4Links for technical help

PCI 1355-01
PCI 1355-02

PCI bus interface development boards for IEEE 1355 DS-DE links

Product Outline

PCI 1355-01/2 Description

The PCI 1355-01/2 provide a simple interface between the PCI bus and 1355 DS-Links. The PCI 1355-01 has one DS-Link, the PCI 1355-02 has two links. The links are buffered in accordance with the DS-DE specification of IEEE 1355 (and also to be ISO/IEC 14575CD).

1355 DS-Links provide an exceptionally light-weight Virtual Channel protocol for serial communication between processors, between I/O systems, or between I/O systems and processors.

The standard PCI form-factor allows PCs, PowerPCs, or DEC Alphas to use 1355 links.

Features

- Links may be used point-to-point, or may be connected via hubs based on routing switch chips such as the 32-port SGS-THOMSON C104.
- Packet payloads may be any multiple of 4 bytes. Examples include ATM payloads at 48 bytes, MPEG2 at 192 bytes, or T9000 transputer at 32 bytes. Packets of different sizes for different destinations may be interleaved on the same link
- The programmer has full control of the packet structure, with a clean address mapping of the C101 registers.
- The PCI 1355-01/2 are slave interfaces and do not therefore sustain the full bi-directional bandwidth of two 100 Mbits/s DS-Links. Actual link bit rate transmitted from the boards is twice the (normally 33MHz) PCI clock speed.
- PCI's 32-bit access, however, offers much higher performance than ISA based interfaces
- The board includes a prototyping space with HTRAM slots and footprints for 100-pin and 208 pin QFPs for development of 1355 applications.

The information supplied in this Product Outline is believed to be accurate. It is, however, based on expected performance of products which are currently being designed and manufactured. The boards have been designed for low EMC emission and susceptibility but are not tested to the EU EMC Directive, and, as development boards, are not intended for "end users". 4Links for technical help reserves the right to change specifications or to discontinue products without notice. 4Links for technical help assumes no liability arising out of the application or use of any information or product, nor does it convey any licence under its patent rights or the rights of others. Products from 4Links for technical help are not designed, intended, authorised or warranted to be suitable for use in life-support devices or systems. 9512

Applications

- Development of 1355 systems
- IHDEN development (In-Home Digital Entertainment Network)
- PC clusters
- Video-on-Demand (VoD) servers
- Host interface for T9 systems
- FIFO between two computers
- Virtual transputers, particularly with "Occam for All"

Acknowledgements

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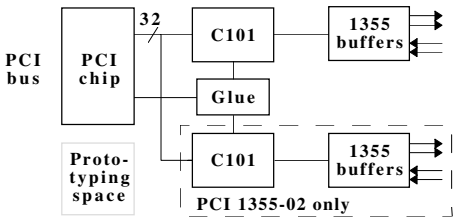
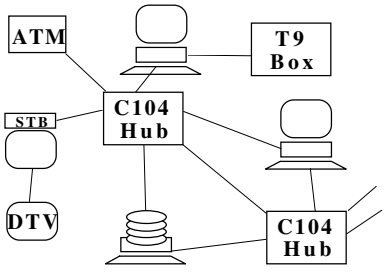
Block Diagram



Example network (which might be developed using IEEE 1355)



Ordering details

PCI 1355-01 Qty 1 to 5 £625
PCI 1355-02 Qty 1 to 5 £775
Prices exclude VAT, P&P
Payment with order

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