A615A-DPC
ARINC 615A Data Loading Protocol Checker

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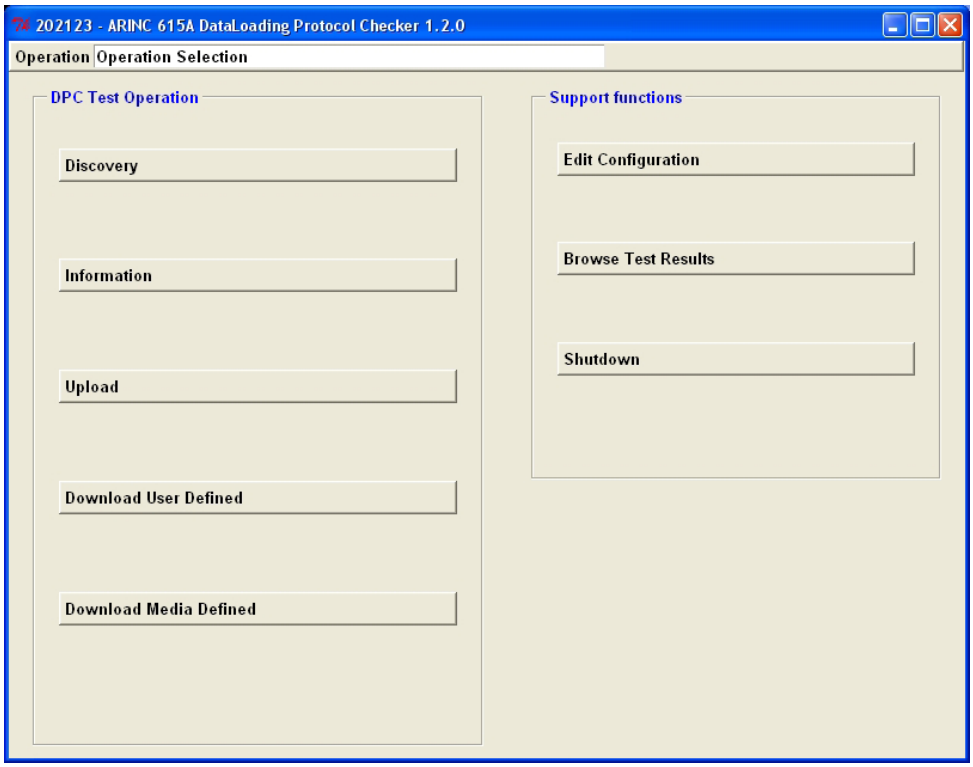
mastering integration complexity



- Handles ARINC 615A-2 operation using the core of TechSAT's ARINC 615A «NetLoader» data loader
- Uses ARINC 665-2/3 compliant header file format for communication with target
- Handles all ARINC 615A operations including FIND, Information Operation, Upload Operation, Media Defined Download Operation, Operator Defined Download Operation
- Supports protocol testing for on-board and off-board data loading
- Pre-defined test cases for structured and easy usage
- Pre-recorded Ethereal traces of all tests for analysis support
- Test report generation

Data Sheet

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Application Scope

The **A615A-DPC** Data Loading Protocol Checker (DPC) allows testing and validating the communication to a target implementing the data loading standard ARINC 615A.

ARINC 615A allows a data loader to
> find LRUs on the network that respond to ARINC 615A FIND broadcasts (FIND Operation)
> query LRUs about their software configuration (Information Operation)
> upload files to the LRU from a data loader (Upload Operation)
> download files from the LRU to a data loader (Download Operation)

The DPC Checker allows testing and validating the correct implementation of the ARINC 615A protocol in an LRU. The goal in the specification and design of the DPC was to provide a simple and easy-to-use test tool for validating an LRU's compliance with the ARINC 615A protocol before testing against
> Onboard Data Loading Function (ODLF)
> Off-Airplane Load Tool (OALT)
> Shop loading tools

The DPC employs standard Ethernet for ARINC 615A communication with a target, but can also be used in combination with TechSAT's PortGate software (bi-directional gateway Ethernet – AFDX®) and an AFDX®/ARINC 664 hardware device to communicate according to the ARINC 615A protocol over AFDX®.

The DPC's purpose is to test the proper exchange of protocol files according to ARINC 615A from and to a target computer.

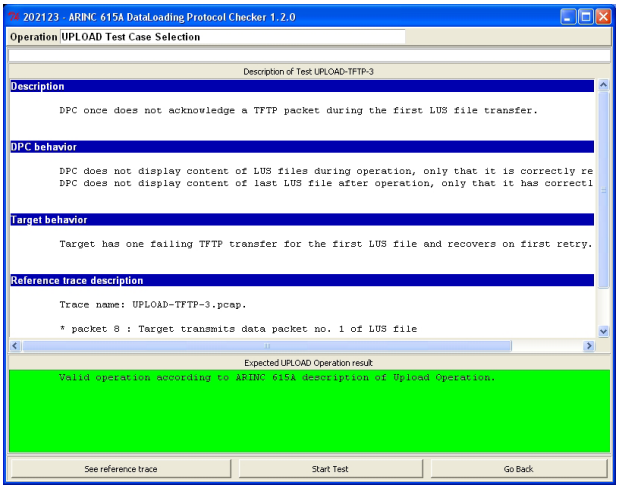
The DPC performs a well-defined, fixed set of test cases for testing the ARINC 615A protocol.

Functionality

The user interface of the DPC is basic. It provides the following functions:
> edit the overall DPC configuration and save it
> select testing the FIND Operation protocol
> select testing the Information Operation protocol
> select testing the Upload Operation protocol
> select testing the Operator Defined Download Operation protocol
> select testing the Media Defined Download Operation protocol

DPC Configuration

The DPC user interface allows the user to configure DPC operational parameters, including the following:
> **Networking:**
  • IP address
  • sub network mask
> **FIND:**
  • use sub-network-relevant broadcast or full broadcast
  • use configuration file for fixed targets instead of FIND for testing with targets that do not respond to find, or for simulating onboard dataloading without FIND
  • FIND receive and transmit port
  • FIND acceptance time
> **TFTP:**
  • server port number
  • Port ranges for ephemeral server ports
  • Port ranges used for client read and write requests
  • block size



Technical Data

Software Requirements
- A615A NetLoader (PN 202053)
- PortGate/AFDX® for A615A over AFDX® (PN 202041)

Hardware Requirements
- AFDX-PMC card for A615A over AFDX® (PN 700008)

Operating Systems
- Windows XP
- Windows 7 32-bit
- Windows 7 64-bit

Part Number
- 202123

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