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# Upgrade to Saia®PCD7.F655 FW version x4x

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## Introduction

There are two variants of the IP communication module Saia®PCD7.F65x:

- The Saia®PCD7.F650 (as well as the F761 and F652 for PCD4 or PCD6)  
These modules do always have a firmware (FW) x0x or x1x.
- The Saia®PCD7.F655  
These modules do always have a firmware version x3x (pilot versions), x4x or higher (official versions).

The product variant (F650 or F655) is solely depending on the firmware loaded on the module. Each Saia®PCD7.F650, F651 or F652 can be upgraded to a Saia®PCD7.F655.

The main differences between the F650 and the F655 are the following:

- The communication performance was increased significantly
- The download mechanism has been improved. While it is possible to download a non compatible firmware file to a F650 (and thereby destroying the module), this is not any more possible on a F655. The F655 executes a verification of the downloaded file before it is loaded into the memory.
- The subnet mask as well as the standard gateway can be modified without a restart of the PCD is necessary.
- The stability of the module has been improved

New IP communication modules are delivered as Saia®PCD7.F655.

## Content of this document

This document does explain how the firmware version x3x and x4x is downloaded to a Saia®PCD7.F65x.

Since the download procedure is depending on the FW already installed on the module, both the upgrade from x0x or x1x (upgrade from F650 to F655 on page 2) as well as the update of a FW version x3x or x4x (update of F655 on page 3) are described.

## Upgrading a Saia®PCD7.F650, F651 or F652 (until versions \$14 included)

The IP modules Saia®PCD7.F650, Saia®PCD7.F651 and Saia®PCD7.F652 equipped with FW version x0x and x1x) are to be updated using the tool **ftpd.exe** (screenshot below). Unlike to the update of such a module to a FW version smaller than x4x, the file to be downloaded must have the extension **\*.bin** (e.g. D7F655\_041.bin).

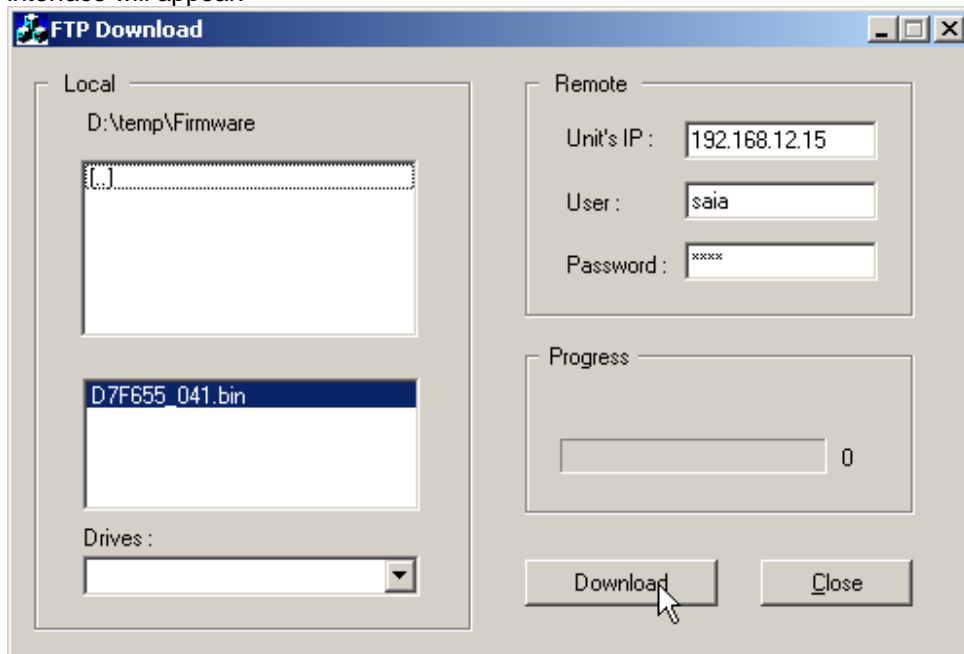


Note that the download of any other files than a FW file with the extension **\*.bin** will make the module unusable. There is no verification whether or not the file downloaded is a firmware; all files will be copied to the flash (causing the module not to work any more!!!).

### Update procedure

Use the special tool ftpdl.exe for downloading a firmware as described below.

- Open the FTP-Download-Commander "**ftpd.exe**" by double clicking it. The following interface will appear:



- Type the IP-Address of the device you want updating the firmware in the "**Remote Unit's IP**" field. In this example, it is 192.168.12.15.
- As user enter "**saia**".
- As password enter "**saia**", too.
- In the left-side <Local-menu> **browse to the \*.bin-file** you want to download as new firmware into the device (e.g. D7F655\_041.bin).
- Click the download-button. A connection to the FTP-server of the device will be established and the firmware will be downloaded.
- After the message "Download complete", power down/up the PCD in order to boot the module with the new IP-Module firmware.

## Update a Saia®PCD7.F655 (all PCD7.F65x with FW x3x and higher)

All PCD7.F655 as well as the PCD7.F65x equipped with FW version x3x, x4x and higher do run a more performing IP stack than the product Saia®PCD7.F650. The IP stack applied on the F655 is the same as used on the Saia®PCD3.

The firmware of the Saia®PCD7.F655 is to be updated with the following procedure. The tool for updating the FW is the Windows Command Prompt with the ftp client.



The FW file to be downloaded does have the extension **\*.blk** (e.g. D7F655\_041.blk). A header is included in this blk-file to check the integrity of the downloaded firmware.

### Update procedure

- Open the Command Prompt (Select “Run...” from the Windows Start Menu and type “cmd”)
- In the command prompt, type “**ftp <Enter>**”
- Type “**open <IP address> 1700 <Enter>**”. This opens an ftp connection to the remote port 1700.
- Type “**saia <Enter>**” as user name.
- Type “**saia <Enter>**” as password.
- Type “**binary <Enter>**” to set the connection into binary mode.
- Type “**put <path and name of FW file>**” (i.e. “put D:\ D7F655\_041.blk”).
- Type “**quit <Enter>**” after the download completed.

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C:\ Command Prompt
Microsoft Windows XP [Version 5.1.2600]
(C) Copyright 1985-2001 Microsoft Corp.

P:\>ftp
ftp> open 172.16.1.123 1700
Connected to 172.16.1.123.
220 NexGenREMOTE FTP server (version 1.0) ready.
User (172.16.1.123:(none)): saia
331 Password required for saia.
Password:
230 User logged in, proceed.
ftp> binary
200 Type set to I.
ftp> put d:\D7F655_041.blk
200 PORT command successful.
150 Opening BINARY mode data connection for 'D7F655_041.blk'.
226 Transfer complete.
ftp: 129356 bytes sent in 0.13Seconds 1034.85Kbytes/sec.
ftp> bye

P:\>_
  
```

- Power down the PCD
- Mark the new firmware version on the module (e.g. with a sticker) for easy recognition in future.
- Power up the PCD in order to boot the IP module with the new FW.