

MPCI-1394

QUICK-REFERENCE R1.1, PCB R0.0

Description

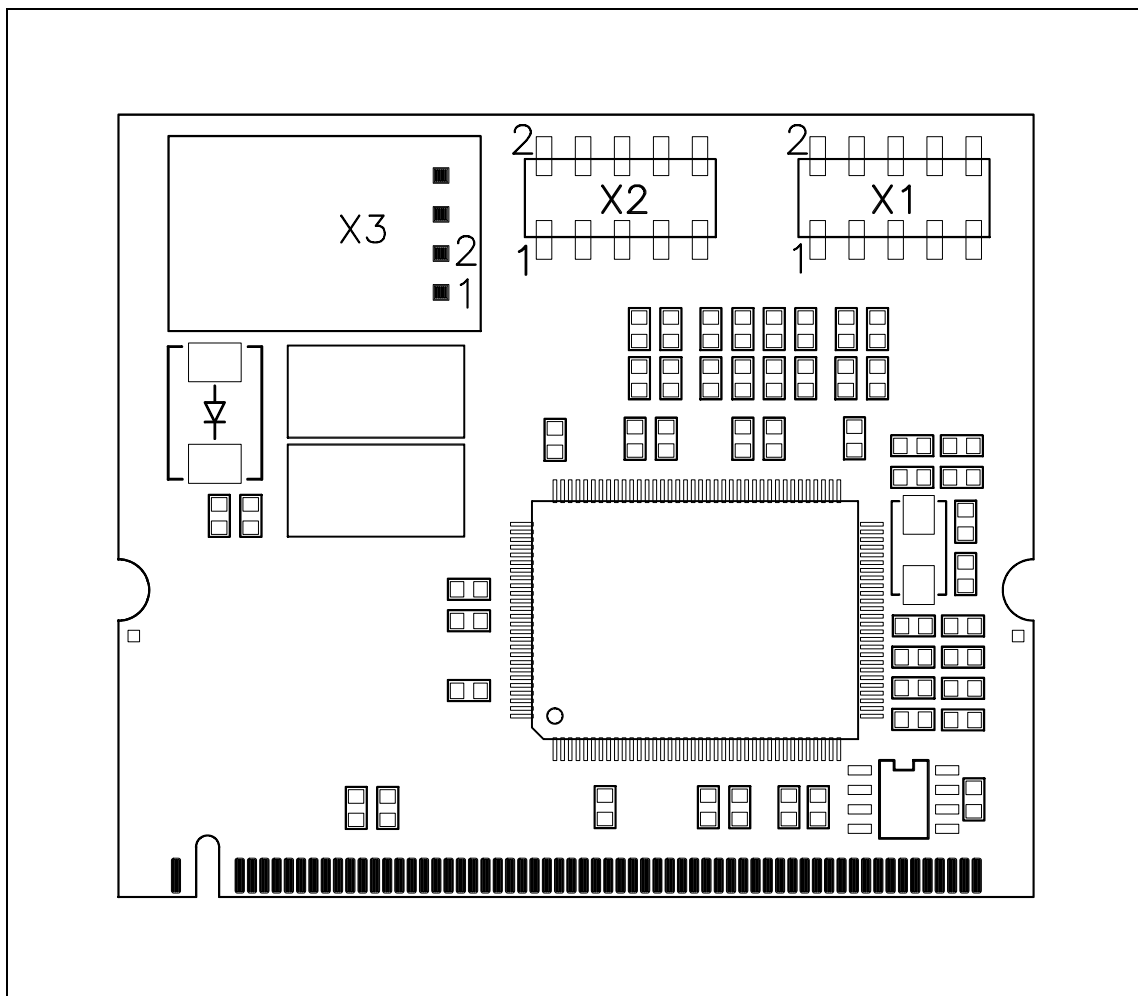
MPCI-1394 is a MiniPCI module that provides two IEEE 1394 interfaces, accessible via IDC10 connectors. With the included adapter cables from IDC10 to standard 1394 connectors any 1394 device can be connected to the module.

The IEEE 1394 high-speed serial bus (known as 'Firewire™') is a leading PCI peer-to-peer interconnect system and is widely acclaimed as the primary interface for digital audio and video applications. The IEEE 1394a specification enables hot-pluggable high volume connections to PC peripherals such as printers and hard disk drives, multimedia appliances, and consumer electronics devices such as game consoles and video cameras.

The used controller VIA Fire IIM VT6307 is a single-chip, low power 2-port IEEE 1394 host controller providing PC systems with high speed, flexible connectivity to a wide range of peripherals and consumer electronics. Supporting the latest high speed IEEE 1394a standards, the VIA VT6307 can detect connected device types and automatically configure data speeds to 100, 200, or 400 Mbps, transmitting both asynchronous and isochronous (real-time) data packets.

With an integrated physical and link layer, the VIA VT6307 is equipped with 32-bit PCI bus interface. On-board chip logic performs bus initialization and arbitration functions allowing for easy plug-and-play connections, and a DMA engine supports high performance data transfer for media disk drives.

The VIA VT6307 is compliant with the latest IEEE 1394 standards with full 1394a P2000 support, and has an OHCI compliant programming interface with support for I2C EEPROMs and 4-Wire Serial ROMs. The VIA VT6307 has VIA and OHCI software driver support built into all recent Microsoft® Windows® operating systems.



Features

- Single chip PCI Host Controller for IEEE 1394-1995 Release 1.0 and IEEE 1394a P2000
- Embedded 1394 Link core:
 - Dual Buffer mode enhancements
 - Skip Processing enhancements
 - Block Read Request handling
 - 32 bit CRC generator and checker for receive and transmit data
- Integrated 400Mbps 2-port PHY:
 - Supports two 1394a fully compliant cable ports at 100/200/400Mbps
 - Supports IEEE 1394-1995 Standard for High Performance Serial Bus 1.0 and 1394a P2000
 - Full 1394a P2000 support
 - Logic performs bus initialization and arbitration functions
 - 2KV ESD protection
- 32-Bit Power-Managed PCI Bus-Interface, compliant with PCI specification v2.2
- OHCI Compliant Programming Interface
- 0.30 micron low power CMOS process

Hardware Installation

The MPCI-1394 is delivered with no user maintainable parts. No jumpers need to be set.

Inserting the card

Insert the card at an angle of about 45 degrees. Then push it towards your mainboard until it snaps into the two latches at the left and the right.

If necessary, connect the 12V power connector from your power supply. This is only necessary if you want to use devices with no own power supply.

Removing the card

Push the latches –one after another– to the outside carefully. The card can be removed easily now.

Connector Definitions

X1 – 1394 Port 1

PIN	Signal
1	TPA0+
2	TPA0-
3	Not connected
4	Ground
5	TPB0+
6	TPB0-
7	+12V (optional)
8	+12V (optional)
9	Not connected
10	Not connected

X2 – 1394 Port 2

PIN	Signal
1	TPA1+
2	TPA1-
3	Not connected
4	Ground
5	TPB1+
6	TPB1-
7	+12V (optional)
8	+12V (optional)
9	Not connected
10	Not connected

X3 – optional Power Supply

PIN	Signal
1	+5V
2	Ground
3	Ground
4	+12V

The optional 12V are only required if your 1394 device doesn't have its own power supply. Therefore you have to plug the power supply of your PC into X3.

Warning: The board must not be connected or disconnected to the MiniPCI connector with power supply switched ON!

Note: Guarantee is void if the connections are not done according to the instructions.

Technical Characteristics:

Size (LxW):	Mini-PCI, 2.35" x 2.0" (59.60 mm x 50.95 mm)
Controller	VIA VT6307
Supported OS	Windows 2000/XP, Linux
Operating temperature:	-20...60 °C
Storage temperature:	-40...70 °C
Temperature change:	max. 10K / 30 min
Relative humidity:	10...90 %
Pressure:	450...1100 hPa
Supply voltage:	3.3V (from MiniPCI connector)
Supply current:	typ. 100 mA

Ordering Information:

Ordering Number	Description
806-0005-12	Mini-PCI module, 2x firewire, 2 cables. Operating temp. range: -20°C .. +60°C

If you have any questions regarding this product, please contact support@lippertembedded.com or use the phone number given below.

Check LiPPERT's website at www.lippertembedded.com for new products or driver updates as well as for additional manuals.