



User Guide

Anybus[®] Firmware Download TP

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HMS Industrial Networks AB

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Important User Information

The reader of this document is expected to be familiar with industrial networking systems, and communication systems in general.

For more information, documentation etc., please visit the HMS website, 'www.anybus.com'.

Liability

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HMS Industrial Networks AB will under no circumstances assume liability or responsibility for any problems that may arise as a result from the use of undocumented features, timing, or functional side effects found outside the documented scope of this product. The effects caused by any direct or indirect use of such aspects of the product are undefined, and may include e.g. compatibility issues and stability issues.

The examples and illustrations in this document are included solely for illustrative purposes. Because of the many variables and requirements associated with any particular implementation, HMS Industrial Networks AB cannot assume responsibility for actual use based on these examples and illustrations.

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P. About This Document

For more information, documentation etc., please visit the HMS website, 'www.anybus.com'.

P.1 Related Documents

| Document | web |
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P.2 Document History

Summary of Recent Changes (... 1.00)

| Change | Page(s) |
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P.3 Revision List

| Revision | Date | Author(s) | Chapter(s) | Description |
|----------|------------|-----------|------------|---------------|
| 1.00 | 2010-10-04 | KeL | - | First release |
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P.4 Conventions & Terminology

The following conventions are used throughout this manual:

- Numbered lists provide sequential steps
- Bulleted lists provide information, not procedural steps
- The term ‘Transport Path’ refers to the software component which specifies the physical connection between the Anybus product and the Firmware Download TP.
- The term ‘Anybus’ refers to the Anybus product used in the firmware download context.

P.5 Support

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1. Introduction

1.1 General Information

The core of any Anybus product is the built-in firmware. As suggested by the term ‘firmware’, this lies somewhere between hardware and software. Just like software, it’s a computer program executed by a microprocessor, while on the other hand it’s also an intimate and essential part of the Anybus hardware, and has very little meaning outside of that context.

HMS continuously improve our implementations and add new features to our products. To enable users to gain access to these improvements, HMS distributes firmware packages, which can be downloaded into the products using the Anybus Firmware Download TP.

The Anybus Firmware Download TP aims to make the process of upgrading and managing the firmware of Anybus products as safe and simple as possible. The built-in security framework effectively prevents incompatible firmware packages from being downloaded into a product.

1.2 System Requirements

- **Operating Systems**
 - Windows 2000
 - Windows XP
 - Windows Vista
 - Windows 7
- **Minimum Hardware**
 - Pentium 233 MHz (Recommended: Pentium 500MHz or greater)
 - 64 MB RAM (Recommended: 128 MB RAM or greater)
 - 50 MB hard drive space

1.3 Supported Product Families

The Anybus Firmware Download TP supports the following Anybus product families:

- Anybus Communicator
- Anybus-S
- Anybus X-Gateway

2. Software Installation

Step 1. Download

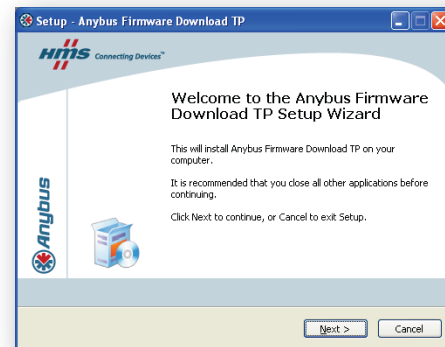
Download 'Firmware Download TP' from www.anybus.com.

To find the latest version, click 'Support' and then choose 'Support tools' and 'Firmware upgrade tools' from the drop-down lists under 'Please select your product type'.

Step 2. Launch the Installer

Double-click on the Firmware Download TP Install file.

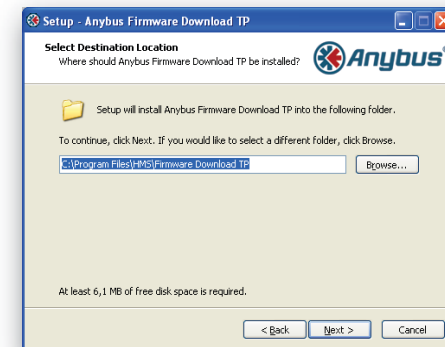
When the installer opens, click 'Next' to proceed to the next step.



Step 3. Specify Destination

The installer needs to know where to put the application files.

Click 'Browse' to specify a destination other than the default one, or 'Next' to proceed to the next step.



Step 4. Start Installation

The installer is ready to install the application.

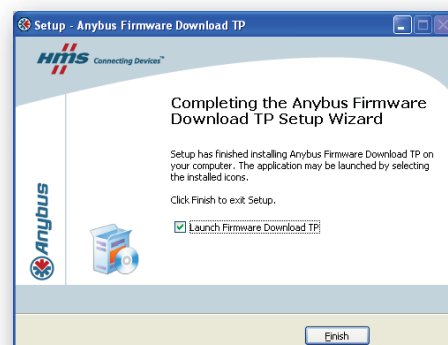
Click 'Next' to proceed. Wait a few moments while the installer copies the files to the destination folder.

Note: The download includes the latest version of the Anybus Transport Provider. If this tool is not already installed, or if the version installed is too old, it will be installed automatically at this time.

Step 5. Finished

The installer has finished copying the files needed for the installation.

Click 'Finish' to exit.



3. Setup and Operation

Prior to setup, please contact HMS support to obtain the appropriate firmware upgrade package for your product.

Step 1. Connect the Module

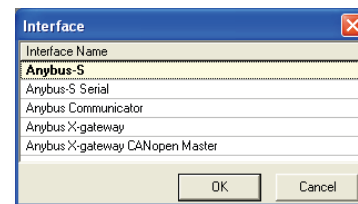
Connect the module. See Installation Sheet and/or Fieldbus appendix

Step 2. Choose Interface

Start the Anybus Firmware Download TP.

The first time you start Anybus Firmware Download TP you will be asked to choose interface (product family). Depending on this choice the rest of the procedure may look slightly different.

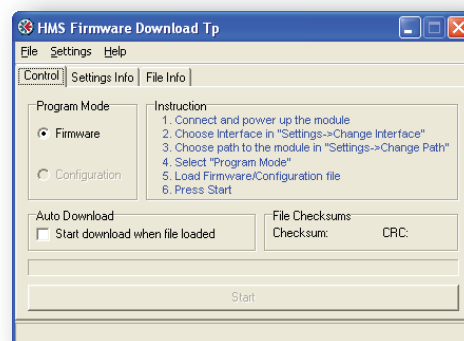
The Firmware Download TP will remember this setting between sessions, but it has to be specified at least once.



Step 3. Control Page

The program will start at the control page.

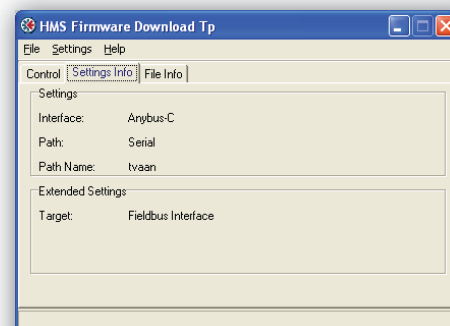
Choose 'Firmware'.¹



Step 4. Settings Info

Select the 'Settings Info' tab. This tab shows the current settings of the Anybus Firmware Download TP. The settings will be remembered between sessions.

If the settings information is correct, proceed to "Step 7. Select Firmware" on page 7. If not, continue with step 5.

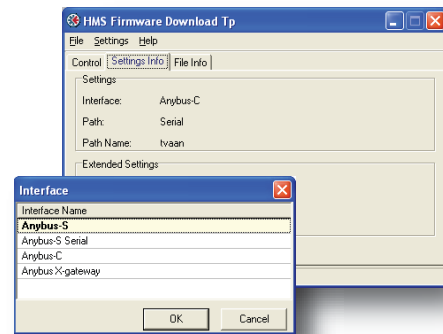


1. The option 'configuration' is only available for LonWorks. Please contact HMS support for details.

Step 5. Interface Selection

Click on Settings/Change Interface and select the correct product family. Depending on choice of product family the rest of the procedure may look slightly different.

The Firmware Download TP will remember this setting between sessions, but it has to be specified at least once.



Step 6. Transport Path Setup and Selection

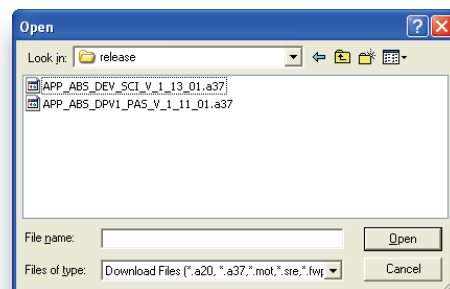
The Transport Path represents the logical- and physical interface used to communicate to the Anybus product. The Firmware Download TP will remember this setting between sessions, but it has to be specified at least once.

Click Settings/Change Path to create or specify a Transport Path (for more information, see 4-8 “Specifying a Transport Path”).

The Firmware Download TP will scan the specified path for attached Anybus products (if no compatible products are detected, the program halts with a timeout error).

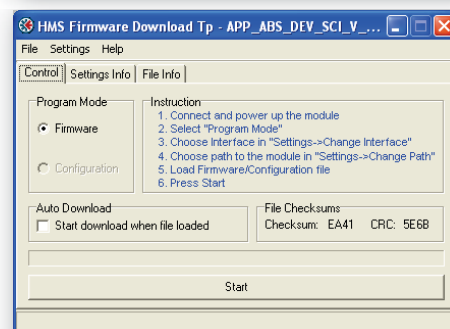
Step 7. Select Firmware

Choose File/Load in the toolbar. Select the correct firmware obtained from HMS Industrial Networks. See under the tab File Info, for information about the chosen file.



Choose the Control tab.

To download the firmware package into the attached Anybus product, click ‘Start’.



Step 8. Download Completed

Click ‘Start’ to download the same firmware package into an equivalent Anybus product, or return to step 3 to change the settings before downloading the next firmware upgrade.

4. Specifying a Transport Path

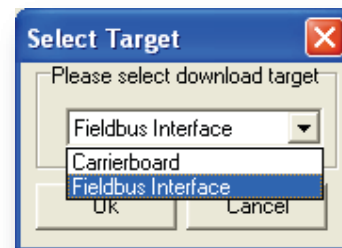
General Information

The Transport Path represents the connection between the computer and the Anybus product.

The ‘Transport Path’-dialog can be accessed by clicking ‘Create’ in the ‘Change Path’-screen reached from the Settings menu.

Step 1. Choose Target

If you have selected Anybus X-gateway or Anybus Communicator as your interface, you will be asked to select target. The firmware shall either be downloaded to the carrierboard or to the fieldbus interface of the module



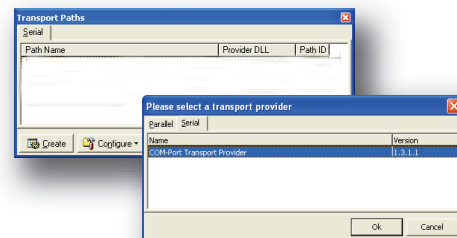
Step 2. Create Path

Depending on choice of fieldbus interface, you may have access to both serial and parallel paths. If the module does not allow parallel firmware, that option will not show.

To create a path, click ‘Create’. If you have chosen to create a parallel path, please continue to step 6.

Step 3. Serial Path

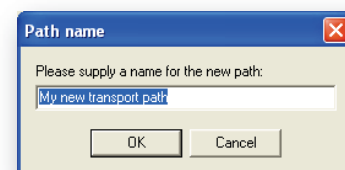
Highlight the ‘COM-Port Transport Provider’ and click ‘OK’ to proceed to the next step.



Step 4. Name the Path

Name the path as desired (e.g. “My path”).

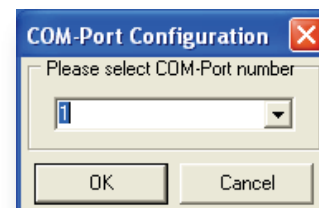
Click ‘OK’ to proceed to the next step.



Step 5. Specify COM-port number

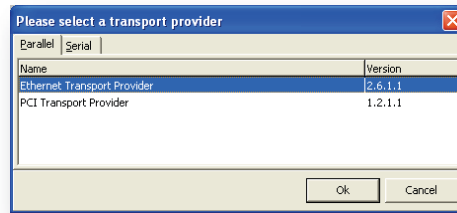
Specify the serial (COM) port used for the communication.

Please continue to step 9.



Step 6. Parallel Path

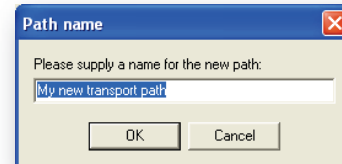
Select 'Transport Provider', either Ethernet or PCI, and click 'OK' to proceed to the next step.



Step 7. Name the Path

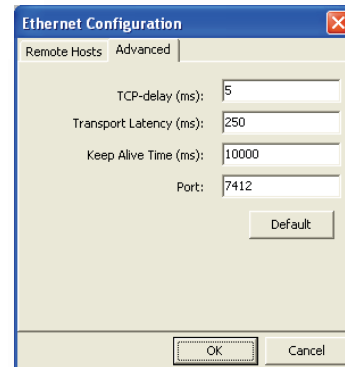
Name the path as desired (e.g. "My path").

Click 'OK' to proceed to the next step.



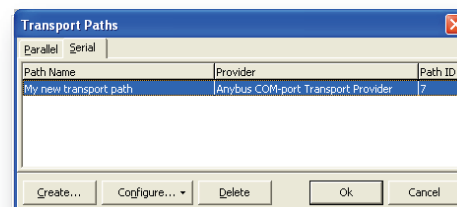
Step 8. Ethernet Transport Provider

If you have selected the Ethernet Transport Provider, specify the Ethernet settings.



Step 9. Done

When done, highlight the created transport path and click 'OK' to return to the Firmware Download TP.



A. Troubleshooting

- **A connection timeout occurs before I can even select a firmware package.**

To prevent incompatible firmware packages from being downloaded into the product, the Anybus Firmware Download TP scans the path for attached Anybus products. If no device is detected, it halts with a 'Connection Timeout' error.

Possible causes:

- Anybus module not connected; make sure the Anybus module is properly connected and try again.
- Configuration jumpers/switches are not set properly.
- Communication problem; make sure the physical connection (i.e. serial cable etc.) works properly.
- Incompatible product; older products may not be compatible with the Firmware Download TP. Consult the documentation for the product in question for further information.

- **I just downloaded a firmware package, but encounter a connection timeout when I try to start a download with the same firmware again (by clicking the 'Start' button).**

Quite possibly, the product needs to be restarted. Press the on-board reset button (if applicable) or power cycle the product, and try again.

- **The firmware download process halts with a 'Download Failed' message.**

Something caused a communication problem between the Anybus Firmware Download TP and the Anybus product. Verify the physical connection used for the Transport Path.