Release Notes AC500 V3 Firmware Version 3.5.0 HF11

Fixed issues with FW 3.5.0 HF11	*ID*
System: In rare cases, remanent data can get deleted during power cycle	3.5.0 HF11
Modbus RTU: Sometimes false positive error no. 32770 / 16#8002 ("Internal error I/O layer") is reported by ModRtuMast FB	3.5.0 HF11
Modbus RTU: Too long processing times of ModRtuMast FB for time sensitive applications	3.5.0 HF11
Modbus RTU: Modbus RTU client might on AC500-eCo serial option board might set the PLC to stop in case of 1) using more than one serial option boards 2) missing Modbus RTU server response Furthermore, the buffer of the Modbus RTU client might not be updated in case of high PLC load.	3.5.0 HF8
OPC UA: OPC UA client stops working after 1 hour because of missing license	3.5.0 HF8
Modbus RTU: Modbus RTU communication needs several minutes to re-establish after line has been disconnected and reconnected again.	3.5.0 HF6
Modbus RTU: When using Modbus RTU communication, AC500 V3 PLC might shut down in applications with repeating interruptions or disturbances in serial communication.	3.5.0 HF6
AC500-eCo onboard I/Os: After crash of PLC the onboard outputs are not reset to zero	3.5.0 HF4
Ethernet: When connecting CP600 operator panels by using the "CODESYS V3 ETH" protocol, in rare cases data exchange with other CP600 operator panels or with OPC DA servers can become very slow.	3.5.0 HF2
Ethernet: After login with Automation Builder 2.5, the IP scan returns wrong results and IP address can no longer be changed until reboot of the PLC. Workaround: Reboot PLC for changing IP address	3.5.0 HF2
MQTT: Exception when disabling the publish function block	3.5.0 HF1
PROFINET: Incorrect handling of pull/plug alarms	3.5.0 HF1
EtherCAT: Number of sync units is limited to 72 Workaround: Don't use more than 72 sync units	3.5.0 HF1
MQTT: Exception when disabling publish function block and MQTT publish has always the size of the very first message.	3.5.0 HF1

Functional changes / New features	*Version*
System: New POU WriteBootProject for writing a new boot project to the user disk. After reboot the new boot project will be loaded and executed.	3.5.0
System: New PLC parameter "Reboot after E2 error"	3.5.0
System: Communication modules: Additional property "DeviceInfo" available from the IO drivers to read the FW version of the communication modules (not yet supported by CM579-PNIO and SM560-S).	3.5.0
System: Integration of CODESYScontrol V3.5 SP17	3.5.0
Backup/Restore: Backup and restore via Automation Builder extended by: - FW, boot application and boot parameters - Alarms and trends - Persistent data - Visualization - IP settings - Certificates Note: User management and licenses must be backuped and restored separately.	3.5.0
Diagnosis: Access to diagnosis history from IEC project	3.5.0
Ethernet: New POU EthSetOwnIp to permanently set the IP address	3.5.0
OPC UA Server: - Support of methods - Support of alarms & conditions OPC UA Client: technology preview, licensed per PLC	3.5.0
Profinet: Support of Profinet I/O device via CM589-PNIO including integration into diagnosis system Note: FD-1 and FD-4 not yet supported	3.5.0
Ethernet/IP: Support Ethernet/IP scanner (master) - release, licensed per PLC	3.5.0
Ethernet/IP: Support Ethernet/IP adapter (slave) - release, licensed per PLC	3.5.0
CAN: The priority of CAN onboard is now also configurable via the communication schema. Highest priority is available by using the "Default" communication schema.	3.5.0
Profibus: Support of Profibus master via CM592-DP including integration into diagnosis system	3.5.0
Profibus: Support of Profibus slave via CM582-DP including integration into diagnosis system	3.5.0
BACnet: Support of BACnet MS/TP on AC500-eCo RS485 option boards	3.5.0
SNTP / NTP: New POU PmNtpInfo (same functionality as PmSntpInfo for SNTP)	3.5.0

Fixed issues with FW 3.5.0	***ID***
SVN integration: Projects containing at least one visualization cannot be saved after SVN check out	AB-21222
Visualization: Visualization Style Editor cannot be opened	AB-21151
Diagnosis: AC500 V3 diagnosis example projects show compile errors because of wrong compiler version defined in the projects. Workaround: To resolve those errors, remove the Library Manager and GlobalTextList in POU view; execute "Update project"	AB-20994
CFC: Full structures of variables are not shown in CFC editor (configurable via context menu: “Hide namespaces”)	AB-21059
IEC61850: V3 CPU is going in shutdown mode after specific memory utilization	AB-21319
System: When using the following functions, AC500 V3 PLC does not properly manage its resources, which might lead to unexpected behavior during long-term use without reboot: Connect via MQTT, set the real time clock, read FW versions, read production data, use SysProcessExecuteCommand2, use SetRtoMinAsync Workaround: Either upgrade to FW version 3.4.1 HF-5 or do not use any of the corresponding features in the PLC application.	CPUFW-8922
Licensing: Doing online changes on a PLC application with FW version 3.4.0/3.4.1 might set the PLC into stop after some minutes because of missing runtime license “remote target visualization”, although this license is not required by the PLC application. Workaround: Either upgrading to FW version 3.4.1 HF-1 or activation of runtime license for remote target visualization (to be obtained from our technical support).	CPUFW-8621
EtherCAT: Online changes on a CPU running with high CPU/PLC load could lead to EtherCAT sync errors Workaround: Avoid Online changes in such configurations.	CPUFW-8613
Diagnosis: AC500 eCo V3: "Interfaces" node is marked with a red exclamation mark in online mode however without any effect on the functionality. Workaround: Ignore the red exclamation mark in online mode	CPUFW-8586
CAN onboard: When using CANopen protocol with node guarding supervision the slaves will re-start. Workaround: Upgrade to FW version 3.4.1 HF-4	CPUFW-8585
Display: When navigating to the PLC ID in the display, the buttons <OK> and <ESC> will not work without changing the value. Workaround: Either change the value or leave the view by pressing <CFG> → <up> → <ESC>	CPUFW-8581
Profinet: Projects with Festo CMMT-AS servo drives do not start due to not supported empty slots in the submodule configuration. Workaround: Edit the GSDML by removing the "2" from PhysicalSubslots in the following line: <ModuleItem ID="IDM_SERVO" ModuleIdentNumber="0x100100B0" PhysicalSubslots="1 2 3 4">	CPUFW-8489 CPUFW-8708
CANopen / CAN: CM598-CN errors in PLC log after change from Stop to Run. System works fine, couplers are sending/receiving CAN 2A/2B telegrams correctly. Workaround: Ignore the corresponding log entries. If the CAN communication dos not start, a reboot of the PLC is required.	CPUFW-8313 CPUFW-8321

Attribute initialize_on_call not working
 	
Workaround: The attribute must be set on the FB additionally to the parameters. This hint is missing in the online help. If you define the FB like this, everything works as expected:
 	
{attribute 'initialize_on_call'}
FUNCTION_BLOCK fb
VAR_INPUT
  {attribute 'initialize_on_call'}
  pInt : POINTER TO INT := 0;
  {attribute 'initialize_on_call'}
  iVal : INT := 0;
END_VAR
	AB-18849

CM579-PNIO: Sporadic error that diagnosis information of third-party devices are not available. Workaround: Check the device status for third party devices also from status icon in the Automation Builder device tree	CPUFW-7499
CM589-PNIO: not supported with FW 3.2.4 or later Workaround: Use FW 3.2.3, if CM589-PNIO is required. Support of CM589-PNIO will be available in future version again.	CPUFW-7462

EtherCAT: EtherCAT ENI files are not deleted, e.g. after changing the slot of a CM579-ETHCAT device Workaround: Delete ENI files manually	CPUFW-7183
AC500 eCo V3: "ETH1" node is marked with a red exclamation mark in online mode for PM5012, PM5032 and PM5052 in case no Interface is defined. However without any effect on the functionality. Workaround: Add “ETH1” as Interface on the “General” tab of the IP settings node	AB-19703

Known problems	***ID***
Backup/Restore: Restore of certificates for encrypted communication does not work. Workaround: Create certificate for encrypted communication again after doing the restore.	CPUFW-8959
Simulation: Simulation mode does not work for AC500-eCo PLCs with plugged option boards Workaround: Remove option boards from project and before switching to simulation mode.	CPUFW-8951
COM port: The function ComGetIdByName does not work for AC500-eCo PLCs, the return value will be always 255 (COM_PORT.COM_ID_INVALID)	CPUFW-8948

System: Unaligned REAL or LREAL access with pointers is leading to an exception and the IEC application is stopped.
 	
Example (for type REAL):
{attribute 'pack_mode' := '1'}
TYPE MyStruct :
STRUCT
  bBool: BOOL;
  rReal: REAL;
END_STRUCT
END_TYPE
 	
PROGRAM PLC_PRG
VAR
  myStruct : MyStruct;
  pVarR: POINTER TO REAL;
  rVar: REAL;
END_VAR
 	
pVarR := ADR(myStruct.rReal);
myStruct.rReal := 123; (* -> correct handling *)
pVarR^ := 123; (* -> exception: not 4-byte-aligned *)
 	
Workaround: Access the variables via structure elements as shown in the example above.
	CPUFW-8914

Diagnosis: The following CPU parameters are being ignored: - Diagnosis history (on/off) - Max. diagnosis history entries Diagnosis history is always enabled, entries are limited to 2000.	CPUFW-8860
FW update: CM5xx: The firmware update of communication modules via SD card does not work in one step in case of PLC update firmware version 3.2.1 or earlier. Workaround: Update the communication module firmware in two steps by using the same SD card: step 1: update of the PLC update firmware step 2: update of the communicaiton module firmware	CPUFW-8814
CAN onboard: Calling the POU CL2.DriverOpenH (library CAA CanL2) to open the CAN interface is blocking the task and takes more than 100 ms to complete. Workaround: Option 1: Move the call of POU CL2.DriverOpenH to an event task, tiggered once in main CAN task. Start CAN communication, when the event task is done. Option 2: Adapt the watchdog settings (time and sensitivity) accordingly. The I/O bus task must have a higher priority than the CAN task.	CPUFW-8769
Diagnosis: After an application download the information about a missing battery (if applicable) is not listed in diagnosis history view. After a reboot missing battery information is available from the diagnosis history again. Workaround: Either check active diagnosis entries or do a reboot, which will add that diagnosis information to the diagnosis history.	CPUFW-8830
Profinet: For some hot swap related diagnosis, Automation Builder receives the unknown error id 8 instead of 9736). Workaround: Check for both error ids.	CPUFW-8612

Display: If the POU PmDispSetText is used with TimeOnScreen set to 0 (infinite) there is no way to programmatically change the text or the duration of showing the text. Workaround: Use a TimeOnScreec >0, if text should be changeable or reboot the PLC with unplugged battery to reset the display text.	CPU_FWLIB-595
CAA_File: After closing a file and switching of the PLC by disconnecting from the power supply, the data of the file might be lost. Workaround: Always call File.Flush before closing a file.	CPU_FWLIB-588
When using the following functions, AC500 V3 PLC does not properly manage its resources, which might lead to unexpected behavior during long-term use without reboot: Connect via MQTT, set the real time clock, read FW versions, read production data, use sysprocessexecutecommand2, use SetRtoMinAsync Workaround: Either upgrade to FW version 3.4.1 HF5 or do not use any of the corresponding features in the PLC application.	CPUFW-8922
OPC UA server does currently not support the following data types: • LTIME_OF_DAY • LDATE • LDATE_AND_TIME	AB-20397
Profibus DP: When using a CI54x device with index prior to “F1” the parameter "Diagnosis behavior" is only supported with value "AC500 V2 compatible". For using the setting "AC500 V3 compatible" a newer CI54x firmware is required. Please update then the firmware to the latest version.	AB-20575
Profinet: The "Compare and commit changes" feature based on a Profinet scan result is only working without errors or warnings in the following cases: • No slave is configured below the Profinet Controller in the device tree • Only slaves are configured below the Profinet Controller which are not found during the scan Restriction: all found slaves need to be accepted, to ensure that all required data can be correctly added to the project	AB-20790
Profinet: In the Profinet Controller 'Diagnostics live list' editor the parameter flag “Assign configuration temporarily” has no effect on writing a device name into a Profinet device. The device name is always stored permanently. Workaround: use the IP configuration tool standalone (available via additional tools in Automation Builder setup) if this is required	AB-20609
EtherCAT: The I/O mapping tab might not show recently added PDO entries when kept opened during adding. Workaround: Please close and reopen the I/O mapping tab editor to update the view with latest PDO entries	AB-20783
User Management: Users might be prompted to login twice after creating the user management on a computer where Automation Builder was never used before.	AB-20703
Motion Wizard: Additionally defined PDO mappings are only handled correctly if they are defined above the automatically generated PDOs in the corresponding PDO content table. Workaround: Any additional PDOs (in the view 'Expert Process Data') must be inserted at the topmost position of the input/output PDO list.	AB-20644
Motion Wizard: additional tasks called in the MotionSolution task will be overwritten	AB-20651
AC500 eCo V3: "Interfaces" node is marked with a red exclamation mark in online mode however without any effect on the functionality. Workaround: not available and also not required	CPUFW-8586
For downgrading the firmware from version 3.4.1 to version 3.4.0 the downgrade process has to be done twice. Downgrade via Automation Builder: The initial downgrade terminates with a success message, although the version information editor shows 3.0.0 as FW version. The second downgrade then finally results in FW 3.4.0 Downgrade via SD card: The initial downgrade results in the PLC showing “update” in the display. A second power cycle completes the downgrade and installs FW 3.4.0.	AB-19738
Input assistant: The programming input assistant might show not matching initialization values for ERROR_ID ENUMs Workaround: Define the initialization of ERROR_ID values directly in the program and not via input assistant	CPUFW-8983
Input assistant: In case the automatically added Ethernet library is removed from the project’s library manager the use of the programming input assistant might lead to a crash of the Automation Builder. Workaround: Add the removed Ethernet library again to the project’s library manager	AB-20877
Ethernet: Network variables: cyclic transmission of network variables can cause an "omitted cycle watchdog" exception. Workaround: Change properties of used Network Variable List (Sender) from "Cyclic transmission" to "Transmit on change".	CPUFW-8468

PROFINET: CM579-PNIO: The node state of Profinet I/O devices might be false negative in case of consecutive errors. Workaround: Check number of nodes with error state on I/O controller level	CPUFW-8456
SysLibs: The FB PmProdReadAsync returns the ProductID for PLCs with one Ethernet interface (PM5012, PM5032, PM5052) in output "Mac1" instead of "ProductId". Workaround: Use value from output "Mac1" as "ProductId" for PM5012, PM5032 and PM5052.	CPU_FWLIB-521
Profinet: Configured but missing I/O devices connected to a CI501-PNIO or CI502-PNIO module are not properly represented in the diagnosis system. The I/O device itself has no diagnosis message and therefore is shown as OK (both in the Automation Builder and in the IEC application). Workaround: Check the ModuleDiffBlock of the CI50x-PNIO module for any missing I/O devices.	CPUFW-8272 CPUFW-8268
Firmware update: Unable to update the system or display firmware, if update firmware (updateFW) versions 3.1.2.32 or 3.1.4.82 are installed. Workaround: First update the update firmware (minimum version: 3.3.2.113) before updating the system or display firmware in a second step.	CPUFW-8252
EtherCAT: The first breakpoint in the EtherCAT sync task is not processed properly. It is always being ignored if there is at least a second breakpoint. Workaround: Always use at least two breakpoints in the EtherCAT sync task considering that the first one will be ignored.	CPUFW-8227
EtherCAT: POU EcatSync outputs ErrInCnt and ErrOutCnt never start at 0 Workaround: Do not use the first output values of EcatSync function block after setting EtherCAT to operation.	CPUFW-7983
Ethernet: The function block EthSetRtoMin (part of AC500_Ethernet library) might cause an exception with FW V3.3.1. This also affects the AC500 High Availability - HA-ModbusTCP V3 Library Example, as it is using this function block. Workaround: If using this function block is mandatory, a dedicated hotfix version of the firmware has to be used (available on request from ABB technical support).	CPU_FWLIB-401
BACnet: If server objects of type "BACNet.BacnetSchedule" or "BACNet.BACnetSchedule" are instantiated in the PLC application, the PLC will crash when the project is deleted from the device. Workaround: Only use the BACnet Schedule by adding it below the BACnet Server in the device tree instead of adding it from the PLC application.	CPUFW-7854
Diagnosis: The PLC node might show a diagnosis indicator "!" in the Automation Builder device tree even if no diagnosis exists. In this case the root cause is that the device diagnosis is disabled. Workaround: Activate the device diagnosis in Automation Builder	CPUFW-7519
CM579-PNIO: Missing error text on disconnected ethernet cable (error code 2) Workaround: Ignore missing error text in case of error number 2 on CM579-PNIO	CPUFW-7498
Ethernet/IP Adapter cannot handle more than one connected scanner (Exclusive Owner). When connecting a 2nd (Listen Only) Ethernet/IP scanner a connection failure occurs Workaround: not available	AB-19326
Persistent memory: Please note that 44 bytes of the persistent memory is reserved by the system for internal data. If the persistent memory is used, the usable area is reduced by this amount. Workaround: not available	AB-18919
Diagnosis text lists are only downloaded to the PLC if a visualization is added to the application	AB-16465
In case the flag “Enable Diagnosis for devices” (PLC node editor → PLC Settings) is not set the diagnosis indication on the device tree object might not be correct Workaround: either activate the flag “Enable device diagnosis” or open the diagnosis editor of the corresponding device object	AB-17250
Diagnosis text lists are not updated after new GSDML installation/device object update if the text list was already present in the project. Workaround: Delete the diagnosis text lists, save project, restart Automation Builder, and rebuild the project. The updated text lists are now generated into the project	AB-16737
Diagnosis text lists are not transferred to the AC500 V3 PLC if download/login is done without rebuild. Workaround: Please check that a visualization is added to the project, the setting 'enable diagnosis for devices is set and project is rebuilt (clean all → rebuild)	AB-18007
Online values of program code are not correctly refreshed in editor if exception handling is included in code	AB-18215
Firmware update might fail via Automation Builder Workaround: Please check if ETH1 and ETH2 are in different subnets	AB-18004

BACnet EDE file import is not allowing to select an exported file. Workaround: Please rename the exported file to *_EDE.csv and retry the import	AB-18210
Cyclic non-safe data exchange: An initialization of arrays and structures in the non-safe program is not supported by the safety program in CoDeSys v2.3 and creates corresponding errors "Erroneous initial value".	AB-17989
Cyclic non-safe data exchange: Build error "address is already used" occurs if STRING mapping is defined at the end Workaround: In this case add any non-string variable at the end of the mapping or change mapping order	AB-17782
Compile error will occur after renaming "CAN bus" on AC500 V3 PLCs Workaround: Please keep default name	AB-17541
Sync-SDOs parameters are not generated when 'Enable Sync Producing' is disabled: For both communication modules CM578-CAN and CM598-CAN, when the parameter CANopen Master parameter 'Enable Sync Producing' is disable, parameter 'set communication cycle period' and 'Set synchronous windows length' are not generated. When CANopen Master parameter 'window Length' is set to 0, the parameter 'Set synchronous windows length' is also not generated.	AB-14071
Fast counter of DA501/502 does not work if used at a Communication Interface (CI) module on PROFINET, EtherCAT or CAN	AB-16614
IO mapping: use only mappings available in the IO mapping editor, avoid manual variable declarations using AT % operations	AB-16521
FW 3.2.0: Downgrade of AC500 PLCs from firmware 3.2.x version to previous versions via Automation Builder 2.1.X is not supported. Workaround: Please prepare SD-card with desired firmware versions and execute firmware version update via SD-card	n.a.
Sometimes the display firmware is not updated within the first “Update Firmware” process (display shows “bAdFlr”). Please start the “Update Firmware” process a second time.	AB-17204
PM5630: There might be not sufficient memory for boot projects when visualizations are used or had been used and downloaded before. Workaround: In case you are running into memory issues please check that visu files which are no longer required are deleted using the "Files" tab in the editor of the main CPU node (delete the files in 'PlcLogic/visu/').	AB-15729
The "Scan for devices" functionality does not work when the "Log" Editor of the V3 PLC is opened, After the call of "Scan for devices" it is also no longer possible to add any object in the device tree (as long as the "Log" Editor is active). Workaround: select another editor tab and call "Scan for devices" again	AB-15749
Division by zero for REAL and LREAL variables does not raise exceptions in IEC user program. Workaround: Check results of division in IEC program for "FIN".	CPUFW-7429
Counter: Fast counter word order is wrong for devices on PROFINET and EtherCAT. Workaround: Swap in- and outputs accordingly.	CPU_FWLIB-279
CAA_File: POU FILE_MOVE is missing Workaround: Use File copy + File delete	CPU_FWLIB-242
CommFB: The library CommFB is not supported for CM579-PNIO Workaround: Use library ABB_PnioCntrl_AC500.library	CPU_FWLIB-140
Trend: Storage size limitation does not work properly. Limitation by file size does not work, as limitation by maximum number of records works. Otherwise PLC can run out of memory. Workaround: Use limitation by maximum number of records	CPUFW-7172 CPUFW-7173
PROFINET and CM589-PNIO: After second download the CM589-PNIO does not work, first download and starting via boot project works. Workaround: Start project as boot project. Note: CM589-PNIO with Codesys driver not supported with FW 3.2.4 or later	CPUFW-6641
System: IEC task watchdog followed by Online -> Reset warm leads to crash of PLC.	CPUFW-6142
CM579-ETHCAT: In some configurations, the state of the last EtherCAT slave is shown as red circle in AB device tree, even if slave works fine. Workaround: Ignore wrong state and/or check state with POU.	CPUFW-6134

Deleting of an AC500 V3 PLC in the tree might fail if there is an invalid AlarmConfiguration task configured. An error message "Invalid object guid..." might be displayed and the PLC cannot be removed. Workaround: Delete AlarmManagerTask below task configuration and delete then the PLC node.	AB-15554
Runtime licensing: Return license feature of runtime license is working on AC500 firmware versions 3.1.3 and higher. Please update AC500 firmware first to this version and then return licenses. Otherwise runtime licensing on this PLC will become unusable!	FW 3.1.0
Projects created with AC500 V3 PLCs in Automation Builder 2.0 require to manually exchange the following libraries: AC500_ExtUtils -> AC500_PM AC500_IntUtils -> AC500_Io, AC500_PM AC500_EthernetUtils -> AC500_Ethernet The V3.1 library "AC500_Ethernet" contains all Function blocks from the V3.0 library "AC500_EthernetUtils" The V3.1 library "AC500_Io" contains Function blocks from the V3.0 library "AC500_IntUtils" The V3.1 library "AC500_Pm" contains Function blocks from the V3.0 library "AC500_IntUtils" and "AC500_ExtUtils"	LIB-1424 LIB-1421 LIB-1419
Projects for AC500 V3 PLCs created with Automation Builder 2.0 need manual update if CM modules had been used as slot numbering is changed now in Automation Builder 2.1. If POUs with a "slot" parameter are used, the slot needs to be adapted to the physical CM position (from 1 to 6) on the terminal base. If EtherCAT is used in "synchronous mode", the event tasks need to be changed (e.g. "EventTask1" for the first slot, "EventTask3" for the third slot).	AB-12531
System: PLCShell command "date" and "rtc-set" cannot set a date after 2038	CPUFW-5870
Ethernet: FTP server: FTP server: If FTP server is configured on booth Ethernet interfaces ETH1 and ETH2, FTP server will be activated on ETH1 with configuration of ETH1. The FTP server configuration of ETH2 will be ignored. Workaround: Configure FTP server only on one Ethernet interface ETH1 OR ETH2.	CPUFW-5869
Network Variables (NV): does not work with default Broadcast address 255.255.255.255 Workaround: Use another Broadcast address as 255.255.255.255, e.g. 192.168.0.0	CPUFW-5803
TLS/SSL self-signed certificates can't have an End-date after 2038.	CPUFW-5765
Modbus TCP server: fast On/Off switching of server can lead to incomplete log entries (e.g. missing IP address)	CPUFW-5763
CAA-File: If the user disk is full; the PLC won't create the INI file with production data on the SD card. Workaround: - Don't fill user disk to 100% (proposed space is 10%). - Login via PLC Shell and remove files from the user disk manually.	CPUFW-5734
SD-Card: In some cases, If the SD card is removed while in PLC is in RUN mode and SD card is accessed and is put back, the PLC don´t recognize that the SD Card is put back. If you try to write on a File on the SD Card there is Error NOT_EXIST but the file is there. Workaround: Do not to remove the SD card while actively accessing it. Note: On display activity of SD card is shown as long as a file is open on it.	CPUFW-5099
Modbus TCP: It's not possible to use multiple connections to one server with Modbus TCP. Workaround: Use only one connection per Modbus TCP server.	CPUFW-5076
LIB: CommFB POUs: GETIO_PART/SETIO_PART do not work. Status code 16#40820000 will be returned. As of V3.1.0 error code "NOT_IMPLEMENTED" will be returned. Workaround: Do not use the POUs	CPUFW-4927
If the SD card is removed during a read / write process, the SD card won't remounted from the PLC after replug. POU FileClose does not output a Done or Error and remains in Busy status. Workaround: Do not remove the SD card during read/write process.	CPUFW-4684
Modbus TCP: POU ETHx_MOD_MAST and EthxModMast with wrong input data length for FCT=22, 23 leads to access violation Workaround: Check the input parameters for valid values	LIB-1615 CPU_FWLIB-104
Modbus TCP: POU ETHx_MOD_MAST with wrong input parameters leads to exception: ADDR := 16#FFFF, NB := 0 Workaround: Check the input parameters for valid values	LIB-1559 CPUFW-6154
CAA_File: FILE.close: exception in case file handle is zero. POU stays forever is state busy. Workaround: Check file handle before call FILE.close. (Must be >0)	LIB-1532 CPUFW-5060
Function Code 7 for Modbus TCP not working. Workaround: FCT=7 cannot be used until issue is fixed.	LIB-1192 CPU_FWLIB-118

Function code 23 for ETHx_MOD_TCP has different max data length (write 121, read 125) then V2 (write 125, read 125). The values in V3 are according to Modbus specification. Workaround: Use data length according to Modbus specification.	LIB-1167LIB-1167 CPU_FWLIB-125
CAA-File: The maximum number of files opened at the same time is limited to 1024. The runtime system already opened some files. So, the limit for the CAA file applications is less 1024, e.g. 1007. Workaround: Consider this limitation for CAA file application.	AB-13406 LIB-1183 CPU_FWLIB-94
CAA-File: "The files to be accessed from IEC (user) applications go to directories that are not visible for the user (e.g. /mytemp). The PLC takes the filename specified by the user and appends it to this IecFilePath, and this complete name has a length <= 255. So, the maximum length of a file name for the CAAFile user is 255 minus the length of the Iec Path." Workaround: Consider the Iec Path in the IecFilePath.	AB-13406 LIB-1176 CPU_FWLIB-9
Modbus TCP: Function code 23 for ETHx_MOD_TCP has different max data length (write 121, read 125) then V2 (write 125, read 125). The values in V3 are according to Modbus specification. Workaround: Use NOT_EXIST for both use cases	LIB-1167 CPU_FWLIB-125
CAA-File: POU FileOpen doesn’t distinguish if the SD card is write-protected or if there is no SD card inserted (in both cases the error message is NOT_EXIST). Workaround: Use NOT_EXIST for both use cases	LIB-1140 CPU_FWLIB-19
OPC UA server: Property MaxMonitordItemsPerCall has been reduced to 100. If this property is read by OPC UA clients, it returns no value (null)	n.a.

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