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NI PXIe-6592 ARINC 818 Test Solution for LabVIEW™

Test Instrument for ARINC 818 Protocol

Applications

- Avionics data capture and display
- Avionics data generation and system emulation
- Debug, diagnosis, test, and validation

Benefits

- LabVIEW™-integrated test instrument
- ARINC 818 video transmitter and/or receiver
- Configurable video formats, rates, and error injection
- Precise timing with hardware-based ARINC 818 offload
- Up to 100% utilization of bandwidth
- Leverage proven technology for standard interface implementation

Specifications

- ARINC 818-2 compliant
- Fully-compatible and programmable with LabVIEW™
- Four SFP ports
 - Copper or active optical cables supported
 - Supports 1/2/3/4G data rates
 - Independent operation of each port
- Supports Object 0, Object 1, Object 2, Object 3



National Instruments PXIe-6592 card

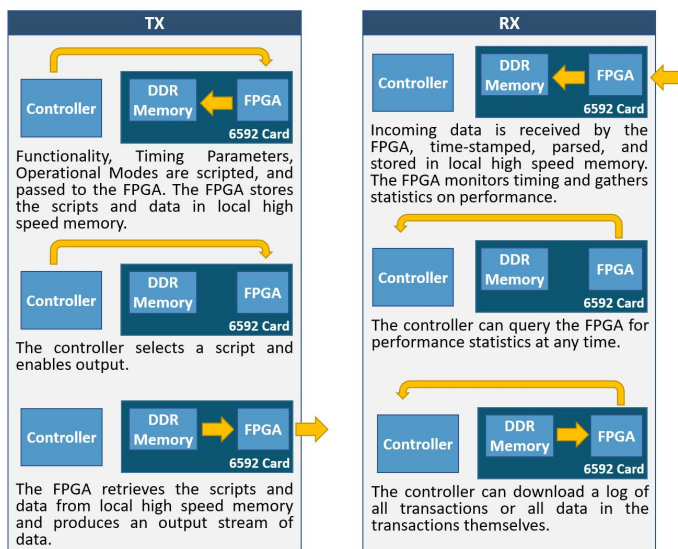
Overview

ARINC 818 is a point-to-point serial protocol, developed for the transmission of video, audio, and data primarily used in avionics applications. The New Wave DV Test Solution for ARINC 818 provides a complete hardware and LabVIEW™ software solution for the ARINC 818 protocol. The ARINC 818 hardware instrument provides full specification compliance, hardware-based container processing, and offload of frame handling including:

- ARINC 818 Container offload
- Hardware-based Video Object processing
- Frame building/checking
- CRC generation/checking
- Error injection/checking
- Frame rate configuration

Data generation and receiving is handled entirely by the FPGA which allows consistent performance in a variety of test cases and applications. The device uses a store-and-forward type architecture that permits the host LabVIEW™ application to operate independently of the FPGA while maintaining precise timing (See Diagram on left).

The hardware is fully integrated with LabVIEW™, allowing users to focus on test-case development instead of protocol development. Included is a fully functional example GUI to setup, control, and status-check the four ARINC 818 ports. The GUI and LabVIEW™ software is user-modifiable, allowing customization for your unique applications. Demonstrations and evaluations of the ARINC 818 instrument are available.

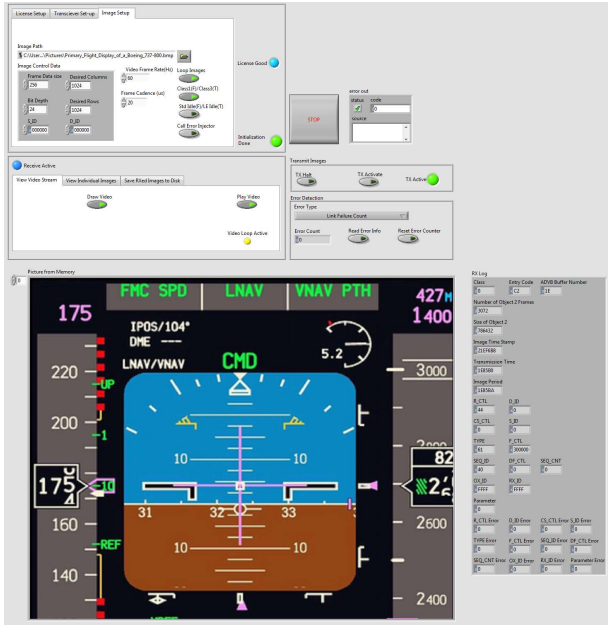


> ARINC 818 Test and Validation System Architecture

CONTACT US TODAY

ARINC 818 Test Solution for LabVIEW™

Test Instrument for ARINC 818 Protocol



> A turnkey example is provided that allows the users to transmit a .bmp (or series of .bmp) images as ARINC 818.

Our Commitment

New Wave DV is committed to providing the latest innovations in technology, architectures, and techniques to keep our customers one step ahead of the rest. Our products, complete with the Development Framework, are intended to offer our customers an entirely unique out-of-the-box experience.

Complete Product Support Program

New Wave DV prides itself on its excellent customer support, a fact that is echoed by our customers. New Wave DV provides industry standard warranty on its products, but it is the human factor that makes our support so valuable to our customers. Our team takes the time and effort to ensure that the customer experience with our products is a positive one.

CONTACT US TODAY

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Features

- Fully-programmable ARINC 818 traffic patterns
- Hardware offload of performance critical traffic flows
 - Script engine defines transaction mix, hardware executes script at wire speed
 - Hardware transmit and receive logs with time-stamping
- User-defined ICD, including:
 - Frame Rate
 - Resolution
 - Pixel-definition
 - Packetization and Segmentation
 - Data cadence
- DRAM transmit and receive packet buffers
- Independent operation and control of each port
- Record incoming frames with hardware time-stamping
- Error detection and injection
- Generate/Display statistical eye diagrams of incoming links
- Real-time statistics gathering
- User-definable packets
- LabVIEW™ API and example designs

Configuration

- PXIe HARDWARE:**
[NI PXIe-6592 PXI High-Speed Serial Instrument](#)
- NETWORK INTERFACE:**
 Four SFP28 optical ports
- PROTOCOL:**
 ARINC 818-2 compliant

Ordering Information

400-783639-01-00: NI PXIe-6592R High-speed Serial Instrument (10 Gbps), ARINC 818 IP Core

[Contact New Wave DV today for more information.](#)

