

FX Tools Software Package - FX Loader Utility User Guide -

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FX Tools Software Package

FX Loader

Introduction

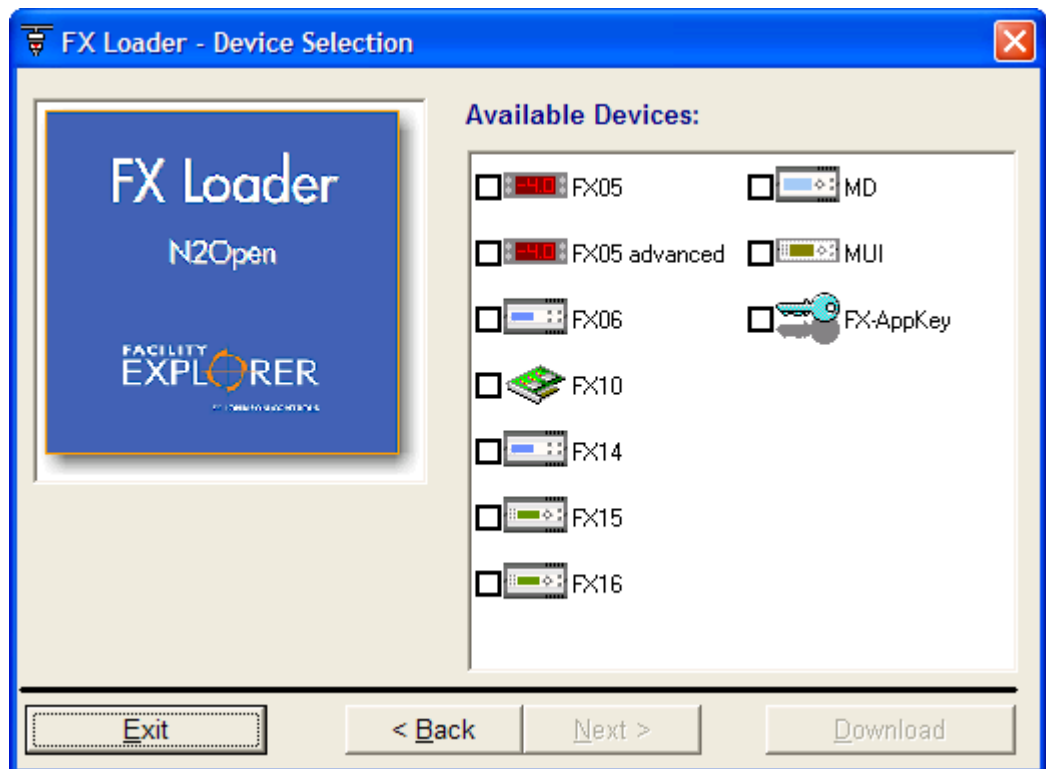


Figure 1: FX Loader Tool

FX Loader is a simple and easy-to-use utility that is used to download control application software, operating system firmware and communication card firmware into the target FX controllers.

N2Open or LonWorks® can be selected as the download protocol. The controller needs to have the appropriate, N2Open or LonWorks® communication card fitted in order to be able to accept the download.

The graphical user interface provides an easy check-box selection of the target controller and of the control application software or firmware to be downloaded.

Installation

Installing FX Loader Utility

With Windows running on the PC, follow the steps below to install FX Loader software:

1. Close all open programs.
2. Insert the FX Tools CD-ROM into the PC CD-ROM drive. The auto-run feature should start automatically. If it does not, select Autorun.exe to start it manually.
3. The CD-ROM Navigator will appear. Click on the Software menu for a list of corresponding options to choose from.

Select FX Loader on the Utility and Driver menu and the InstallShield Wizard will appear and guide the user through the installation.

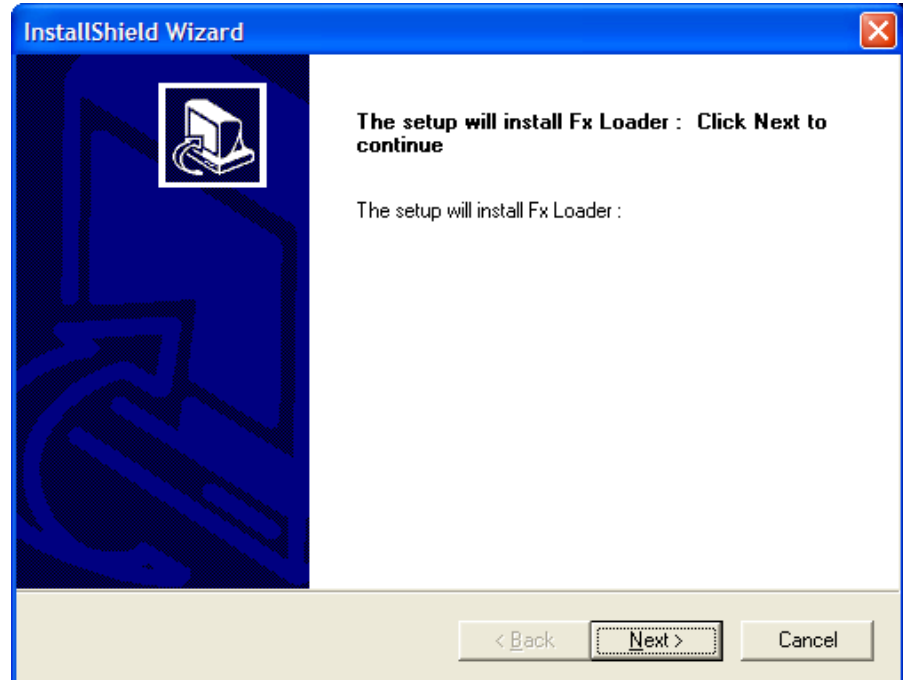


Figure 2 : FX Loader InstallShield Wizard Window

Click on Next to continue.

The software Destination Location window will appear:

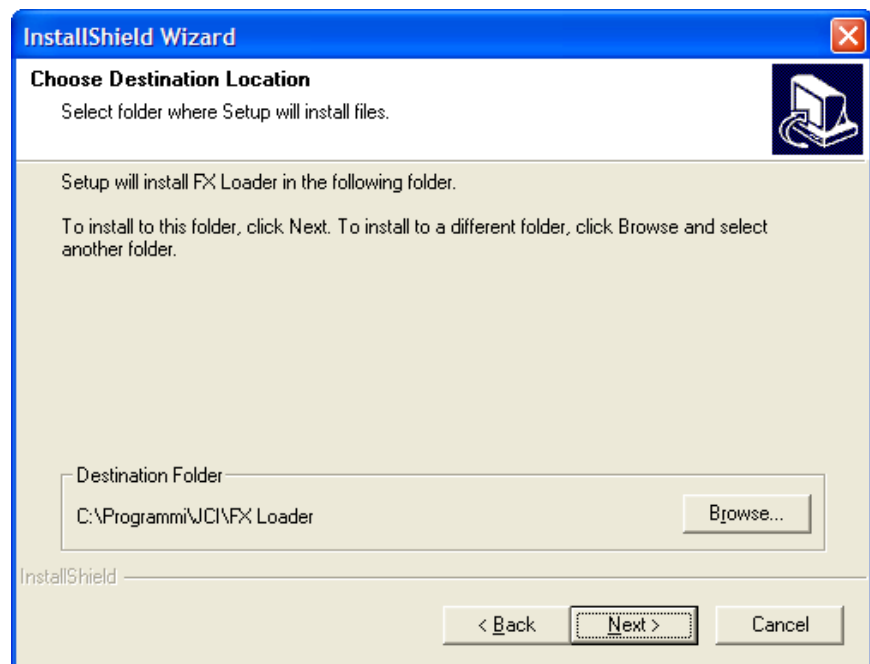


Figure 3 : Destination Location Window

To install the program in a directory other than the default directory shown in the Destination Folder box, click on the Browse button. Choose a different directory and then click on Next >.

In the dialog boxes which subsequently appear, you will be asked to select the destination folder for the program and check the setup information. Then the Setup Status window will appear:

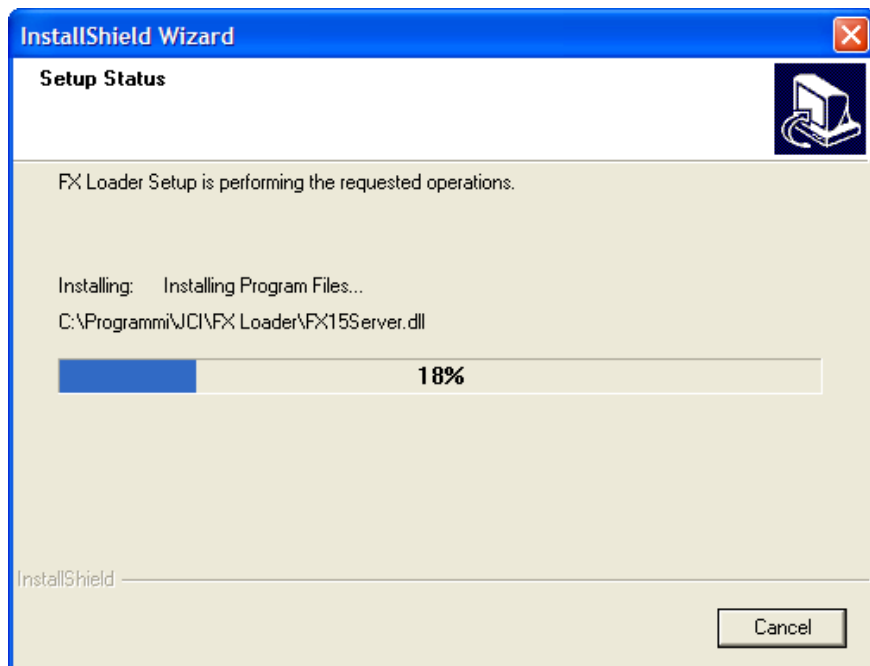


Figure 4 : Setup Status Window

When the FX Loader installation is complete, the following window will appear:

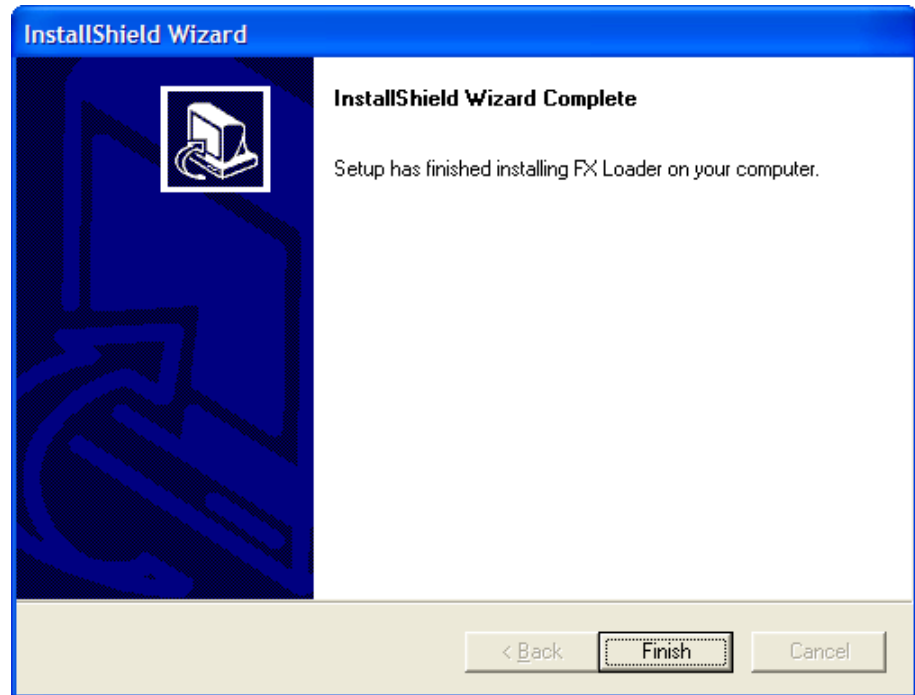


Figure 5 : Installation Complete Window

Click on Finish to reconfirm and exit the Software section and the CD Navigator.

Important Note: Do not rename the program directory after the program has been installed.

FX Loader Utility

Running FX Loader

Running FX Loader N2 Open

To start FX Loader :

- Open the Windows Start menu and select Run. Browse to the FX Loader application at the “C:\Programs\FX Loader” directory and click on Open, or use Windows Explorer.

The following FX Loader startup window appears:

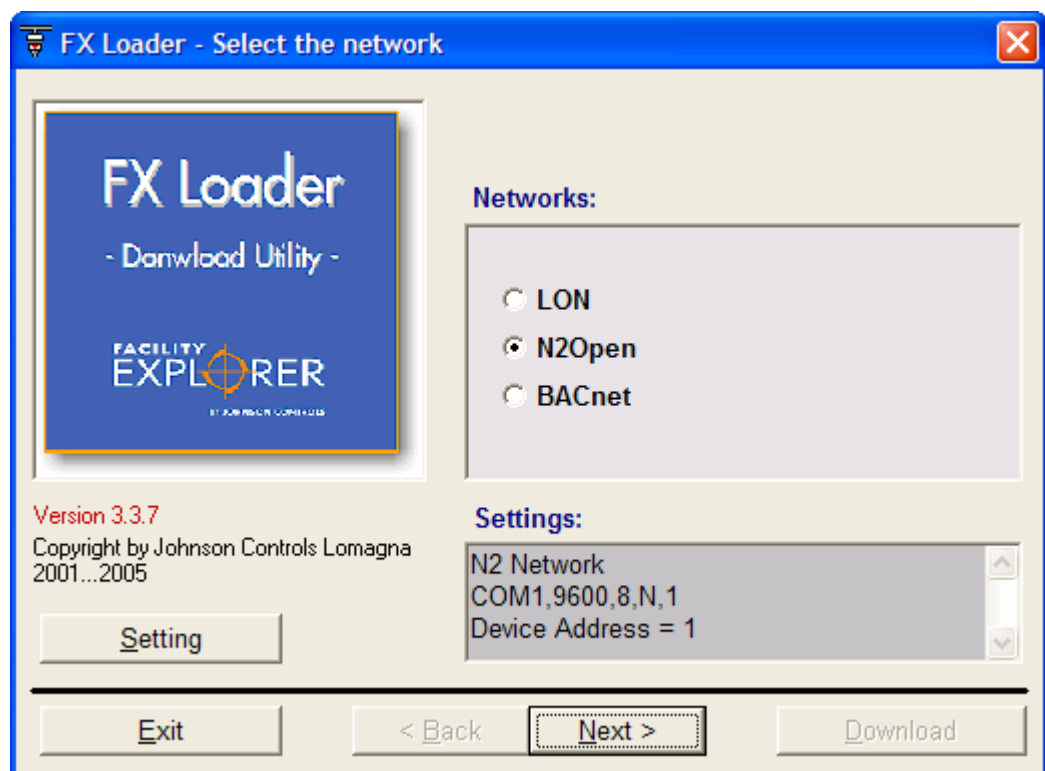


Figure 6 : FX Loader Startup Window

Select the communication protocol based on the two protocols supported by the FX platform devices :

- *LON*
- *N2 Open*

Click on *N2 Open* option on the greyed box below and the current setting of the COM port will appear.

Click on the "Setting" button to access the settings windows and modify the COM port parameters.

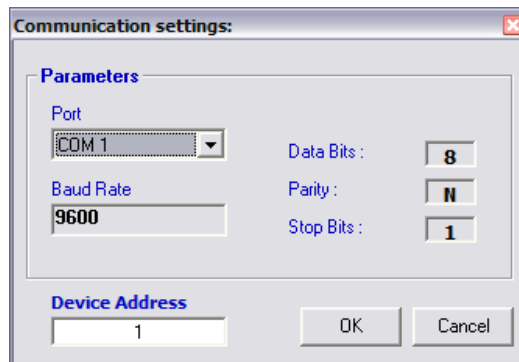


Figure 7 : COM port settings

The only parameters editable are the COM port selection and the Device Address.

NOTE : The Application file (*.APD) downloading can be performed with **any** N2 Address within the range of **1:255**.

The N2open Address SW, selected in the "Communication Settings" window of the FX Loader **MUST** be the same of the HW setting of the N2Open communication card of the controller.

Running FX Loader LON

To start FX Loader:

- Open the Windows Start menu and select Run. Browse to the FX Loader application at the “C:\Programs\FX Loader” directory and click on Open, or use Windows Explorer.

The following FX Loader startup window appears:

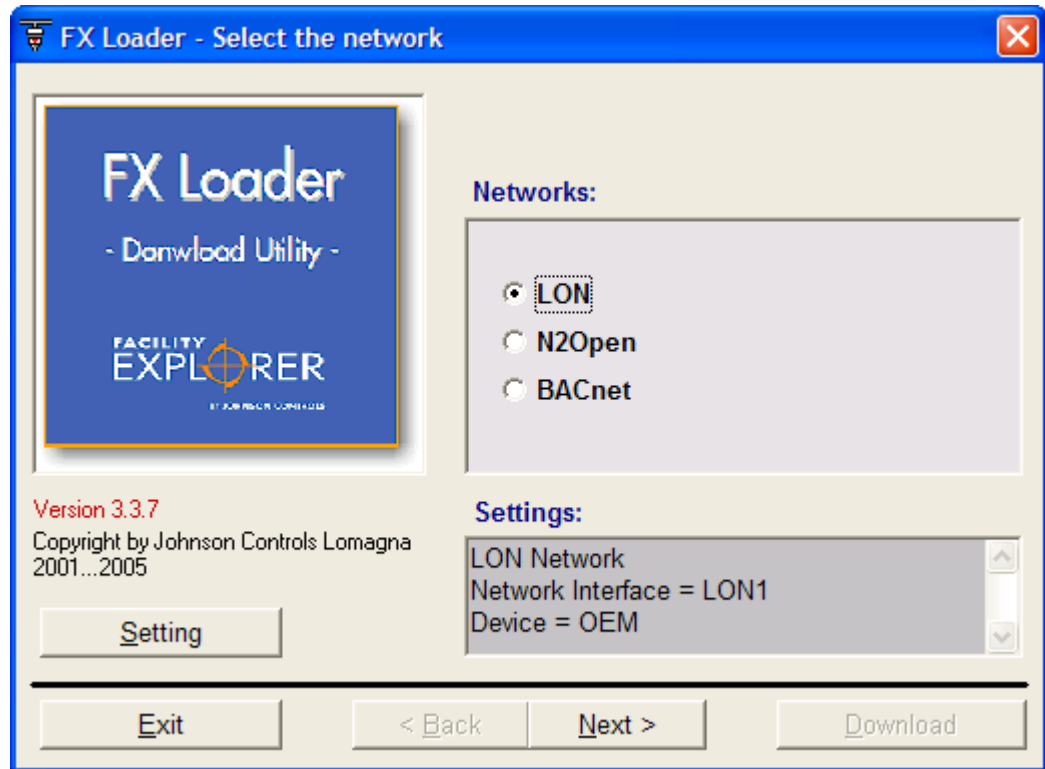


Figure 8 : FX Loader Startup Window

Select the communication protocol based on the two protocols supported by the FX platform devices :

- ***LON***
- ***N2 Open;***

Click on ***LON*** option on the greyed box below and the current setting of the LON Network Interface will appear.

Click on the "Setting" button to access the settings windows and modify the LON network interface:

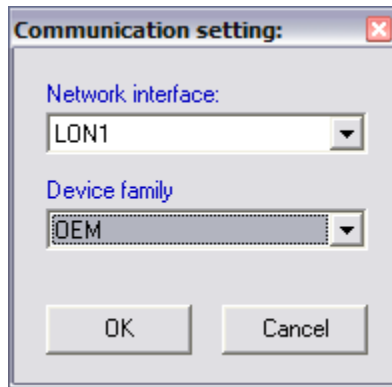


Figure 9 : LON Interface setting

Device family equal to OEM is the selection requested in order to download files into FX platform devices.

In case more than one LON network interface (PCC10, PCLTA or SLTA) is available, choose the proper one by clicking on the "Network Interface" combo box.

The Device family selection of **OEM** is required in order to download files into Facility Explorer series of controllers.

Starting FX Loader

FX Loader Main Screen

The FX Loader main screen appears after startup:

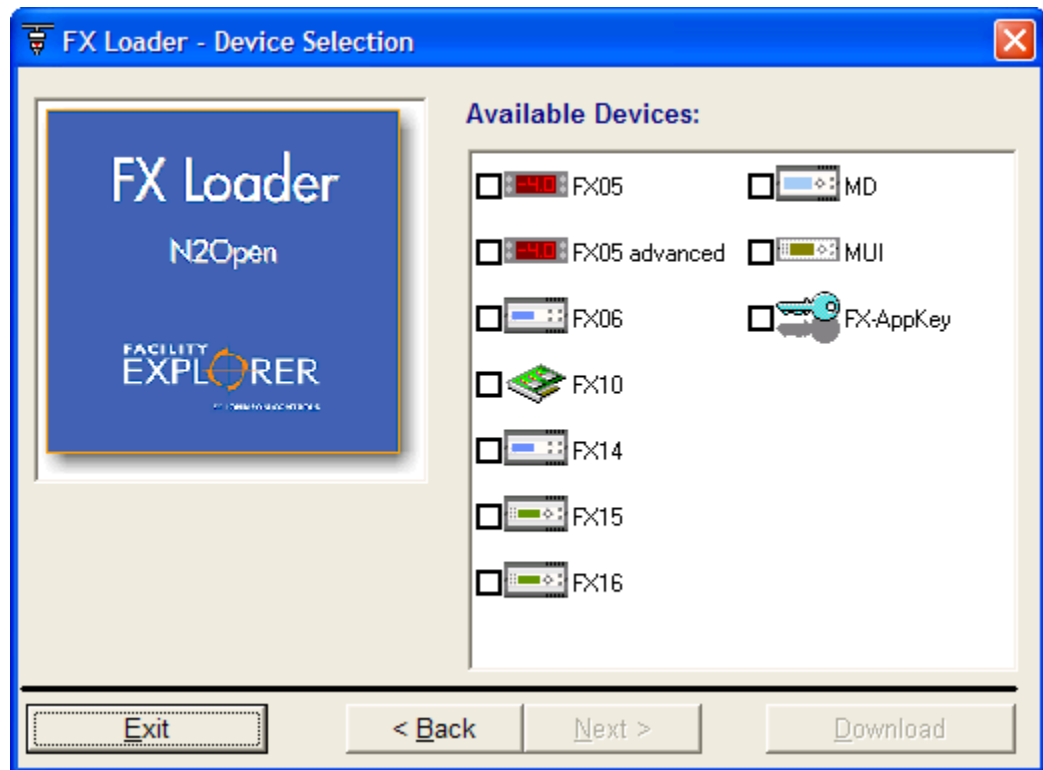


Figure 10 : FX Loader N2 Open Screen

It allows the user to choose among different devices and accessories:

- **FX05 Controller** (original model used mainly in OEM applications)
- **FX05 (Advanced) Controller**
- **FX10 Controller** (used in OEM applications only)
- **FX15 Field Controller** (Classic)
- **FX15 Universal Field Controller**
- **FX16 Master Controller**
- **MUI Display DIS60Pxx** (also used for LUI Display DIS65Pxx in OEM applications)
- **MD20 Master Display**
- **FX Programming Key**

Target device selection

Click on the check box of the target device and click on the "Next" Button :

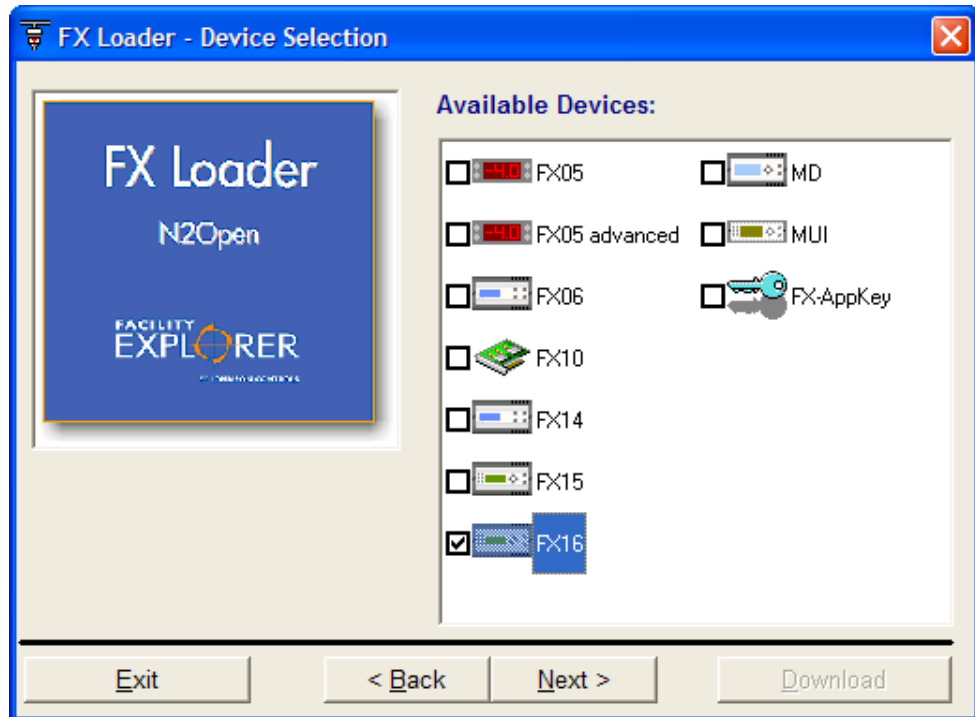


Figure 11 : Hardware Device Selection

Files Selection

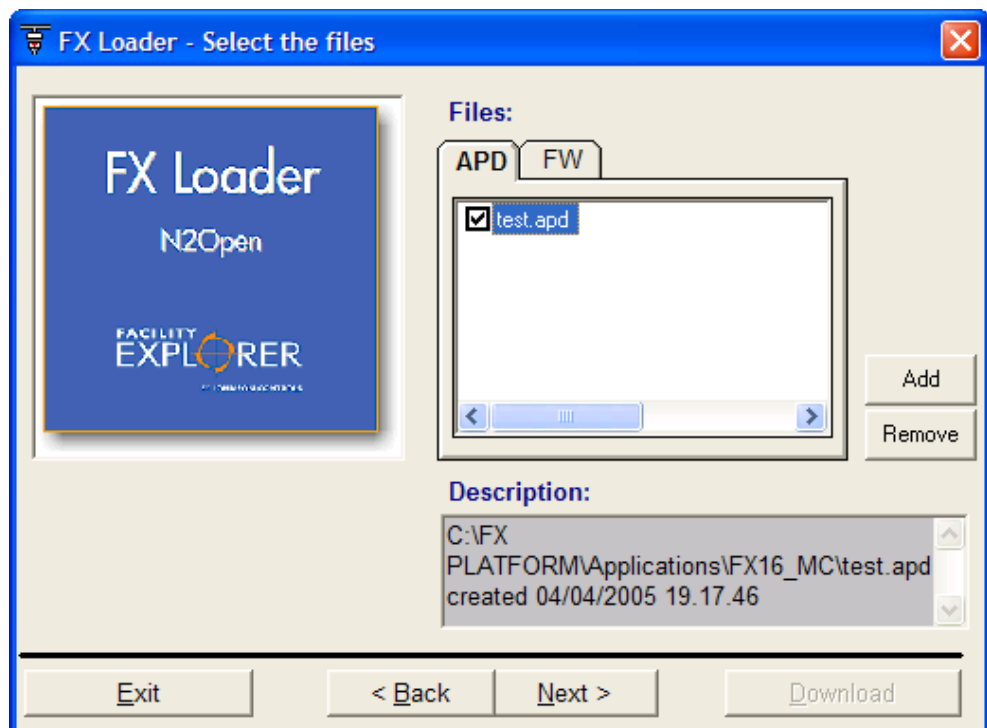


Figure 12 : Files selection

The Files Selection window allows the user to add different types of files:

- **APD file** :_represents the whole Application including display configuration and Network & Application profile configuration generated using the NEW FX-Builder
- **FW file** :_represents the FirmWare file stored on board the controller.

Adding a File

Clicking on the "Add" button, select the application, and click on Open.

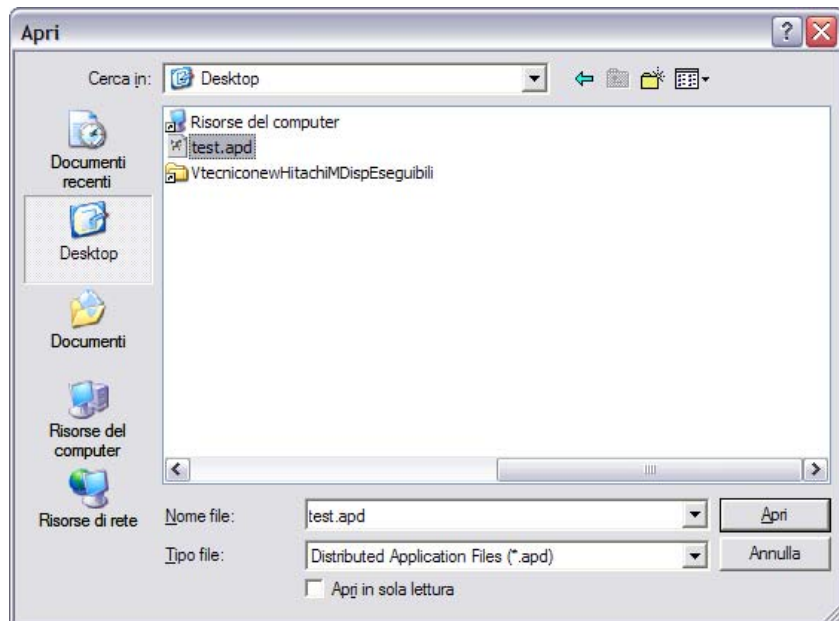


Figure 13 : Browse the application file

Select by clicking on the check box of the preferred file and proceed selecting "Next" button.

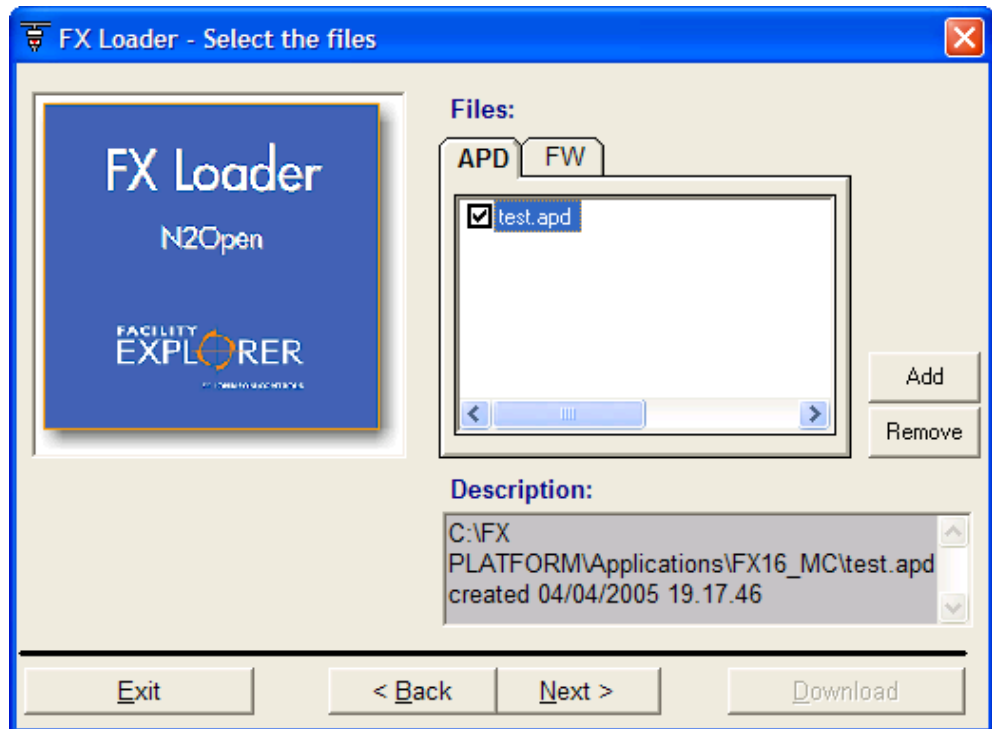


Figure 14 : Application selection

Click on “Next” to download the files into the target controller. The application will be downloaded into the device, which will subsequently run with the new control application code.

subsequently run with the new control application code.

Downloading a FirmWare upgrade

The Firmware upgrade downloading is enabled only via **N2 Open bus**.

NOTE: Be sure that the target device is equipped with a proper N2 Open communication card before proceeding with the download.

The download procedure does not require any special precaution except for the:

- FX05 Controller (original model used mainly in OEM applications)
- FX05 (Advanced) Controller
- FX10 Controller (used in OEM applications only)
- MUI Display DIS60Pxx (also used for LUI Display DIS65Pxx in OEM applications)

which **MUST** have a N2Open Address setting equal to 1 to enable the Firmware upgrade.

Troubleshooting

Object Configuration Error Condition

- **Error/Condition:** The FX Loader gets the following error :

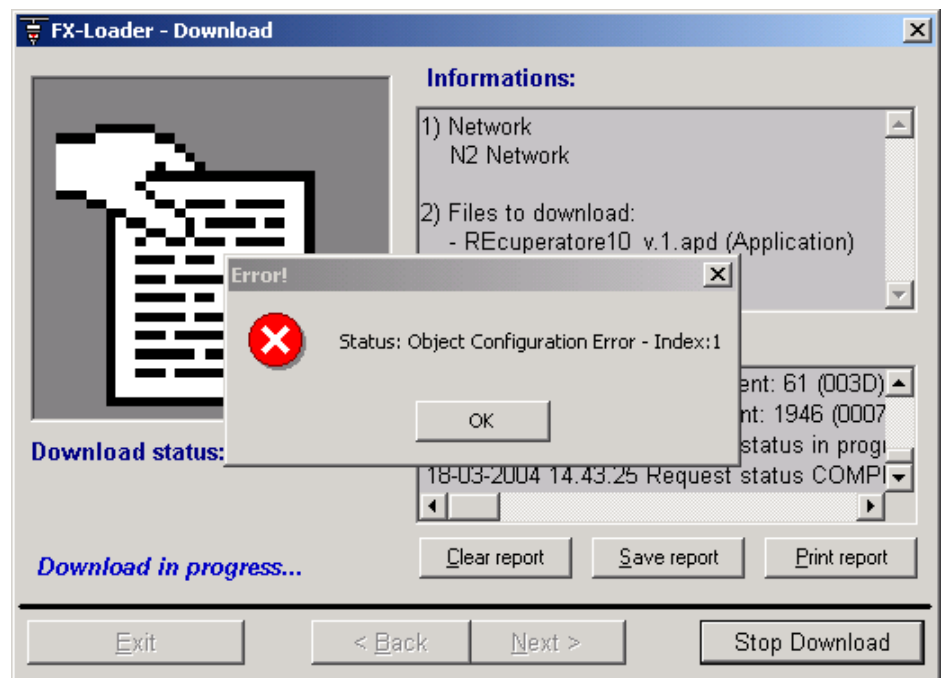


Figure 15 : Object Error

- **Problem:** There is an object configuration error in the application. The **Index** gives the position number, from 0 to 255, of the faulty object. In this case the object position index is 1 and is therefore the 2nd object in the object list.
- **Solution:** Open the application in FX Builder and look at the Application object list. Select the object involved and check to see if there is a missing mandatory connection.

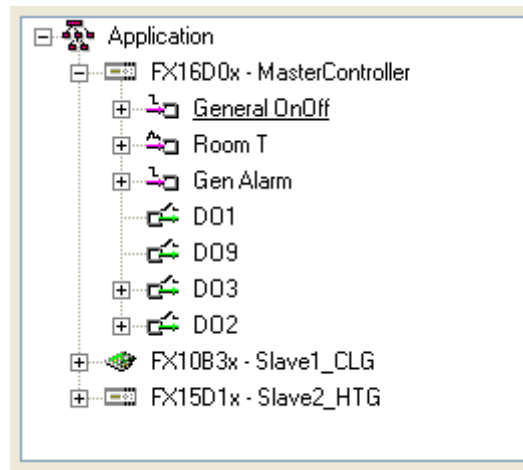


Figure 16 : Identification of the Faulty Object

Download Failed Condition

- **Error/Condition:** The FX Loader gets the following error :

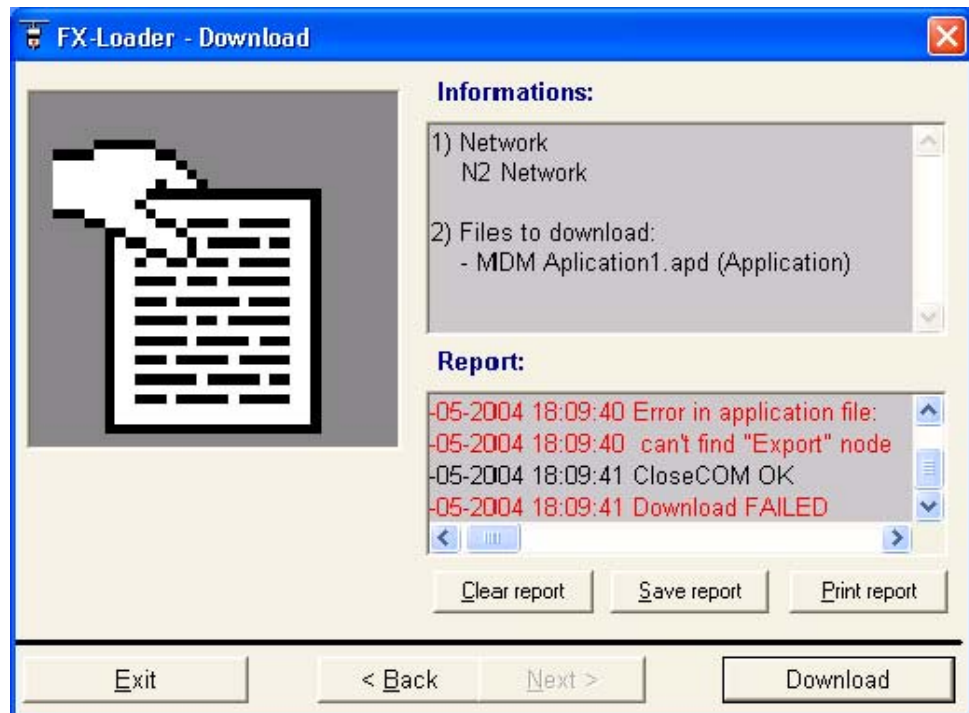


Figure 17 : Download Failed

- **Problem:** Occurs when the Application file (*.apd) has been exported without the Export files. Refer to FX Builder User Guide for further details.
- **Solution:** Open the application in FX Builder and click on the Σ icon in order to display the General Info window. The FX Builder tool checks during the file saving and export process that all the elements of the application file (application configuration, display configuration, application profile, network profile, etc) are within the permitted memory limitations. If the

limits are exceeded, the export file is not created, and the General Info window indicates which part of the application is causing the problem.

Specifications and Technical Data

Ordering Codes

Software

Product Code	Product Description
LP-FXTPRO-0	FX Tools Pro CD ROM (FX Builder, FX Builder Express, FX CommPro N2, FX CommPro LON, FX Loader Utility)
LP-FXTEXP-0	FX Tools Express CD ROM (FX Builder Express, FX CommPro N2)

Technical Specifications

FX Loader utility

System Requirements	
Operating System	Microsoft® Windows 98 Microsoft Windows NT® Version 4.0 Microsoft Windows 2000 (with Service Pack 4 or later) Microsoft Windows XP (with Service Pack 1 or later)
Hardware Requirements	Processor : Intel® Pentium® Processor, 500 MHz or higher
	RAM : Minimum 512 MB RAM
	Hard Disk : 60 MB available hard disk storage
	Display : Display resolution 800 x 600 16-bit (32,768) color minimum
	Interface RS232, USB
Software Requirements	Microsoft Internet Explorer Version 5.0 or later

The performance specifications are nominal and conform to acceptable industry standards. For application at conditions beyond these specifications, consult the local Johnson Controls office. Johnson Controls, Inc. shall not be liable for damages resulting from misapplication or misuse of its products.



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Published in U.S.A. and Europe