



Agilent HHBA-5101 64-bit Tachyon TL PCI-to-Fibre Channel Adapter

Product Overview



Description

The HHBA-5101 is a 64-bit PCI-to-Fibre Channel Adapter for mass storage applications that require FC-AL or Fabric, Class 3 and SCSI upper layer protocol handling.

At the heart of these is the HPFC-5100 Tachyon TL Fibre Channel Interface Controller IC.

The 1Gb/s Fibre Channel Adapters are powered by Agilent Tachyon controllers, based on a Finite State Machine (FSM) architecture. The FSM allows performance to scale seamlessly with increased server CPU power. By contrast, processor-based adapters are limited by the maximum performance of the processor itself.

Software Driver Support

Agilent offers a Tachyon Software Developer's Kit (TSDK) for Windows NT® 4.0, Linux environments and VXWorks.

Product Offering

The HHBA-5101 is available in four configurations. The HHBA-5121x and HHBA-5121xP are single and bulk packaged adapters, respectively. In addition, there are two bulk package options which include an industry standard GBIC: HHBA-5121xP1 with an 850 nm optical GBIC or HHBA-5121xP2 with an HSSDC Copper GBIC.

Features

- **Fibre Channel data transfer rates:**
 - up to 100 MB/s (Half duplex)
 - up to 200 MB/s (Full duplex)
- **Physical interface style**
 - **GBIC (optical or copper) for applications requiring reliability and flexibility**
- **Supports Fibre Channel Arbitrated Loop (FC-AL) including Public Loop and Fabric (F- and FL-port login)**
- **One or less PCI bus interrupt per SCSI I/O operation**
- **64-bit Universal PCI interface (2.1 compliant)**

Workstation and Server Applications

- **Storage Area Networks (SANs)**
- **Data warehousing**
- **Clustering**
- **Remote back-up**
- **Near on-line storage**
- **Video editing & CAD**



Specifications

Fibre Channel Operation

| | |
|------------------------------|--|
| Fibre Channel Data Rate | 1 Gbit/sec, 100 MBytes/sec (half duplex), 200 Mbytes/sec (full duplex) |
| Topology | Arbitrated Loop – Public and private, Fabric support (F- and FL-login) |
| Class | 3 |
| Upper Layer Protocol | SCSI FCP - On-chip automation of complete SCSI I/O |
| Loop Initialization | Completely hardware-based for high availability |
| Arbitrated Loop Capabilities | Loop map, Loop directed reset, Loop broadcast |
| Link Diagnostics | Link Status indicators, internal/external loopback |
| Compliance | FC-PH, FC-AL, FC-PLDA, FCP-SCSI |

PCI

| | |
|----------------------------|--|
| Compliance | PCI Local Bus specification v2.1 |
| Rate & Width | 33 MHz, 64/32-bit PCI |
| Burst Transfer Rate | 264 Mbytes/sec, guaranteed for length of frame, inbound & outbound at 64-bit, 33 MHz |
| Dual Address Cycle Support | Yes (64-bit PCI addressing) |
| Hot Plug Support | Yes |
| Additional PCI Features | Zero wait state multiple cache line bursting capable up to full frame size, 32-byte cache line |

Tachyon TL Architectural Features

| | |
|--------------------------------|--|
| Complete Hardware-based Design | Numerous independent functional blocks concurrently processing inbound data, outbound data, control and commands in hardware Automation of complete I/O on-chip in hardware Results in lowest latency & I/O overhead and highest levels of parallelism |
|--------------------------------|--|

Physical and Environmental

| | |
|-----------------------------|-----------------------------------|
| PCB Size | Universal PCI short card |
| PCB Power | 5W max, at 5V ± 5% |
| Supply Voltage | 5V ± 5% |
| Operating Temperature Range | 0° to 55° Centigrade (no airflow) |
| Storage Temperature Range | -40° to 70° Centigrade |
| Relative Humidity | up to 90% (non-condensing) |

Software Support

| | |
|---|---|
| Tachyon Software Developer's Kit (TSDK) | Windows NT 4.0 Linux Environments VXWorks |
|---|---|

Certifications

| | |
|----------------------|---|
| FCC Class B | US/FDA/CDRH Laser AEL Class I (21CFR) |
| CE | TÜV Rheinland Laser AEL Class 1 (EN60825-1+A11) |
| VCCI ITE Class | Yes |
| C-TICK (AZ/NZS 3548) | Yes |

www.agilent.com/semiconductors

For product information and a complete list of distributors, please go to our web site.

For technical assistance call:

Americas/Canada: +1 (800) 235-0312 or
(408) 654-8675

Europe: +49 (0) 6441 92460

China: 10800 650 0017

Hong Kong: (+65) 6271 2451

India, Australia, New Zealand: (+65) 6271 2394

Japan: (+81 3) 3335-8152(Domestic/International), or
0120-61-1280(Domestic Only)

Korea: (+65) 6271 2194

Malaysia, Singapore: (+65) 6271 2054

Taiwan: (+65) 6271 2654

Data subject to change.

Copyright © 2002 Agilent Technologies, Inc.

Obsoletes 5988-6274EN

July 25, 2002

5988-7408EN



Agilent Technologies