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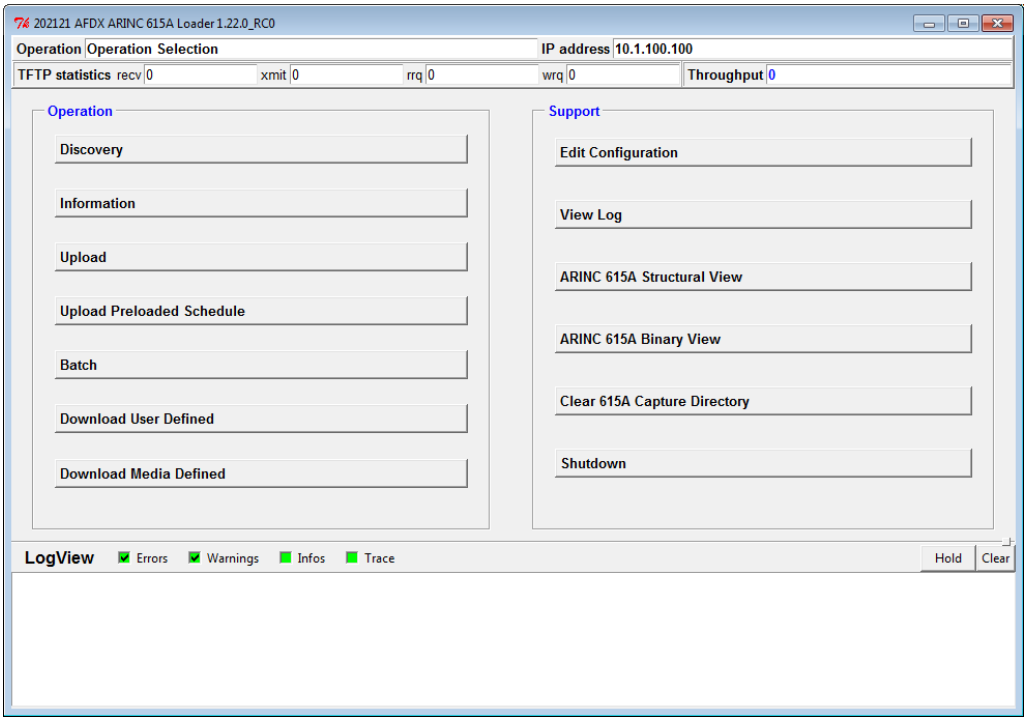
AFDX NetLoader™
ARINC 615A Data Loader via AFDX®



- Fully specification compliant ARINC 615A data loader
- Support for A615A-1/-2/-3 AFDX® software simulated on any computer (no AFDX® hardware required)
- Easy-to-use graphical user interface
- Full support of SNIP/FIND
- Full event logging during loading and complete post-load diagnostics
- Scriptable interface
- A615A traffic analysis and recording using Wireshark®

Data Sheet

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Application Scope

The **AFDX NetLoader™** is an ARINC 615A compliant data loader for loading ARINC 665 compliant software parts on target LRUs over AFDX®. The tool, which can be run as GUI or scripting interface (Python API), is fully compliant to all aspects of the A615A-1/-2/-3 specifications and is backward compatible to all earlier A615A versions. It is the A615A data loading utility choice of many OEMs for both off and on-aircraft data loading support requirements.

The AFDX NetLoader™ GUI consists of a single window, which dynamically changes its content depending on the selected operation. Its main dialogs and displays are briefly presented in the subsequent sections.

Simulated AFDX

The AFDX NetLoader™ uses a software simulation of AFDX which turns any Ethernet interface into a one-channel AFDX end system (no AFDX redundancy supported). No AFDX hardware is required.
The AFDX parameters of the target(s) are configured in an ASCII file which can be automatically generated from ICD files.

Session Log and Event Log

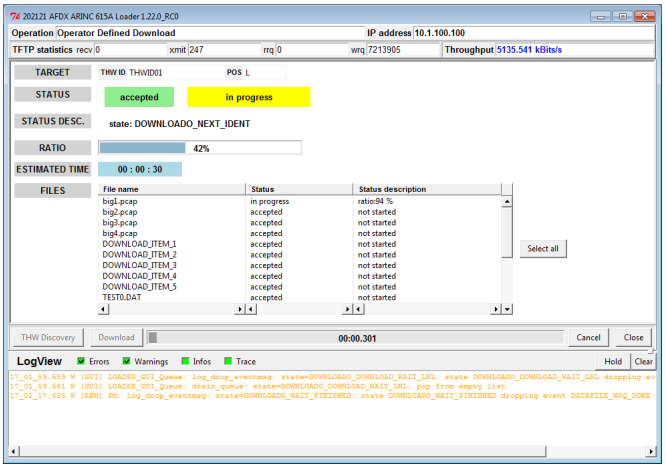
All transactions including login are logged to a session log file at a highly detailed level. Additionally, all protocol level events are logged into an event log file, again at a highly detailed level.
For each session a new session log file and a new event log file are created. All stored session and event log files can be inspected in a viewer window. The content of the current session log is always visible to the user.

Data Loader Operation Selection Screen

This dialog contains a launch menu of the main data loader operations:

Information Operations

- Look for Target Hardware – This operation allows searching the aircraft network for Target Hardware Devices (LRUs) in order to check part number, accessibility, and other information supported by the ARINC 615A FIND protocol.
- Retrieve Target Hardware Configuration – This operation, which also searches the aircraft network for target hardware devices and displays them in a tree view, additionally allows the operator to select a device, download its software configuration information, and view the configuration in a text window.



Upload and Download Operations

- Upload Target from Media – This operation allows the user to select a media type. The content of the media is scanned for load part numbers, which are then displayed in a tree view for selection. Additionally, the target hardware devices are searched on the aircraft network and displayed in another tree view. Now the operator needs to assign each of the LSAPs to be loaded to the appropriate target device. Upon confirmation, the compiled upload schedule is executed. Instead of manually configuring the LSAPs, the operator can use the Upload Target from Media Batch File operation to select a batch file defining which LSAPs on the media are to be loaded into which hardware targets. A detailed status report of each load is displayed.
- Download in Media Defined Mode – This operation allows the operator to select a media type. The content of the media is scanned for download definition files, which are then listed in a tree view for selection. Now, the operator needs to select the required download definition file, which specifies the LSAPs to be downloaded from the LRUs. A detailed status report of each download is indicated.
- Download in Operator Defined Mode – This operation allows the operator to specify the media to which the downloaded files are to be written. The aircraft network is scanned for attached LRUs, which are displayed in a tree view. When the operator selects a device, it will be examined for its software content. The detected LSAPs are displayed as a list of part numbers. From this list, the operator selects the LSAPs to be downloaded.

Scriptable Interface

The AFDX NetLoader™ scripting interface consists of a set of Python functions that can be used to perform ARINC 615A operations in a scripted fashion.
The scripting interface supports all A615A operations and uses the same configuration files as the GUI version.

Technical Data

Supported Implementations

- ARINC 615A-1
- ARINC 615A-2
- ARINC 615A-3

Software Options

- A665 MediaCreator for A665-0/1/2 load parts (PN 202054)
- A665-3 MediaCreator for A665-2/3 load parts (PN 202126)
- RDC787 Remote Data Concentrator for data loading over CAN (PN 202040)
- A615A DPC Data Loading Protocol Checker (PN 202123)

Operating System Options

- Linux
- Windows XP
- Windows 7 32-bit
- Windows 7 64-bit

Part Number

- 202121

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