Overview of ARINC 818 Test Suite

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GRT Complete Life-Cycle Support

- Successfully completed more than 100 ARINC 818 projects
- ISO 9001/AS 9100 Quality Management Systems

Most Capable Tools + GRT Expertise = Project Success & Lowest Life Cycle Cost

Planning

Design

Testing

Validation

Production Support

Depot Maintenance

Frame Grabbers – Graphics Generators

Capture or Create an ARINC 818 Video Stream, DVI Convertor

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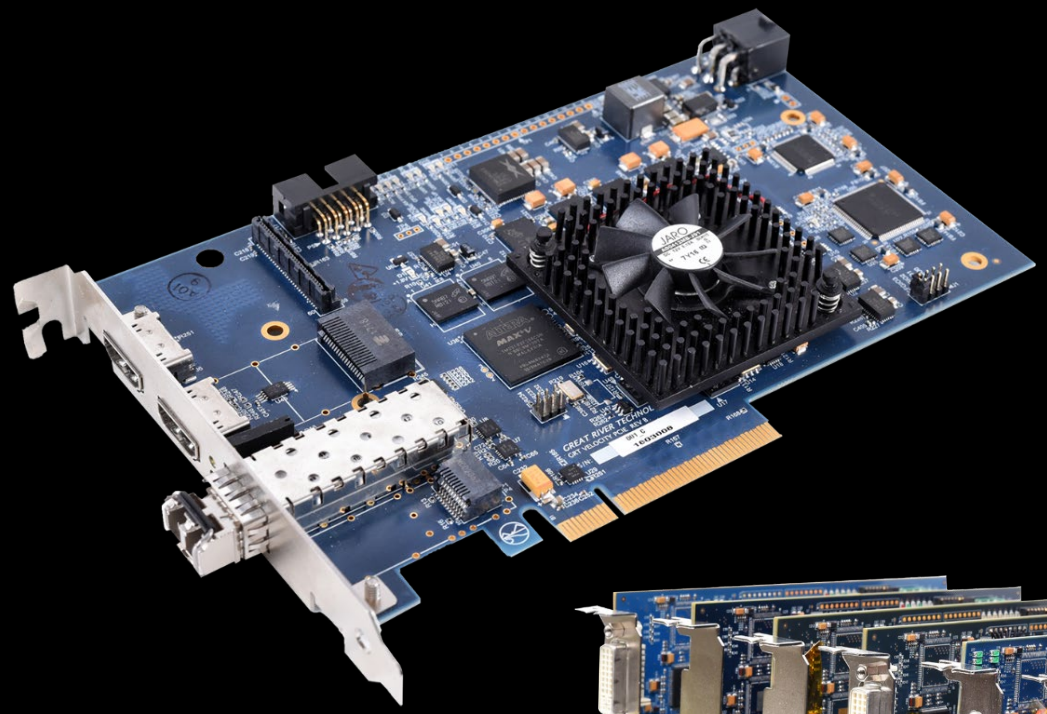
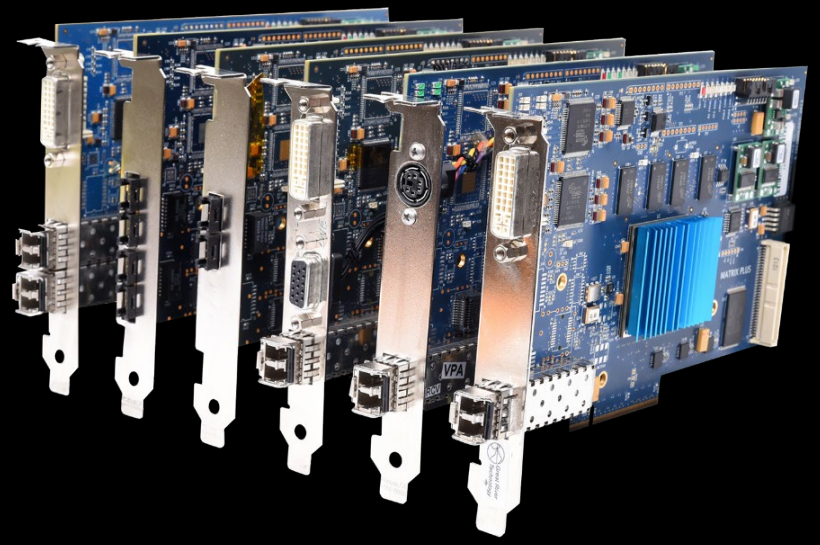
Velocity Series

- ARINC 818 speeds up to 10 Gbps
- PCIe x8, Gen 3
- Throughput at least 4GBps
- High-Speed Coax (6G)
- HDMI 1.4 interface



Velocity Plus

- Multiple format support



Velocity XI

- In-field configurable

❖ Frame grabbers also available in XMC form factor

ARINC 818 Test Software

Builds on GRTs ARINC 818 Test standard features:

ARINC 818 Receiver

- Capture and Display Video Stream to GUI
- Capture and Convert Video Steam to DVI
- Examine Container & Frame header

ARINC 818 Transmitter

- Load Image and Transmit as ARINC 818
- Upload/Edit header
- Add Scrolling Line
- Convert DVI to ARINC 818

New Built-in Features

- Image Compare
- Regions of Interest
- Pixel info from image
- Play video files

SDK to integrate Matrix card into test environments
Scripting support – TAL (Test Automation Language)

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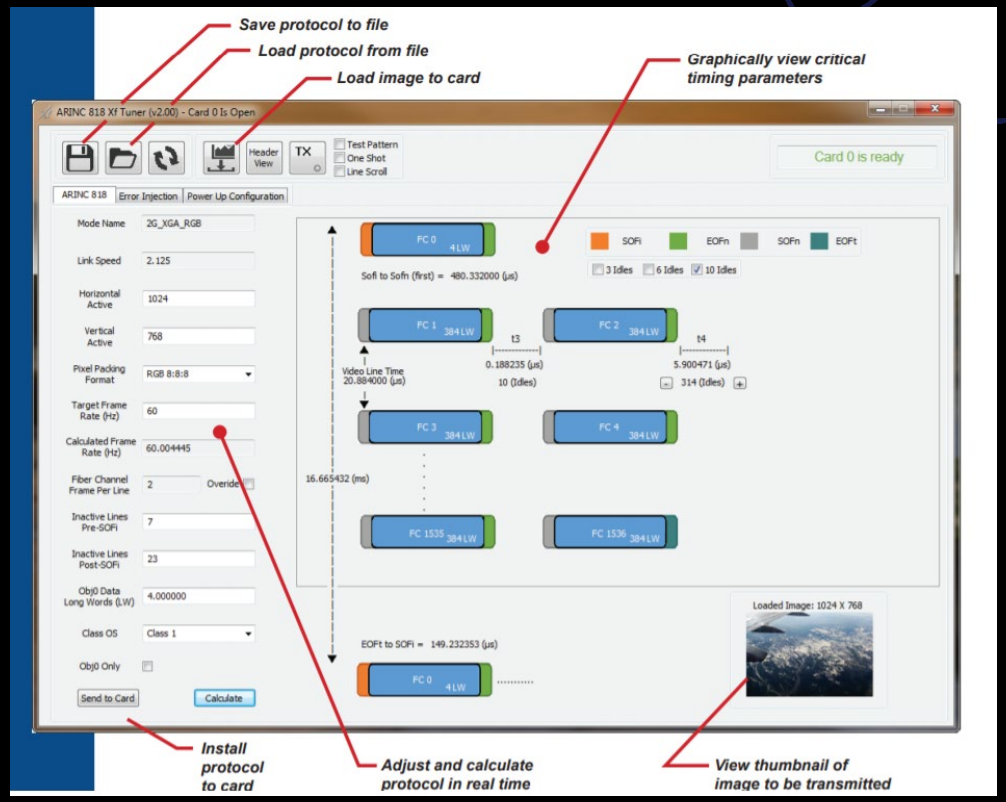
ARINC 818 Xf Tuner – Universal Transmitter

Applications

- Implementation of interface control document (ICD)
- Display/receiver development
- Error Injection
- Robustness testing
- Qualification testing
- Creation of a library of protocols that can be loaded to the Tuner card



Features

- Link rates up to 4.25 Gb/s, with 10 Gb/s expected soon
- Protocol adjustments in real time
- Error injection options
- Object 0 management

Environment

ARINC 818 Xf Tuner is available as an option or upgrade to GRT's Titan and Europa systems.

HS SAM Gen III - Stand Alone Module

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Features and Options

- ARINC 818 to DVI converter
- DVI to ARINC 818 converter with line-spy capability
- Up to 4.25Gbps
- USB port (2.0 required)
- Channel health indicators
- 24VDC with switching adapter for 100–120VDC @ 50–60 Hz

Standard connectors available:

- Fiber optic 1310nm single mode
- Fiber optic 850nm multimode
- FCN copper
- High-speed coax

Optional feature:

- Mounting bracket

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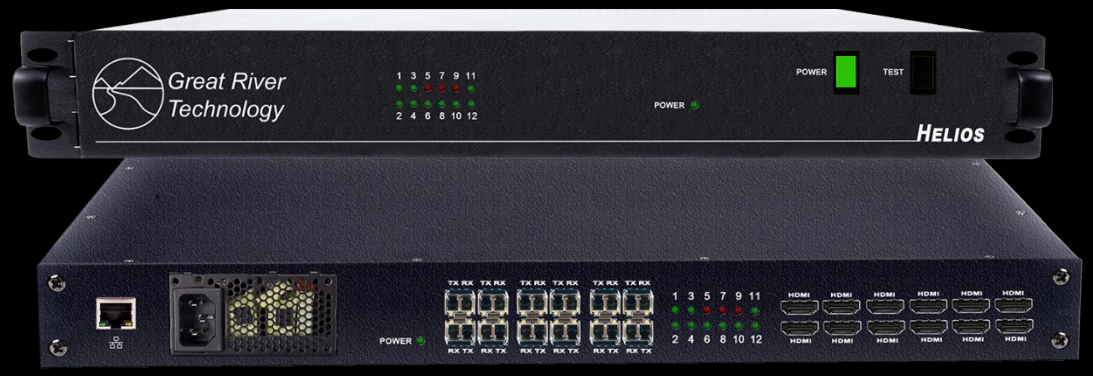
HELIOS: Multi-Channel ARINC 818 - HDMI Converter System

Features:

- Supports 4, 8, or 12 channels
- 19 inch 1U rack
- 120 VAC (28 VDC option)
- A818 link rates from 1x to 8x
- Remote Based controls (LAN)

Applications

- Pilot Training Simulators
- Cockpit Development
- Flight Test Recording of ARINC 818
- Factory Test of ARINC 818 Equipment



ARINC 818 Switches

- Link rate support up to 8X
- ARINC818-2 compliant smart switching
- Unicast, multi-cast and broadcast modes
- Remote command and control

Pantera 4x4 Switch

Rugged 10x10 Switch

Spider 19" Rack-mounted 10x10 Switch

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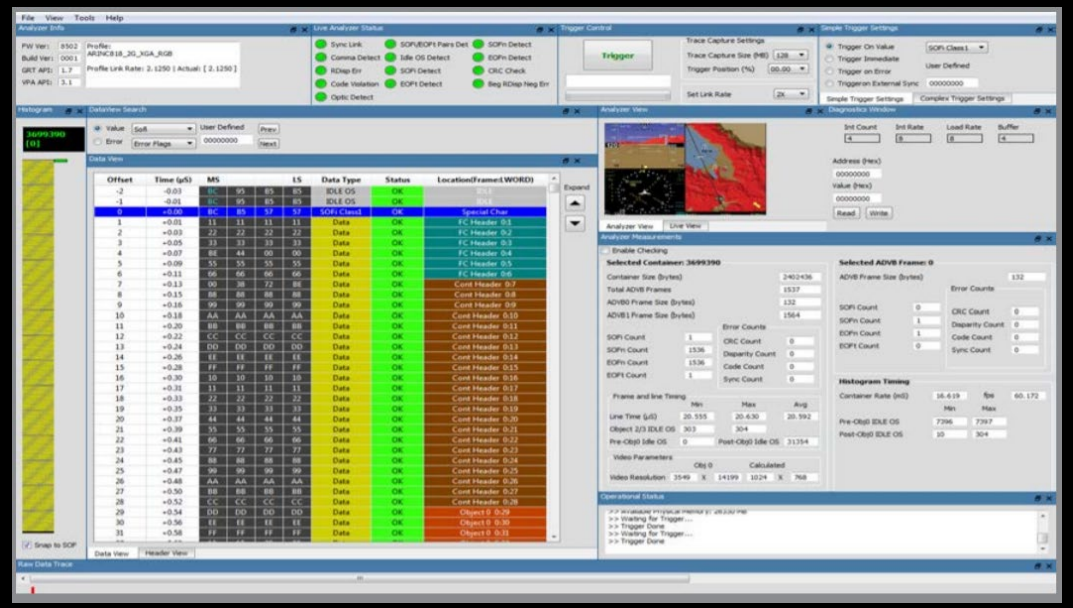
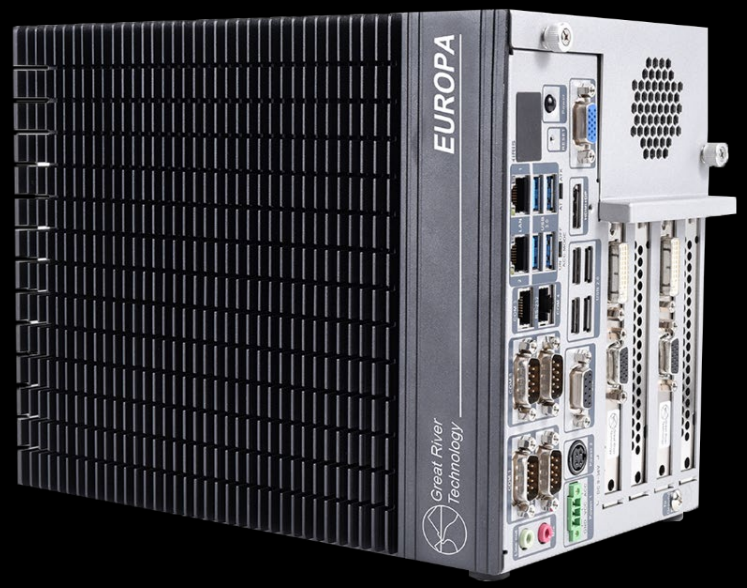
VPA Gen III
- ARINC 818 Video & Protocol Analyzer





- Supports 1X, 2X, 3X, 4X, 5 Gbps, 6X, 8X, 10 Gbps
- In depth analysis of protocol and timing
- Live video with Frame Grabber Functionality
- Up to 8 GB trace captures
- Complex triggers
- Profile generator

Systems

TITAN

- Rugged 19" rack mount
- Up to 16 PCIe slots

Applications

- Flight testing
- Simulation of ARINC 818 systems
- ATE testing

EUROPA

- Compact and portable
- Up to 4 PCIe slots

Applications

- Design and Development
- Qual testing

Recorders

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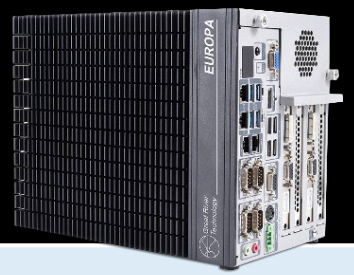
	EUROPA SYSTEM	TITAN SYSTEM
		
Capacity		
ARINC 818 recording channels	1	1–8
Terabyte storage	1–2	10–24
Applications		
Cockpit simulation labs		X
Engineering development	X	X
Qualification testing	X	X
Flight tests	X	X
Factory production		X
Maintenance and repair		X
Flight simulators/pilot training		X
Options (availability depends on configuration)		
Video capture	X	X
Video conversion	X	X
Video record/playback	X	X
Video playout		X
Video generation	X	X
Protocol analysis	X	X
Robustness testing	X	X
Remote control	X	X
Compression		X
Data removal		X
*Total cards, including GPS, RAID, video, and GRT cards.		

GRT ARINC818 Test Suite

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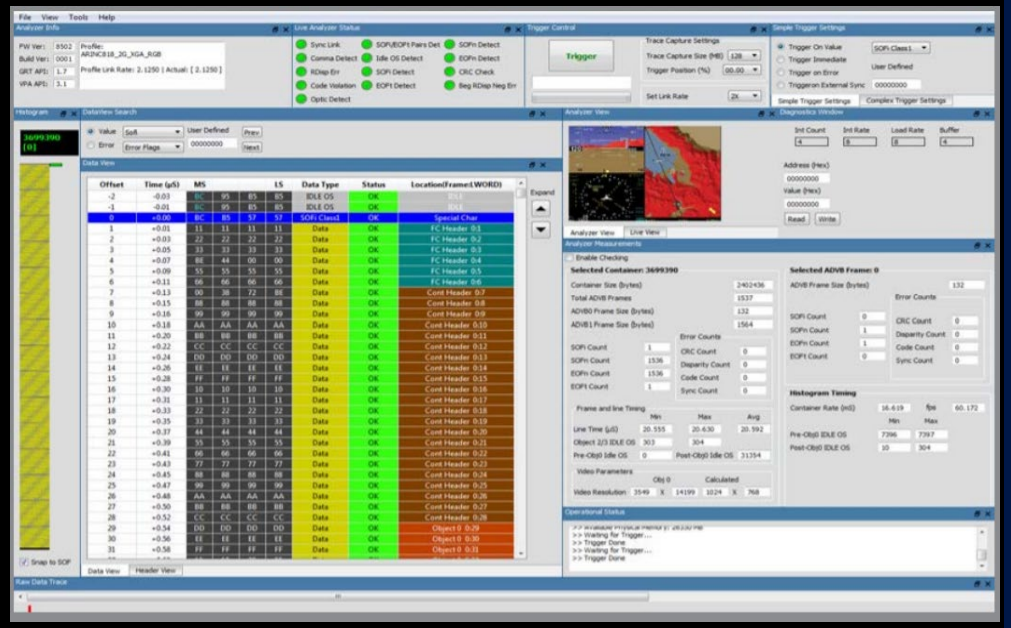

Next Recommended Videos

- Overview of ARINC 818 Standard & Protocol
- Why ARINC 818?
- Please review the in-depth product videos in the academy to further understand each product.
- If more detail is still needed on specific products, please visit our website at GreatRiverTech.com or reach out to us at info@ARINC818-Academy.com