



VELOCITY ARINC 818 PXIe CARD

PXIe Velocity Card Support for **XI Configuration** and **Dual Independent RX Configuration**

The PXI Express form factor ensures compatibility with modular PXIe test systems, and an SDK for LabVIEW™ development is available which can be integrated with the National Instruments TestStand software. The Velocity PXIe card can function as either a single-channel card capable of receiving or transmitting ARINC 818, or as a dual-channel ARINC 818 receiver card - depending on the card purchased. With the GRT XI configuration tool, users can quickly implement a new ARINC 818 video format into hardware.

FEATURES:

- Implement a new video format in minutes
- Create a library of video formats
- ARINC 818 transmit or receive
- Full-featured test application
- ARINC 818 to or from HDMI conversion
- Error injection

APPLICATIONS:

- Avionics Video
- ATP for Production Displays
- Display Development
- Sensor Arrays
- Cockpit Simulation
- Video Generation
- Data Only
- High-Speed Video Recording
- Dual-Channel LAD Systems

LINK RATES: (Gbps)

- 1.0625
- 2.125
- 3.1875
- 4.25
- 5.0
- 6.375
- 8.5
- 10.0

PIXEL TYPES:

- Color RGB 8:8:8
- Color RGB 5:6:5
- YCbCr 422
- Monochrome 8-bit
- Monochrome 16-bit

AVAILABLE HDMI RESOLUTIONS:

Users may configure the HDMI video output port from the following options in a pull-down list:

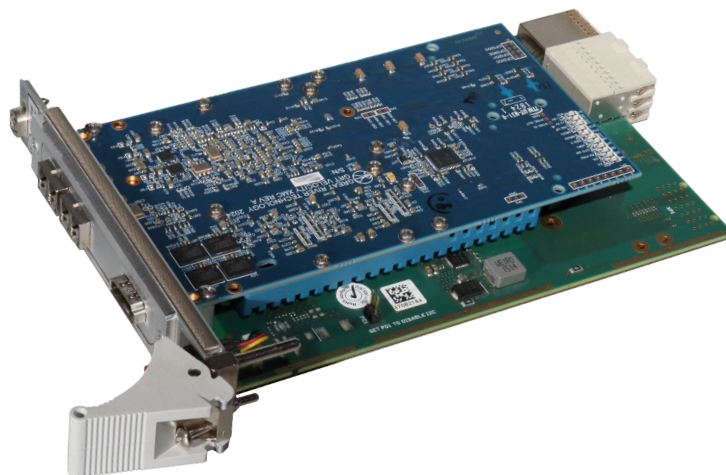
- XGA 1024x768 @ 60Hz
- HD 1280x720 @ 60Hz
- WXGA 1280x800 @ 60Hz
- SXGA 1280x1024 @ 60Hz
- SXGA+ 1400x1050 @ 60Hz
- WXGA+ 1440x900 @ 60Hz
- UXGA 1600x1200 @ 60Hz
- FHD 1920x1080 @ 60Hz
- DSXGA 2560x1024 @ 60Hz
- UHD 4K 3840x2160 @ 30Hz

SOFTWARE DEVELOPMENT KITS:

An optional Windows-based Software Development Kit (SDK) enables faster development of real-time image and data acquisition systems, camera and sensor emulators, video generators, or other video-intensive applications. C/C++ and C# programming languages are supported.

An optional SDK for LabVIEW™ development is also available and eliminates the need to create Virtual Instruments for LabVIEW™ from scratch.

SDKs include a user guide, example code, and four hours of technical support.



VELOCITY PXIe CONFIGURATIONS:

- Single Channel with Dual ARINC 818 FO Transceivers
 - **ARINC 818 RX:** CHA or CHB Selected RX
 - **ARINC 818 TX:** CHA/CHB Mirrored TX

VELOCITY DUAL RECEIVER PXIe CONFIGURATIONS:

- Dual ARINC 818 FO Transceivers
 - **ARINC 818 RX:** Independent CHA and CHB RX
 - **ARINC 818 TX:** Test Pattern ONLY on TX

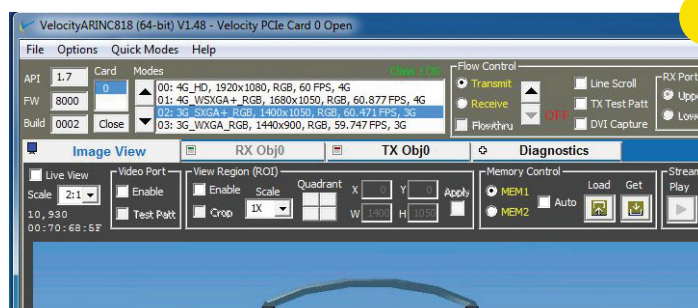
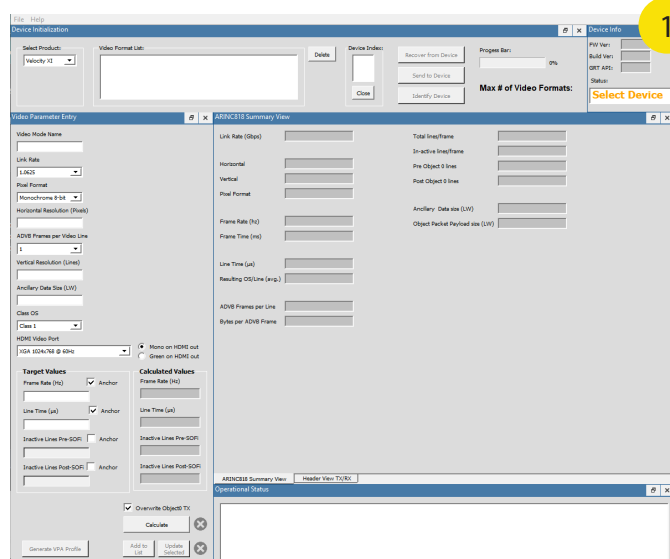
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INCLUDED, POWERFUL SOFTWARE APPLICATIONS:

- 1 The **GRT XI Configuration Application** allows the user to define supported video format parameter combinations. Request Tech Note 002XI for details. Line, frame, or vertical blanking time parameters can be anchored for priority.
- 2 Use the **VelocityARINC818 Test Software Application** to view your image and discover validity of link synchronization, presence of SOFi, EOFt, and idle ordered sets, as well as receive alerts for any 8B/10B or CRC errors.
- 3 The **VelocityDual Test Software Application** employs the viewing and status indicator features of the VelocityARINC818 Test Software Application described above, modified for the dual receive channels. In addition, the user is able to view images in a simulated LAD display.



SPECIFICATIONS:

| | | | |
|------------------------------|---|----------------------|----------------------------|
| Operating System | Windows 7, 8, 10, & 11, 64-bit | Connectors | HDMI |
| Power Requirement | < 20W | Form Factor | PXle |
| Operating Temperature | 0-50°C (32-122°F) | PCIe Gen 3 x8 | 4 GB transfer rate |
| Weight | 10.58oz; 300g (including card & heatsink) | Memory | 256 MB (2 banks of 128 MB) |
| Physical Dimensions | 6.3in x 3.9in; 160mm x 100mm | Standards | ARINC 818 |

HOW TO BUY:

Velocity PXle cards come in two versions:

| Part Number | Description |
|------------------------|--|
| VX-P8-A8-D8-MM-HH | Velocity PXle with GRT XI configuration tool |
| VR-P8-A8-D8-MM-HT-DOXI | Velocity Dual Receiver PXle with GRT XI configuration tool |

With optional SDK additions:

| Part Number | Description |
|-------------------|--|
| VL-SW-SD-A8-WN | SDK with C/C++ and C# example code and documentation |
| VL-SW-SD-A8-LB-64 | SDK for LabVIEW™ development with example code and documentation |

To order, consult our Sales page at www.greatrivertech.com/sales. If no distributor is listed for your region or country, or if you need additional information about our custom firmware, please fill out the Product Inquiry Form on our website.

