The GFG500 is a 3U VPX-REDI video processing board for capturing and processing multiple simultaneous video streams from GigE Vision compliant video sources.

Video, in the form of GigE Vision format Ethernet packets, is input to the GFG500 via one of two available 10Gb XAUI ports.

Captured and processed GigE Vision packets are output as uncompressed memory mapped video frames via one of two x4 lane PCI Express ports that allows high speed communication to other VPX boards.

Operating in conjunction with a single board computer and graphics processing unit, such as the SBC340 and GRA110, the GFG500 has been successfully integrated into multi sensor vision systems, capable of simultaneously processing ten 1392 x 1024 GigE Vision video streams at 30Hz.

The GFG500 provides a programmable control interface that enables the user to configure the various available video processing options, as well as providing control of adjustable GigE Camera properties. The programming interface is currently only available for Linux operating systems.

Video processing options currently provided include Bayer decoding, video sampling and compression.
GFG500 – Gigabit Ethernet Video Processor

Specifications

Processor
- Tilera TILEPro64 8 x 8 grid general purpose processor cores (tiles)

Interfaces
- Two 10GE XAUI interfaces; configurable MAC or PHY mod
- Two 4-lane PCIe interfaces; root complex or endpoint mode
- Two GbE MAC interfaces
- 1 x RS232

Power
- 20-60 W (700MHz typical) idle; tiles can be put into low-power sleep mode

Dimensions
- Conforms to 3U VPX standard

With Video handling software:

Video Inputs
- 2 x XAUI 10Gb ports
- Supports Multiple GigE Vision Ethernet video streams
- Video Output
- Memory mapped video frames via PCI Express ports
- Hardware Support
- Optional rear transition development module
- Power, status and IO LED’s
- Reset button

Software Support
- C/C++ Linux programming interface
- Video processing firmware upgradable

Block Diagram

About GE Intelligent Platforms

GE Intelligent Platforms, a General Electric Company (NYSE: GE), is an experienced high-performance technology company and a global provider of hardware, software, services, and expertise in automation and embedded computing. We offer a unique foundation of agile, advanced and ultra-reliable technology that provides customers a sustainable advantage in the industries they serve, including energy, water, consumer packaged goods, government and defense, and telecommunications. GE Intelligent Platforms is a worldwide company headquartered in Charlottesville, VA and is part of GE Home and Business Solutions. For more information, visit www.ge-ip.com.

GE Intelligent Platforms Contact Information

Americas: 1 800 433 2682 or 1 434 978 5100
Global regional phone numbers are listed by location on our web site at www.ge-ip.com/contact

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