ADAPTEC®

A Complete Guide to

Adaptec Networking Products

Fall/Winter 1996

adaptec®

Easing the Migration to Fast Ethernet Networks

Adaptec's goal is to develop superior network products to increase network throughput and eliminate system bottlenecks. To do so, Adaptec takes a high-level systems approach to solving today's network problems. Our products are engineered to consistently outperform the competition and redefine the limits of network performance.

With our Cogent™ Ethernet and Fast Ethernet LAN adapters, Adaptec delivers superior price-performance. These adapter cards receive considerable praise from leading LAN publications, end users, and our many satisfied OEM customers.

Adaptec is fully committed to the continued improvement of PCI and Fast Ethernet technologies, and offers the industry's broadest range of Fast Ethernet adapters. Our adapter cards deliver a unique set of performance features, including:

- Predictive Pipelining™
- Full range of software drivers
- Support for all popular system bus architectures
- Multi-port advantages

A Wide Range of Fast Ethernet Solutions

Adaptec offers a series of stackable Fast Ethernet repeaters to meet today's corporate network needs. We provide a complete line of Fast Ethernet adapters and repeaters for all IEEE 802.3u Fast Ethernet topologies. Whether you run Fast Ethernet over pre-existing CAT 3 UTP cable plants, have already installed or upgraded to CAT 5 UTP cable, or require the long distance support that Fiber Fast Ethernet can provide, Adaptec offers the right Fast Ethernet solution for your network.

Leading the Way with ATM Technology

Adaptec took an early lead in ATM technology by developing powerful client-server interface products designed to eliminate network bottlenecks. Today, Adaptec delivers a complete family of ATM LAN adapter solutions for PCs, workstations, and servers.

Our ATM networking solutions, which comply with UNI 3.0, 3.1, and 4.0 standards and 25.6 Mbps and 155 Mbps ATM data rates, include adapters for SBus, PCI and Micro Channel systems. These products offer both unshielded, twisted-pair (UTP) and multi-mode fiber (MMF) media interfaces.

Adaptec plays a large role in facilitating the deployment of ATM for use in advanced networks all over the world. In addition to providing high performance ATM adapters, Adaptec works closely with its customers to simplify their migration to ATM. Adaptec thoroughly tests its ATM products to ensure interoperability and provides the support services customers need to capitalize on the enormous benefits of ATM technology.
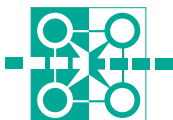
Ethernet/Fast Ethernet Products

- Cogent PCI Ethernet LAN Adapters
- Cogent Fast Ethernet LAN Adapters
- Cogent Quartet™ Adapters

Repeater Products

- Cogent Fast Ethernet Repeaters

ATM Products

- Adaptec® ATM25™ LAN Adapters
- Adaptec® ATM155™ for PCI LAN Adapters
- Adaptec® ATM155™ for SBus LAN Adapters

Cogent PCI Ethernet LAN Adapters
10 Mbps

The Adaptec Cogent ANA™-6901 was the first Ethernet adapter on the market for the new PCI bus architecture. Designed according to PCI local bus specifications, the adapter delivers fast and trouble-free connections to Ethernet networks.

The Adaptec Cogent ANA-6901 family features two, 32-bit, bus mastering solutions for PCI bus servers and workstations. The ANA-6901 adapter is an RJ-45 only version, and the ANA-6901 Combo model offers both RJ-45 and BNC connectors. With processor-independence, and very large scale integration, these adapters bring full 132 MByte/sec PCI data throughput to the network at a low cost.

Product Highlights

- 132 MByte/sec (33 MHz) burst data rate across the PCI bus

- Small form factor design fits in virtually all PCI systems

- Predictive Pipelining™ for greater throughput with lower CPU utilization in NetWare environments

- Full Duplex Ethernet (FDE) capability to double the cumulative system throughput rate to 20 Mbps in switched Ethernet networks

- Self-configured design for Plug-and-Go operation

- Combo connector and twisted pair versions available for maximum flexibility

Software Drivers

- DOS ODI
- DOS NDIS
- NetWare 3.1x and 4.x
- OS/2 NDIS
- OS/2 Warp
- Windows® for Workgroups
- Windows® 95
- Windows NT™
- SCO UNIX
- LAN Manager
- NEXTSTEP
- Sun Solaris

Ethernet Products

The first Ethernet adapters for the PCI bus, Adaptec's Cogent ANA-6901 Ethernet adapters provide optimum performance for networked PCs, workstations, and servers.

Cogent Fast Ethernet LAN Adapters
10/100 Mbps and 100 Mbps

Adaptec offers Fast Ethernet products to meet every adapter and repeater environment, including 10BASE-2, 10BASE-T, 100BASE-TX, 100BASE-T4, and 100BASE-FX (fiber).
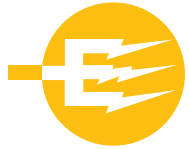
Our Cogent Fast Ethernet adapters are designed for PCI, EISA and ISA servers and workstations. This family of adapters provides the fastest, simplest way to connect to Fast Ethernet networks. High-speed Cogent adapters deliver impressive price-performance advantages to networks migrating to, or currently running, Fast Ethernet.

Product Highlights

- Powers large amounts of data across the network for resource-intensive graphics, multimedia, and mission-critical applications
- Full Duplex Ethernet (FDE) capability on PCI models to double the cumulative system throughput rate in switched Ethernet/Fast Ethernet networks
- Full AutoSensing capabilities allow the adapters to automatically detect the network's maximum line speed without manual adapter configuration
- Predictive Pipelining for greater throughput with lower CPU utilization in NetWare environments
- Universal cable connectivity with a BNC coax connector to connect to existing coax networks now, and upgrade to twisted pair Fast Ethernet in the future
- SNMP management through standard network management
- Comprehensive diagnostics utility
- Self-configuring design

Models to Support Any Standard

- Cogent PCI, EISA, and ISA models support 10/100 Mbps IEEE 802.3 10BASE-T and 10BASE-2 standards
- Cogent PCI, EISA and ISA Models support 100 Mbps IEEE 802.3u 100BASE-TX standard
- Cogent PCI models support 100 Mbps IEEE 802.3u 100BASE-FX (fiber) standard

Fiber versions available for both ST (twist-on) and SC (push-on) connectors allow cabling distances of up to 400 meters in half-duplex, and 2 kilometers in full duplex, for use in electronically "noisy" environments.

Software Drivers
- DOS ODI
- DOS NDIS
- LAN Workplace for DOS
- NetWare 3.1x and 4.x
- OS/2 NDIS
- OS/2 Warp
- IBM LAN Server
- Windows for Workgroups
- Windows 95
- Windows NT
- SCO UNIX
- DEC PATHWORKS
- FTP PC/TCP
- LAN Manager
- Artisoft LANtastic
- VINES
- NEXTSTEP
- Sun Solaris

Fast Ethernet Products

Adaptec Cogent Fast Ethernet adapters comply with T4, TX, and FX standards to deliver great price-performance for networks migrating to, or currently running, Fast Ethernet.

LAN PRODUCTS OF THE YEAR

Cogent Quartet™
Multichannel PCI Ethernet/Fast Ethernet LAN Adapters
10/100 Mbps, 10 Mbps, and 100 Mbps

Cogent Quartet adapters provide the ultimate performance solution for PCI servers operating on Ethernet and Fast Ethernet networks. With four channels on a single board and optional Full Duplex support, the Quartet adapters have the features today's 32-bit Ethernet and Fast Ethernet servers need to handle Windows, graphics, multimedia, database, and mission-critical applications.

These innovative adapters provide ample bandwidth for even the most demanding networks. They support up to four network segments on separate channels for cumulative throughput of up to 800 Mbps (depending on adapter model). With the Cogent Quartet adapters, cable plant upgrades are not necessary. They will run on any UTP cable currently running 10BASE-T and can be used when you're ready to run at 100 Mbps–with the same cable. The Cogent Quartet adapters multiply flexibility, performance and cabling compatibility by four to provide easy migration paths to Fast Ethernet network solutions.

Product Highlights

- Four connectors to support four separate network segments

- Multiple Quartet adapters can be installed on each server for even greater bandwidth

- Efficient bus master design for maximum performance with minimum CPU utilization

- NWay compatible AutoSensing of maximum line speed allows the adapters to automatically detect the network's maximum line speed without adapter configuration

- Full Duplex Ethernet (FDE) capability to double the cumulative system throughput rate in switched Ethernet/Fast Ethernet networks

- Integrated 2 KByte transmit and 4 KByte receive FIFOs (First In, First Out) memory on each channel

- Predictive Pipelining for greater throughput with lower CPU utilization in NetWare environments

- Comprehensive diagnostics utility

Models to Support Multiple Standards

- Cogent Quartet ANA-6904
  10 Mbps IEEE 802.3 10BASE-T standard

- Cogent Quartet ANA-6940
  100 Mbps IEEE 802.3u 100BASE-TX standard

- Cogent Quartet ANA-6944
  10 Mbps IEEE 802.3 10BASE-T standard
  100 Mbps IEEE 802.3u 100BASE-TX and T4 standards

Software Drivers

- Novell NetWare
- Windows for Workgroups
- Windows 95
- Windows NT
- DOS NDIS
- OS/2 WARP
- LAN Manager
- Artisoft LANtastic
- Banyan Vines
- FTP PC/TCP
- DEC PathWorks
- Sun Solaris

Ethernet and Fast Ethernet Products

Adaptec Cogent Quartet adapters feature four channels on a single board to provide cumulative throughput of up to 800 Mbps and easy migration paths to Fast Ethernet networks.

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Cogent Fast Ethernet Repeaters
100 Mbps

Adaptec features a full line of Cogent Fast Ethernet repeaters (hubs) for T4, TX, and FX environments. Models are available for use with CAT 3, 4 or 5 UTP wiring, and standard multimode fiber optic cables. Each repeater provides cost-effective integration of Fast Ethernet into existing networks regardless of cable type. Rack mounting brackets and stackability make these repeaters easy to install and maintain.

The Cogent repeaters include LEDs for power, collision, and activity. Each port has two LEDs indicating activity and link/partition. For even more flexibility, the repeater's last port can be used with both straight-through and cross-over cables connected to a workstation or server. T4 and TX repeaters are equipped with 12 ports and can be stacked with up to four other repeaters to form one logical hub with up to 60 ports. FX repeaters are likewise stackable and equipped with 9 ports, 8 fiber and 1 UTP.

Product Highlights

- Scalable architecture, stackable in groups of five
- Operates on any pre-existing voice grade twisted pair cabling
- Two LEDs per port (Activity and Link/Partition)
- Up to 12 network device attachments per hub (9 nodes for FX version)
- Cabling distances up to 100 meters with UTP, and 137 meters with fiber
- 19" rack mountable
- 110/220 volt power supply
- Class 1 802.3u repeater
- Optional stacking cable

Models to Support any Standard

• ANH™-6012/T4 HUB

Supports 100 Mbps IEEE 802.3 100BASE-T4 standard

• ANH-6012/TX HUB

Supports 100 Mbps IEEE 802.3 100BASE-TX standard

Supports all Fast Ethernet protocols and frame types

Stacks interchangeably with FX and TX repeaters

• ANH-6012/FX HUB

Supports 100 Mbps IEEE 802.3 100BASE-FX standard

Cabling distances up to 137 meters for "electrically noisy" environments

Stacks interchangeably with FX and TX repeaters

Versions available with either ST (twist-on) or SC (push-on) connectors

Repeater Products

Stackable repeaters for T4, TX and FX Fast Ethernet environments provide cost-efficient integration of Fast Ethernet into networks with CAT 3, 4 or 5 UTP cabling and fiber plants.

Adaptec ATM25 LAN Adapters
For PCI, SBus and Micro Channel systems

The Adaptec ATM25 family of ATM LAN adapters provide desktop systems the bandwidth required to cost-effectively and efficiently run imaging, graphics, multimedia, and distributed data applications. These adapters increase network performance by helping to eliminate bottlenecks and increase data transfer rates.

The ATM adapters integrate seamlessly with traditional local area networks and comply with ATM Forum standards to ensure interoperability with major vendors' ATM switches, routers, concentrators, and edge devices. The LAN Emulation standard ensures that users are free to choose from a variety of Adaptec ATM solutions and integrate them with legacy LANs. This high level of interoperability and compatibility optimizes users' investment in desktop systems, and enables users to migrate at the pace they choose.
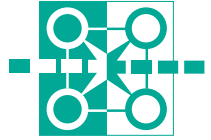
Adaptec ATM25 adapters are manageable through SNMP allowing customers the flexibility to use existing network management software to monitor adapter status.

Product Highlights

- Full duplex 25 Mbps connection to standards-based ATM networks
- Choice of adapters for PCI, SBus or Micro Channel systems using a UTP Category-3 (RJ-45) interface
- LAN Emulation and Classical IP over ATM client support
- Up to 1,024 concurrent virtual circuits supported with either SVCs or PVCs
- Manageable through SNMP using the ATM Forum ILMI MIB

Models for PCI, SBus, or Micro Channel

- ANA-5210

  25 Mbps

  Supports SBus systems and UTP 3 and STP interfaces

- ANA-5910 EL

  25 Mbps

  Supports PCI systems, UTP 3, STP interfaces, and up to 40 simultaneously active virtual circuits
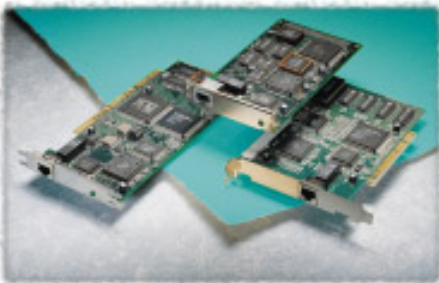
- ANA-5910 DX

  25 Mbps

  Supports PCI systems, UTP 3 and STP interfaces, and up to 200 simultaneously active virtual circuits

- ANA-5610

  25 Mbps

  Supports Micro Channel systems and UTP 3, STP interfaces

Software Drivers

- Windows NT versions 3.5x and 4.x
- Windows 95
- DOS/Windows 3.1x
- OS/2 Warp
- NetWare Server 3.12 and 4.x
- Software 5210
- Sun OS version 4.1x.
- Solaris version 2.3, 2.4, and 2.5

ATM Products

Adaptec's family of 25 Mbps ATM adapters for PCI, SBus and Micro Channel systems delivers the bandwidth benefits of ATM as well as optimum cost-efficiency.
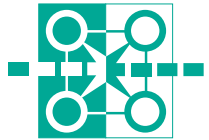
Adaptec ATM155 LAN Adapters
For PCI Systems

With the Adaptec ATM155 family of ATM LAN adapters, users can take full advantage of powerful, business-critical applications. The Adaptec ATM155 adapters eliminate network bottlenecks, increase data rates, and enable full duplex transmission for two-way simultaneous data movement. These adapters integrate seamlessly with traditional local area networks and comply with ATM Forum standards to ensure interoperability with major vendors' ATM switches, routers, concentrators, and edge devices. These ATM adapters offer advanced performance in pure ATM networks, and because they comply with ATM Forum LAN Emulation standards, Adaptec adapters can extend existing Ethernet or Token Ring networks to new ATM clients and servers. This enables companies to preserve their investments in networking hardware and software while building for the future.

Adaptec ATM155 adapters are manageable through SNMP allowing customers the flexibility to use existing network management software to monitor adapter status.

Product Highlights

- Full duplex 155 Mbps connection to ATM networks for PCI workstations and servers
- LAN Emulation and Classical IP over ATM for transparent integration with existing LANs
- Up to 1,024 virtual circuits supported with either SVCs or PVCs
- Manageable through SNMP and ATM Forum ILMI MIB

Models to Support PCI Systems
- ANA-5930

  155 Mbps

  Supports PCI systems and the UTP 5 interface

- ANA-5940

  155 Mbps

  Supports PCI systems and the MMF interface

Software Drivers
- Windows NT versions 3.5x and 4.x
- Windows 95
- DOS/Windows 3.1x
- OS/2 Warp
- NetWare Server 3.12 and 4.x

ATM Products

Adaptec's family of 155 Mbps adapters for PCI systems deliver the bandwidth required to run today's multimedia applications in networking environments.

Adaptec ATM155 LAN Adapters
For SBus Systems

With the Adaptec ATM155 family of ATM LAN adapters, users can now take full advantage of powerful business and engineering applications.
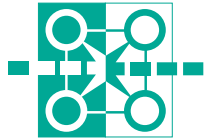
These ATM adapters increase network performance by helping to eliminate bottlenecks, increase data transfer rates, and enable users to preserve investments in legacy systems.

The Adaptec ATM adapters integrate seamlessly with traditional local area networks and comply with ATM Forum standards to ensure interoperability with major vendors' ATM switches, routers, concentrators, and edge devices. They take advantage of ATM Forum-based LAN Emulation to give users freedom of choice when implementing ATM solutions in legacy LAN environments. This high level of interoperability optimizes LAN technology investments, eliminates dependence on a single vendor, and enables users to migrate at their own pace.

Adaptec ATM155 adapters are manageable through SNMP allowing customers the flexibility to use existing network management software to monitor adapter status.

Product Highlights

- Full duplex 155 Mbps connection to ATM networks for Sun workstations

- LAN Emulation and Classical IP over ATM for transparent integration with existing LANs

- Up to 1,024 virtual circuits supported with either SVCs or PVCs

- Manageable through SNMP and ATM Forum ILMI MIB

- Ideal for either workstations or workgroup server applications

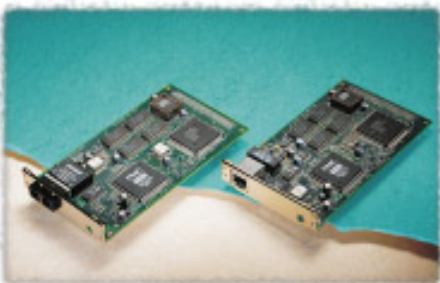## Models to Support SBus Systems

- ANA-5230

  155 Mbps

  Supports SBus systems and the UTP 5 interface

- ANA-5240

  155 Mbps

  Supports SBus systems and the MMF interface

Software Drivers

- Sun OS version 4.1x
- Solaris version 2.3, 2.4, and 2.5

ATM Products

Adaptec's family of 155 Mbps adapters for SBus systems are for Sun users who require network access to business-critical applications.

Conversion and Product Reference Chart

Cogent PCI Ethernet LAN Adapters

New Model #	Previous Model #	Bus	Speed	Interface
ANA-6901 Combo	EM960C	PCI	10 Mbps	RJ-45, BNC, AUI
ANA-6901	EM960TP	PCI	10 Mbps	RJ-45

Cogent PCI Quartet LAN Adapters

New Model #	Previous Model #	Bus	Speed	Interface
ANA-6944/TX	EM440TX-PCI	PCI	4 x 10/100 Mbps	RJ-45 (4)
ANA-6944/T4	EM440T4-PCI	PCI	4 x 10/100 Mbps	RJ-45 (4)
ANA-6940/TX	EM400TX-PCI	PCI	4 x 100 Mbps	RJ-45 (4)
ANA-6904/BNC	EM964BNC	PCI	4 x 10 Mbps	BNC (4)
ANA-6904	EM964TP	PCI	4 x 10 Mbps	RJ-45 (4)

Cogent 10/100 Fast Ethernet LAN Adapters

New Model #	Previous Model #	Bus	Speed	Interface
ANA-6911/TX Combo	EM110TX-PCI-C	PCI	10/100 Mbps	RJ-45, BNC
ANA-6911/TX	EM110TX-PCI	PCI	10/100 Mbps	RJ-45
ANA-6911/T4 Combo	EM110T4-PCI-C	PCI	10/100 Mbps	RJ-45, BNC
ANA-6911/T4	EM110T4-PCI	PCI	10/100 Mbps	RJ-45
ANA-6910/TX	EM100TX-PCI	PCI	100 Mbps	RJ-45
ANA-6910/FXST	EM100FX-PCI-ST	PCI	100 Mbps	ST
ANA-6910/FXSC	EM100FX-PCI-SC	PCI	100 Mbps	SC
ANA-6711/TX Combo	EM110TX-EISA-C	EISA	10/100 Mbps	RJ-45, BNC
ANA-6711/TX	EM110TX-EISA	EISA	10/100 Mbps	RJ-45
ANA-6711/T4 Combo	EM110T4-EISA-C	EISA	10/100 Mbps	RJ-45, BNC
ANA-6711/T4	EM110T4-EISA	EISA	10/100 Mbps	RJ-45
ANA-6710/TX	EM100TX-EISA	EISA	100 Mbps	RJ-45
ANA-6511/TX Combo	EM110TX-ISA-C	ISA	10/100 Mbps	RJ-45, BNC
ANA-6511/TX	EM110TX-ISA	ISA	10/100 Mbps	RJ-45
ANA-6511/T4 Combo	EM110T4-ISA-C	ISA	10/100 Mbps	RJ-45, BNC
ANA-6511/T4	EM110T4-ISA	ISA	10/100 Mbps	RJ-45
ANA-6510/TX	EM100TX-ISA	ISA	100 Mbps	RJ-45

Cogent Fast Ethernet Hubs

New Model #	Previous Model #	Speed	Interface
ANH-6008/FXSC HUB	S800FX-SC	100Mbps	SC MMF
ANH-6008/FXST HUB	S800FX-ST	100Mbps	SC MMF
ANH-6012/T4 HUB	S1200-T4	100Mbps	RJ-45
ANH-6012/TX HUB	S1200-TX	100Mbps	RJ-45
ANH-STK/T4 SGL	STK-T4	Connector	na
ANH-STK/TX-FX SGL	STK-TX/FX	Connector	na

Adaptec ATM25 LAN Adapters

Model Number	Speed	Bus	Media Interface
ANA-5210	25 Mbps	SBus	UTP 3, STP
ANA-5910 (EL/DX options)	25 Mbps	PCI	UTP 3, STP
ANA-5610	25 Mbps	MCA	UTP 3, STP

Adaptec ATM155 LAN Adapters

Model Number	Speed	Bus	Media Interface
ANA-5230	155 Mbps	SBus	UTP 5
ANA-5240	155 Mbps	SBus	MMF
ANA-5930	155 Mbps	PCI	UTP 5
ANA-5940	155 Mbps	PCI	MMF

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