

PCI 6140 Key Features

- ◆ Lowest cost *FastLane™* Bridge
- ◆ 200mW Power Consumption
- ◆ Small Footprint PQFP-128 Package
- ◆ Lead Free Available
- ◆ Low Latency

Other Important Features

- ◆ 3.3V signaling, including 5V input signal tolerance
- ◆ Hot swap friendly
- ◆ Zero wait state burst
- ◆ Optional Zero clock latency when bursting data across PCI 6140 to preserve maximum data rate
- ◆ PCI compatible cycle completion without PCI Retry penalty of a traditional PCI bridge Legacy VGA and Audio IO address support
- ◆ Provides arbitration support for 4 bus masters on secondary interface
- ◆ Supports PCI Type 1 to Type 0 and Type 1 configuration command conversion
- ◆ Supports 1-Clock Latency Mode



Application:

USB/Firewire/Ethernet PCI Combo Card

PLX Product:

PCI 6140 – 32-bit FastLane PCI Bridge

Key Benefit:

Add-in Card Refreshes Legacy PCs

Low Cost *FastLane* Bridge Simplifies Connectivity Upgrade



How many legacy PCs become useless simply because they lack up-to-date I/O connectivity? Sometimes all it takes to bring new life to an old PC is to add USB 2.0, Firewire or Ethernet connectivity. This is easily accomplished with a PCI Combo Card. A single add-in card can have several I/O devices; but they all

can't

connect directly to the system PCI bus, so some kind of bridge is required. A classic example is the USB 2.0/Firewire/Ethernet combo card shown here. These low-end PCs and their add-in cards are usually quite cost-sensitive, and the standard PCI-to-PCI Bridge from Intel adds too much to the BOM cost.

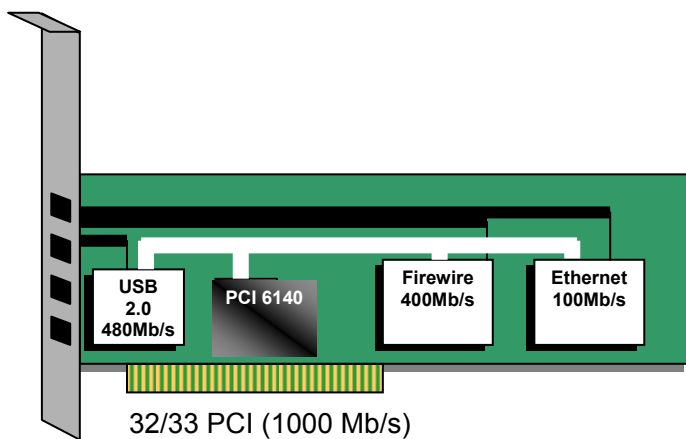


The Solution: Low-Cost Load Expansion with the PCI 6140

On these PCI combo cards, there are normally two to four PCI devices behind the bridge on the card. These PCI devices include USB, Firewire, and Ethernet I/O chips as in this example; other combo cards include RS 232, MIDI, SPDIF, TV Tuners, MPEG Decoders and Encoders, Audio Processors, and other multimedia devices. The PCI Specification allows each PCI slot only one device load. In order for multiple devices to reside on the card, the PCI 6140 provides the lowest-cost isolated PCI bus on its secondary. This bus can handle up to four PCI devices at 33MHz.

Is There Enough Bandwidth with 32-bits/33MHz PCI?

The 32-bit, 33MHz PCI bus allows a maximum throughput of 125MB/s, (or 1000Mb/s). Compare this with the maximum rates for USB 2.0 (480Mb/s), Firewire (400Mb/s) or 10/100 Ethernet (100 Mb/s). You can see there is plenty of bandwidth for the devices behind a 32-bit bridge like the PCI 6140.



The PCI 6140 is Optimized for These Applications:

- ◆ PCI Latency-Sensitive Systems
- ◆ PCI-Retry Penalty Sensitive Systems
- ◆ PCI Slave Access Intensive Bridging Functions
- ◆ Low Power Systems
- ◆ CompactPCI Systems Using Hot Swap

Lead Free Packaging available NOW!

The PCI 6140 is available in lead-free, RoHS compliant versions as well as the traditional leaded packages.

Part Number	Package	Speed
PCI 6140-AA33PC	Standard Leaded PQFP Package	33MHz
PCI 6140-AA33PC G	Lead-Free RoHS Green PQFP Packaging	33MHz

PLX Advantages

- ◆ The industry's best PCI expertise and support
- ◆ Ultra Low Power (200mW)
- ◆ Low cost

Design Tools & Documentation: On PLX Public ToolBox:

http://www.plxtech.com/products/fastlane_bridges/PCI6140/default.asp

- ◆ DataBook, IBIS Models, App Notes, Product Brief, Hspice Models

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6140-Combo-EA-1.0