

# Test Solution for ARINC-818

## Test Instrument for ARINC-818 Protocol

### Applications

Avionics vision and display system data generation and data capture  
 Avionics debug and diagnosis  
 Avionics test and validation

### Benefits

LabVIEW-integrated test instrument  
 Instrument is a 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 1/2/3/4/6G data rates
- Independent operation of each port

 Supports Object 0, Object 1, Object 2, Object 3



[National Instruments PXIe-6592 card](#)

### Overview

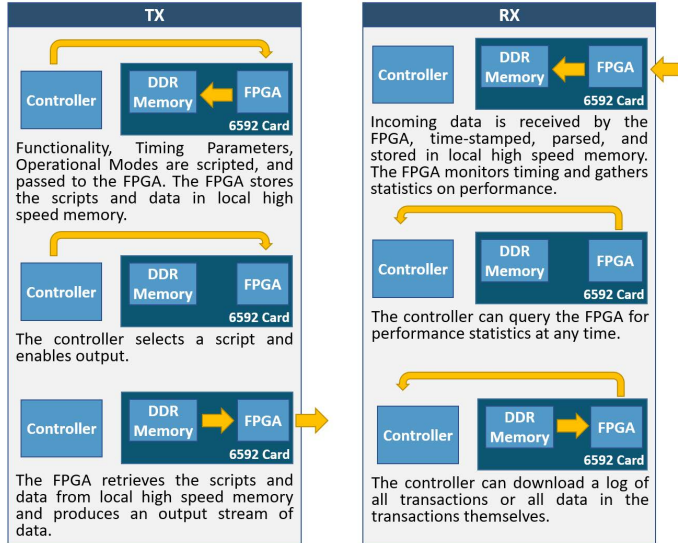
ARINC-818 is a point-to-point serial protocol, developed for the transmission of video, audio, and data primarily used in avionics applications. The New Wave DV ARINC-818 test instrument provides a complete hardware and LabVIEW software solution for the ARINC-818 protocol. The ARINC-818 hardware instrument provides full specification compliance, hardware-based container processing, and offload of frame handling including: ARINC-818 Container offload, hardware-based Video Object processing, DMA controller, frame building/checking, CRC generation/checking, error injection/checking, and frame rate configuration.

The hardware is fully integrated with the LabVIEW test stand, 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.

**CONTACT US TODAY**

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> [ARINC-818 Test and Validation System Architecture](#)

## 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

DMA channels from DRAM to host

Independent operation and control of each port

Record incoming frames with hardware time-stamping

Error detection and injection

Real-time statistics gathering

User-definable packets

Windows C or 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.](#)

