



Agilent HHBA-5121 66 MHz 64-bit PCI-to-Fibre Channel Adapter

Product Overview



Product Description

The HHBA-5121 is a 64-bit, 66 MHz 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 the HHBA-5121 is the HPFC-5166 Tachyon TS Fibre Channel Interface Controller IC.

Scalable Performance Matches Demanding SAN Requirements

The 1 Gb/s HBAs 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 Support

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

Product Offering

The HHBA-5121 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 connectivity**
 - 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**
- **66 MHz, 64-bit Universal PCI interface**
 - Fully backward compatible with 32-bit & 33 MHz PCI
 - PCI 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	33/66 MHz, 64/32-bit PCI
Burst Transfer Rate	528 Mbytes/sec, guaranteed for length of frame, inbound & outbound at 64-bit, 66 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 TS 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
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Physical and Environmental

PCB Size	Universal PCI short card (6.421" x 4.2")
PCB Power	7W 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
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Certifications

FCC Class B	US/FDA/CDRH Laser AEL Class 1 (2 CFR)
CE	TÜV Rheinland Laser AEL Class 1 (EN60825-1+A11)
VCC 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.

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Data subject to change.

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