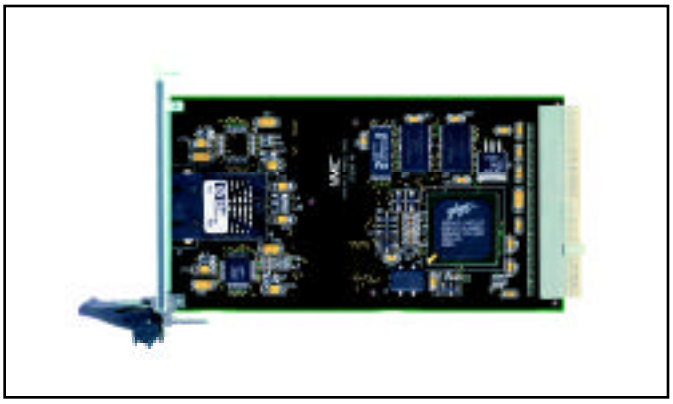
VMICPCI-5661
CompactPCI 1 Gigabit Fibre Channel Adapter

- Supports 200 Mbyte/s full-duplex communications in all Fibre Channel topologies (100 Mbyte/s simultaneous TX/RX)
- Available in two host bus speed versions:
  - 66 MHz, 64-bit CompactPCI® host bus interface
  - 33 MHz, 64-bit CompactPCI host bus interface
- Compliant with PCI Local Bus specification revision 2.1
- Support for F-PORT and FL-PORT fabric login
- Compliant with ANSI SCSI standards for class 2 and class 3 services:
  - Fibre Channel Arbitrated Loop (FC-AL-2) working draft, rev. 6.4, August 28, 1998
  - Fibre Channel Fabric Loop Attachment (FC-FLA) working draft, rev. 2.7, August 12, 1997
  - Fibre Channel Private Loop SCSI Direct Attach (FC-PLDA) working draft, rev. 2.1, September 22, 1997
- Supports Fibre Channel protocol SCSI (FCP-SCSI) and Fibre Channel IP protocols concurrently
- Supports TCP and UDP IP services
- Supports SCSI initiator/target and target modes (drivers for SCSI initiator only)
- On-board, enhanced RISC processor
- On-board gigabit serial transceivers
- Supports PCI dual-address and cache commands
- No host intervention required to execute complete SCSI and IP operations
- Supports multi-ID aliasing
- Fully backward compatible with 32-bit PCI
- Optional copper or fiber-optic interface
- Based on QLogic ISP 2200a series chip

INTRODUCTION — The VMICPCI-5661 is a single-board, highly integrated Fibre Channel host bus adapter (HBA) targeted at storage area networks (SANs), network applications, and computer clustering. The HBA connects the CompactPCI bus to a Fibre Channel loop, fabric, or to a point-to-point network. The VMICPCI-5661 maximizes Fibre Channel throughput while minimizing transfer latency and host processor overhead.

PRODUCT OVERVIEW — The VMICPCI-5661 is a host bus adapter specifically designed for storage area network (SAN) applications. Typical applications include enterprise-wide and workgroup configurations which consolidate hard disk arrays and tape library functions at a central location. Additionally, the VMICPCI-5661 is well suited for telecom, signal processing, and distributed computing applications due to its high network bandwidth. It incorporates a highly integrated, state-of-the-art ASIC that contains a 64-bit PCI host interface, an RISC processor, a Fibre Channel protocol engine, and dedicated transmit and receive buffers. Three independent DMA channels enable commands and data to be processed simultaneously, and the dedicated frame buffers optimize PCI bus utilization and enable continuous streaming of data during transfer operations. Simultaneous SCSI I/O commands are completely executed without host system intervention; no more than one system interrupt is generated per complete SCSI I/O. The highly integrated design promotes high reliability, low power consumption, and low cost.



Software Support: Linux, Windows NT®, VxWorks, Solaris x86 (SCSI initiator), and many others. See the Fibre Channel products area of **www.vmicnet.com** for the complete listing and latest information regarding software driver support.

TECHNICAL SPECIFICATIONS

Fibre Channel Transfer Rate: 100 Mbyte/s, 200 Mbyte/s (full duplex)

Host Bus Transfer Rate: 64-bit bus master DMA maximum burst data transfers up to 264 Mbyte/s (PCI - 64/33 MHz) or 528 Mbyte/s (PCI - 64/66 MHz)

Host Bus Signaling: Supports 5 or 3 V signaling

On-Board RAM: 128 Kbyte static RAM

PHYSICAL/ENVIRONMENTAL

Temperature Range: 0 to 50 ˚C, operating
-40 to 70 ˚C, storage

Relative Humidity: 20 to 80 percent, noncondensing

Power Requirements: 1 A (maximum) 5 VDC

Network Connections:
Twinax with HSSDC connector
(maximum distance - 30 m)

Fiber optic (multimode) with SC-type connectors
(maximum distance - 500 m)

Fiber optic (single-mode) with SC-type connectors
(maximum distance - 10 km)

Ordering Options								
May 31, 2000 800-655661-000 B		A	B	C	–	D	E	F
VMICPCI-5661	–				–			

A = Host Bus Clock Speed
0 = 33 MHz CompactPCI bus
1 = 66 MHz CompactPCI bus
B = Front Panel Option
0 = 3U Front Panel
1 = 6U Front Panel
C = Transmission Mode
0 = Multimode Fiber-Optic (SC-Type Connectors)
1 = Twinax (HSSDC)
2 = Single-Mode Fiber-Optic (SC-Type Connectors)

Connector Data	
SC to ST Adapter	SC Connector
AMP 503638-1 (or equivalent)	AMP 503948-1 (or equivalent)

Cable Specifications

Fiber-Optic Cable - Multimode; (62.5 Micron core); Single-Mode (9 Micron core).

Fiber-Optic Cable Assemblies		A	B	C	–	D	E	F
VMICBL-000-F4	–	0			–			

ABC = Cable Lengths

000 = .5 ft (0.15 m)	011 = 350 ft (106.68 m)
001 = 1 ft (.31 m)	012 = 500 ft (152.15 m)
002 = 5 ft (1.52 m)	013 = 574 ft (175 m)
003 = 10 ft (3.04 m)	014 = 656 ft (200 m)
004 = 25 ft (7.62 m)	015 = 820 ft (250 m)
005 = 50 ft (15.24 m)	016 = 1,000 ft (304.30 m)
006 = 80 ft (24.40 m)	017 = 1,148 ft (350 m)
007 = 100 ft (30.49 m)	018 = 1,312 ft (400 m)
008 = 150 ft (45.72 m)	019 = 1,500 ft (456.45 m)
009 = 200 ft (60.98 m)	020 = 1,640 ft (500 m)
010 = 250 ft (76.20 m)	

Twinax Cable Assemblies		A	B	C	–	D	E	F
VMICBL-001-33	–	0			–			

A = 0 (Option reserved for future use)
BC = Cable Lengths

00 = Not Used	06 = 10 m
01 = 0.5 m	07 = 15 m
02 = 1 m	08 = 20 m
03 = 3 m	09 = 25 m
04 = 5 m	10 = 30 m
05 = 7 m	

HSSDC-to-HSSDC Cable Assemblies		A	B	C	–	D	E	F
VMICBL-001-36	–				–			

003 = 3 m, 30 AWG, without Equalizers
310 = 10 m, 22 AWG, with Equalizers
325 = 25 m, 22 AWG, with Equalizers
(All other options not shown above are reserved for future use.)

Twinax Adapters

HSSDC-to-DB9 Adapter P/N VMICBL-001-34-000
DB9-to-DB9 Splitter Cable P/N VMICBL-001-35-001

See attached topology/cable configuration guide for application of these adapters.

For Ordering Information, Call:
1-800-322-3616 or 1-256-880-0444 • FAX (256) 882-0859
E-mail: info@vmic.com Web Address: www.vmic.com

TRADEMARKS

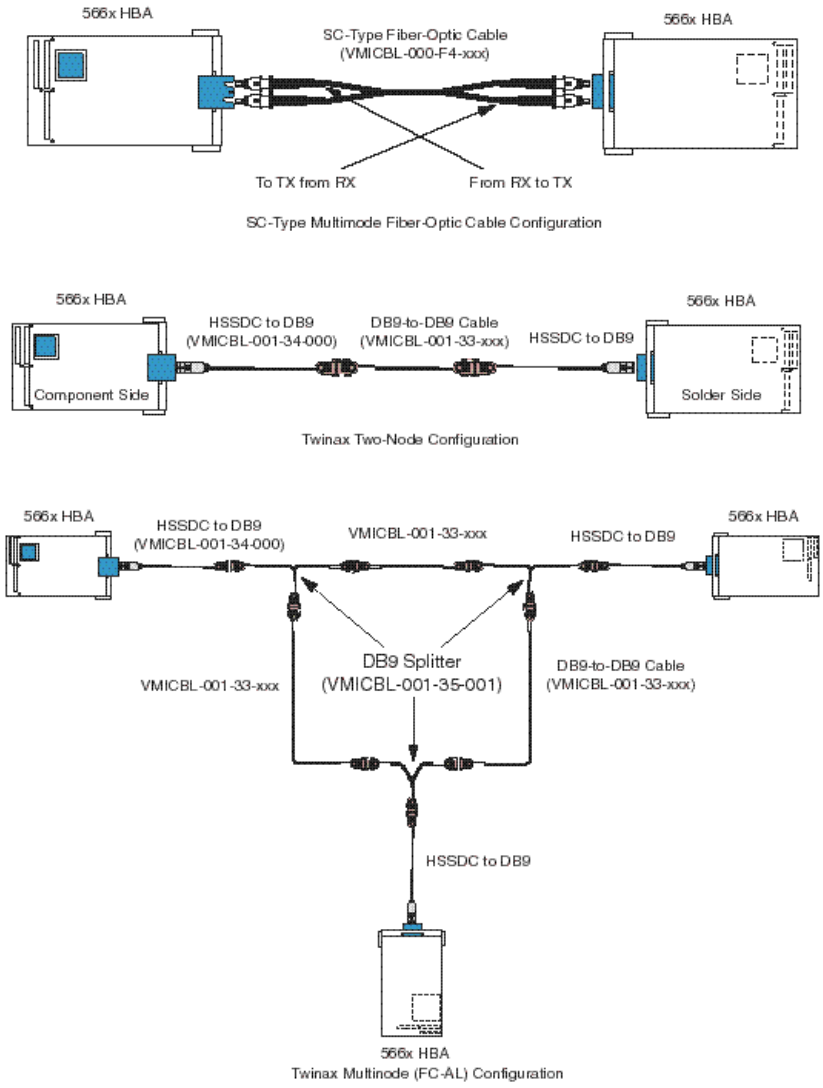


Figure 1. Fibre Channel Topology/Cable Configuration Guide