



VELOCITY XI

The Velocity XI allows the user to implement a new ARINC 818 ICD into hardware in less than a minute using the Velocity XI Configuration Tool, virtually any ICD. Once the Velocity XI configuration tool has been used to implement an ICD into the card, then the Velocity XI card will operate as a single format Velocity card, that will both receive and transmit ARINC 818.

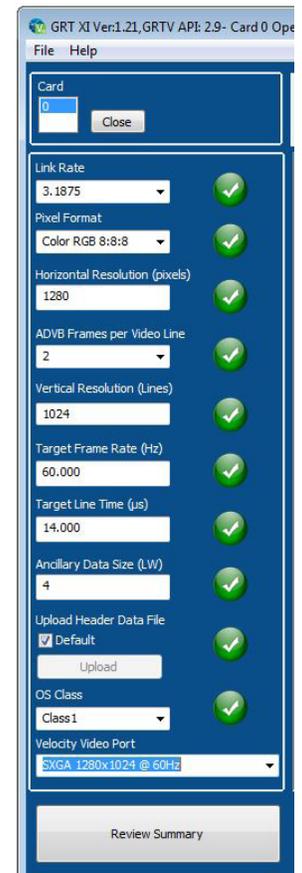
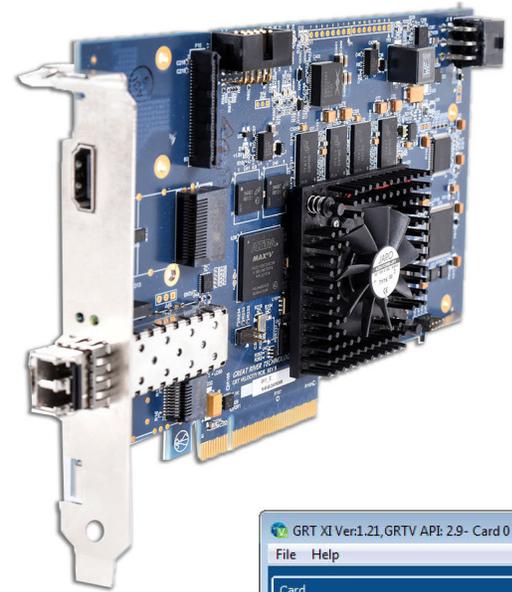
The configuration tool provides an easy to use and user-friendly entry page for video parameters (as seen on the right). To properly use the Velocity XI configuration tool, the user will need to have a predetermined ICD in front of them.

The user enters the ICD parameters one at a time and the configuration tool verifies that a valid entry has been made (as indicated by a green check). Once all the ICD parameters are properly entered, the tool calculate the necessary settings for the hardware and allows the user to download the new firmware to the card.

The configuration tool will only allow the loading of a single video format but gives users the capability of loading and saving configurations (ICD) as a SPROF file. The user can create a library of different ICDs that can be loaded into the card as desired, but only one ICD at a time. To properly use the Velocity XI configuration tool, it assumes that the user has already determined their desired ICD and has a copy of that in front of them.

Features

- Implement a new ICD in under a minute
- Once configured, the Velocity XI card acts as an ARINC 818 receiver or transmitter
- Compatible with all the powerful features of the Velocity Test Application
- Includes conversion from ARINC 818 to DVI for standard resolutions
- Create your own library of ICD to cover all your ARINC 818 programs



Applications

- Avionics video
- ATP for production displays
- Display development
- Sensor arrays
- Cockpit simulations
- Video generation
- Ultra-resolution, high-speed video recording
- Data only

Card Specifications

Standards	FC-PH Revision 4.3 ARINC 818-2 ADVB high data rate
PCIe Gen 3 x8	4 GB plus throughput
Memory	256 MB (2 banks of 128 MB)
Power requirement	20 W @ 12 V
Operating System	Windows 7, 8, 10, 64-bit; Linux (call for kernels supported)
Form factor	PCIe half length
Connectors	HDMI
Operating temp.	0–50°C (32–122°F)

Link Rates (Gbps)

1.0625	3.1875	6.375	12.75
2.125	4.25	8.5	

Pixel Types

Monochrome 8-bit, Color RGB
8:8:8, Color RGB 5:6:5

Operating System

Velocity XI Configuration Tool:
Windows 10

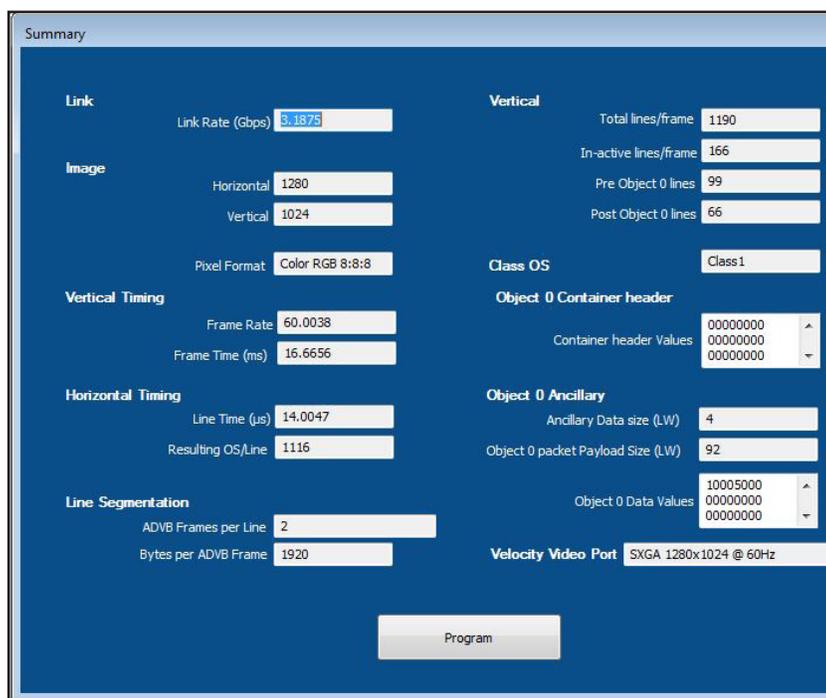
Velocity XI is compatible with Windows
(7, 10) and Linux Velocity SDKs

Configuration Options

Users may configure the TX Video port from the following options in a pull-down list:

Velocity Video Port

XGA 1024x768 @ 60Hz
HD 1280x720 @ 60Hz
WXGA 1280x800 @ 60Hz
SXGA 1280x1024 @ 60Hz
SXGA+ 1400x1050 @ 60Hz
WXGA+ 1440x900 @ 60Hz
UXGA 1600x1200 @ 60Hz
HD+ 1920x1080 @ 60Hz
DWide 2560x1024 @ 60Hz
4K 3840x2160 (Reduced Blanking) @ 30Hz



The screenshot shows a configuration tool interface with the following sections and values:

- Link:** Link Rate (Gbps) set to 3.1875
- Image:** Horizontal set to 1280, Vertical set to 1024, Pixel Format set to Color RGB 8:8:8
- Vertical:** Total lines/frame set to 1190, In-active lines/frame set to 166, Pre Object 0 lines set to 99, Post Object 0 lines set to 66
- Vertical Timing:** Frame Rate set to 60.0038, Frame Time (ms) set to 16.6656
- Horizontal Timing:** Line Time (µs) set to 14.0047, Resulting OS/Line set to 1116
- Line Segmentation:** ADVB Frames per Line set to 2, Bytes per ADVB Frame set to 1920
- Class OS:** Set to Class1
- Object 0 Container header:** Container header Values set to 00000000, 00000000, 00000000
- Object 0 Ancillary:** Ancillary Data size (LW) set to 4, Object 0 packet Payload Size (LW) set to 92, Object 0 Data Values set to 10005000, 00000000, 00000000
- Velocity Video Port:** SXGA 1280x1024 @ 60Hz

A "Program" button is located at the bottom of the interface.

How to Buy

Determine your part number for Velocity XI Series (VX-E8) ARINC 818 (A8) cards as follows:

VX-E8-A8-__-MM-HT-___ Custom Characters assigned by GRT

Interface

O3 = Fiber 1310nm single mode
O8 = Fiber 850nm multi mode



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