GE
Intelligent Platforms

GRA110

3U VPX High Performance Graphics Board

Features

- NVIDIA G73 GPU
  - As used on NVIDIA® GeForce® 7600GT
- Leading OpenGL performance
- 256 MBytes GDDR3 SDRAM
- Two independent output channels
- VESA output resolutions to 1600x1200
- RS-170, NTSC & PAL video output
- DVI 1.0 digital video output
- RS170, NTSC & PAL Video output
- Air- and rugged conduction- variants
- 3U VPX Form Factors

The GRA110 is the first graphics board to be announced in the 3U VPX form factor. Bringing desktop performance to the rugged market, the GRA110 represents a step change in capability for the embedded systems integrator. With outstanding functionality, together with PCI Express™ interconnect, even the most demanding applications can now be deployed with incredible fidelity.

The VPX form factor allows for high speed PCI Express connections to single board computers in the system. The GRA110 supports the 16-lane PCI Express implementation, providing the maximum available communication bandwidth to a CPU such as GE Intelligent Platforms SBC340. The PCI Express link will automatically adapt to the active number of lanes available, and so will work with single board computers in 8- and 4-lane configurations.

With a rich set of I/O, the GRA110 is designed to serve many of the most common video applications. Dual, independent channels mean that it is capable of driving RGB analog component video, digital DVI 1.0, and RS170, NTSC or PAL standards. In addition, the GRA110's video input capability allows integration of sensor data using RS170, NTSC or PAL video formats.

Optionally available as an LRM (Line Replaceable Module) in accordance with the VPX–REDI (formerly VITA 48) standard

GRA110 3U VPX High Performance Graphics Board

Specifications

GPU
- State of the art NVIDIA® G73 graphics processor

Video memory
- 256 MBytes GDDR3 memory

Number of channels
- Two

RGB output
- VESA: resolutions up to 1600x1200 @ 60Hz

Digital output
- DVI 1.0: resolutions up to 1600x1200 @ 60Hz

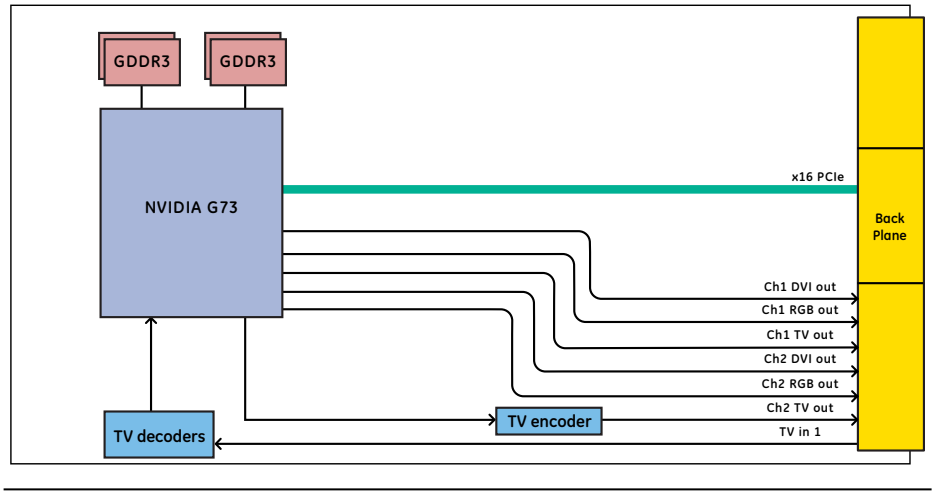
TV output
- RS170, NTSC, PAL

Video input
- RS170, NTSC, PAL

Form factor
- 3U VPX: allows maximum bandwidth between CPU & GPU on 16-lane PCI Express

Drivers
- RTOS
- Drivers for Windows & Linux running on Pentium® host card available from NVIDIA

Block Diagram



Standard Ordering Information

GRA110-1000

Level 1 Air-cooled GRA110
Dual Channel NVIDIA graphics processing unit, with NVIDIA G73 CPU; 256 MBytes GDDR3 SDRAM. Dual DVI 1.0 output; Dual VGA output; Dual RS-170/NTSC/PAL output; RS-170/NTSC/PAL Input

GRA110-2000

Level 2 Air-cooled GRA110, as above

GRA110-3000

Level 3 Air-cooled GRA110, as above

GRA110-4000

Level 4 Conduction-cooled GRA110, as above

GRA110-5000

Level 5 Conduction-cooled GRA110, as above

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**

www.ge-ip.com