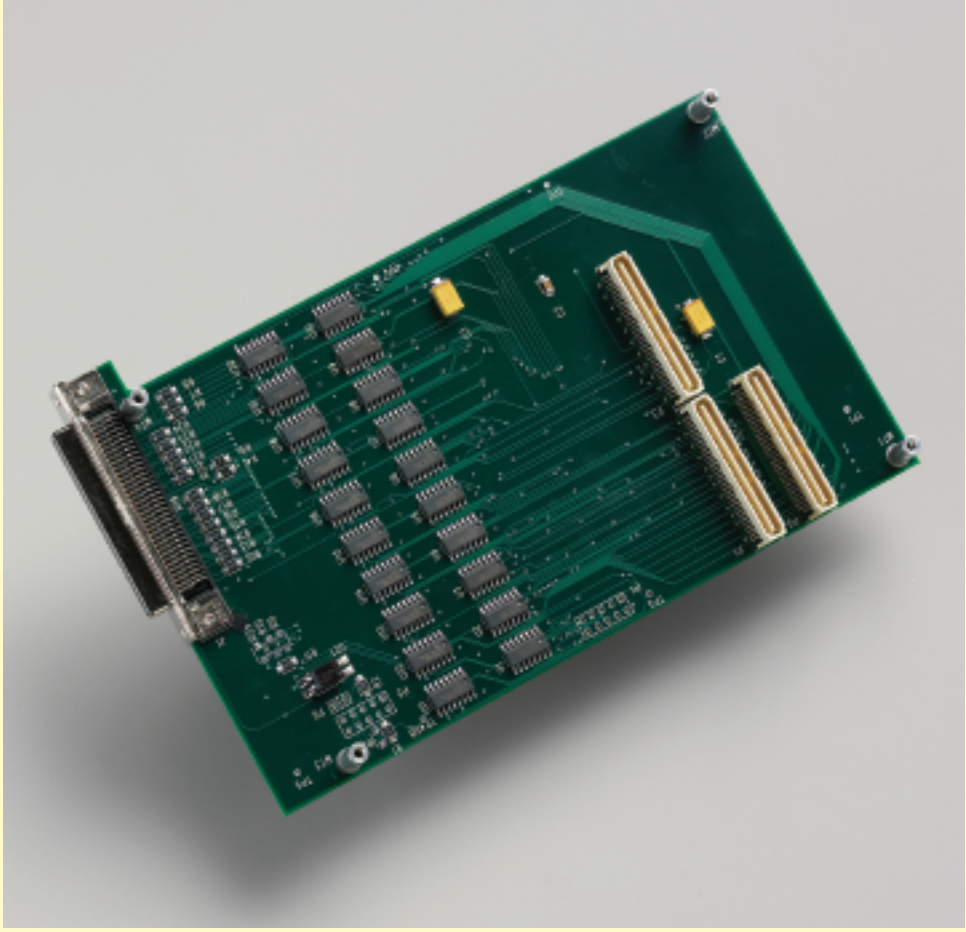
edt
a HEICO company

PCI SS/GS LVDS/RS-422



Features

- 33 LVDS (standard) or RS-422 (optional) input/output signals
- Transfer rates up to 90 megabits per second using a single channel; 64 megabits per second using all 16 channels
- Provides 16 high-speed DMA channels between LVDS or RS-422 devices and a PCI local bus computer
- User-programmable FPGA up to Xilinx XCV2000E (PCI SS) or XC2VP70 (PCI GS)
- Local memory up to 1 gigabyte (PCI GS)
- Single short PCI local bus slot
- Fast transfers using a 66 MHz 32-bit PCI
- Configuration file for 16 synchronous serial channels

Description

The LVDS/RS-422 mezzanine board provides 33 differential LVDS or RS-422 signals for either the PCI SS or PCI GS main boards. The LVDS/RS-422 signals can be inputs or outputs in groups of four signals. The function of each signal is determined by the FPGA configuration file programmed on the main board.

The PCI SS/GS LVDS/RS-422 mezzanine board is supplied with FPGA configuration files that implement 16 synchronous serial channels. Each channel inputs or outputs a data signal on the edge of the associated clock. The data is stored in or sent from host memory using the PCI DMA. This configuration provides a simple, flexible solution for telemetry, satellite, and monitoring applications.

A large Xilinx Virtex™-E (PCI SS) or Virtex™-II Pro (PCI GS) FPGA and associated memory allow the user to implement an FPGA configuration and process a large amount of serial data. The separate high-speed 16-channel PCI DMA controller allows flexible access to host memory.

Applications

- Telemetry receiver and transmitter
- Monitoring serial data communications
- Satellite ground station support

Specifications

PCI Local Bus Compliance (when mounted on PCI SS/GS Main Board)	PCI Version	PCI 2.2
	Data Width	32 bits
	Number of Slots	1
	Transfer Size	Up to 1024 bytes per transfer
	DMA (Direct Memory Access)	Yes
	PCI Local Bus Memory Space	Approximately 66 KB
	Clock Rate	33 MHz or 66 MHz
External Connectors	High-density 68-pin AMP™ connector (part number 787169-7)	
LVDS/RS-422	33 differential LVDS signals Standard LVDS or RS-422 signal levels, terminated with 100-Ω line to line	
Physical	Number of Slots	1
	Dimensions	4.2" x 6.6"
Environmental	Temperature	Operating: 0° to 40° C Non-operating: -40° to 70° C
	Humidity	Operating: 1% to 90% non-condensing at 40° C Non-operating: 95% non-condensing at 45° C
System Requirements	Intel, AMD, SPARC, or PowwerPC Computer with 66MHz PCI Bus or faster (will run in 33 MHz slot with reduced performance)	

Software

Device Drivers for Solaris 2.7+ (Intel and SPARC platform), Windows NT/XP/2000/-2003, Red Hat Linux 9.0, Red Hat Enterprise v3-v4, SuSE Linux 9.1-10, are included with the board. Mac OS X and VxWorks drivers are also available.

Support

EDT provides engineer-to-engineer customer support, from phone consultation to custom design of hardware, firmware, or software. Technical support is also available through the Technical Information section of our web site.

Ordering

Ordering options are listed below. To order, contact our sales department or your distributor. Be sure to specify which cable will be needed (if any).

PCI SS LVDS
Signal option: RS-422

PCI GS LVDS
Signal option: RS-422

See PCI SS and PCI GS data sheets for main board options.

Contact

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