.	fixed
-	Firmware updated (PLC runtime system / operating system)	fixed

23.6.7

Target system XC-202

Ticket	Summary	Status
1529 CDS-36374	Exception handling on ARM platforms with Windows CE is now supported in IEC.	fixed
-	Firmware updated (PLC runtime system / operating system)	fixed

23.6.8

RTS for XV-1xx, XV-3xx, XV-4xx, XVS-4xx, XC-152

Ticket	Summary	Status
1695	Firmware installation: Operating system updated new OS V3.1.1 (CE7.0) for XV-3xx	fixed
1688	Multiple start of the plc runtime system is possible.	fixed
1685	PLC runtime system updated New basic version 3.5.7.30	fixed
1687	"Boot device independent" startup and execution is now supported. ➔ Please contact the support to get information about the settings to configure the "boot device independent" startup and execution behaviour.	fixed
1537	Library EA23_SysLib_Add.lib: Some library functions do not yet support the 2 nd Ethernet interface. ➔ New function block Sys_MacAddr_Ex() and function block Sys_IpMaskAddr_Ex() to support the 2 nd Ethernet interface added.	fixed
1529 CDS-36374	Exception handling on Arm platforms with Windows CE is now supported in IEC.	fixed

23 XSOFT-CODESYS V3.5.7

23.6 Addressed Defects and Changes

23.6.9

RTS for XC-202

Ticket	Summary	Status
1690	XIOC: Gets wrong input data. If a XIOC input module (XIOC 16DI) is accessed bitwise only, bits 8 to 15 show the same input values as bits 0 to 7.	fixed
1685	PLC runtime system updated New basic version 3.5.7.30	fixed
1529 CDS-36374	Exception handling on Arm platforms with Windows CE is now supported in IEC.	fixed

24 XSOF-CD-3 V3.5.6 – Bugfix 1

24.1 Release information

Product	XSOF-CD-3
Release	3.5.6
Profile specification	XSOF-CD-3 V3.5.6
Build	2973
Setup	Setup_XSOF_CD-3_V3.5.6
Product Management	H. Heck
Test Management	K. Rampelt
Quality Management	P. Zuber

24.1.1 Bugfix information

→ This version is released as typical full installation. It replaces the existing version XSOF-CD-3 V3.5.6 (Build 2955).

24.2 Fixes and changes

Firmware installation: Operating system for XV-3xx (CE7.0) updated. Network communication problems on the 1st interface (ENET1) are fixed.

Library EA23_SysLibEasyNet: Missing library category for XV-3xx added.

Library EA23_CanUser: Missing library category for XV-3xx added.

Target visu: Exception on task VISU_TASK if trend is used is fixed.

Target visu: Problem with displayed images on projects which are updated from V3.5.5 is fixed.

24 XSOFT-CODESYS V3.5.6 – Bugfix 1

24.3 Known restrictions

24.3

Known restrictions

Following restrictions are additionally to already known restrictions.

Ticket	Summary
-	-

24.4

Addressed Defects and Changes

Following addressed defects and changes are additionally to already known addressed defects and changes.

24.4.1

Target system XV-3xx

Ticket	Summary	Status
1678	Library EA23_CanUser: Library category TARGET_XV300 is missing	fixed
1677	Library EA23_SysLibEasyNet: Library category TARGET_XV300 is missing	fixed
1670	Network communication problems on the 1 st interface (ENET1) may occur. The problem is solved with the update of the operating system. Operating system ≥ V3.0.1 (CE7.0) is required.	fixed
-	Firmware updated (PLC runtime system / operating system)	fixed

24.4.2

RTS for XV-1xx, XV-3xx, XV-4xx, XVS-4xx, XC-152

Ticket	Summary	Status
1680	Firmware installation: The ftp installation fails, if the root folder "\PlcRts" already exists and the destination folder ("\\InternalStorage\PlcRts" or "\\StorageCard\PlcRts") does not exist.	fixed
1676	Target visu: Trend causes exception in VISU_TASK	fixed
1675	Target visu: Projects which are updated from V3.5.5 do not work properly, if no text is configured on the displayed images.	fixed
1669	Firmware installation: Operating system updated new OS V3.0.1 (CE7.0) for XV-3xx	fixed

25 XSOF-CDSEYS V3.5.6

25.1 Release information

Product	XSOF-CDSEYS-3
Release	3.5.6
Profile specification	XSOF-CDSEYS V3.5.6
Build	2955
Setup	Setup_XSOF_CDSEYS_V3.5.6.exe
Product Management	H. Heck
Test Management	K. Rampelt
Quality Management	P. Zuber

25.2 Version information

25.2.1 Programming system

Component	Actual Version
CDSEYS V3	3.5 SP6 Patch 4

25.2.2 Target firmware

Firmware	Actual Version
RTS for XV-1xx, XV-3xx ¹⁾ , XV-4xx, XVS-4xx, XC-152 firmware.exe	3.5.6
RTS for XC-202 firmware.exe (XC202.bin)	3.5.6

25 XSOFT-CODESYS V3.5.6

25.2 Version information

25.2.3

Target systems

Target system	Actual Version
XV-1xx	3.5.6.0
XV-3xx ¹⁾	3.5.6.0
XV-4xx	3.5.6.0
XVS-4xx	3.5.6.0
XC-202	3.5.6.0
XC-152	3.5.6.0

¹⁾ The target system XV-3xx is available as a release version. For further information see chap. 25.5.1.

25.3

Features and changes

Components of PLC programming system CODESYS updated

Components of PLC runtime system CODESYS updated

Target system XV-3xx is now supported

Various firmware updates

Various library changes

Device descriptions for CAN (EDS) updated

- Gateway "XN-312-GW-CAN" is now supported
- Gateway "EU5C-SWD-CAN" updated: Modules "EMS-SWD-DO/RO", "EMS-SWD-DOS/ROS", "ELR Hx-I-PT-SWD/500AC", "ELR Hx-IES-PT-SWD/500AC", "EU1E-SWD-2DX", "EU1E-SWD-2DD", "EU2E-SWD-4DX", "EU2E-SWD-4DD", "EU5E-SWD-4PT-2 (HW V03)", "M22-SWD-R" and "M22-SWD-INC" are now supported.

Device descriptions for Profibus (GSD) updated

- Gateway "EU5C-SWD-DP" updated: Modules "EMS-SWD-DO/RO", "EMS-SWD-DOS/ROS", "ELR Hx-I-PT-SWD/500AC", "ELR Hx-IES-PT-SWD/500AC", "EU1E-SWD-2DX", "EU1E-SWD-2DD", "EU2E-SWD-4DX", "EU2E-SWD-4DD", "EU5E-SWD-4PT-2 (HW V03)", "M22-SWD-R" and "M22-SWD-INC" are now supported..

Device descriptions for EtherCAT (XML) added

- Gateway "EU5C-SWD-EtherCAT" is now supported

SWD functionality: Online replacement (XEnergy-Mode) is now supported

Target system XV-1xx, XV-4xx, XVS-4xx and XC-152

- PLC program memory has been increased. By default 2048kB PLC program memory are now supported.
- The available PLC data memory has been increased. By default 512kB PLC data memory are now supported.

25.4

Documentation

The target system specific programming manuals are not part of this distribution. They are published on our web site www.eaton-automation.com in order to provide you the latest version.

25.5

Known restrictions

Ticket	Summary
1650 CDS-45868	EtherCAT: Reconnect of single slaves does not work always after power off/on. Startup fails on unplug and replug in some cases.
1630	Library EA_SWD, EA_SWD_ext: Function blocks ReadAcyclic() and WriteAcyclic() work with restrictions.
1611	Target visu: Alpha blending is not supported. Windows CE does not support alpha blending.
1610	Target visu: Antialiasing is not supported yet.
1577 CDS-36844	EtherCAT: For gateway "EU5C-SWD-EtherCAT" a wrong configuration is generated if a placeholder module is configured. ➔ Workaround: Write the CoE mandatory object 0xF030 manually in the plc program.
1450 CDS-38067	Ethernet/IP - IoDrvEtherNetIP: Reconnect of Ethernet/IO device does not work sporadically after power off/on.
1342	Target system XV-1xx, XVS-4xx and XC-152, function block DiagGetBusState(): A diagnostic message which is pending before start will not be detected.
1341	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: If a reset operation is performed with a quickly following start operation, the connection to the gateway cannot always be established. ➔ Workaround: Until this issue is fixed, use a longer break between reset and start operation
1315	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: On initialization with baud rate 9600 bit/s and 19200 bit/s communication problems can occur.
1313	CAN: gc_bReadQueueSize has no effect on XV-1xx, XV-4xx, XC-152 => fixed value of 256 is used for Input-Queue-Sizes
1269	Data server: If the PC has multiple network adapters, the connection to data server does not work as documented in the online help. ➔ The best way to get a connection is to search the target device by a network scan and to configure the specified node name of the device as data source. Please note: In the log file of the PLC with the configured data server you can see if the connection is established or with which error it fails.
1240 CDS-28362	Modbus Slave: Unable to write Holding Register ➔ Holding registers are defined as Input Channels. Therefore the local slave application can only read these data, but is unable to update the value of the holding registers. To enable this, the register shall be mapped to a global variable.
1233	CANopen Inputs of missing nodes keep their values and are not set to default values
1208 CDS-40511	XSOFT-CODESYS is working only with 96 DPI display size properly.
1162	Udp network variables: If acknowledgment is selected, the response messages are missing
1161	Target system XV-1xx, XV-4xx, XVS-4xx and XV-152, support of onboard flash is not yet included. The functions Sys_FlashInit(), Sys_FlashErase(), Sys_FlashWrite() and Sys_FlashRead() are not supported yet.
1148	RTS-WinCE: GUI not yet refactored

1143 CDS-31058	Retain Persistent Array with constant index: A compiler error appears if Retain Persistent Array with constant index was renamed afterwards. ➔ Workaround: Delete the object PersistentVars to fix this bug
1138	Device editor, online view: The profibus diagnostics is only partially implemented. Not all functionalities are supported yet.
1105	On PLC reset, the handles are not closed automatically.
1094	Various documentation not yet included
1044	IOassistant not yet included

25.5.1

Target system XV-1xx

Ticket	Summary	Status
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet in the plc runtime system. The functions are not supported yet.	open

25.5.2

Target system XV-3xx

The target system XV-3xx is available as release version. Not all functionalities are implemented yet resp. some functionalities work with restrictions.

Ticket	Summary	Status
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet in the plc runtime system. The functions are not supported yet.	open
-	EtherCAT functionality is not supported yet	open
-	Profibus functionality is not supported yet	open
-	Operation system: 2D acceleration leads to plc task jitters. ➔ Workaround: Until this issue is fixed, disable the 2D acceleration in config tool.	open
1537	Library EA23_SysLib_Add.lib: Some library functions do not yet support the 2 nd Ethernet interface.	open
-	Operation system: From operating system image version 3.0.0.1055, the NAND flash memory structure on operating system has changed. ➔ With an update of a device with operating system image version < 3.0.0.1055, all data of the internal storage (\InternalStorage) will be lost. Please contact our support to get information about the correct update process!	fixed

25.5.3

Target system XV-4xx

Ticket	Summary	Status
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet in the plc runtime system. The functions are not supported yet.	open

25 XSOFT-CODESYS V3.5.6

25.6 Addressed Defects and Changes

25.5.4

Target system XVS-4xx

Ticket	Summary	Status
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet in the plc runtime system. The functions are not supported yet.	open

25.5.5

Target system XC-152

Ticket	Summary	Status
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet in the plc runtime system. The functions are not supported yet.	open

25.6

Addressed Defects and Changes

25.6.1

XSOFT-CODESYS V3.5.6

Ticket	Summary	Status
1656	PLC programming system: The device editor page "device information" of XC202 contains multiple entries with the same values.	fixed
1641	Device description(s): EDS file for gateway "XN-312-GW-CAN" added	fixed
1633	Device description(s): EDS file for gateway "EU5C-SWD-CAN" updated. Modules "EMS-SWD-DO/RO", "EMS-SWD-DOS/ROS", "ELR Hx-I-PT-SWD/500AC", "ELR Hx-IES-PT-SWD/500AC", "EU1E-SWD-2DX", "EU1E-SWD-2DD", "EU2E-SWD-4DX", "EU2E-SWD-4DD", "EU5E-SWD-4PT-2 (HW V03)", "M22-SWD-R" and "M22-SWD-INC" are now supported.	fixed
1633	Device description(s): GSD file for gateway "EU5C-SWD-DP" updated. Modules "EMS-SWD-DO/RO", "EMS-SWD-DOS/ROS", "ELR Hx-I-PT-SWD/500AC", "ELR Hx-IES-PT-SWD/500AC", "EU1E-SWD-2DX", "EU1E-SWD-2DD", "EU2E-SWD-4DX", "EU2E-SWD-4DD", "EU5E-SWD-4PT-2 (HW V03)", "M22-SWD-R" and "M22-SWD-INC" are now supported.	fixed
1633	Device description(s): EtherCAT XML files for gateway "EU5C-SWD-EtherCAT" added.	fixed
1630	Library EA_SWD, EA_SWD_ext added. Includes new functionality to get additional module information. → see chap. 25.5 Known restrictions	fixed
1629	Library EA23_MC_Toolbox_en changed: Function block A_ZSFB01_spezial_FB() returns wrong values.	fixed
1629	Library EA23_MC_Toolbox_de changed: Function block A_ZSFB01_Sonder_FB() returns wrong values.	fixed
1625	SWD functionality: Online replacement (XEnergy-Mode) is now supported.	fixed
1620	Components of PLC programming system CODESYS updated. New basic version 3.5 SP6 Patch 4	fixed

1571 CDS-36930	EtherCAT: After power off/on switching of the 2nd slave, the slave will not start properly. The slave does not switch to the operational mode.	fixed
1551 CDS-38247	CAN configuration: SDO objects of type BIT cannot add to SDO configuration.	fixed
1512	SWD functionality: The device scan does not work, if a NOP module is available on network → Device description for NOP module added. The configuration of NOP modules is now supported.	fixed
1503 CDS-38699	EtherNet/IP: Documentation of EtherNetIp Services libraries does not exist.	fixed
1462 CDS-38461	Code generation: The memory observation fails at code generation if the code is reduced and increased without clean all.	fixed
1404	Library EA_Network, EA_Network_ext added. → see chap. 25.5 Known restrictions	fixed
1241 CDS-27947	Modbus Slave Device: Bit-Access function codes (Coils) are not implemented yet. → It is recommended to use register function codes instead.	fixed

25.6.2

Target system XV-1xx

Ticket	Summary	Status
1657	Target visu: Color Gradient fill is now supported.	fixed
1647	Target visu: User management dialog is not displayed correctly.	fixed
1608	Target visu: Image format "Scalable Vector Graphics" (.svg) is now supported → No native support: The svg images are converted to png/jpg images on import.	fixed
1597	Default PLC program size changed: The available PLC program memory has been increased. By default 2048kB PLC program memory are now supported.	fixed
1597	Default PLC data size changed: The available PLC data memory has been increased. By default 512kB PLC data memory are now supported.	fixed
-	Firmware updated (PLC runtime system / operating system)	fixed

25.6.3

Target system XV-3xx

Ticket	Summary	Status
-	Target system XV-3xx is now supported as release version	fixed

25.6.4

Target system XV-4xx

Ticket	Summary	Status
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25 XSOFT-CODESYS V3.5.6

25.6 Addressed Defects and Changes

1597	Default PLC program size changed: The available PLC program memory has been increased. By default 2048kB PLC program memory are now supported.	fixed
1647	Target visu: User management dialog is not displayed correctly.	fixed
1597	Default PLC data size changed: The available PLC data memory has been increased. By default 512kB PLC data memory are now supported.	fixed
-	Firmware updated (PLC runtime system / operating system)	fixed

25.6.5

Target system XVS-4xx

Ticket	Summary	Status
1647	Target visu: User management dialog is not displayed correctly.	fixed
1597	Default PLC program size changed: The available PLC program memory has been increased. By default 2048kB PLC program memory are now supported.	fixed
1597	Default PLC data size changed: The available PLC data memory has been increased. By default 512kB PLC data memory are now supported.	fixed
-	Firmware updated (PLC runtime system / operating system)	fixed

25.6.6

Target system XC-152

Ticket	Summary	Status
1597	Default PLC program size changed: The available PLC program memory has been increased. By default 2048kB PLC program memory are now supported.	fixed
1597	Default PLC data size changed: The available PLC data memory has been increased. By default 512kB PLC data memory are now supported.	fixed
-	Firmware updated (PLC runtime system / operating system)	fixed

25.6.7

Target system XC-202

Ticket	Summary	Status
1652	The PLC identification mechanism is now supported. A blink pattern identifies the plc if the "Wink" button included in the "Scan network/Select Device" dialog is pressed.	fixed
1464	System events StartDone/StopDone are not called correctly	fixed
1404	Library EA_Network, EA_Network_ext: Library functions are now supported	fixed
-	Firmware updated (PLC runtime system / operating system)	fixed

25.6.8

RTS for XV-1xx, XV-3xx, XV-4xx, XVS-4xx, XC-152

Ticket	Summary	Status
1645	Function SysExecuteCommand() is blocking when the called program is not available	fixed
1643	Operating system updated new OS V2.28.0 (CE5.0) for XV-1xx, XV-4xx, XVS-4xx and XC-152	fixed
1643	Operating system updated new OS V3.0.0 (CE7.0) for XV-3xx	fixed
1639	Boot project does not start if application name has been changed	fixed
1613	PLC runtime system updated New basic version 3.5.6.40	fixed
1628	Firmware installation/download: The option to edit/configure the startup behavior is now supported.	fixed
1552	Firmware installation/download: The option to clean the plc program data is now supported.	fixed

25.6.9

RTS for XC-202

Ticket	Summary	Status
1652	The PLC identification mechanism is now supported. A blink pattern identifies the plc if the "Wink" button included in the "Scan network/Select Device" dialog is pressed.	fixed
1613	PLC runtime system updated New basic version 3.5.6.40	fixed
1464	System events StartDone/StopDone are not called correctly	fixed
1404	Library EA_Network, EA_Network_ext: Library functions are now supported	fixed

26 XSOF- CODESYS V3.5.5

26.1 Release information

26 XSOF- CODESYS V3.5.5

26.1 Release information

Product	XSOF- CODESYS-3
Release	3.5.5
Profile specification	XSOF- CODESYS V3.5.5
Build	2796
Setup	Setup_XSOF_ CODESYS_V3.5.5.exe
Product Management	H. Heck
Test Management	K. Rampelt
Quality Management	P. Zuber

26.2 Version information

26.2.1 Programming system

Component	Actual Version
CODESYS V3	3.5 SP5 Patch 3

26.2.2 Target firmware

Firmware	Actual Version
RTS for XV-1xx, XV-3xx ¹⁾ , XV-4xx, XVS-4xx, XC-152 <i>firmware.exe</i>	3.5.5
RTS for XC-202 <i>firmware.exe (XC202.bin)</i>	3.5.5

¹⁾ The target system XV-3xx is available as a preview/prerelease version. For further information see chap. 26.5.1.

26.2.3

Target systems

Target system	Actual Version
XV-1xx	3.5.5.0
XV-3xx ¹⁾	3.5.5.0
XV-4xx	3.5.5.0
XVS-4xx	3.5.5.0
XC-202	3.5.5.0
XC-152	3.5.5.0

¹⁾ The target system XV-3xx is available as a preview/prerelease version. For further information see chap. 26.5.1.

26.3

Features and changes

Components of PLC programming system CODESYS updated

Components of PLC runtime system CODESYS updated

Various firmware updates

Various device descriptions for CAN, Profibus and SWD updated

EtherCAT functionality is now supported

Target system XV-3xx (preview version)

26.4

Documentation

The target system specific programming manuals are not part of this distribution. They are published on our web site www.eaton-automation.com in order to provide you the latest version.

26.5

Known restrictions

Ticket	Summary
1611	Target visu: Alpha blending is not supported yet
1610	Target visu: Antialiasing is not supported yet
1609	Target visu: Color Gradient fill is not supported yet
1234	
1551 CDS-38247	CAN configuration: SDO objects of type BIT cannot add to SDO configuration ➔ Workaround: Until this issue is fixed, select desired SDO object and click in a blank area of the SDO parameter list. Now the SDO object can be inserted.
1512	CAN configuration for SWD-CANopen Gateway: The configuration of NOP modules is not supported yet.
1464	Target system XC-202: System events StartDone/StopDone are not called correctly
1450 CDS-38067	Ethernet/IP - IoDrvEtherNetIP: Reconnect of Ethernet/IO device does not work sporadically after power off/on.
1404	Library EA_Network, EA_Network_ext: Library functions are not included yet. The functions are not supported yet.
1342	Target system XV-1xx, XVS-4xx and XC-152, function block DiagGetBusState(): A diagnostic message which is pending before start will not be detected.
1341	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: If a reset operation is performed with a quickly following start operation, the connection to the gateway cannot always be established. ➔ Workaround: Until this issue is fixed, use a longer break between reset and start operation
1315	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: On initialization with baud rate 9600 bit/s and 19200 bit/s communication problems can occur.
1313	CAN: gc_bReadQueueSize has no effect on XV-1xx, XV-4xx, XC-152 => fixed value of 256 is used for Input-Queue-Sizes
1269	Data server: If the PC has multiple network adapters, the connection to data server does not work as documented in the online help. ➔ The best way to get a connection is to search the target device by a network scan and to configure the specified node name of the device as data source.
Please note: In the log file of the PLC with the configured data server you can see if the connection is established or with which error it fails.	
1241 CDS-27947	Modbus Slave Device: Bit-Access function codes (Coils) are not implemented yet. ➔ It is recommended to use register function codes instead.
1240 CDS-28362	Modbus Slave: Unable to write Holding Register ➔ Holding registers are defined as Input Channels. Therefore the local slave application can only read these data, but is unable to update the value of the holding registers. To enable this, the register shall be mapped to a global variable.
1233	CANopen Inputs of missing nodes keep their values and are not set to default values
1208 CDS-40511	XSOFT-CODESYS is working only with 96 DPI display size properly.
1162	Udp network variables: If acknowledgment is selected, the response messages are missing

1161	Target system XV-1xx, XV-4xx, XVS-4xx and XV-152, support of onboard flash is not yet included. The functions Sys_FlashInit(), Sys_FlashErase(), Sys_FlashWrite() and Sys_FlashRead() are not supported yet.
1148	RTS-WinCE: GUI not yet refactored
1143 CDS-31058	Retain Persistent Array with constant index: A compiler error appears if Retain Persistent Array with constant index was renamed afterwards. ➔ Workaround: Delete the object PersistentVars to fix this bug
1138	Device editor, online view: The profibus diagnostics is only partially implemented. Not all functionalities are supported yet.
1105	On PLC reset, the handles are not closed automatically.
1094	Various documentation not yet included
1044	IOassistant not yet included

26.5.1

Target system XV-3xx

The target system XV-3xx is available as a preview/prerelease version. Not all functionalities are implemented yet resp. some functionalities work with restrictions.

Ticket	Summary	Status
-	Profibus functionality is not supported yet	open
-	EtherCAT functionality is not supported yet	open
-	UDP communication with the 2 nd Ethernet interface does not work correctly	open
-	UDP network variable communication with the 2 nd Ethernet interface does not work correctly	open
-	Target visu: The taskbar of Windows CE is always visible	fixed
-	Firmware download: The network name resolution is not working correctly resp. the network name is not recognized. If an online connection between the programming system and the target is active, when firmware download via FTP the IP address must be entered again.	fixed

26 XSOFT-CODESYS V3.5.5

26.6 Addressed Defects and Changes

26.6 Addressed Defects and Changes

26.6.1 XSOFT-CODESYS V3.5.5

Ticket	Summary	Status
1526	GSD/EDS files for SWD functionality updated. Modules "EMS-SWD-ADP", "PKE-SWD-CP" and "MCB-HK-SWD" are now supported	fixed
1513	Programming system: Dialog for detailed device specific information added (Code size, data size, retain size, etc.)	fixed
1510	Installation: PLC programming manuals added	fixed
1508	Components of PLC programming system CODESYS updated. New basic version 3.5 SP5 Patch 3	fixed
1490	Profibus configuration: If there are only bits defined, the bits are not shown correctly (The 2 nd byte contains values of first 8 bits)	fixed
1457 CDS-38335	Library IoDvModbus: The library shows a warning during compilation in a project (C0196 implicit conversion).	fixed
1449 CDS-38084	The addresses of the generic modbus slave channels are not updated on CleanAll or update device. Only after a project reload they are correct again.	fixed
1398 CDS-36646	Target visu, alarm management: Incorrect display in the alarm table if the "Automatic line break for alarm message" is enabled.	fixed
1397 CDS-36646	Target visu, alarm management: Incorrect display in the alarm table if the "Automatic line break for alarm message" is enabled. The message text of messages with placeholders influences message texts of other alarms. A part of one alarm text also appears in the alarm text of other alarm.	fixed

26.6.2 Target system XV-1xx

Ticket	Summary	Status
1573	Modbus configuration: The configuration of a 2 nd Modbus interface is now supported.	fixed
1504	EtherCAT functionality is now supported	fixed
-	Firmware updated (PLC runtime system / operating system)	fixed

26.6.3 Target system XV-4xx

Ticket	Summary	Status
1207	Profibus DPV1 functionality is now supported	fixed
-	Firmware updated (PLC runtime system / operating system)	fixed

26.6.4 Target system XVS-4xx

Ticket	Summary	Status
-	Firmware updated (PLC runtime system / operating system)	fixed

26.6.5 Target system XC-152

Ticket	Summary	Status
1573	Modbus configuration: The configuration of a 2 nd Modbus interface is now supported.	fixed
-	Firmware updated (PLC runtime system / operating system)	fixed

26.6.6 Target system XC-202

Ticket	Summary	Status
1573	Modbus configuration: The configuration of up to 5 Modbus interfaces is now supported.	fixed
-	Firmware updated (PLC runtime system / operating system)	fixed

26.6.7 RTS for XV-1xx, XV-3xx, XV-4xx, XVS-4xx, XC-152

Ticket	Summary	Status
1583	Task scheduling: Task scheduling changed. Tasks of same priority interrupt each other based on a time slice of 1ms (round robin).	fixed
1542	Start behaviour of PLC runtime system changed. PLC runtime system starts from ram drive.	fixed
1538	Profibus PDP-TP does not work	fixed
1532	Depending of plc program state the plc runtime icon of the taskbar changes.	fixed
1524	Target visu: Check license failed even if the target has enough license points (Startup-Timing-Problem)	fixed
1518 1505	CAN: If EasyNet and CANopen are used, the initialization does not work correctly.	fixed
1530	Operating system updated new OS V2.27.1 (CE5.0) for XV-1xx, XV-4xx, XVS-4xx and XC-152	fixed
1379	Task configuration: The priority of event tasks is not considered.	fixed
1371	Task scheduler: Scheduler does not work exactly. There occur jitters of +/-1 millisecond.	fixed
-	PLC runtime system updated New basic version 3.5.5.30	fixed

26 XSOFT-CODESYS V3.5.5

26.6 Addressed Defects and Changes

26.6.8

RTS for XC-202

Ticket	Summary	Status
1573	Modbus configuration: The configuration of up to 5 Modbus interfaces is now supported.	fixed
1379	Task configuration: The priority of event tasks is not considered.	fixed
-	PLC runtime system updated New basic version 3.5.5.30	fixed

27 XSOF-ODESYS V3.5.4

27.1 Release information

Product	XSOF-ODESYS-3
Release	3.5.4
Profile specification	XSOF-ODESYS V3.5.4
Build	2481
Setup	Setup_XSOF_CODESYS_V3.5.4.exe
Product Management	H. Heck
Test Management	K. Rampelt
Quality Management	P. Zuber

27 XSOFT-CODESYS V3.5.4

27.2 Version information

27.2 Version information

27.2.1 Programming system

Component	Actual Version
CODESYS V3	3.5 SP4 Patch 1

27.2.2 Target firmware

Firmware	Actual Version
RTS for XV-1xx, XV-4xx, XVS-4xx, XC-152 <i>firmware.exe</i>	3.5.4
RTS for XC-202 <i>firmware.exe (XC202.bin)</i>	3.5.4

27.2.3 Target systems

Target system	Actual Version
XV-1xx	3.5.4.0
XV-4xx	3.5.4.0
XVS-4xx	3.5.4.0
XC-202	3.5.4.0
XC-152	3.5.4.0

27.3

Features and changes

Components of PLC programming system CODESYS updated

Components of PLC runtime system CODESYS updated

Various firmware updates

Various device descriptions for CAN, Profibus and SWD updated

Ethernet/IP functionality is now supported

SAE J1939 functionality is now supported

Target system XV100

- CAN configuration: Support of 2nd CAN interface is now supported

27.4

Documentation

The target system specific programming manuals are not part of this distribution. They are published on our web site www.eaton-automation.com in order to provide you the latest version.

27.5

Known restrictions

Ticket	Summary
1404	Library EA_Network, EA_Network_ext: Library functions not yet included. The functions are not supported yet.
1398 CDS-36646	Target visu, alarm management: Incorrect display in the alarm table if the "Automatic line break for alarm message" is enabled.
1397 CDS-36646	Target visu, alarm management: Incorrect display in the alarm table if the "Automatic line break for alarm message" is enabled. The message text of messages with placeholders influences message texts of other alarms. A part of one alarm text also appears in the alarm text of other alarm.
1379	Task configuration: The priority of event tasks is not considered.
1342	Target system XV-1xx, XVS-4xx and XC-152, function block DiagGetBusState(): A diagnostic message which is pending before start will not be detected.
1341	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: If a reset operation is performed with a quickly following start operation, the connection to the gateway cannot always be established. ➔ Workaround: Until this issue is fixed, use a longer break between reset and start operation
1315	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: On initialization with baud rate 9600 bit/s and 19200 bit/s communication problems can occur.
1313	CAN: gc_bReadQueueSize has no effect on XV-1xx, XV-4xx, XC-152 => fixed value of 256 is used for Input-Queue-Sizes
1269	Data server: If the PC has multiple network adapters, the connection to data server does not work as documented in the online help. ➔ The best way to get a connection is to search the target device by a network scan and to configure the specified node name of the device as data source. Please note: In the log file of the PLC with the configured data server you can see if the connection is established or with which error it fails.
1241 CDS-27947	Modbus Slave Device: Bit-Access function codes (Coils) are not implemented yet. ➔ It is recommended to use register function codes instead.
1240 CDS-28362	Modbus Slave: Unable to write Holding Register ➔ Holding registers are defined as Input Channels. Therefore the local slave application can only read these data, but is unable to update the value of the holding registers. To enable this, the register shall be mapped to a global variable.
1234	Target visu: Color Gradient is not supported yet
1233	CANopen Inputs of missing nodes keep their values and are not set to default values
1208 CDS-40511	XSOFT-CODESYS is working only with 96 DPI display size properly.
1207	Target system XV-4xx, Profibus DPV1 functionality is not supported yet.
1162	Udp network variables: If acknowledgment is selected, the response messages are missing
1161	Target system XV-1xx, XV-4xx, XVS-4xx and XV-152, support of onboard flash is not yet included. The functions Sys_FlashInit(), Sys_FlashErase(), Sys_FlashWrite() and Sys_FlashRead() are not supported yet.
1148	RTS-WinCE: GUI not yet refactored

1143 CDS-31058	Retain Persistent Array with constant index: A compiler error appears if Retain Persistent Array with constant index was renamed afterwards. ➔ Workaround: Delete the object PersistentVars to fix this bug
1138	Device editor, online view: The profibus diagnostics is only partially implemented. Not all functionalities are supported yet.
1105	On PLC reset, the handles are not closed automatically.
1094	Various documentation not yet included
1044	IOassistant not yet included

27.6

Addressed Defects and Changes

27.6.1

XSOFT-CODESYS V3.5.4

Ticket	Summary	Status
1452	CODESYS Control Win V3: The service is no longer started automatically. Start type changed from automatically to manually.	fixed
1448	Project update: If devices are updated, the error message "Unbalanced BeginCompoundAction() / EndCompoundAction()" can occur.	fixed
1446	Various device descriptions for CAN, Profibus and SWD updated.	fixed
1428	SAE J1939 functionality is now supported	fixed
1427	Ethernet/IP functionality is now supported	fixed
1426 CDS-37177	Data server: Reconnect does not longer work.	fixed
1415	Libraries EA23_easy800_en and EA23_easy800_de show warning messages	fixed
1411	Components of PLC programming system CODESYS updated. New basic version 3.5 SP4 Patch 1	fixed
1377	Library SysPlcCtrl23, function SysWdgEnable() is no longer supported. ➔ It is recommended to use the function CmplecTask.lecTaskDisableWatchdog2() instead.	fixed
1369 CDS-35459	Target visu: Not possible to use array with constant index	fixed
1265 CDS-33507	Device update: After update of IO mapping nothing is changed. Sample: If IO mapping changed from "In_32Byte" to "In_16Word") the IO mapping remains "ARRAY [0 to 31] OF BYTE".	fixed
1247 CDS-31975	Device configuration: Controls stay disabled after online mode	fixed
1213 CDS-30962	Target visu: Under the following condition, a bitmap will not be shown: The image is contained within an explicitly inserted image pool with name "ImagePool" that is located in the POU's and is used in the visualization.	fixed

27 XSOFT-CODESYS V3.5.4

27.6 Addressed Defects and Changes

27.6.2

Target system XV-1xx

Ticket	Summary	Status
1500	Profibus DP-Master CMM/MPI: Mapping of I/O data can be wrong (from 2 nd TN). Especially in case of alternating byte/word configuration or when the configuration contains gaps.	fixed
1441	Profibus DP-Master CMM/MPI: Device scan is now supported	fixed
1414	SWD: Device scan is now supported	fixed
1409	Task configuration, task settings: Task type "free-wheeling" cannot be supported. Task type "free-wheeling" removed.	fixed
1147	CAN configuration: Support of 2nd CAN interface is now supported	fixed
-	Firmware updated (PLC runtime system / operating system)	fixed

27.6.3

Target system XV-4xx

Ticket	Summary	Status
1420	XV400 does not support SWD master functionality. Configuration of SWD master removed.	fixed
1409	Task configuration, task settings: Task type "free-wheeling" cannot be supported. Task type "free-wheeling" removed.	fixed
-	Firmware updated (PLC runtime system / operating system)	fixed

27.6.4

Target system XVS-4xx

Ticket	Summary	Status
1500	Profibus DP-Master CMM/MPI: Mapping of I/O data can be wrong (from 2 nd TN). Especially in case of alternating byte/word configuration or when the configuration contains gaps.	fixed
1441	Profibus DP-Master CMM/MPI: Device scan is now supported	fixed
1409	Task configuration, task settings: Task type "free-wheeling" cannot be supported. Task type "free-wheeling" removed.	fixed
-	Firmware updated (PLC runtime system / operating system)	fixed

27.6.5

Target system XC-152

Ticket	Summary	Status
1500	Profibus DP-Master CMM/MPI: Mapping of I/O data can be wrong (from 2 nd TN). Especially in case of alternating byte/word configuration or when the configuration contains gaps.	fixed
1441	Profibus DP-Master CMM/MPI: Device scan is now supported	fixed
1414	SWD: Device scan is now supported	fixed
1409	Task configuration, task settings: Task type "free-wheeling" cannot be supported. Task type "free-wheeling" removed.	fixed
-	Firmware updated (PLC runtime system / operating system)	fixed

27.6.6

Target system XC-202

Ticket	Summary	Status
1409	Task configuration, task settings: Task type "free-wheeling" cannot be supported. Task type "free-wheeling" removed.	fixed
1365	New firmware download functionality	fixed
-	Firmware updated (PLC runtime system / operating system)	fixed

27.6.7

RTS for XV-1xx, XV-4xx, XVS-4xx, XC-152

Ticket	Summary	Status
1500	Profibus DP-Master CMM/MPI: Mapping of I/O data can be wrong (from 2 nd TN). Especially in case of alternating byte/word configuration or when the configuration contains gaps.	fixed
1483	Library EA23_SwdUtil, function block Swd_AcyclicRequest(): PLC runtime system crashes if function block is called from an another function block instance.	fixed
1472	Library EA_CAN, function block CAN_ReadImage(): Reading of object with 29 bit identifier (extended frame format) is now supported.	fixed
1469	Library EA_CAN, function block CAN_ReadQueue(): Output parameter CanMessage.xldType29Bit is always false.	fixed
1460	Retain memory cannot be allocated every time.	fixed
1444	Operating system updated new OS V2.26.7 (CE5.0) for XV-1xx, XV-4xx, XVS-4xx and XC-152	fixed
1441	Profibus DP-Master CMM/MPI: Device scan is now supported	fixed
1429	PLC runtime system updated New basic version 3.5.4.10	fixed
1414	SWD: Device scan is now supported	fixed

27 XSOFT-CODESYS V3.5.4

27.6 Addressed Defects and Changes

1403	Modbus RTU restrictions with 9600 Baud on XV100, XC150 and XV400: Depending on the amount of transmitted data a minimum PLC cycle of 20 ms is required.	fixed
The update of operating system fixes the problem (OS V2.26.7 (CE5.0))		
1372	Switched from preemptive to nonpreemptive task management (IEC tasks with the same priority do not interrupt each other).	fixed
1331	PLC runtime system crashes with exception message CMexiton if a shutdown is called.	fixed
1301	Library EA23_DPV1, function block DPV1_ReadEx(): If the input parameter Enable is set to false or a rising edge occurs, the output parameter Error is not reset.	fixed
1204	If a stop event occurs, the reason is notified (application is stopped by GUI or by switch)	fixed

27.6.8

RTS for XC-202

Ticket	Summary	Status
1471	Library EA23_SysLibCan, function SysCanRead_29BitID(): Function returns no data.	fixed
1434	Saves communication settings during firmware update	fixed
1429	PLC runtime system updated New basic version 3.5.4.10	fixed
1316	Web visu: PLC runtime system crashes if alarm manager is used	fixed
1239	Library SysLibMem23, function SysMemAlloc() increases the cycle time even if no memory can be allocated.	fixed
1224	Saves boot project and node name during firmware update	fixed

28 XSOF-ODESYS V3.5.3

28.1 Release information

Product	XSOF-ODESYS-3
Release	3.5.3
Profile specification	XSOF-ODESYS V3.5.3
Build	2292
Setup	Setup_XSOF_ODESYS_V3.5.3.exe
Product Management	H. Heck
Test Management	K. Rampelt
Quality Management	P. Zuber

28 XSOFT-CODESYS V3.5.3

28.2 Version information

28.2 Version information

28.2.1 Programming system

Component	Actual Version
CODESYS V3	3.5 SP3 Patch 6

28.2.2 Target firmware

Firmware	Actual Version
RTS for XV-1xx, XV-4xx, XVS-4xx, XC-152 <i>firmware.exe</i>	3.5.3
RTS for XC-202 <i>firmware.exe (XC202.bin)</i>	3.5.3 ¹⁾

¹⁾ Format of version information (major.minor.revision.build) changed

28.2.3 Target systems

Target system	Actual Version
XV-1xx	3.5.3.0
XV-4xx	3.5.3.0
XVS-4xx	3.5.3.0
XC-202	3.5.3.0
XC-152	3.5.3.0

28.3 Features and changes

Components of PLC programming system CODESYS updated

Components of PLC runtime system CODESYS updated

Various firmware updates

New firmware download functionality for XC202

EDS files for SWD functionality updated

- Modules "WOE-SWD-ECS3D2D" and "WOE-SWD-MOTUS" are now supported

28.4 Documentation

The target system specific programming manuals are not part of this distribution. They are published on our web site www.eaton-automation.com in order to provide you the latest version.

28.5

Known restrictions

Ticket	Summary
1404	Library EA_Network, EA_Network_ext: Library functions not yet included. The functions are not supported yet.
1398 CDS-36646	Target visu, alarm management: Incorrect display in the alarm table if the "Automatic line break for alarm message" is enabled.
1397 CDS-36646	Target visu, alarm management: Incorrect display in the alarm table if the "Automatic line break for alarm message" is enabled. The message text of messages with placeholders influences message texts of other alarms. A part of one alarm text also appears in the alarm text of other alarm.
1342	Target system XV-1xx, XVS-4xx and XC-152, function block DiagGetBusState(): A diagnostic message which is pending before start will not be detected.
1341	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: If a reset operation is performed with a quickly following start operation, the connection to the gateway cannot always be established. ➔ Workaround: Until this issue is fixed, use a longer break between reset and start operation
1315	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: On initialization with baud rate 9600 bit/s and 19200 bit/s communication problems can occur.
1313	CAN: gc_bReadQueueSize has no effect on XV-1xx, XV-4xx, XC-152 => fixed value of 256 is used for Input-Queue-Sizes
1269	Data server: If the PC has multiple network adapters, the connection to data server does not work as documented in the online help. ➔ The best way to get a connection is to search the target device by a network scan and to configure the specified node name of the device as data source. Please note: In the log file of the PLC with the configured data server you can see if the connection is established or with which error it fails.
1265 CDS-33507	Device update: After update of IO mapping nothing is changed. Sample: If IO mapping changed from "In_32Byte" to "In_16Word") the IO mapping remains "ARRAY [0 to 31] OF BYTE".
1247 CDS-31975	Profibus DP Editor: Controls stay disabled after online mode
1241 CDS-27947	Modbus Slave Device: Bit-Access function codes (Coils) are not implemented yet. ➔ It is recommended to use register function codes instead.
1240 CDS-28362	Modbus Slave: Unable to write Holding Register ➔ Holding registers are defined as Input Channels. Therefore the local slave application can only read these data, but is unable to update the value of the holding registers. To enable this, the register shall be mapped to a global variable.
1234	Target visu: Color Gradient is not supported yet
1233	CANopen Inputs of missing nodes keep their values and are not set to default values
1213 CDS-30962	Target visu: Under the following condition, a bitmap will not be shown: The image is contained within an explicitly inserted image pool with name "ImagePool" that is located in the POU and is used in the visualization. ➔ Workaround: Until this issue is fixed, the following simple workarounds can be used: Move the ImagePool to the application and rename the image pool.

1208 CDS-40511	XSOFT-CODESYS is working only with 96 DPI display size properly.
1207	Target system XV-4xx, Profibus DPV1 functionality is not supported yet.
1162	Udp network variables: If acknowledgment is selected, the response messages are missing
1161	Target system XV-1xx, XV-4xx, XVS-4xx and XV-152, support of onboard flash is not yet included. The functions Sys_FlashInit(), Sys_FlashErase(), Sys_FlashWrite() and Sys_FlashRead() are not supported yet.
1148	RTS-WinCE: GUI not yet refactored
1147	CAN configuration: Support of 2 nd CAN interface is not supported yet
1143 CDS-31058	Retain Persistent Array with constant index: A compiler error appears if Retain Persistent Array with constant index was renamed afterwards. ➔ Workaround: Delete the object PersistentVars to fix this bug
1105	On PLC reset, the handles are not closed automatically.
1094	Various documentation not yet included
1044	IOassistant not yet included

28.6

Addressed Defects and Changes

28.6.1

XSOFT-CODESYS V3.5.3

Ticket	Summary	Status
1359	Remote Client updated	fixed
1358	Device repository: New device category "Local IO systems" and "XIOC" XIOC implemented.	fixed
1355	Device repository: New device category "SWD" implemented.	fixed
1354	Device repository: New device category "Easy-NET" implemented.	fixed
1353	Installation: If package manager is starting, the message "system instance of interface type _3S.CoDeSys.Core.Engine is not existing" can occur.	fixed
1351	Components of PLC programming system CODESYS updated.	fixed
1272	Target visu, alarm management: On alarm tables, line breaks are not displayed correctly.	fixed
1262	Target visu: Alarm management uses lot of system resources.	fixed
1237 CDS-31957	Device Editor: Controls with parent control stay disabled after online mode.	fixed
1216 CDS-32903	CANopen: If the PDO configuration contains gaps, I/O data contains wrong data.	fixed
1079, 1115 CDS-30769	Compile: The calculated size of persistent data is not always correct. Reorganization of persistent variables with Clean All required.	fixed

28 XSOFT-CODESYS V3.5.3

28.6 Addressed Defects and Changes

28.6.2 Target system XV-1xx

Ticket	Summary	Status
-	Firmware updated (PLC runtime system / operating system)	fixed

28.6.3 Target system XV-4xx

Ticket	Summary	Status
1346	Profibus DP-Master DPM-MC2: Default baud rate set to 1.5 kBaud.	fixed
-	Firmware updated (PLC runtime system / operating system)	fixed

28.6.4 Target system XVS-4xx

Ticket	Summary	Status
-	Firmware updated (PLC runtime system / operating system)	fixed

28.6.5 Target system XC-152

Ticket	Summary	Status
-	Firmware updated (PLC runtime system / operating system)	fixed

28.6.6 Target system XC-202

Ticket	Summary	Status
1365	New firmware download functionality	fixed
-	Firmware updated (PLC runtime system / operating system)	fixed

28.6.7 RTS for XV-1xx, XV-4xx, XVS-4xx, XC-152

Ticket	Summary	Status
1393	Firmware installation: If in the programming system a communication channel is selected as the active one, the ftp address is automatically applied.	fixed
1364	PLC runtime system crashes if a project without SWD configuration is downloaded to target system with a running SWD configuration.	fixed
1352	Operating system updated new OS V2.26.6 (CE5.0) for XV-1xx, XV-4xx, XVS-4xx and XC-152	fixed

1344	SWD functionality: Shell command "swd_setnew" allowed on states SWD_ERROR_TARGETCONFIG /SWD_ERROR_PROJECTCONFIG	fixed
1305	Library EA_CAN, function CAN_SetBaudrate(): Function returns an error, if CAN bus is already initialized. Now it is possible to set the baud rate if the CAN bus is already initialized.	fixed
1316 1272	Target visu, alarm management: On alarm tables, line breaks are not displayed correctly.	fixed
1262	Target visu: Alarm management uses lot of system resources.	fixed
1261 CDS-32587	Target visu: Not all tables are refreshed automatically.	fixed
1178 CDS-31968	Libraries SysFile23/SysFileAsync23, function SysFileClose(): PLC runtime system crashes if using function SysFileClose().	fixed
1108 CDS-27358	Libraries SysFile23/SysFileAsync23, function SysFileRead(): PLC runtime system crashes if using function with invalid file handle (0).	fixed
1399	PLC runtime system updated New basic version 3.5.3.60	fixed

28.6.8

RTS for XC-202

Ticket	Summary	Status
1399	PLC runtime system updated New basic version 3.5.3.60	fixed
1339	Shutdown RTS will force a reboot of the plc: RUN/STOP LED will show state "Stopped" after "EVT_PrepareStop.	fixed
1296	When creating a boot project on large projects communication timeouts can occur.	fixed

29 XSOF-CDSYS V3.5.2

29.1 Release information

29 XSOF-CDSYS V3.5.2

29.1 Release information

Product	XSOF-CDSYS-3
Release	3.5.2
Profile specification	XSOF-CDSYS V3.5.2
Build	2092
Setup	Setup_XSOF_CDSYS_V3.5.2.exe
Product Management	H. Heck
Test Management	A. Schmid
Quality Management	P. Zuber

29.2 Version information

29.2.1 Programming system

Component	Actual Version
CODESYS V3	3.5 SP2 Patch 2

29.2.2 Target firmware

Firmware	Actual Version
RTS for XV-1xx, XV-4xx, XVS-4xx, XC-152 <i>firmware.exe</i>	3.5.2
RTS for XC-202 <i>btsxc202_v030504.bin</i>	3.5.2 <i>resp. V03.05.04</i>

29.2.3 Target systems

Target system	Actual Version
XV-1xx	3.5.2.0
XV-4xx	3.5.2.0
XVS-4xx	3.5.2.0
XC-202	3.5.2.0
XC-152	3.5.2.0

29 XSOFT-CODESYS V3.5.2

29.3 Features

29.3

Features

Since this is an initial release of a new generation of XSOFT-CODESYS, there are a lot of enhancements and new features both in the programming and the runtime system. Please refer also to CODESYS 3.x documentation.

29.4

Documentation

The target system specific programming manuals are not part of this distribution. They are published on our web site www.eaton-automation.com in order to provide you the latest version.

29.5

Known restrictions

Ticket	Summary
1342	Target system XV-1xx, XVS-4xx and XC-152, function block DiagGetBusState(): A diagnostic message which is pending before start will not be detected.
1341	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: If a reset operation is performed with a quickly following start operation, the connection to the gateway cannot always be established. ➔ Workaround: Until this issue is fixed, use a longer break between reset and start operation
1315	Target system XV-1xx, XVS-4xx and XC-152, SWD-DP-Gateway: On initialization with baud rate 9600 bit/s and 19200 bit/s communication problems can occur.
1313	CAN: gc_bReadQueueSize has no effect on XV-1xx, XV-4xx, XC-152 => fixed value of 256 is used for Input-Queue-Sizes
1316 1272	Target visu, alarm management: On alarm tables, line breaks are not displayed correctly.
1269	Data server: If the PC has multiple network adapters, the connection to data server does not work as documented in the online help. ➔ The best way to get a connection is to search the target device by a network scan and to configure the specified node name of the device as data source. Please note: In the log file of the PLC with the configured data server you can see if the connection is established or with which error it fails.
1262	Target visu: Alarm management uses lot of system resources. ➔ It is not recommended to use the alarm management with this release of the software.
1261 CDS-32587	Target visu: Not all tables are refreshed automatically.
1247 CDS-31975	Profibus DP Editor: Controls stay disabled after online mode
1241 CDS-27947	Modbus Slave Device: Bit-Access function codes (Coils) are not implemented yet. ➔ It is recommended to use register function codes instead.
1240 CDS-28362	Modbus Slave: Unable to write Holding Register ➔ Holding registers are defined as Input Channels. Therefore the local slave application can only read these data, but is unable to update the value of the holding registers. To enable this, the register shall be mapped to a global variable.
1237 CDS-31957	Device Editor: Controls with parent control stay disabled after online mode
1234	Target visu: Color Gradient is not supported yet
1233	CANopen Inputs of missing nodes keep their values and are not set to default values
1213 CDS-30962	Target visu: Under the following condition, a bitmap will not be shown: The image is contained within an explicitly inserted image pool with name "ImagePool" that is located in the POU's and is used in the visualization. ➔ Workaround: Until this issue is fixed, the following simple workarounds can be used: Move the ImagePool to the application and rename the image pool.

29 XSOFTE-CODESYS V3.5.2

29.5 Known restrictions

1208 CDS-40511	XSOFTE-CODESYS is working only with 96 DPI display size properly.
1207	Target system XV-4xx, Profibus DPV1 functionality is not supported yet.
1178 CDS-31968	Libraries SysFile23/SysFileAsync23, function SysFileClose(): PLC runtime system crashes if using function SysFileClose()
1162	Udp network variables: If acknowledgment is selected, the response messages are missing
1161	Target system XV-1xx, XV-4xx, XVS-4xx and XV-152, support of onboard flash is not yet included. The functions Sys_FlashInit(), Sys_FlashErase(), Sys_FlashWrite() and Sys_FlashRead() are not supported yet.
1148	RTS -WinCE: GUI not yet refactored
1147	CAN configuration: Support of 2 nd CAN interface is not supported yet
1143 CDS-31058	Retain Persistent Array with constant index: A compiler error appears if Retain Persistent Array with constant index was renamed afterwards. ➔ Workaround: Delete the object PersistentVars to fix this bug
1108 CDS-27358	Libraries SysFile23/SysFileAsync23, function SysFileRead(): PLC runtime system crashes if using function with invalid file handle (0).
1105	On PLC reset, the handles are not closed automatically.
1094	Various documentation not yet included
1079 CDS-30769	Compile: The calculated size of persistent data is not always correct. Reorganization of persistent variables with Clean All required.
1044	IOassistant not yet included

29.6

Addressed Defects and Changes

It is an initial release version, there are no addresses defects and changes.

30 Migration guide

30.1 Introduction

30 Migration guide

30.1 Introduction

If you migrate projects from CODESYS V2 to CODESYS V3 take a few minutes to review the following information.

For further information, please refer also chapter "Known restrictions" (see chap. 29.5).

30.2 Migration from CODESYS V2 to CODESYS V3

30.2.1 Retain data handling

Variable declarations with keyword "PERSISTENT"

Ticket 1186, 1197

Variable declarations with keyword "PERSISTENT" are not supported.

➔ Use keyword "RETAIN PERSISTENT"

30.2.2 Library SysDir23

Function SysDirOpen()

Ticket 1109

Function is not compatible to CODESYS V2.3. If an error occurs, it returns -1 instead 0.

30.2.3 Library SysFile23

Function SysFileOpen()

Ticket 1173

Function is not compatible to CODESYS V2.3. It is possible to open a file multiple times with mode "write".

Ticket 1106

Function is not compatible to CODESYS V2.3. If an error occurs, it returns -1 instead 0.

Function SysFileEOF()

Ticket 1172, CDS-31922

Function is not compatible to CODESYS V2.3. It returns EOF at different position.

CODESYS V3

30.2.4

Library SysFileAsync23

Function block SysFileDeleteAsync()

Ticket 1176

Function block is not compatible CODESYS V2.3. If a file does not exist, output parameter wErrorId returns 2 (ERR_FILEASYNC_FILENOTFOUND) instead 4 (ERR_FILEASYNC_FILENOTDELETED).

Function block SysFileOpenAsync()

Ticket 1173

Function block is not compatible to CODESYS V2.3. It is possible to open a file multiple times with mode "write".

Function SysFileEOFAsync()

Ticket 1172, CDS-31922

Function block is not compatible to CODESYS V2.3. It returns EOF at different position.

30.2.5

Library SysTask23

Function SysTaskGetInfo()

Ticket 1170, CDS-31774

Function is not compatible to CODESYS V2.3. Return values are always 0.

→ Use library SysTask and CmplECTask

30.2.6

Library SysTaskInfo23

Function block TaskInfo()

Ticket 1111, CDS-29769, CDS-30577

Function block is not compatible to CODESYS V2.3. Return values are always 0.

→ Use library SysTask and CmplECTask

30.2.7

Library SysGetAddress23

Function SysLibGetAddress()

Ticket 1110

Function is not compatible to CODESYS V2.3. It returns wrong values.

Function SysLibGetSize()

Ticket 1110

Function is not compatible to CODESYS V2.3. It returns wrong values.

30 Migration guide

30.2 Migration from CODESYS V2 to CODESYS V3

30.2.8 Library SysCom23

Function SysComRead()

Ticket 1104

Function is not compatible to CODESYS V2.3. If buffer is empty and the timeout is 0, the function returns after 2000 ms.

30.2.9 Library CanUser

The CODESYS V2.3 library CanUser is available with limited functionality. Migrated functions and function blocks are available in library EA23_CanUser.

Function block CanUser_DiagInfo()

Ticket 1098

Function block is not compatible to CODESYS V2.3. It is available with limited functionality. The functionality cannot be represented with the same interface on the CANopen stack of CODESYS V3.

Function block CanUser_ReadImage()

Ticket 1098

Projects based on plc target system XC-202, function block is not compatible to CODESYS V2.3. Output parameter xReady is also FALSE if no new data are available.

Function block CanUser_ReadQueue()

Ticket 1098

Projects based on plc target system XC-202, function block is not compatible to CODESYS V2.3. Output parameter xReady is also FALSE if no new data are available.

Output parameter iStatus = 4 is not supported (Queue full).

Function CanUser_Write()

Ticket 1098

Function is not compatible to CODESYS V2.3. If a queue overflow occurs, the function returns with value 17.

30.2.10 Library CanUser_Master

The CODESYS V2.3 library CanUser_Master is available with limited functionality. Migrated functions and function blocks are available in library EA23_CanUser.

Function block CanUser_DiagMaster()

Ticket 1098

Function block is not available anymore. The functionality cannot be represented with the same interface on the CANopen stack of CODESYS V3.

CODESYS V3

Function block CanUser_DiagNode()

Ticket 1098

Function block is not available anymore. The functionality cannot be represented with the same interface on the CANopen stack of CODESYS V3.

Function CheckPDOconfig()

Ticket 1098

Function is not available anymore. The functionality cannot be represented with the same interface on the CANopen stack of CODESYS V3.

Function block CanUser_GetEmergency()

Ticket 1098

Function block is not compatible to CODESYS V2.3. Function block is available with limited functionality. The functionality cannot be represented with the same interface on the CANopen stack of CODESYS V3.

Functions CanUser_StartNode() / CanUserStartAllNodes()

Ticket 1098

Functions are not compatible to CODESYS V2.3. Functions are available with limited functionality. The functionality cannot be represented with the same interface on the CANopen stack of CODESYS V3.

Function block CanUser_SDOuploadBlock()

Ticket 1098

Projects based on target system XV-1xx, XV-4xx or XC-152, the function block is not compatible to CODESYS V2.3. Input parameter dwLenMax must be set 7 bytes bigger than the current data length of the received data dwLen.

30.2.11

Library CanUser_Sync

Ticket 1100

The CODESYS V2.3 library CanUser_Sync is not available anymore. The functionality cannot be represented with the same interface on the CANopen stack of CODESYS V3.

30.2.12

Library CanUser_Device

Ticket 1099

The CODESYS V2.3 library CanUser_Device is not available anymore. The functionality cannot be represented with the same interface on the CANopen stack of CODESYS V3.

30.2.13

Library SysLib_Add

Ticket 1161

30 Migration guide

30.2 Migration from CODESYS V2 to CODESYS V3

The CODESYS V2.3 library SysLib_Add is available with limited functionality. Migrated functions and function blocks are available in library EA23_SysLib_Add.

On target system XV-1xx, XV-4xx, XVS-4xx and XV-152, support of onboard flash is not yet included. The functions Sys_FlashInit(), Sys_FlashErase(), Sys_FlashWrite() and Sys_FlashRead() are not supported yet.

30.2.14 **Library SysLibDPV1Hilscher**

The CODESYS V2.3 library SysLibDPV1Hilscher is not supported yet.

30.2.15 **Library Busdiag**

Projects based on target system XC-202, only one instance of each FB is allowed.

30.2.16 **Library SysLibPlcCtrl**

Function SysEnableScheduling()

Function is not supported yet.

Function SysWdgEnable()

Function is not supported yet.

30.2.17 **Library SymArtiLib**

Ticket 1087

The CODESYS V2.3 library SymArtiLib is not available anymore.

30.2.18 **Library TcpUdpLib**

Ticket 1085

The CODESYS V2.3 library TcpUdpLib is not available anymore.

30.2.19 **Library SysLibSocketAsync**

Ticket 1084

The CODESYS V2.3 library SysLibSocketAsync is not available anymore.

30.2.20 **Library UdpUser**

The CODESYS V2.3 library UdpUser is not available anymore.

30.2.21 **CAN network variables**

Ticket 1049

The functionality of CODESYS V2.3 CAN network variables is not available anymore.

CODESYS V3

30.2.22

Profibus-DP configuration

Module parameter SwapIOMode

Ticket 1135

The module parameter SwapIOMode is not available anymore. According to specification, on Profibus DP the values of word variables are sent in Motorola byte order (Siemens-compatible). Since our controllers work in Intel format, the values of word variables are swapped automatically in the driver, so in the application the values are available on Intel byte order.

→ If you use XION modules, select "LSB first" instead "MSB first".

30.2.23

PLC reset

Ticket 1105

On PLC reset, the handles are not closed automatically.

30.2.24

Target visu

Object trend

If a CODESYS V2 project contains trend objects and it is converted to CODESYS V3, the trend objects are missing. The object trend is not available anymore.

→ Use object trace instead

Variable name CurrentVisu

If a CODESYS V2 project contains the variable CurrentVisu and it is converted to CODESYS V3, the variable CurrentVisu is missing.

→ Replace the variable name CurrentVisu with the variable name VisuElems.CurrentVisu.

30.2.25

IO mapping

Address alignment

Ticket 1343

The address alignment of IOs can be different.

→ If the CODESYS V2 project contains variables which are manually mapped to IO addresses (bValue AT %IBx : BYTE;), it is necessary to check the manually mapped IO addresses.