

# GX3640

## FPGA PXI CARD WITH 40 CHANNEL ECL BUFFER MODULE

- 20 output and 20 input ECL channels
- Read / Write control via a software front panel or API
- Configurable terminations for each ECL I/O signal
- Fully compatible with MECL 10K
- Configurable termination voltage, -2 V or -5.2 V



## DESCRIPTION

The GX3640 is comprised of the GX3500 FPGA card and the GX3540, 40 channel ECL expansion card. It is a 3U PXI instrument card that can be used for general data acquisition, process control, Automatic Test Equipment (ATE), and functional test applications. The GX3640 consists of 20 differential ECL drivers and 20 differential ECL receivers. Each channel can be accessed via software commands for use in static I/O applications.

## FEATURES

Reading and writing to each of the I/O channels is done via software reads and writes. The board supports standard ECL logic levels and includes on-board terminators for each differential channel. The board is supplied with 390  $\Omega$  terminators which are terminated to -5.2 volts. Optionally, the board can be configured to use terminations with an onboard -2 V termination voltage source. The terminating resistors are socketed, allowing the user to change the terminators for specific applications.

## PROGRAMMING AND SOFTWARE

The board is supplied with the GXFPGA library, a software package that includes a virtual instrument panel, and a Windows 32/64-bit DLL driver library and documentation. The virtual panel can be used to interactively program and control the instrument from a window that displays the instrument's current settings and status. In addition, interface files are provided to support access to programming tools and languages such as ATEasy, LabView, LabView/Real-Time, C/C++, Microsoft Visual Basic®, Delphi, and Pascal.

An On-Line help file and PDF User's Guide provides documentation that includes instructions for installing, using and programming the board.

A separate software package - [GtLinux](#) - provides support for Linux 32/64 operating systems.

## APPLICATIONS

- Automatic Test Equipment (ATE) and Functional Test
- Data Acquisition
- Process Control
- Factory Automation

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## SPECIFICATIONS

GX3640 3U FPGA CARD WITH 40 CHANNEL ECL EXPANSION BOARD	
Number of Channels	20 differential inputs 20 differential outputs
Logic Family	MECL 10 K compatible
Driver Output VOL	-1.95 V (min) -1.63 V (max)
Receiver Input VIH	-1.13 V (min) -0.81 V (max)
Receiver Input VIL	-1.95 V (min) -1.48 V (max)
Receiver Differential Input Level	150 mV (typ) 1.0 V (max)
Receiver Common Mode Range	-2.85 V (min) +0.3 V (max)
Maximum Absolute Input Voltage Range	0 V to -5.2 V
ECL I/O Terminations	Each input and output is terminated with a 390 $\Omega$ resistor which is connected to -5.2 V. Optionally, the board can be configured to use terminations with an onboard -2 V termination voltage source
I/O Connectors	(2) SCSI III, VDHCI type, 68 pin female One for ECL outputs, one for ECL inputs

Note: Specifications are subject to change without notice

## ORDERING INFORMATION

GX3640	3U PXI Card, ECL, Differential Line Driver/Receiver, 40 Differential Channels (GX3500 & GX3540)
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