Table of contents

1 Changes CPU Firmware V2.4.4
  1.1 Improvements
  1.2 New Features

1 Changes CPU Firmware V2.4.4
1.1 Improvements

The following improvements have been included in Firmware V2.4.4 (additionally to those from V2.4.2 listed below.)

**Modbus TCP / RTU**
Improvement of Ethernet stability. Fixed

Modbus TCP with PM55x-ETH/PM56x-ETH: Communication error when using modem e.g. eWon (ewon flexy). Fixed

PM5xx and two times Modbus server always close connections and reopen it. Fixed

CM574-RS as Modbus server (COM1 shared) answered independent of the Modbus address. Fixed

**Online Access**

2nd Login via CM597-ETH can lead to severe error of PM5xx in some configurations (e.g. with CS31-Bus). Fixed

**POU**

POU ETH_ICMP_PING don't start after Reset (Online/Reset) and Start. Fixed

**PROFINET**

CM579-PNIO: after STOP->START old values send to CI50x-PNIO for ca. 2s. Fixed

**System**

CPU load command can't show correct value when cpu load upto 100%. Fixed

CPU load show higher values for PM55x, PM56x, PM57x and PM58x. Fixed
The following improvements were included in Firmware V2.4.2.

**C-Code**
Some problems have been fixed for relocation of data or pointer initialization. Fixed.

**EtherCAT**
The recognition of data type SINT by the XML parser is now working. Fixed.

**Ethernet**
Improvement of Ethernet stability. Fixed.

**UDP protocol:** Unconnected Input Data of a FB "ETH_UDP_STD_SEND" was not well supported by AC500. Fixed

**FTP server with AC500-eCo behavior has been improved in case of bootproject without task configuration.** Fixed

**Modbus**
Modbus limits were not checked. Measures need to be taken in customer application. Fixed.

**Online Access**
CPU load (POU and PLC browser command) show wrong value in case of high CPU load and is not updated at 100%. Fixed.

**Real time Clock**
RTC POU: CurTimeEx does not work correct. Fixed.

**System**
Projects without task configuration use "DefaultTask" (Prio=10, Cycle time=10ms, Watchdog=On, Watchdog time=10ms, Watchdog sensibility=1). This can lead to trigger the watchdog especially on small PM5xx. Fixed.

Task configuration: Project without task configuration has a default task running at 10ms interval with a 10ms watchdog. The watchdog is triggered in projects with CS31-Bus or other communications, especially on small CPUs. Fixed

Diagnostic message from CM574 communication module in mixed configuration together with other CM577 (e.g.) delivers bad information. Fixed
Serial Communication

A runtime error occurred while using the Function Block `COM_MOD_MAST` via Communication Module CM574-RS when the response time of the slave is longer than the timeout set for the Function Block. Fixed.

File Handling

CAA_File library: ZipArchive* interface does not work if entries inside of zip-archive contain slashes (/) instead of backslashes (\). Fixed.

1.2 New Features

The following new features have been added in Firmware **V2.4.4** additionally to those below.

**Diagnosis**

Diagnosis: Forward fieldbus error with matching component into PLC diagnosis buffer

The following new features were added in Firmware V2.4.2.

**System extension**

New display Firmware for AC500 CPU PM57x/PM58x/PM590... PM592, allowing support of MultiOBE and FlexConf.

Extended file size dialog with CODESYS > V2.3.9.45.

**Support of new devices**

Condition Monitoring System (CMS) FM502-CM

New PLC PM590-ARCNET, PM591-2ETH.

New high performance PLC PM595-4ETH-F and PM595-4ETH-M-XC.

New PROFINET IO device communication module CM589-PNIO.

New Ethernet communication module CM597-ETH (as replacement for the CM577-ETH module).

**Flexible configuration (FlexConf)**

Flexible configuration for IO devices connected to local I/O-Bus - handling of multiple HW-configuration files. Feature available for all PLC except AC500-S Safety CPU.
SNTP protocol for AC500-eCo CPUs

Protocol SNTP (Simple Network Time Protocol) for eCo CPUs with Onboard Ethernet - CPU as time slave.

Function Block Libraries

Support for new Function Block `BOOTPROJECT_HASH_INFO` (contained in internal system library) introduced. This Function Block enables hash checks of all parts of a boot project. Full functionality are supported from CoDeSys version V2.3.9.45.

Programming in C-Code

New standard libraries for C-Code editor extended.

Online change are is now available using CoDeSys from V2.3.9.45.

C++ support on PM590-ETH / PM591-ETH / PM591-2ETH / PM592-ETH.

IEC60870-5-104 tele-control protocol

Support of "2nd connection" - multiple substations on one PLC.

Support of "2nd port" for PLCs with Multiple Onboard-Ethernet (e.g. PM591-2ETH or PM595-4ETH-F/M-XC).