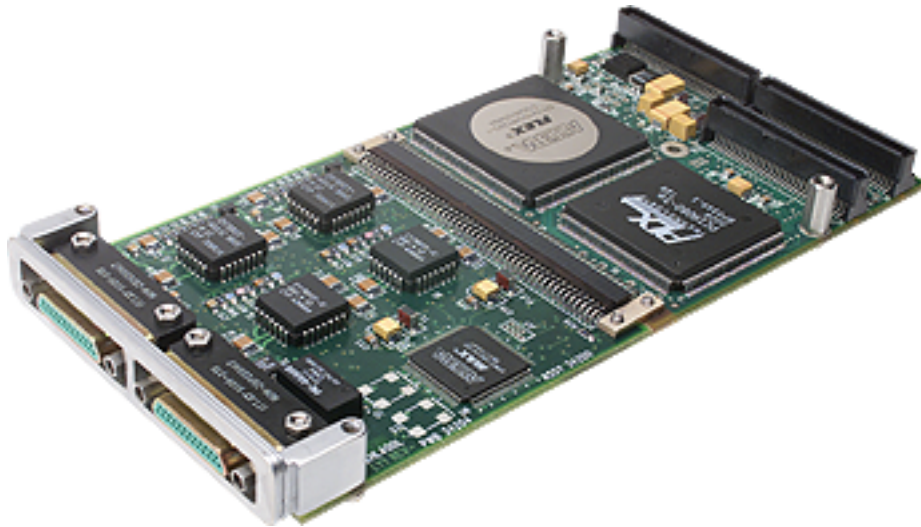


HOTLink I/O Modules

2HL400



Tekmicro's HOTLink PMC customers compete in a broad range of application spaces, including video, radar, sonar, seismic, semiconductor test, and vehicle inspection systems. The HOTLink standard fits most any application with typical throughput requirements, which explains its wide market penetration as well as its role as the low-level protocol for the SMPTE 259 video standard.

HOTLink's broad appeal lies in its strength as an ideal point-to-point solution, especially over longer distances. When used with copper cable media, HOTLink PMCs can move 8-bit parallel data up to 50 meters using only two wires. In addition, HOTLink's low latency and simple protocol eliminate much of software overhead and integration costs associated with network protocols.

In fact, 2HL400 customers often implement their own protocol layer on top of the HOTLink protocol. To support such efforts, Tekmicro ships a number of FPGA programs that are flexible enough to work with most customer-developed packet and frame protocols. These off-the-shelf FPGAs can be tuned as necessary to provide a tight fit at a cost-effective price.

Compared with the HL266, Tekmicro's 2HL400 doubles the number of input and output streams and adds greater FPGA capacity. Its highly configurable factory options include selectable oscillator speeds and several data transfer media (9 pin Micro-D, 25-pin Micro-D, copper SMB, or 1300nm SC fiber optic connector). Certain models also provide LVDS (EIA-644) signals for user specific functions.

Tekmicro's HOTLink PMCs are fully compatible with the current generation of PMC-enabled VMEbus Single Board Computers. Tekmicro also offers turnkey solutions for RACEway and HOTLink PMC users on its own PowerRACE and JazzStream I/O Controller and Processor Cards. Details of supported configurations can be found at www.tekmicro.com on the Host Support datasheet.

Integration Examples

Antenna control unit for SIGINT system

Vehicle inspection system using IR camera

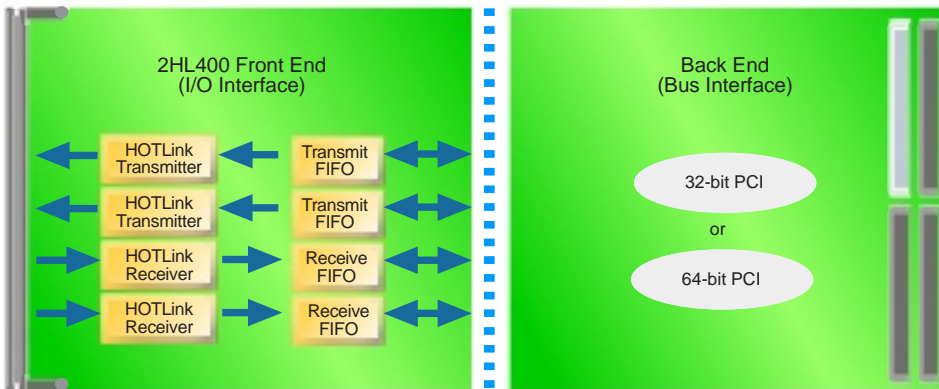
Semiconductor inspection

Video systems

Radar

Sonar

2HL400



I/O Connectors*:

2HL400CC:
100 Ohm Twisted Pair (9 pin Micro D)

2HL400FF:
1300 nm Duplex Fiber (SC)

2HL400L:
100 Ohm Twisted Pair +LVDS (25 pin Micro D)

2HL400S:
50 or 75 Ohm Coax (SMB)
Single ended or differential connection

2HL400T:
75 Ohm Triax (NDL-T)
Single ended or differential connection

* Pinout varies by product configuration. See user manual for details.

Specifications:

Front End:

I/O Interface	Cypress HOTLink 160 - 400 Mbps
Data Rate	Copper: 400 Mbps maximum Fiber: 266 Mbps maximum

Back End:

Bus Interface	32-bit, 33 MHz PCI 2.1 (standard) 64-bit, 66 MHz PCI 2.1 (special order)
Bus Throughput	132 MB/s using 32-bit PCI Back End 264 MB/s using 64-bit PCI Back End
Memory Capacity	1 MB (256K x 32) for 32-bit back end 512 KB (128K x 32 dual port) for 64-bit back end
Interrupt Support	Programmable through FPGA
DMA Support	Two integrated linked-list DMA controllers

General:

Mechanical	Single-wide PMC module
Power Requirements	+5 Volts, 1500 mA
Operating Temperature	0° to +55°C (Commercial) -40° to +70°C (Rugged Level 2)
Storage Temperature	-40° to +85°C (Commercial) -55° to +85°C (Rugged Level 2)
Ruggedization	Available commercial grade and Rugged Level 2. See Tekmicro Ruggedization Data Sheet for definition of environmental performance specifications.
Warranty	One year limited hardware warranty Ninety day limited software warranty

Features

Fully compliant with PCI 2.1 specification

Interoperable with supported hosts. Drop-in integration with RACEway and MC/OS using Tekmicro's PowerRACE carrier card.

Copper Media

Allows longer-distance solutions up to 50 meters cost-effectively

Onboard clock synthesizers

Supports exact generation of arbitrary clock frequencies to match interface requirements

Optional dual crystal oscillator

Optional independent crystal oscillator based frequency sources for each HOTLink channel

Memory buffer

Allows zero wait state DMA block transfers; supports custom applications which require lookup or temporary memory

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