

AXC 1050 (XC) – CHANGE NOTES

Change notes for the AXC 1050 and AXC 1050 XC controllers

Application note
105769_en_05

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1 General notes

This document contains all changes made between the current firmware version and the previously released version.

Current firmware version: 3.05



NOTE: Incorrect firmware status

In order to install the latest firmware version, the last released firmware version must be installed on the controller. If an older firmware version is installed on the controller, this can result in material damage to the controller when the latest firmware version is installed.

- Ensure that the last released firmware version is installed on the controller before installing the latest firmware version.

2 Ordering data

Description	Type	Order No.	Pcs./Pkt.
Axioccontrol for the direct control of Axioline I/Os. With two Ethernet interfaces and programming options according to IEC 61131-3. Complete with connector and marking field.	AXC 1050	2700988	1
Axioccontrol for the direct control of Axioline I/Os. With two Ethernet interfaces, extended temperature range, and programming options according to IEC 61131-3. Complete with connector and marking field.	AXC 1050 XC	2701295	1



Make sure you always use the latest documentation. It can be downloaded at [phoenixcontact.net/products](https://www.phoenixcontact.net/products).



This application note is valid for all products listed in the ordering data.

3 Changes in firmware 3.05

3.1 New functions

- Web server settings (HTTP/HTTPS ports)
HTTP/HTTPS port changes can be carried out with a firmware service.
- Use of future Axioline I/O modules
The controllers have been prepared for the use of future Axioline I/O modules. This change does not effect the current device functions.

3.2 Error corrections

- Hardware watchdog after a communication error
A communication error has been removed that could have sporadically triggered a hardware watchdog.
- Communication with SSL/TLS encryption
With SSL/TLS encrypted communication the controller was no longer accessible in the network after a certain time (application-dependent) and had to be restarted. This error has been rectified.

4 Changes in firmware 3.00

4.1 New functions



The new functions in PC Worx are available from AUTOMATIONWORX Software Suite 2017 Version 1.84.

- Modbus/TCP server support
The controller can now also be used as a Modbus/TCP server.

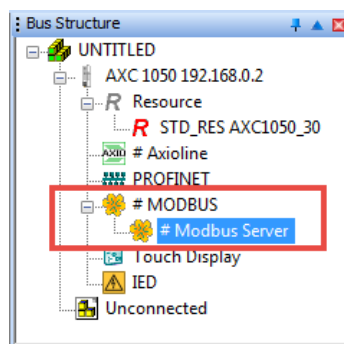


Figure 1 Modbus/TCP server in the PC Worx bus structure

Up to eight communication connections to Modbus/TCP clients are supported. For additional information, please refer to the AH EN MODBUS/TCP application note. The application note can be downloaded via the product at phoenixcontact.net/products.

- SD card functionality



WARNING: Explosion hazard AXC 1050 XC

In potentially explosive areas, the SD card must not be used as additional memory. Use the SD card as main memory only. Do not insert or remove the SD card during operation.

The SD card's functionality has been extended. The SD card can now be used either as the main memory or as additional memory.

As the additional memory, the SD card can be used to store log files.

You can select the SD card function you need in the "Device Details" window in PC Worx.

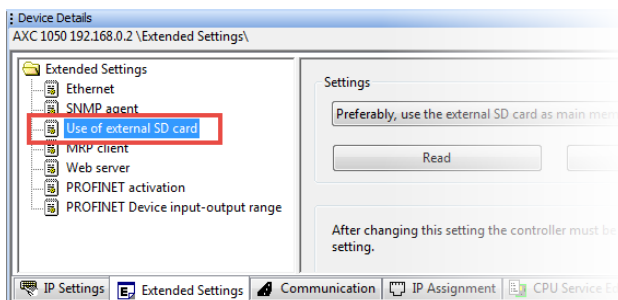


Figure 2 Selecting SD card function

- SMTPS support for secure e-mailing
You can use the SMTPS method (e-mailing via SMTP with SSL/TLS) for secure e-mailing. In order to use the SMTPS method, you need to import the latest version of the “IT_Library” function block library. It can be downloaded via the product at phoenixcontact.net/products. The SMTPS method was tested using the following providers:
 - Gmail (port 465¹, port 587)
 - GMX (port 465, port 587)
 - Web.de (port 587)
 - Yahoo Mail (port 465, port 587)
 - T-Online (port 465, port 587)
 - Microsoft Hotmail (port 587)
 - freenet AG (port 587)
- Opening/closing of ports
The ports 1962 (port for communication with PC Worx), and 21 (FTP port) can be opened or closed by means of the CPU_Set_Value_Request CPU service.
- Creating/renaming/deleting directories on the FTP server
Directories can be manually created, renamed or deleted on the FTP server.
- Restricting FTP access
To prevent unauthorized FTP access to the parameterization memory (internal parameterization memory or SD card), you can define a user name and a password for access.
- PROFINET controller/device function
The controller can now be used as a PROFINET controller and device at the same time.

¹ Use the “Allow less secure apps” option.

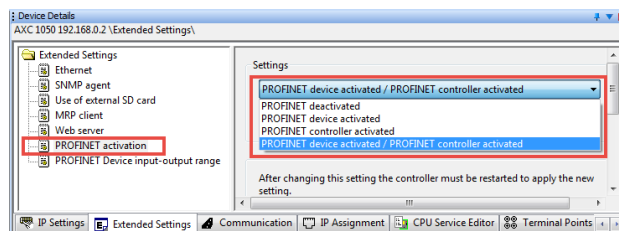


Figure 3 Controller as PROFINET controller and device

- Immediate adoption of the IP address
When assigning the IP address via BootP and manually assigning the IP address via USB, the IP address settings only took effect after a controller restart. You can activate the function for immediate adoption of the IP address via the CPU_Set_Value_Request CPU service. If the function is active, the IP addresses are adopted immediately without the need to restart the controller.
- MRP client function
The MRP client function can be read in and activated or deactivated in the “Device Details” window in PC Worx.

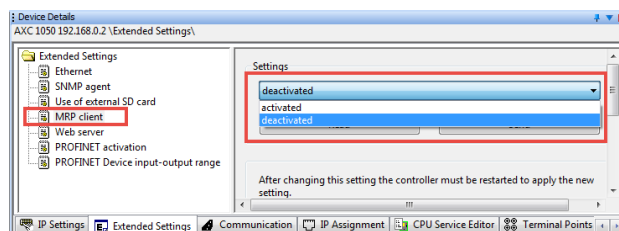


Figure 4 Activating/deactivating the MRP client function

- New function blocks ETH_SEND and ETH_RECEIVE
The ETH communication blocks enable communication to take place on the Data Link Layer of the ISO/OSI model (layer 2 communication) according to IEEE 802.3.
- New function block GET.UTC_TIMESTAMP
The GET.UTC_TIMESTAMP function block enables you to query the coordinated universal time UTC.
- New function block IP_INFO
The IP_INFO function block provides information about the current communication partner (IP address of the communication partner, port number, and communication protocol used).
- New system variables LAN_PORT1_1_LINK and LAN_PORT1_2_LINK
The system variables supply the link status to the Ethernet interfaces X1 and X2.

- New system variable PLC_PROJ_NAME
The system variable supplies the project name and the version of the PC Worx project.
- Web-based management (WBM)
In the web-based management, you can access static and dynamic controller information and modify certain controller settings.
The WBM can be called up via any of the controller's Ethernet interfaces.

4.2 Error corrections

- Variables in WebVisit
Rounding errors occurred in values of variables which were visualized from a PC Worx project in WebVisit. This error has been rectified.
- Status of the system variable PND_S1_PLC_RUN
When a PC Worx project was transferred to the controller, with activated PROFINET device function, the PND_S1_PLC_RUN system variable had status TRUE, even though there was no connection to the higher-level PROFINET controller.
This error has been rectified.
- Axioline F local bus
There were some data inconsistencies in the Axioline F local bus.
This error has been rectified.
- “Diagnostic Archive” view in Diag+
Runtime errors were shown in the “Diagnostic Archive” view as undefined bus errors without error code.
This error has been rectified.
- Creating directories on the FTP server
When the path contained forward slashes (“/”) when creating a directory on the FTP server, the directory was not created.
This error has been rectified.
- IP address assignment via DCP
When the PROFINET functionality was switched off, IP addresses could not be assigned via DCP.
This error has been rectified.
- Download changes
The “Download Changes” function could not be carried out in some instances.
This error is rectified by selecting the entry “AXC 1050 v3.0.2 (Core: 3.0.2.1) Rev. 1” in the Resource settings for the Build settings.



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