

HP EtherTwist Product Catalog



May 1992

HP EtherTwist Network Products

Complex problems. A simple solution.

We'd like to propose a simple solution for your complex networking problems:

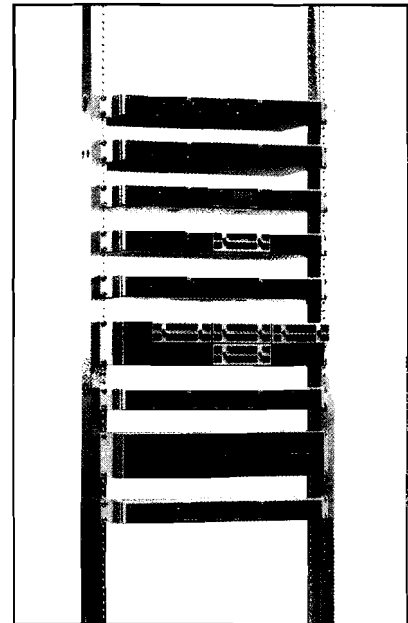
The HP EtherTwist family of networking products.

Whether you're building growth potential into a startup network, or wiring together an enterprise network from mixed pieces all over the world, HP's EtherTwist networking products will simplify your network. This complete line of networking products—including cards, hubs, bridges, routers, and management software—provides the connectivity, performance, and management you need at a cost that won't break your budget.

Benefits

- **Flexibility:** HP's "rack and stack" components let you custom-tailor your network to your present and future needs, without the costs, complexities, and compromises of cardcage configurations. Simply select the components you want—hubs, bridges, and routers—in the capacities you need, and connect them together with a "virtual backplane" of thin coaxial cable to build the network that matches your requirements. All common Ethernet/IEEE 802.3 cable types—twisted-pair, fiber-optic, and thick and thin coaxial—are fully supported, and the Router TR allows easy connection to token ring networks.
- **Ease of Use:** The HP EtherTwist components have had ease of use designed in from the beginning. The hubs and bridges are set up at the factory to work with the most common network configurations right out of the box. Many applications allow true "plug and play" operation: just plug in the data cables and the power, and your network is up and running. In other situations, only a minimum of configuration is needed to get your network going. Even with devices as complex as routers, an easy session with the Quick Config utility is usually all that's needed to start operation. Console interfaces and connector layouts have been designed for the greatest consistency possible, and the network management software offers point-and-click access to sophisticated monitoring and control functions.
- **Interoperability:** Because HP EtherTwist products adhere to industry and de facto standards, you can be sure that they will interoperate successfully in multivendor networks. And HP EtherTwist network management software, operating under the de facto standard HP OpenView environment, manages all vendors' SNMP/IP and SNMP/IPX devices that adhere to standard MIB-II specifications, as well as several devices with proprietary MIBs.

Complete line of networking hardware from the leading network management company



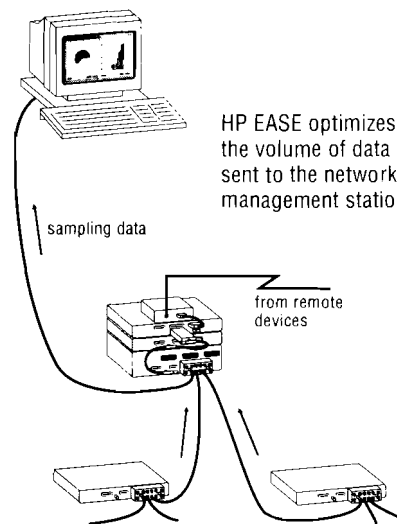
Connectivity, performance, and management at a lower price.

- **Reliability:** The Hewlett-Packard name has long been synonymous with quality and reliability. The HP EtherTwist products continue this tradition using the latest in application-specific integrated circuits (ASICs) and surface-mount technology (SMT). The resulting low parts counts, combined with extensive testing, yield superior reliability—many EtherTwist products carry mean-time-between-failure (MTBF) ratings measured in centuries rather than hours or years.
- **Single-View Network Management:** The SNMP-based agent firmware installed in HP's managed hubs, bridges, and routers allows full management by HP's OpenView Hub Manager/DOS and Interconnect Manager/DOS in IP and IPX networks. These managers can also manage the proprietary MIBs of several third-party network devices, as well as any device that conforms to standard MIB-II specifications. Because this management takes place at the IP/IPX level, a central network management station can monitor and control any manageable device on any subnet, anywhere in the world.
- **Improved Operational Control of Your Network:** The comprehensive device management offered by Hub Manager and Interconnect Manager is now enhanced by the addition of HP EASE, which allows management of the network as a whole. EASE stands for Embedded Advanced Sampling Environment, a breakthrough technology that adds data collection capabilities to your HP hubs and bridges. This gives you more complete management of your entire network in real time from a central management station.

Distributed, embedded instrumentation: HP's managed hubs and bridges now ship with firmware that allows them to act as data-gathering instruments on the network. By distributing the data-gathering throughout the entire network and using advanced sampling techniques that take up only a small portion of the processing power in each device, the HP EASE architecture can provide accurate, real-time data in compact form to a central management station from any part of the network. This provides a new level of capability that complements your existing dedicated instrumentation.

Full network management: HP OpenView Resource Manager, the first network management software to take advantage of the HP EASE architecture, makes the transition from traditional device management to full network management. Resource Manager performs trend analysis on the traffic flowing through the network and identifies the stations generating the most traffic and the most errors on the network. This information indicates parts of the network you may want to monitor further with a LAN analyzer, and points out devices appropriate for monitoring and control with HP OpenView Hub Manager/DOS or Interconnect Manager/DOS. Future network management software using the HP EASE technology will predict traffic trends and problems on the network and actually prescribe the corrective actions you should take.

Improved operational control of your network



HP EASE optimizes the volume of data sent to the network management station.

HP EASE distributes embedded instrumentation throughout the network.

HP Computer Museum
www.hpmuseum.net

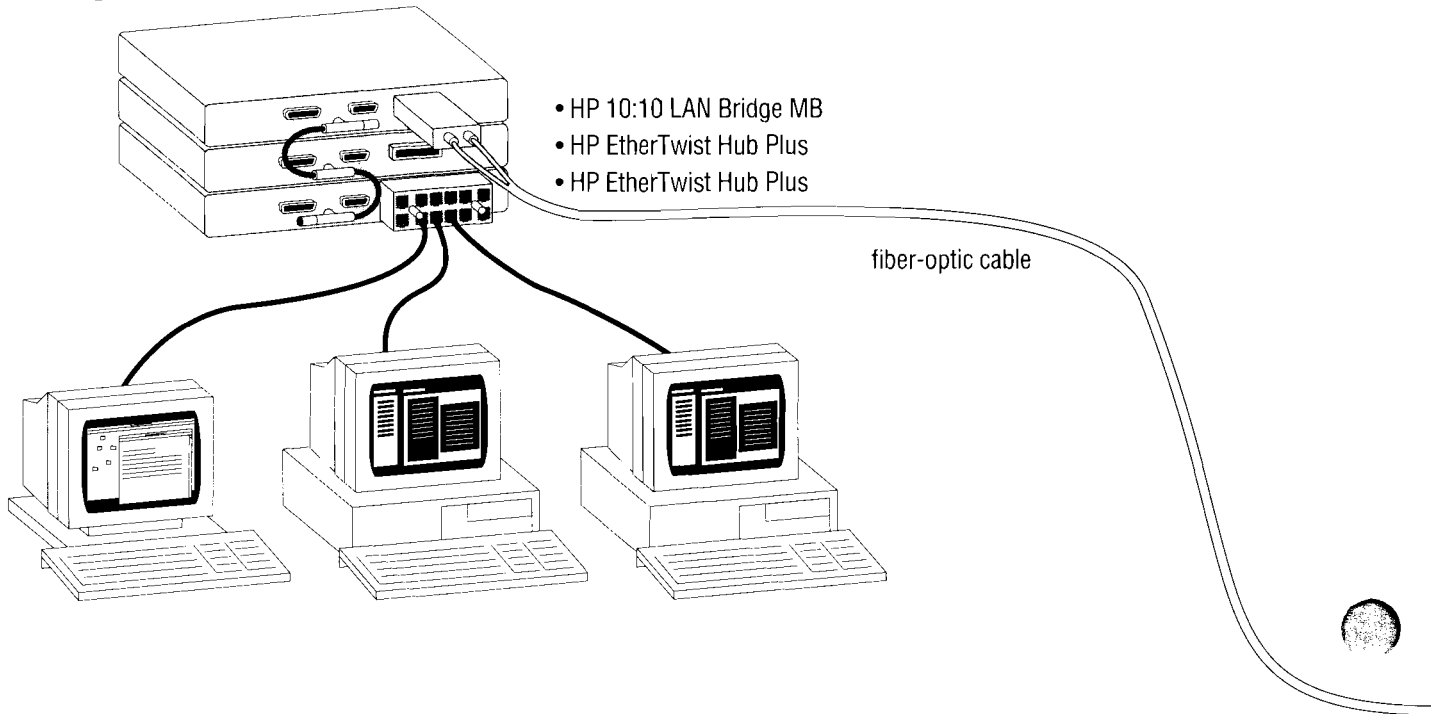
For research and education purposes only.

HP EtherTwist Components

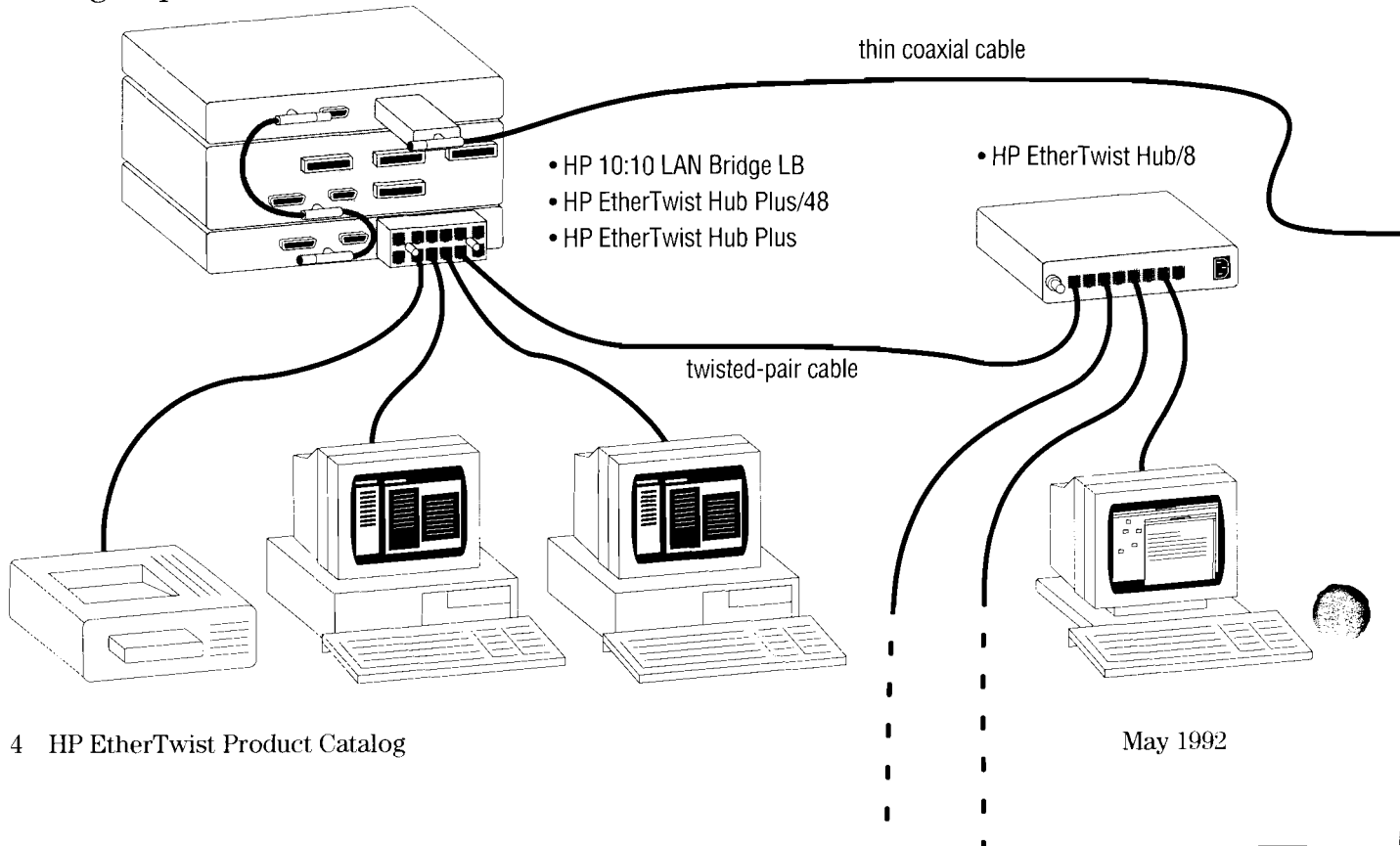
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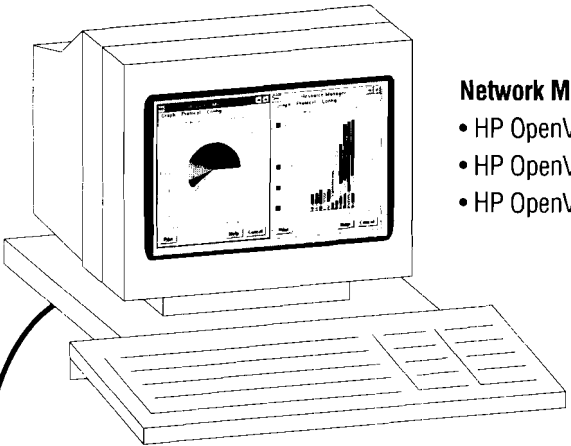
HP EtherTwist: The Simplest Way to Build a Network

Workgroup



Workgroup





- Network Management**
- HP OpenView Hub Manager/DOS
 - HP OpenView Interconnect Manager/DOS
 - HP OpenView Resource Manager/DOS

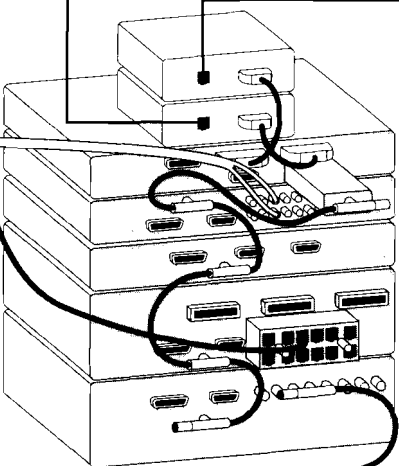


wide area link

wide area link

Remote Site

- DSU/CSU
- HP Router TR
- HP EtherTwist Hub Plus
- HP EtherTwist Hub Plus/48

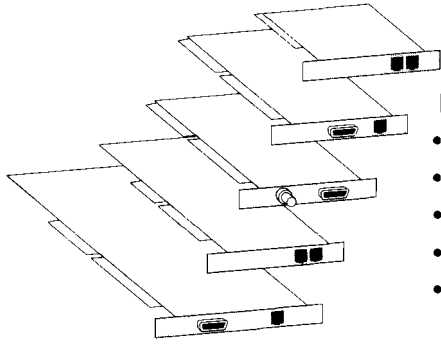


- DSU/CSU
- DSU/CSU
- HP Router ER
- HP Fiber-Optic Hub Plus
- HP 10:10 LAN Bridge MB
- HP EtherTwist Hub Plus/48
- HP ThinLAN Hub Plus

Site

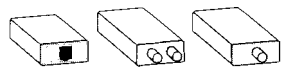
Remote Site

- DSU/CSU
- HP Remote Bridge RB
- HP EtherTwist Hub Plus
- HP EtherTwist Hub Plus



- EtherTwist Adapter Cards**
- HP PC LAN Adapter/8 TP
 - HP PC LAN Adapter/16 TP
 - HP PC LAN Adapter/16 TL Plus
 - HP MC LAN Adapter/16 TP Plus
 - HP EISA LAN Adapter/32 TP

- EtherTwist Transceivers**
- HP EtherTwist Transceiver
 - HP Fiber-Optic Transceiver
 - HP ThinLAN Transceiver



HP EtherTwist LAN Adapters

- HP 27248A EISA LAN Adapter/32 TP
- ☆ HP 27247B PC LAN Adapter/16 TP Plus
- ☆ HP 27269B PC LAN Adapter/16 TP Plus 6-Pack
- ☆ HP 27252A PC LAN Adapter/16 TL Plus
- HP 27246A MC LAN Adapter/16 TP
- HP 27245A PC LAN Adapter/8 TP
- HP 27267A PC LAN Adapter/8 TP 6-Pack

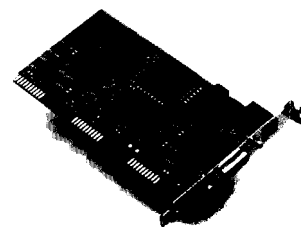
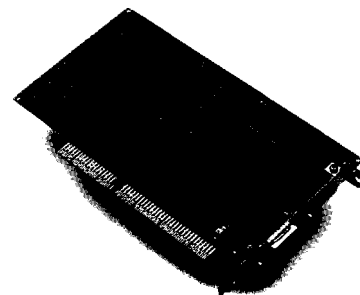
The HP EtherTwist family of LAN Adapters offers leading price-performance across client and server applications, and for different PC backplanes including 8-bit ISA, 16-bit ISA, 16-bit Micro Channel, and 32-bit EISA.

There are two new additions to the HP EtherTwist LAN Adapter Card family. They are the HP 27247B, an ISA 16-bit 10Base-T card, and the HP 27252A, an ISA 16-bit 10Base2 (thin coax) card. Both of these cards offer market-leading performance and an assortment of new features. For example, they provide boot ROM support for diskless PC applications, LEDs for indicating status, and an AUI port for attachment to other media such as optical fiber. These new cards are 100 percent software configurable through HPLANSet, an easy-to-use configuration and diagnostic program. The HP 27247B and HP 27269B (6-pack) are replacements for the HP 27247A and HP 27269A, respectively. The HP 27252A is a new high-performance IEEE 802.3/Ethernet card for thin coaxial networks.

Highlights

- **High Performance:** HP EtherTwist LAN Adapters are designed for optimal network performance via high throughput and low CPU utilization. The adapters have plenty of on-board memory (32 or 64 Kbytes) for packet buffering; most competing products have only a 16-Kbyte buffer memory. The HP 27247B and 27252A 16-bit ISA adapters are the highest performing 16-bit cards in the industry. Their performance rivals that of most 32-bit EISA cards.
- **Reliability:** The HP EtherTwist LAN Adapters give you long-term trouble-free operation. These cards use the latest in application-specific integrated circuit (ASIC) chips and surface mount technology (SMT) packaging. This results in fewer components than more complicated competing cards. The mean-time-between-failure (MTBF) of these adapters is greater than 300 years (350 years for HP 27245A). All HP EtherTwist LAN Adapters are backed by a lifetime limited warranty.

☆ *new products*



- **Extensive Driver Support:** The HP EtherTwist LAN Adapters come with drivers for a wide variety of network operating systems (NOSs). This gives you the flexibility to run the network applications best suited for your business. HP provides driver support for Novell's NetWare Lite, NetWare 286 and 386, Microsoft's LAN Manager 2.1, SCO UNIX v3.2.x, FTP Inc.'s PC/TCP, and NCSA TCP/IP v2.3. See the driver compatibility table on page 9 for more details.

HP EtherTwist LAN Adapter Selection Guide

Client	Server	PC Bus Type	Connection Type
27245A		ISA 8-bit	10Base-T
27246A	27246A	MC 16-bit	10Base-T
27247B	27247B	ISA 16-bit	10Base-T, AUI
27252A	27252A	ISA 16-bit	Thin Coax, AUI
	27248A	EISA 32-bit	10Base-T, AUI

Features

HP 27248A EISA LAN Adapter/32 TP

- High throughput and low CPU utilization
- 32-bit EISA backplane connection
- Burst DMA data transfer (33-Mbyte/s transfer rate)
- 64 Kbytes of on-board static RAM for packet buffering
- 8-pin modular (RJ-45) jack for 10Base-T connection
- AUI port for connection to coaxial or fiber-optic cabling
- LED indications for transmit and receive signals

HP 27247B PC LAN Adapter/16 TP Plus and HP 27269B PC LAN Adapter/16 TP Plus 6-Pack

- Remote boot support for Novell NetWare 286 & 386 (ROM product number HP 27260A)
- Fully software configurable; no jumpers, no switches
- Easy-to-use configuration and diagnostic program (HPLANSet)
- Dual-mode operation: shared memory or Rep I/O
- RJ-45 (8-pin) modular jack for 10Base-T connection
- AUI (15-pin) port for transceiver connection to fiber-optic cabling (HP 28683A Fiber-Optic Transceiver)
- LED indicators: Transmit, Receive, Link Beat Status, Port Selected
- Wide selection of interrupts (IRQs: 3, 4, 5, 6, 7, 9, 10, 11, 12, 15)
- Large packet buffer memory (32 Kbytes)

Specifications

Environmental Characteristics

Operating Temperature:
0°C to 55°C (+32°F to +131°F)
Relative Humidity:
15% to 95% @40°C noncondensing

Electrical Characteristics

HP 27248A:

0.90 A @ 5 V typical; 2.00 A @ 5V maximum

HP 27247B & HP 27269B:

0.75 A @ 5 V typical; 0.90 A @ 5V maximum

HP 27252A:

0.75 A @ 5 V typical; 0.90 A @ 5 V maximum

HP 27246A:

1.20 A @ 5 V typical; 1.40 A @ 5 V maximum

HP 27245A & HP 27267A:

0.65 A @ 5 V typical; 0.70 A @ 5 V maximum

Physical Characteristics

HP 27248A:

Dimensions: 22.9 cm by 12.1 cm
(9.00 in. by 7.75 in.)

Weight: 147 g (5.2 oz)

HP 27247B & HP 27269B:

Dimensions: 15.9 cm by 8.9 cm

(6.25 in. by 3.5 in.)

Weight: 85 g (3.0 oz)

HP 27252A:

Dimensions: 15.9 cm by 8.9 cm

(6.25 in. by 3.5 in.)

Weight: 85 g (3.0 oz)

HP 27246A:

Dimensions: 10.5 cm by 8.6 cm

(4.13 in. by 3.4 in.)

Weight: 116 g (4.1 oz)

HP 27245A & HP 27267A:

Dimensions: 10.5 cm by 8.6 cm

(4.13 in. by 3.4 in.)

Weight: 71 g (2.5 oz)

Standards

Communications:

HP 27248A, 27247B, 27252A, 27246A,

27245A: IEEE 802.3 Type 10Base-T

HP 27252A: IEEE 802.3 Type 10Base-2

Emissions:

FCC Part 15 Class A

CISPR-22 (1985) Class A*

EN 55022 (1988) Class A*

VCCI Class 1

* 27246A, 27247A, & 27248A are Class B

Immunity:

ESD:

IEC 801-2: 1991 3 kV CD, 8 kV AD

prEN 55101-2: 1990

Radiated Emissions:

IEC 801-3: 1984 3 V/m

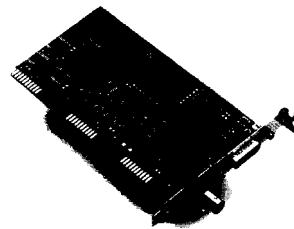
prEN 55024-3: 1991

Warranty:

All HP EtherTwist LAN Adapters have a life-time limited warranty.

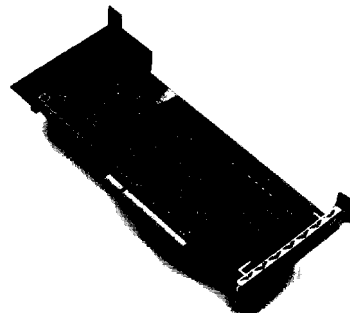
HP 27252A PC LAN Adapter/16 TL Plus

- Remote boot support for Novell NetWare 286 & 386 (ROM product number HP 27260A)
- Fully software configurable; no jumpers, no switches
- Easy-to-use configuration and diagnostic program (HPLANSet)
- Dual-mode operation: shared memory or Rep I/O
- BNC connector for standard Ethernet thin coax connection
- AUI (15-pin) port for transceiver connection to fiber-optic cabling (HP 28683A Fiber-Optic Transceiver)
- LED indicator for Port Selected
- Wide selection of interrupts (IRQs: 3, 4, 5, 6, 7, 9, 10, 11, 12, 15)
- Large packet buffer memory (32 Kbytes)



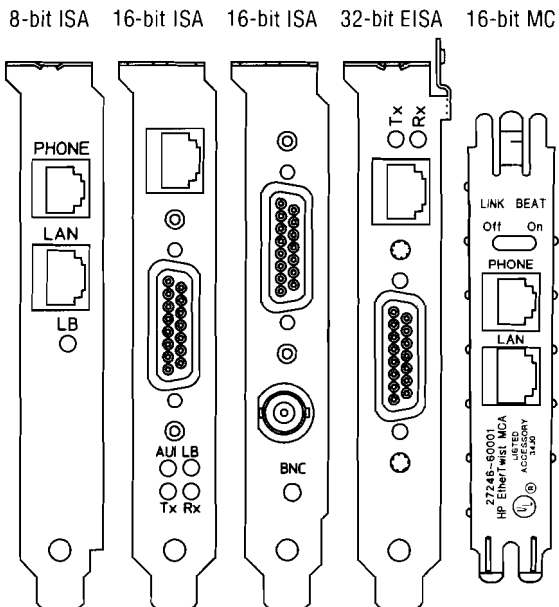
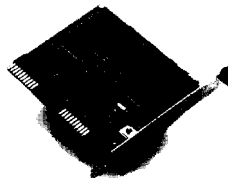
HP 27246A MC LAN Adapter/16 TP

- 16-bit Micro Channel backplane connection
- 64 Kbytes of on-board static RAM for packet buffering
- 8-pin modular (RJ-45) jack for 10Base-T connection
- 6-pin modular (RJ-11) jack for integration with phone cabling



**HP 27245A PC LAN Adapter/8 TP and
HP 27267A PC LAN Adapter/8 TP 6-Pack**

- 8-bit ISA (AT) backplane connection
- 32 Kbytes of on-board static RAM for packet buffering
- 8-pin modular (RJ-45) jack for 10Base-T connection
- 6-pin modular (RJ-11) jack for integration with phone cabling
- LED indicator for 10Base-T link beat signal



Driver Compatibility Reference Guide

HP EtherTwist LAN Adapter

Network Operating System(NOS)	32-bit EISA (27248A)	16-bit ISA (27252A & 27247B/27269B)	16-bit MC (27246A)	8-bit ISA (27245A/27267A)
Novell NetWare Lite	IPX	ODI	ODI	ODI
Novell NetWare 286 v2.15/2.2	C-IPX	C-IPX S-IPX S-ATALK	C-IPX S-IPX S-ATALK	C-IPX S-IPX S-ATALK
Novell NetWare 386 v3.0/3.1x	S-ODI C-IPX	S-ODI C-ODI C-IPX	S-ODI C-ODI C-IPX	S-ODI C-ODI C-IPX
Microsoft LAN Manager v2.1 ^(a)	NDIS 2.0	NDIS 2.0	NDIS 2.0	NDIS 2.0
HP LAN Manager (DOS, OS/2) ^(a)	NDIS 2.0	NDIS 2.0	NDIS 2.0	NDIS 2.0
3Com 3+Open v1.1 ^(a)	NDIS 2.0	NDIS 2.0	NDIS 2.0	NDIS 2.0
DEC Pathworks v4.0 ^(a)	NDIS 2.0	NDIS 2.0	NDIS 2.0	NDIS 2.0
SCO UNIX v3.2.x	Streams ^(b)	Streams ^(c)	Streams	Streams
Banyan Vines (clients only)	NDIS 2.0 ^(d)	NDIS 2.0 ^(d)	NDIS 2.0 ^(d)	NDIS 2.0 ^(d)
FTP Inc. PC/TCP	NDIS 2.0	NDIS 2.0 Packet Driver ^(c)	NDIS 2.0 Packet Driver	NDIS 2.0 Packet Driver
NCSA TCP/IP Services v2.3	—	Packet Driver ^(c)	Packet Driver	Packet Driver
Hughes ProLink ^(a)	NDIS 2.0	NDIS 2.0	NDIS 2.0	NDIS 2.0

Legend:

—	Not presently available
S-IPX	DOS IPX Server
C-IPX	DOS IPX Client
S-ODI	Open Data-Link Interface (ODI) Server
C-ODI	DOS ODI Client
S-ATALK	Server with AppleTalk functionality

Notes:

- (a) NDIS 2.0 driver support both server and client unless otherwise noted.
- (b) This driver is shipped with the SCO UNIX software.
- (c) Driver currently available for HP 27247A and will be available for HP 27247B shortly.
- (d) Requires Banyan Vines version 4.00 with patch release 2NNN, or later versions.

HP EtherTwist Transceivers

- HP 28685B EtherTwist Transceiver ✓
- HP 28683A Fiber-Optic Transceiver
- HP 28641B ThinLAN Transceiver ✓

The HP transceivers allow quick and easy connection between your LAN cabling and the AUI port of your system or network device. They send and receive data, detect collisions on the network, and protect the network's reliability by monitoring malfunctions between the AUI and the transceiver. For maximum flexibility, the transceivers all support both IEEE 802.3 and Ethernet protocols and are transparent to network operating systems. LEDs provide a quick visual assessment of the status of your network.

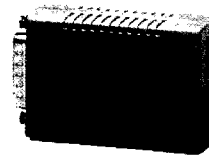
Highlights

- **Compact Size:** HP transceivers are about the size of a 1-inch (2.5-cm) stack of business cards. This space-saving design allows them to be attached directly to the device's AUI port, saving you money on cables and eliminating an additional source of potential failure in your cabling scheme.
- **Cabling Versatility:** HP transceivers let you easily attach devices with AUI ports to twisted-pair, fiber-optic, or thin coaxial cable.
- **Industry-Standard Compatibility:** HP transceivers support IEEE 802.3 and Ethernet version 1.0 and 2.0 devices. They are compatible with IEEE 802.3 Type 10Base-T, FOIRL, and Type 10Base2 networks.

Features

HP 28685B EtherTwist Transceiver

- Provides compatibility with IEEE 802.3 Type 10Base-T networks, as well as with HP StarLAN 10 networks.
- Connects to twisted-pair cable via 8-pin modular (RJ-45) jack.
- Supports 22, 24, or 26 AWG unshielded twisted-pair cable. Shielded cable can also be used with proper adapter.
- Supports 100 meters of twisted-pair cable to any AUI-compatible device. Using low-loss cable and connecting to another HP 28685B transceiver with the long-cable switch on, enables cabling distances up to 225 meters.
- Provides user-selectable switches for link beat, SQE test, loopback test, and long cable function.
- Provides six LEDs for quick indication of power, collision detection, polarity, transmission activity, receive activity, and link status.



HP 28683A Fiber-Optic Transceiver

- Provides compatibility with IEEE 802.3 FOIRL standard.
- Connects to fiber-optic cable via two ST connectors (Tx and Rx).
- Supports both 62.5/125- μ m and 50/125- μ m fiber-optic cable.
- Supports up to 2 km of fiber-optic cable distance (with 10-dB cable attenuation).
- Can be used in both point-to-point configurations and in star configurations with the HP 28682A Fiber-Optic Hub Plus.
- Provides user-selectable switches for loopback test and SQE test.
- Provides LEDs for quick visual indication of power, transmission activity, collision detection, and light status.

HP 28641B ThinLAN Transceiver

- Provides compatibility with IEEE 802.3 Type 10Base2 networks.
- Connects to thin coaxial cable via ThinLAN (BNC) port.
- Provides user-selectable SQE test switch.
- Provides LED power indicator for quick notification that the transceiver is functioning.

Characteristics

	HP 28685B EtherTwist	HP 28683A Fiber-Optic	HP 28641B ThinLAN
Environmental:			
Operating Temperature	0°C to +55°C (+32°F to +131°F)		
Relative Humidity	15% to 95% @ 40°C (104°F) noncondensing		
Electrical:			
Voltage Requirements	9.0–15.75 V	10.5–15.75 V	10.2–15.75 V
Power Consumption	1.0 W typical 2.6 W maximum	1.8 W typical 2.4 W maximum	2.0 W typical 2.6 W maximum
Physical:			
Connectors	- Standard IEEE 802.3 AUI 15-pin - Modular 8-pin (RJ-45)	- Standard IEEE 802.3 AUI 15-pin - ST fiber-optic (Tx/Rx)	- Standard IEEE 802.3 AUI 15-pin - BNC
Switches Enable/Disable	- SQE Test - Loopback Test - Link Beat - Long Cable	- SQE Test - Loopback Test	- SQE Test
LEDs	Pwr, Tx, Rx, Col, Polarity, Linkbeat	Power, Light status, Collision, Activity	Power
Dimensions	6.85 cm by 4.3 cm by 2.41 cm (2.7 in. by 1.7 in. by 0.95 in.)	9.52 cm by 4.34 cm by 2.41 cm (3.75 in. by 1.71 in. by 0.95 in.)	
Weight	57 g (2.0 oz)	75 g (2.6 oz)	85 g (3.0 oz)

Optical Characteristics for HP 28683A Fiber-Optic Transceiver

	62.5/125- μ m fiber	50/125- μ m fiber
Optical Receiver	-30 dBm typical, -27 dBm min	-30 dBm typical, -27 dBm min
Optical Transmitter	-12 dBm typical, -17 dBm min	-12 dBm typical, -17 dBm min
Optical Budget	10 dB	6 dB
Wavelength	820 nm	820 nm

Specifications

Characteristics

(See table below.)

Hardware Compatibility

The HP 28685B EtherTwist Transceiver, the HP 28683A Fiber-Optic Transceiver, and the HP 28641B ThinLAN Transceiver are each designed to provide an AUI connection for LAN devices that are compatible with the IEEE 802.3 or Ethernet version 1.0 or 2.0 standards.

Software Compatibility

The HP transceivers are transparent to network operating systems.

Standards

Communications:

HP 28685B: IEEE 802.3 Type 10Base-T

HP 28683A: IEEE 802.3 FOIRL

HP 28641B: IEEE 802.3 Type 10Base2

Safety:

Complies with:

UL 1950

CSA 220

CSA 950

Verified to IEC 950 / EN 60950

Emissions:

FCC Part 15 Class A

CISPR-22 (1985) Class B

EN 55022 (1988) Class B

VCCI Class 2

FTZ-1046/84 (VDE Level B)

Immunity:

ESD:

IEC 801-2: 1991 3 kV CD, 8 kV AD

prEN 55101-2: 1990

Radiated Emissions:

IEC 801-3: 1984 3 V/m

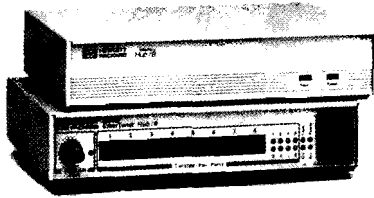
prEN 55024-3: 1991

Warranty

The HP 28685B, HP 28683A, and HP 28641B transceivers are warranted for one year against defects.

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HP EtherTwist Hub/8



The HP 28691A EtherTwist Hub/8 is a 10Base-T multiport repeater that includes eight twisted-pair ports and one thin coaxial (BNC) port. The Hub/8 repeats and retimes signals, handles collision management, and monitors individual link status. In addition, the hub automatically segments individual ports disturbing the network and reconnects them when the problems are cleared.

Highlights

- **Low Cost LAN Infrastructure:** The HP EtherTwist Hub/8 gives you a low connection cost that used to be possible only with ArcNet and thin coax, while delivering the speed and reliability of 10Base-T (Ethernet on twisted-pair cabling).
- **Simple Plug-and-Play Operation:** The Hub/8 is designed to simplify the installation and startup of your LAN. Twisted-pair cable plugs directly into the RJ-45 ports, and coaxial backbone cable can be connected to the integrated BNC port. No configuration or special setup is required, which allows you to start up your LAN in minutes.
- **Topology Flexibility:** Hub/8s can stand alone to support up to eight users or be combined to support larger networks in various configurations. Hubs can be connected using the BNC port with thin coaxial backbone cable, or cascaded with twisted-pair cable. Either way gives you growth paths for the future.

Features

- Provides eight twisted-pair ports using 8-pin modular (RJ-45) plugs and one thin coaxial (BNC) port.
- Supports up to 100 meters of cable (typically) between hub and twisted-pair transceiver or PC adapter card; greater distances are possible with low-loss cable.
- Includes LEDs for Port Status, Collisions, Activity, Fault, and Power, providing quick hub status checks and troubleshooting.
- Includes self-test for fault isolation.
- Can be wall mounted or stacked on a table top or rack self.
- Operates transparently to network operating system software.
- Supports both IEEE 802.3 and Ethernet.
- Provides auto-segmentation of ports for fault isolation and improved network integrity.
- Detects wiring polarity faults on the twisted-pair cable and automatically switches polarity to compensate for the wiring error.
- Supports multi-hub configurations using either a thin coaxial backbone between BNC ports or twisted-pair cascading between twisted-pair ports.
- Supports voice and data signals in the same cable bundle.
- Installs in minutes.



Specifications

Environmental Characteristics

Operating Temperature:

5°C to 40°C (41°F to 104°F)

Relative Humidity:

15% to 95% @ 40°C (104°F) noncondensing

Physical Characteristics

Dimensions: 21.3 cm by 15.1 cm by 4.6 cm
(8.4 in. by 5.9 in. by 1.8 in.)

Weight: 1.0 kg (2.2 lbs)

Electrical Characteristics

Voltage: 100-120 V ac 200-240 V ac

Current: 0.2 A max 0.1 A max

Frequency: 50/60 Hz 50/60 Hz

The EtherTwist Hub/8 automatically adjusts to any voltage between 90 and 240 volts.

Standards

Communications:

IEEE 802.3 Type 10Base-T

IEEE 802.3 Type 10Base2

Safety:

UL 1950

CSA 950

Verified to IEC 950 / EN 60950

Emissions:

FCC Part 15 Class A

CISPR-22 (1985) Class A

EN 55022 (1988) Class A

VCCI Class 1

Immunity:**ESD:**

IEC 801-2: 1991 3 kV CD, 8 kV AD

prEN 55101-2: 1990

Radiated Emissions:

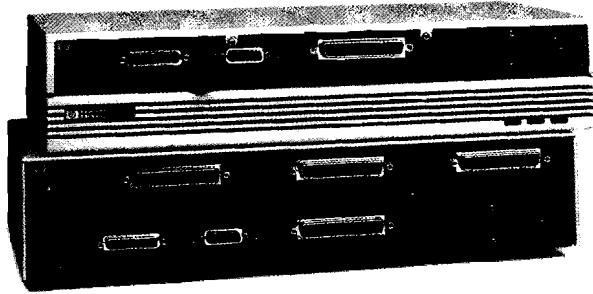
IEC 801-3: 1984 3 V/m

prEN 55024-3: 1991

Warranty

The HP 28691A EtherTwist Hub/8 is warranted for two years against defects.

HP EtherTwist Hub Plus and Hub Plus/48



The HP 28688B EtherTwist Hub Plus and HP 28699A EtherTwist Hub Plus/48 are 10Base-T multiport repeaters that include 12 or 48 twisted-pair ports, 1 thin coaxial (BNC) port and 1 AUI port. The Hub Pluses repeat and retime signals, handle collision management, and monitor individual link status. In addition, the hubs automatically segment individual ports disturbing the network and reconnect them when the problems are cleared.

The Hub Pluses include agent firmware to support network management via SNMP/IP and SNMP/IPX. In addition, the firmware incorporates HP EASE (Embedded Advanced Sampling Environment), an embedded instrument technology that allows the hubs to perform trend analysis functions. When used with HP OpenView Resource Manager, the Hub Plus and Hub Plus/48 can identify top talkers, heavy users, errors, and communication pairs, thus providing a new level of capability that complements dedicated instrumentation.

Highlights

- **Topology Flexibility:** Hub Pluses are designed to be easily combined to support large LANs in various configurations. Bridges, routers, and hubs can be combined using the BNC port and thin coaxial “virtual backplane” to make a “cardcage solution” of any size. Since the AUI and BNC ports are both active, the AUI port on the hub can be used to connect the “cardcage” to a fiber-optic or thick coaxial backbone.
- **Full Management Control:** Configure, monitor and control your HP hubs over the LAN with the graphical, full-featured HP OpenView Hub Manager (HP 28686D) or HP OpenView Interconnect Manager (HP 27256D). With their SNMP/IP/IPX agent firmware, the HP hubs can be controlled from a single DOS management station on the network or remotely controlled via out-of-band network management.
- **Low Cost with Full Features:** The EtherTwist modular solution gives all the features of a cardcage solution without the overhead of a chassis, network management card, and repeater card. You achieve full economies of scale with each 12- or 48-port module. Each hub is complete with network management capability, power, repeater, and backbone connection. You buy only what you need when you need it: pay as you grow.



Features

- Provides 12 or 48 twisted-pair ports using 50-pin connectors, 1 AUI port, and 1 thin coaxial port (BNC). A 50-pin-plug to modular-plug (RJ-45) adapter is available separately (product number HP 28638A).
- Supports up to 100 meters of cable (typically) between hub and twisted-pair transceiver or PC adapter card; greater distances are possible with low-loss cable.
- Supports one redundant link per hub to provide backup connections over a separate path.
- Includes an RS-232 console port for maintenance and configuration that allows users to configure ports and look at statistics in the hub. Connection is made using a terminal or emulator connected to the hub directly or via a modem.
- Supports SNMP/IP- and SNMP/IPX-based network management, such as HP OpenView Hub Manager/DOS and Interconnect Manager/DOS.
- Includes LEDs for Port Status, Collisions, Activity, Fault, and Power, providing quick hub status checks and troubleshooting.
- Includes self-test for fault isolation.
- Operates transparently to network operating system software.
- Supports both IEEE 802.3 and Ethernet.
- Provides auto-segmentation of ports for fault isolation and improved network integrity.
- Detects wiring polarity faults on the twisted-pair cable and automatically switches polarity to compensate for the wiring error.
- Supports flexible backbone configurations by direct thin coaxial connections to the integrated BNC port, fiber-optic or thick coaxial connections to the AUI port, or twisted-pair cascading. All ports are active, so both AUI and BNC ports can be connected along with the twisted-pair ports.
- Supports voice and data signals in the same cable bundle.
- Is fully compatible with existing HP StarLAN 10 networks.
- Mounts in a standard 19-inch rack (with cables facing front or back), on a wall (flat or on end), or on any horizontal surface like a shelf or table. The Hub Plus takes up only 1.75 inches (one rack space) vertically, and the Hub Plus/48 takes up only 3.5 inches (two rack spaces)—very little space in any mounting configuration.
- Installs in minutes.

Specifications

Environmental Characteristics

Operating Temperature:

0°C to 55°C (32°F to 131°F)

Relative Humidity:

15% to 95% @ 40°C (104°F) noncondensing

Physical Characteristics

Hub Plus:

Dimensions: 42.6 cm by 23.5 cm by 4.4 cm
(16.8 in. by 9.3 in. by 1.7 in.)

Weight: 2.7 kg (6.0 lbs)

Hub Plus/48:

Dimensions: 42.6 cm by 23.5 cm by 8.9 cm
(16.8 in. by 9.3 in. by 3.5 in.)

Weight: 3.8 kg (8.3 lbs)

Electrical Characteristics

Voltage: 100-120 V ac 200-240 V ac

Current:

Hub Plus: 0.5 A max 0.5 A max

Hub Plus/48: 0.6 A max 0.5 A max

Frequency: 50/60 Hz 50/60 Hz

The EtherTwist Hub Plus and Hub Plus/48 automatically adjust to any voltage between 90 and 240 volts.

Standards

Communications:

IEEE 802.3 Type 10Base-T

IEEE 802.3 Type 10Base2

Safety:

UL 1950

CSA 220

CSA 950

Verified to IEC 950 / EN 60950

Emissions:

FCC Part 15 Class A

CISPR-22 (1985) Class A

EN 55022 (1988) Class A

VCCI Class 1

VDE-0871 Level A

Immunity:

ESD:

IEC 801-2: 1991 3 kV CD, 8 kV AD

prEN 55101-2: 1990

Radiated Emissions:

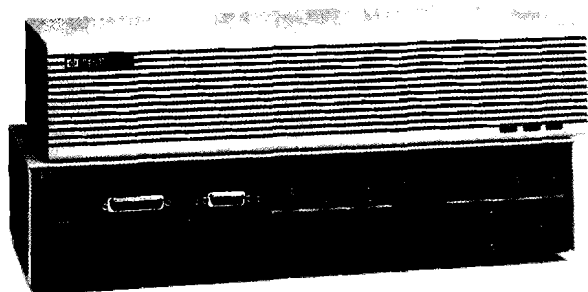
IEC 801-3: 1984 3 V/m

prEN 55024-3: 1991

Warranty

The HP 28688B EtherTwist Hub Plus and HP 28699A EtherTwist Hub Plus/48 are warranted for one year against defects.

HP ThinLAN Hub Plus



Using the same form factor as the HP EtherTwist Hub Plus/48, the HP 28692A ThinLAN Hub Plus provides added functionality to HP's "rack-and-stack" family of network components. The HP ThinLAN Hub Plus is a manageable, multiport, thin-coaxial repeater for use in Ethernet and IEEE 802.3 local area networks. With nine thin coaxial (BNC) ports and one AUI port, this SNMP-based hub provides a scalable, manageable, and flexible solution for 10-Mbit/s LANs using thin coaxial cable.

The HP ThinLAN Hub Plus includes agent firmware to support network management via SNMP/IP and SNMP/IPX. In addition, the firmware incorporates HP EASE (Embedded Advanced Sampling Environment), an embedded instrument technology that allows the hub to perform trend analysis functions. When used with HP OpenView Resource Manager, the ThinLAN Hub Plus can identify top talkers, heavy users, errors, and communication pairs, thus providing a new level of capability that complements dedicated instrumentation.

Highlights

- **Full Management Control:** Configure, monitor and control your HP hubs over the LAN with the graphical, full-featured HP OpenView Hub Manager (HP 28686D) and HP OpenView Interconnect Manager/DOS (HP 27256D). With its SNMP/IP and IPX agent firmware, the hub can be controlled from a single DOS management station on the network or remotely controlled via out-of-band network management.
- **Topology Flexibility:** HP hub products are designed to be easily combined to support large LANs in various configurations. Bridges, routers, and hubs can be combined using the BNC port and thin coaxial "virtual backplane" to make a "cardcage solution" of any size and configuration.
- **Maximum Reliability Through Diagnostics and Fault Isolation:** To ensure your network integrity for critical backbone applications, the HP ThinLAN Hub Plus automatically identifies any segment disturbing the network and disconnects it from the rest of the network. When the problem is resolved, the hub automatically reconnects the segment. Status LEDs help you troubleshoot your network.

Features

- Provides nine ThinLAN coaxial ports using BNC connectors and one AUI port. The AUI port allows simultaneous connection to thin or thick coaxial, fiber-optic, or twisted-pair cable via transceiver.
- Supports one redundant link per hub to provide backup connections over a separate path.
- Is compatible with the IEEE 802.3 Type 10Base2 standard.
- Supports 10-Mbit/s link speed.
- Supports both IEEE 802.3 and Ethernet.
- Provides cable fault detection.
- Isolates network faults by automatically segmenting ports disturbing the network.
- Includes LEDs for a quick visual check of port status, collisions, activity, and power.
- Provides console (RS-232) port, which allows users to read network statistics and configure ports in the hub. This port connects to a terminal or terminal emulator either directly or via a modem.
- Includes diagnostics for checking port functionality and loopback test for troubleshooting cable problems.
- Is transparent to network operating system software.
- Supports SNMP/IP- and IPX-based network management. Specifically, the hub can be managed from a central network management station using HP OpenView Hub Manager (product number HP 28686D) or HP OpenView Interconnect Manager/DOS (product number HP 27256D).
- Mounts in a standard 19-inch rack (with cables facing front or back), on a wall (flat or on end), or on any horizontal surface like a shelf or table. Since the hub is only 3.5 inches high (two rack spaces), it takes up very little space in any mounting configuration.

Specifications

Environmental Characteristics

Operating Temperature: 0°C to 55°C
(32°F to 131°F)
Relative Humidity: 15% to 95% @ 40°C
(104°F) noncondensing

Physical Characteristics

Dimensions: 42.6 cm by 23.5 cm by 8.9 cm
(16.8 in. by 9.3 in. by 3.5 in.)
Weight: 4.0 kg (8.8 lbs)

Electrical Characteristics

Voltage: 100-120 V ac 200-240 V ac
Current: 0.8 A max 0.6 A max
Frequency: 50/60 Hz 50/60 Hz

The ThinLAN Hub Plus automatically adjusts to any voltage between 90 and 240 volts.

Standards

Communications:

IEEE 802.3 Type 10Base2

Safety:

UL 1950

CSA 950

Verified to IEC 950 / EN 60950

Emissions:

FCC Part 15 Class A

CISPR-22 (1985) Class B

EN 55022 (1988) Class B

VCCI Class 2

Immunity:

ESD:

IEC 801-2: 1991 3 kV CD, 8 kV AD

prEN 55101-2: 1990

Radiated Emissions:

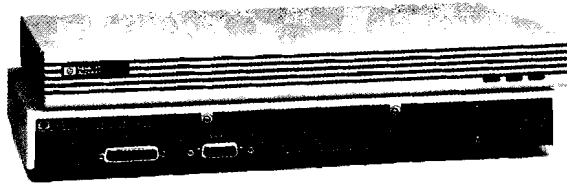
IEC 801-3: 1984 3 V/m

prEN 55024-3: 1991

Warranty

The HP 28692A ThinLAN Hub Plus is warranted for one year against defects.

HP Fiber-Optic Hub Plus



Using the same form factor as the HP EtherTwist Hub Plus, the HP 28682A Fiber-Optic Hub Plus provides added functionality to HP's "rack-and-stack" family of network components. The HP Fiber-Optic Hub Plus is a multiport, fiber-optic repeater for use in Ethernet and IEEE 802.3 local area networks. This "plug-and-play" 8-port hub gives you a fully manageable, scalable, and flexible networking solution for 10-Mbit/s fiber-optic connections. The HP Fiber-Optic Hub Plus complies with the IEEE 802.3 FOIRL standard for fiber-optic inter-repeater links; in addition, it provides backbone connections to other network devices as well as direct connections to computers.

The HP Fiber-Optic Hub Plus includes agent firmware to support network management via SNMP/IP and SNMP/IPX. In addition, the firmware incorporates HP EASE (Embedded Advanced Sampling Environment), an embedded instrument technology that allows the hub to perform trend analysis functions. When used with HP OpenView Resource Manager, the Fiber-Optic Hub Plus can identify top talkers, heavy users, errors, and communication pairs, thus providing a new level of capability that complements dedicated instrumentation.

Highlights

- **Control of Your Network with Hub Management:** Configure, monitor, and control your HP hubs over the LAN with the graphical, full-featured HP OpenView Hub Manager (HP 28686D) and Interconnect Manager (HP 27256D). With their SNMP/IP/IPX agent firmware, the HP hubs can be controlled from a single DOS management station on the network or remotely controlled via out-of-band network management.
- **Industry-Standard Compatibility:** The HP Fiber-Optic Hub Plus supports the IEEE 802.3 FOIRL standard so it can be easily integrated into existing Ethernet and 802.3 networks.
- **Maximum Reliability through Diagnostics and Fault Isolation:** To ensure your network integrity for critical backbone applications, the HP Fiber-Optic Hub Plus automatically identifies any segment disturbing the network and disconnects it from the rest of the network. When the problem is resolved, the hub automatically reconnects the segment. Status LEDs help you troubleshoot your network.

Features

- Provides eight fiber-optic ports using ST connectors, one BNC port, and one AUI port. The BNC and AUI ports allow simultaneous connection to thin coaxial cable and (via transceiver) thick coaxial, fiber-optic, or twisted-pair cable.
- Can operate as a nine-port fiber-optic hub when a fiber-optic transceiver (HP 28683A) is attached to the AUI port. For larger networks, multiple hubs can be multi-dropped from thin coaxial cable or cascaded via fiber-optic cable to easily increase the port count.
- Supports one redundant link per hub to provide backup connections over a separate path.
- Compatible with IEEE 802.3 FOIRL standard.
- Supports 10-Mbit/s link speed.
- Supports both 62.5/125- μ m and 50/125- μ m optical fiber.
- Supports 1 km of fiber-optic cable. Greater distances are possible depending on network configuration.
- Supports both IEEE 802.3 and Ethernet.
- Isolates network faults by automatically segmenting ports disturbing the network.
- Includes LEDs for a quick visual check of port status, collisions, activity, and power.
- Provides console (RS-232) port, which allows users to read network statistics and configure ports in the hub. This port connects to a terminal or terminal emulator either directly or via modem.
- Includes diagnostics for checking port functionality and loopback test for troubleshooting cable problems.
- Is transparent to network operating system software.
- Follows simple design rules for maximum topological flexibility.
- Supports SNMP/IP- and SNMP/IPX-based network management. Specifically, the hub can be managed from a centralized network management station on the LAN using HP OpenView Hub Manager/DOS (HP 28686D) or Interconnect Manager/DOS (HP 27256D).
- Mounts in a standard 19-inch rack (with cables facing front or back), on a wall (flat or on end), or on any horizontal surface like a shelf or table. Since the hub is only 1.75 inches high (one rack space), it takes up very little space in any mounting configuration.

Optical Characteristics	62.5/125- μ m Fiber	50/125- μ m Fiber
Wavelength:	820 nm	820 nm
Budget:	10 dB transmitter	6 dB transmitter
Power:	12 dBm typical 17 dBm minimum	16.5 dBm typical 21 dBm minimum
Receiver sensitivity:	30 dBm typical 27 dBm minimum	30 dBm typical 27 dBm minimum

Specifications

Optical Characteristics

(See table below.)

Environmental Characteristics

Operating Temperature:

0°C to 55°C (32°F to 131°F)

Relative Humidity:

15% to 95% @ 40°C (104°F) noncondensing

Physical Characteristics

Dimensions: 42.6 cm by 23.5 cm by 4.4 cm
(16.8 in. by 9.3 in. by 1.7 in.)

Weight: 2.7 kg (6.0 lbs)

Electrical Characteristics

Voltage: 100-120 V ac 200-240 V ac

Current: 0.5 A max 0.4 A max

Frequency: 50/60 Hz 50/60 Hz

The HP Fiber-Optic Hub Plus automatically adjusts to any voltage from 90 to 240 volts.

Standards

Communications:

IEEE 802.3 FOIRL

IEEE 802.3 Type 10Base2

Safety:

UL 1950

CSA 220

CSA 950

Verified to IEC 950 / EN60950

Emissions:

FCC Part 15 Class A

CISPR-22 (1985) Class A

EN 55022 (1988) Class A

VCCI Class 1

FTZ 1046/84 (VDE Level B)

Immunity:

ESD:

IEC 801-2: 1991 3 kV CD, 8 kV AD

prEN 55101-2: 1990

Radiated Emissions:

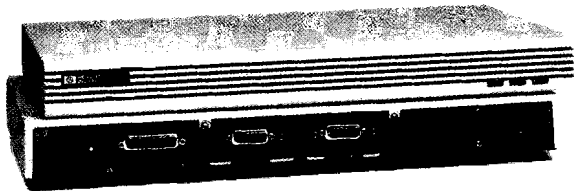
IEC 801-3: 1984 3 V/m

prEN 55024-3: 1991

Warranty

The HP 28682A Fiber-Optic Hub Plus is warranted for one year against defects.

HP 10:10 LAN Bridge MB



The HP 28673A 10:10 LAN Bridge MB is a “learning” bridge that connects two separate LANs or extends a single LAN beyond its topological limitations. It provides “media speed” bridging while performing address filtering to eliminate unnecessary traffic on the network.

The HP 10:10 LAN Bridge MB includes agent firmware to support network management via SNMP/IP and SNMP/IPX. In addition, the firmware incorporates HP EASE (Embedded Advanced Sampling Environment), an embedded instrument technology that allows the bridge to perform trend analysis functions. When used with HP OpenView Resource Manager, the HP 10:10 LAN Bridge MB can identify top talkers, heavy users, errors, and communication pairs, thus providing a new level of capability that complements dedicated instrumentation.

Yet with all its features, the bridge offers easy, “plug-and-play” operation. It comes preconfigured with settings that work optimally in most installations—all you do is attach network cables and plug in the power, and the bridge starts functioning automatically.

Highlights

- **High Performance:** The HP 10:10 LAN Bridge MB can filter and forward data packets as fast as the network can operate; this is called “media-speed” operation. This allows you to divide a large LAN into logical subnets without creating bottlenecks in the network. In addition, the bridge conserves network capacity (bandwidth) by isolating local traffic and forwarding only those packets with destinations on the other side of the bridge.
- **Fault Tolerance:** The HP 10:10 LAN Bridge MB uses the Spanning Tree Protocol developed by the IEEE 802.1 committee. This permits IEEE 802.3/Ethernet LANs to be bridged in an arbitrary topology that includes alternative or redundant paths. In the event of a primary link failure, a backup link takes over automatically, thereby ensuring continued data transmission between networks.
- **Network Management:** HP OpenView Interconnect Manager software (HP 27256D) can centrally monitor and control any number of HP 10:10 LAN Bridge MBs in an extended IEEE 802.3 or Ethernet LAN environment. In addition, the bridge’s console port provides for out-of-band management of several bridge parameters from a terminal or a PC, through either a direct connection or a remote connection via modem.



Features

- Connects adjacent LANs, or allows expansion of an existing LAN that has reached its topological limits.
- Operates at “media speed”, filtering and forwarding packets as fast as the network can operate.
- Automatically learns addresses of stations on the attached LANs by examining network traffic (in learning mode), and uses address filtering to eliminate unnecessary traffic on the network.
- Allows filtering based on combinations of stations configured into the address table (in secure mode), to provide greater security for individual stations.
- Allows “wildcard filtering” of packets based on source or destination address or on data fields in the packets.
- Does not propagate corrupt packets from one network to another. End-to-end data integrity is maintained.
- Provides one port with AUI connector and one port with choice of AUI or BNC connector. This allows direct connection to thin coaxial cable, and connection via transceiver to thick coaxial, thin coaxial, twisted-pair, or fiber-optic cable.
- Includes LEDs for a quick visual check of power, activity, self-test status, and network and bridge failure.
- Supports the IEEE 802.1 Spanning Tree Protocol, allowing a network topology that contains redundant bridges. If an active bridge fails, a backup bridge can automatically take over and continue transmitting data.
- Supports SNMP/IP- and SNMP/IPX-based network management. The bridge can be managed from a centralized network management station on the LAN using the HP OpenView Interconnect Manager software (HP 27256D).
- Provides console (RS-232) port for out-of-band bridge management from a terminal or PC. The console port also allows downloading of product updates to the bridge firmware. Connection to this port can be made directly or remotely via modem.
- Comes preconfigured to provide easy, “plug-and-play” installation and operation for most network applications.
- Mounts in a standard 19-inch rack (with cables facing front or back), on a wall (flat or on end), or on any horizontal surface like a shelf or table. Since the bridge is only 1.75 inches high (one rack space), it takes up very little space in any mounting configuration.

Specifications

Environmental Characteristics

Operating Temperature:

0°C to 55°C (32°F to 131°F)

Relative Humidity:

15% to 95% @ 40°C (104°F) noncondensing

Physical Characteristics

Dimensions: 42.6 cm by 23.5 cm by 4.4 cm
(16.8 in. by 9.3 in. by 1.7 in.)

Weight: 2.7 kg (6.0 lbs)

Electrical Characteristics

Voltage: 100-120 V ac 200-240 V ac

Current: 0.5 A max 0.4 A max

Frequency: 50/60 Hz 50/60 Hz

The HP 10:10 LAN Bridge MB automatically adjusts to any voltage between 90 and 240 volts.

Standards

Communications:

IEEE 802.3

IEEE 802.3 Type 10Base2

IEEE 802.1 Spanning Tree Protocol

Safety:

UL 1950

CSA 220

CSA 950

Verified to IEC 950 / EN60950

Emissions:

FCC Part 15 Class A

CISPR-22 (1985) Class A

EN 55022 (1988) Class A

VCCI Class 1

VDE-0871 Level A

Immunity:**ESD:**

IEC 801-2: 1991 3 kV CD, 8 kV AD

prEN 55101-2: 1990

Radiated Emissions:

IEC 801-3: 1984 3 V/m

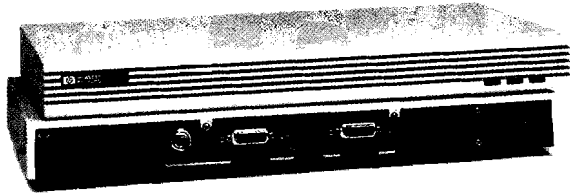
prEN 55024-3: 1991

Warranty

The HP 28673A 10:10 LAN Bridge MB is warranted for one year against defects.



HP 10:10 LAN Bridge LB



The HP 28681A 10:10 LAN Bridge LB is the low-cost LAN extender for any Ethernet/IEEE 802.3 network. For nearly the same price as a repeater, the HP 10:10 Bridge LB provides the additional benefits of a high-performance, filtering bridge. By connecting multiple local networks into a single integrated communications system, these bridges will improve the performance of a LAN by reducing traffic. Since all the HP bridges are protocol independent, they can be used in conjunction with any other vendor's Ethernet/IEEE 802.3 devices.

Highlights

- **Low Cost and High Performance:** The HP 10:10 LAN Bridge LB offers "near media-speed" performance, processing arriving data at a rate close to the theoretical maximum speed at which the LAN can operate. "Real-world" LAN environments typically exhibit steady-state traffic levels below 50% of the maximum (media) speed, with occasional bursts of traffic up to 85%. With performance levels that are approximately 90% of the maximum (media) speed of an Ethernet LAN, the HP 10:10 LAN Bridge LB can easily handle such loads. The HP 10:10 LAN Bridge LB offers this performance for half the price of some competitive products.
- **Increased Network Performance:** The HP 10:10 LAN Bridge LB is a data-link layer device which, unlike a repeater, is intelligent about forwarding data from one LAN to another. Data that must travel between nodes on opposite sides of the bridge is forwarded; packets that are transmitted between nodes on the same network segment are discarded. In other words, the HP 10:10 LAN Bridge LB prevents unnecessary traffic from being repeated on opposite sides of the bridge, which conserves bandwidth on both LANs.
- **Network Extension beyond Maximum Cable Distances:** When maximum cable lengths are reached, bridges permit extension of a LAN beyond the maximum cable lengths specified for various media. Additionally, bridges are excellent at connecting LANs of different media types. For example, the corporate backbone may use fiber-optic or thick coaxial cable, and the smaller workgroup subnet may use thin coaxial or twisted-pair cable. The HP bridge can connect these different media through its AUI and ThinLAN ports (using the appropriate transceivers as necessary).

Features

- Installs easily—simply connect it to the networks and to a power source and the bridging function begins immediately and automatically. No configuration is needed; the bridge is a “plug-and-play” device that is self-configuring.
- Forwards 13,373 packets per second and filters 26,700 packets per second. This is approximately 90% of the maximum (media) speed of an Ethernet LAN, allowing the bridge to easily handle maximum network traffic loads for a normally operating network.
- Saves network capacity by isolating local traffic and forwarding only packets intended for stations on the other side of the bridge.
- Automatically learns station addresses by examining network traffic.
- Provides one port with AUI connector and one port with choice of AUI or BNC connector. This allows direct connection to thin coaxial cable, and connection via transceiver to thick coaxial, thin coaxial, twisted-pair, or fiber-optic cable.
- Maintains an address table of the last 256 active stations. (Only a fraction of the stations on a typical network are active at any one time, so it is *not* necessary to have excessively large table sizes.)
- Allows extension of a LAN beyond the maximum cable lengths specified for various media. Additionally, the bridge can connect LANs of different media types through its AUI and ThinLAN ports.
- Maintains end-to-end data integrity. The HP 10:10 LAN Bridge LB does not propagate corrupt packets from one network to another. The bridge performs a check (CRC/FCS) of the packet to determine the packet's integrity.
- Can be used in multivendor Ethernet/802.3 environments. The HP bridge operates at the data link layer of the ISO OSI model, so it is transparent to higher-level protocols. The HP bridge can thus be used with any other vendor's products.
- Mounts in a standard 19-inch rack (with cables facing front or back), on a wall (flat or on end), or on any horizontal surface like a shelf or table. Since the bridge is only 1.75 inches high (one rack space), it takes up very little space in any mounting configuration.
- Provides LEDs for easy recognition of the bridge's operating condition and for troubleshooting. LEDs indicate power, self-test status, faults, collisions, and activity.
- Does not support the IEEE Spanning Tree Protocol, nor does it include network management or a console port. For these features, order the HP 28673A 10:10 LAN Bridge MB.

Specifications

Environmental Characteristics

Operating Temperature:

0°C to 55°C (32°F to 131°F)

Relative Humidity:

15% to 95% @ 40°C (104°F) noncondensing

Physical Characteristics

Dimensions: 42.6 cm by 23.5 cm by 4.4 cm
(16.8 in. by 9.3 in. by 1.7 in.)

Weight: 2.7 kg (6.0 lbs)

Electrical Characteristics

Voltage: 100-120 V ac 200-240 V ac

Current: 0.5 A max 0.4 A max

Frequency: 50/60 Hz 50/60 Hz

The HP 10:10 LAN Bridge LB automatically adjusts to any voltage between 90 and 240 volts.

Standards

Communications:

IEEE 802.3

IEEE 802.3 Type 10Base2

Safety:

UL 1950

CSA 220

CSA 950

Verified to IEC 950 / EN60950

Emissions:

FCC Part 15 Class A

CISPR-22 (1985) Class B

EN 55022(1988) Class B

VCCI Class 1

FTZ 1046/84 (VDE Level B)

Immunity:**ESD:**

IEC 801-2: 1991 3 kV CD, 8 kV AD

prEN 55101-2: 1990

Radiated Emissions:

IEC 801-3: 1984 3 V/m

prEN 55024-3: 1991

Warranty

The HP 28681A 10:10 LAN Bridge LB is warranted for one year against defects.

HP Remote Bridge RB



The HP 28674B Remote Bridge RB is a “learning” bridge that can connect one local and one remote 802.3 Ethernet LAN to form a single, integrated communications network between geographically distant sites. Since the HP bridges are protocol-independent and operate at “media speed”, they can be used in a multivendor network without causing a bottleneck.

An HP universal interface with appropriate 5-meter interface cable to an external DSU/CSU provides access to digital leased lines. The HP Remote Bridge RB supports speeds from 19.2 Kbit/s to 2.048 Mbit/s (E-1). Each remote connection requires two HP Remote Bridge RBs, one at each end of the wide area link, or one HP Remote Bridge RB and one HP or Wellfleet router.

The HP Remote Bridge RB includes agent firmware to support network management via SNMP/IP and SNMP/IPX. In addition, the firmware incorporates HP EASE (Embedded Advanced Sampling Environment), an embedded instrument technology that allows the bridge to perform trend analysis functions. When used with HP OpenView Resource Manager, the Remote Bridge RB can identify top talkers, heavy users, errors, and communication pairs, thus providing a new level of capability that complements dedicated instrumentation.

Highlights

- **High Performance:** The HP Remote Bridge RB can filter and forward data packets as fast as the wide area link can operate; this is called “media-speed” operation. In addition, the bridge conserves network capacity (bandwidth) by isolating local traffic and forwarding only those packets with destinations on the other side of the bridge.
- **Fault Tolerance:** The Spanning Tree Protocol, developed by the IEEE 802.1 committee, permits IEEE 802.3/Ethernet LANs to be bridged in an arbitrary topology that includes alternative or redundant paths. In the event of a primary link failure, a backup link takes over automatically, ensuring continued data transmission between networks.
- **Network Management:** HP OpenView Interconnect Manager software (HP 27256D) can centrally monitor and control any number of HP Remote Bridge RBs in an extended IEEE 802.3 or Ethernet LAN environment. In addition, the bridge’s console port provides for out-of-band management of several bridge parameters from a terminal or a PC, through either a direct connection or a remote connection using a modem.

Features

- Connects LANs in geographically distant sites to form an integrated, global network.
- Operates at “media speed”, filtering and forwarding packets as fast as the network can operate.
- Automatically learns addresses of stations on the attached LANs by examining network traffic (in learning mode), and uses address filtering to eliminate unnecessary traffic on the network.
- Allows filtering in secure mode that is based on a statically configured station address to provide greater security.
- Allows “wildcard filtering” of packets based on source or destination address or on data fields in the packets.
- Does not propagate corrupt packets from one network to another. End-to-end data integrity is maintained.
- Supports wide area link speeds between 19.2 Kbit/s and 2.048 Mbit/s.
- Provides one port with choice of AUI or BNC connector and one WAN connection via the HP universal interface port with the appropriate 5-meter interface cable (RS-232, RS-422/449, V.35, X.21). The HP Remote Bridge RB automatically senses which specific interface cable is connected.
- Includes LEDs for a quick visual check of power, activity, self-test status, and network and bridge failure.
- Supports the IEEE 802.1 Spanning Tree Protocol, allowing a network topology that contains redundant bridges. If an active bridge fails, a backup bridge can automatically take over and continue transmitting data.
- Supports SNMP/IP- and SNMP/IPX-based network management. The bridge can be managed from a centralized network management station on the LAN using the HP OpenView Interconnect Manager software (HP 27256D).
- Provides console (RS-232) port for out-of-band bridge management from a terminal or PC. The console port also allows downloading of product updates to the bridge firmware. Connection to this port can be made directly or remotely via modem.
- Comes preconfigured to provide easy, “plug-and-play” installation and operation for most network applications. An external DSU/CSU is required for each bridge.
- Mounts in a standard 19-inch rack (with cables facing front or back), on a wall (flat or on end), or on any horizontal surface like a shelf or table. Since the bridge is only 1.75 inches high (one rack space), it takes up very little space in any mounting configuration.
- Includes appropriate WAN (synchronous) interface cable, orderable by product option number.

Specifications

Environmental Characteristics

Operating Temperature:

0°C to 55°C (32°F to 131°F)

Relative Humidity:

15% to 95% @ 40°C (104°F)

noncondensing

Physical Characteristics

Dimensions: 42.6 cm by 23.5 cm by 4.4 cm
(16.8 in. by 9.3 in. by 1.7 in.)

Weight: 2.7 kg (6.0 lbs)

Electrical Characteristics

Voltage: 100-120 V ac 200-240 V ac

Current: 0.5 A max 0.4 A max

Frequency: 50/60 Hz 50/60 Hz

The HP Remote Bridge RB automatically adjusts to any voltage between 90 and 240 volts.

Standards

Communications:

CCITT V.35

IEEE 802.3 Type 10Base2

IEEE 802.1 Spanning Tree Protocol

Safety:

UL 1950

CSA 220

CSA 950

Verified to IEC 950 / EN60950

Emissions:

FCC Part 15 Class A

CISPR-22 (1985) Class B

EN 55022 (1988) Class B

VCCI Class 2

Immunity:**ESD:**

IEC 801-2: 1991 3 kV CD, 8 kV AD

prEN 55101-2: 1990

Radiated Emissions:

IEC 801-3: 1984 3 V/m

prEN 55024-3: 199

WAN Interface Cables

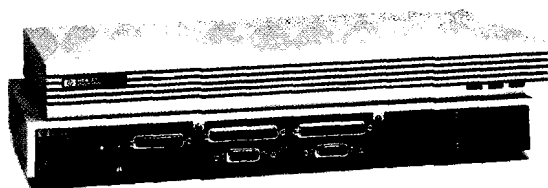
The HP 28674B includes a WAN (synchronous) interface cable. Select the cable type by ordering the appropriate option.

Option	Cable Type
001	V.35
002	RS-232
003	X.21
004	RS-422

Warranty

The HP 28674B Remote Bridge RB is warranted for one year against defects.

HP Router ER



The HP 27285A Router ER is a high-performance, multiprotocol router that can also function as a bridge. Using the same form factor as HP's EtherTwist hubs, this 4-port router is part of HP's "rack-and-stack" family of network products. The HP Router ER connects to two local Ethernet/IEEE 802.3 networks and to two synchronous WAN links, each at speeds up to 2.048 Mbits/second.

Highlights

- **Concurrent Multiprotocol Routing and Bridging:** The standard configuration of the HP Router ER supports concurrent operation of five popular routing protocols: TCP/IP, DECnet IV, Novell IPX, Xerox XNS and AppleTalk II. For packets that can not be routed, the router can function as a learning bridge with the IEEE Spanning Tree Protocol. It can also connect to X.25 networks in a variety of configurations. The router's port configuration allows connection to two local area networks and two wide area networks.
- **High Performance:** The HP Router ER employs a Motorola 68020 (25-MHz) processor and a multiple-bus architecture for excellent LAN-to-LAN performance, even in multiprotocol networks with high traffic loads.

Protocol	Number of 64-Byte Packets per Second
Ethernet Learning Bridge	11,900
IP Routing over Ethernet	9,000
IP Routing over 802.3	8,300
DECnet IV Routing over Ethernet	6,600
Novell IPX Routing over Ethernet	6,200
AppleTalk Routing over Ethernet	7,500

- **Ease of Use:** Despite the inherent complexities of routing, the HP Router ER approaches "plug-and-play" operation. The Quick Config utility allows the router's basic parameters to be set by answering a short series of questions; a split screen displays the current configuration and provides context-sensitive help. Extensive router management is available through the router's console port or via Telnet (remote terminal) access over the network.

Features

- Provides concurrent multiprotocol routing and bridging for maximum flexibility in supporting the connection of different multivendor devices on the network.
- Offers five standard routing protocols: TCP/IP (RIP/OSPF), DECnet IV, Xerox XNS, Novell IPX, and AppleTalk II.
- Operates concurrently as a multiport bridge with the IEEE 802.1 Spanning Tree Protocol.
- Can transfer data through X.25 public data networks (PDN) and defense data networks (DDN) on both WAN ports. The X.25 software is included as a standard feature at no additional cost.
- Allows load balancing between multiple WAN links of equal bandwidth for best use of leased lines between remote routers.
- Supports two Ethernet/IEEE 802.3 LAN connections via the standard AUI ports.
- Supports two synchronous WAN connections via the HP universal interface ports with the appropriate 5-meter interface cable (RS-232, RS-422/449, V.35, X.21). The HP Router ER automatically senses which specific interface cable is connected. Wide area link speeds between 19.2 Kbits/second and 2.048 Mbits/second are possible.
- Supports BOOTP relay agent for initializing from a preset configuration held in a server.
- Allows remote software updates via TFTP, providing the vehicle to download a new software version over the LAN to multiple routers.
- Provides network security and isolation by allowing user-configurable traffic filtering based on type of service, protocol, subnet address, and/or network node addresses.
- Offers standards-based network management using the Simple Network Management Protocol (SNMP). This protocol is supported by HP's OpenView Interconnect Manager/DOS (HP 27256D). In addition, router management is available through the router's console (RS-232) port and via Telnet (remote terminal) access over the network.
- Allows simple configuration using the Quick Config option on the terminal console menu. A complete configuration editor is available for detailed tuning of the router's configuration.
- Mounts in a standard 19-inch rack, using one 1.75-inch rack space. All necessary mounting hardware is included.
- Includes computer-based tutorial (CBT) on 5.25-inch media to provide a self-paced training overview of router operation. HP is the only router vendor supplying valuable training with all units, free of charge.

Specifications

Environmental Characteristics

Operating Temperature:

0°C to 55°C (32°F to 131°F)

Relative Humidity:

15% to 95% @ 40°C (104°F) noncondensing

Physical Characteristics

Dimensions: 42.6 cm by 23.5 cm by 4.4 cm
(16.8 in. by 9.3 in. by 1.7 in.)

Weight: 2.7 kg (6.0 lbs)

Electrical Characteristics

Voltage: 100-120 V ac 200-240 V ac

Current: 0.6 A max 0.45 A max

Frequency: 50/60 Hz 50/60 Hz

The HP Router ER automatically adjusts to any voltage between 90 and 240 volts.

Standards

Communications:

IEEE 802.3

IEEE 802.3 Type 10Base2

IEEE 802.1 Spanning Tree Protocol

Safety:

UL 1950

CSA 950

Verified to IEC 950 / EN60950

Emissions:

FCC Part 15 Class A

CISPR-22 (1985) Class B

EN 55022 (1988) Class B

VCCI Class 2

FTZ 1046/84 (VDE Level B)

Immunity:

ESD:

IEC 801-2: 1991 3 kV CD, 8 kV AD

prEN 55101-2: 1990

Radiated Emissions:

IEC 801-3: 1984 3 V/m

prEN 55024-3: 1991

WAN Interface Cables

The WAN (synchronous) interface cable must be ordered separately. Choose the appropriate cable listed below and place the order with HP's Support Material Organization (SMO). This adapter cable must be ordered for each synchronous port to provide the physical interface connection to the DSU/CSU.

28606-63008 V.35 Synchronous Port

28606-63006 RS-232 Synchronous Port

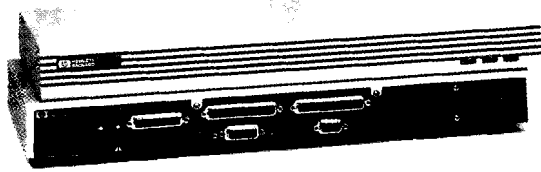
28606-63005 RS-449/422 Synchronous Port

28606-63001 X.21 Synchronous Port

Warranty

HP 27285A Router ER is warranted for one year against defects.

HP Router TR



The HP 27286A Router TR is a high-performance, multiprotocol router for connection of Ethernet, token ring, and wide area networks. Using the same form factor as the HP EtherTwist hubs and bridges, this 4-port router is the newest addition to HP's "rack-and-stack" family of network components. The HP Router TR connects to one local Ethernet/IEEE 802.3 network, one token ring/IEEE 802.5 4/16-Mbit/s network, and up to two synchronous WAN links, each at speeds up to 2.048 Mbits per second. The port configuration on the HP Router TR is ideal for internetworking different network types.

Highlights

- **Concurrent Multiprotocol Routing:** The standard configuration of the HP Router TR supports concurrent operation of five popular routing protocols: TCP/IP (RIP/OSPF), DECnet IV, Novell IPX, Xerox XNS, and AppleTalk II. For packets that can not be routed, the HP Router TR can function as a MAC-layer bridge with the IEEE Spanning Tree Protocol on the Ethernet port and Source Routing Protocol on the token ring port. Bridging is possible only between one of the local ports and the WAN ports. The router comes standard with X.25 software for configuring one or both WAN ports. The router's port configuration allows connection to two local area networks (one Ethernet and one token ring) and two wide area networks.
- **High Performance:** The Router TR employs a Motorola 68020 (25 MHz) processor, a multiple-bus architecture, and the FASTMAC software from MADGE Networks, Ltd., for excellent Ethernet-to-token ring routing performance, even in multiprotocol networks with high traffic loads. Approximately 5,500 (64-byte) packets per second can be forwarded between the two LANs.
- **Ease of Use:** Despite the inherent complexities of routing, the HP Router TR approaches the level of "plug-and-play" operation. The "Quick-Config" utility on the console port allows the router's basic parameters to be set by answering a short series of questions; a split screen displays the current configuration and provides context-sensitive help. Extensive router management is available through the router's console port or via Telnet (remote terminal) access over the network. The HP Interconnect Manager applications offer both a DOS and UNIX version for control of the router's SNMP parameters.

Features

- Provides concurrent multiprotocol routing between all ports and bridging for each LAN and WAN port for maximum flexibility in supporting the connection of different multivendor devices on the network.
- Offers five standard routing protocols: TCP/IP (RIP/OSPF), DECnet IV, Xerox XNS, Novell IPX, and AppleTalk II.
- Operates concurrently as a bridge between the LAN and WAN ports. The IEEE 802.1 Spanning Tree Protocol can be used on the Ethernet LAN port and IEEE Source Routing can be used on the token ring port.
- Can transfer data through X.25 public data networks (PDN) and defense data networks (DDN) on both WAN ports. The X.25 software is included as a standard feature at no additional cost.
- Allows load balancing between two WAN links of equal bandwidth for best use of leased lines between multiple remote routers.
- Supports two synchronous WAN connections via the HP universal interface ports with the appropriate 5-meter interface cable (RS-232, RS-422/449, V.35, or X.21). The HP Router TR automatically senses which interface cable is connected. Wide area link speeds between 19.2 Kbits/second and 2.048 Mbits/second are possible.
- Provides support of synchronous pass-through to allow certain IBM SNA traffic to use common internet services.
- Supports BOOTP relay agent for initializing from a preset configuration held in a server.
- Allows remote software updates via TFTP, providing the vehicle to download a new software version over the LAN to multiple routers.
- Provides network security and isolation by allowing user-configurable traffic filtering based on type of service, protocol, subnet address, and/or network node addresses.
- Offers standards-based network management using the Simple Network Management Protocol (SNMP). This protocol is supported by HP's OpenView Interconnect Manager/DOS (HP 27256D). In addition, router management is available through the router's console (RS-232) port and via Telnet (remote terminal) access over the network.
- Allows for easy configuration using the "Quick-Config" option on the terminal menu. A complete configuration editor is available for detailed tuning of the router's configuration.
- Mounts in a standard 19-inch equipment rack, using only one 1.75-inch rack space. All necessary mounting hardware is included.
- Includes computer-based tutorial (CBT) on 5.25-inch media to provide a self-paced training overview of router operation. HP is the only router vendor supplying valuable training with all units, free of charge.

Specifications

Environmental Characteristics

Operating Temperature: 0°C to 55°C
(32°F to 131°F)
Relative Humidity: 15% to 95%
@ 40°C (104°F) non-condensing

Physical Characteristics (without brackets)

Dimensions: 42.54 cm by 23.50 cm by 4.34 cm
(16.75 in. by 9.25 in. by 1.72 in.)
Weight: 2.72 kg (6.0 lbs)

Electrical Characteristics

Voltage: 100-120 V ac 200-240 V ac
Current: 0.9 A max 0.6 A max
Frequency: 50/60 Hz 50/60 Hz

The HP Router TR automatically adjusts to any voltage between 90 and 240 volts.

Standards

Communications:

Ethernet version 1.0 & 2.0
IEEE 802.3
IEEE 802.1 Spanning Tree Protocol version 9
RS-232 C on the console port

Emissions:

FCC Part 15 Class A
CISPR-22 (1985) Class B
EN 55022 (1988) Class B
VCCI Class 2
FTZ-1046/84 (VDE Level B)

Immunity:

ESD:
IEC 801-2: 1991 3 kV CD, 8 kV AD
prEN 55101-2: 1990

Radiated Emissions:

IEC 801-3: 1984 3 V/m
prEN 55024-3: 1991

Safety Approvals:

UL 1950
CSA 950
Verified to IEC 950/EN60950

WAN Interface Cables

The WAN (synchronous) interface cable must be ordered separately. Choose the appropriate cable listed below and place the order with HP's Support Material Organization (SMO). This adapter cable must be ordered for each synchronous port to provide the physical interface connection to the DSU/CSU.

28606-63008 V.35 Synchronous Port
28606-63006 RS-232 Synchronous Port
28606-63005 RS-449/422 Synchronous Port
28606-63001 X.21 Synchronous Port

Warranty

HP 27286A Router TR is warranted for one year against defects.

HP OpenView Hub Manager/DOS

The HP 28686D OpenView Hub Manager/DOS is a workgroup-level manager for hubs, PCs, workstations, printers, and network adapter cards. HP OpenView Hub Manager/DOS is a Microsoft Windows enhanced-mode application that is capable of providing the power of multitasking to manage a multivendor workgroup environment. Hub Manager also offers an easy upgrade path to site and multisite management.

Highlights

- **Management by Remote Control:** You no longer need to feel tied to your desk when OpenView Hub Manager is running. Based on a carefully designed and fully integrated remote alarm notification system, Hub Manager can notify you when an alarm is triggered on your network. Regardless of where you are at the time of the alarm—at your desk or across the globe—Hub Manager will activate a pager or a voice-activated system to inform you of alarms. You are immediately notified of network utilization levels, security violations, or other thresholds you set as alarms.
- **Integrated Multivendor Management:** Our leading-edge discovery and layout function automatically discovers and lays out all your NetWare/IPX clients/servers and IP devices in a single network map. Using the map, you can monitor and control devices on your network down to the PC on your desk or the printer on your network. To understand which user/PC is generating the most traffic on your network, activate the Hub Manager graphing facility. To browse another vendor's MIB (management information base), including proprietary extensions, activate the MIB browser facility. Because the Hub Manager application is designed for Microsoft Windows enhanced mode, performance is not compromised by these comprehensive, easy-to-use features.
- **Ease of Use and Upgrade:** Despite the complexity of your network, HP OpenView Hub Manager/DOS gives you seamless integration of multivendor IP and IPX management. Hub Manager's icon-based color graphic interface, context-sensitive online help, and task-oriented documentation let you perform management functions quickly and easily. This ease of use—combined with the low cost of Hub Manager—lets you manage your workgroup at a fraction of what an hour of downtime could cost you. As your network grows, you can easily upgrade your network management functions, while maintaining your expertise and investment in HP OpenView Hub Manager/DOS, by purchasing HP OpenView Interconnect Manager/DOS (HP 27256D).

Features

- Notifies you of network alarms remotely—at your desk or across the globe.
- Draws your network map automatically, including multivendor devices with NetWare/IPX or IP support.
- Knows what is in your work group, down to the level of identifying personal computers on your desk and printers connected to your network.
- Manages personal computers and/or the personal computer network adapter cards via the ports on the HP EtherTwist Hub Plus, avoiding the cost and performance degradation caused by running an SNMP/IP agent on your personal computer.
- Monitors workgroup network utilization—including multivendor devices with IP or IPX support—through the graphing facility.
- Provides easy point-and-click browsing of MIB-II or proprietary MIB extensions with the Hub Manager browser facility.
- Secures hubs on the network through a password encryption for each hub on your network.
- Protects your investment through standards support and a seamless upgrade path. HP OpenView Hub Manager fully supports the SNMP/IP, SNMP/IPX, and MIB-II standards.
- Makes control of your workgroup as simple as setting thresholds and configuring HP OpenView Hub Manager/DOS to monitor the workgroup and trigger when needed.
- Allows uploading and downloading of hub configuration files, for modifying an existing configuration or copying of configurations between hubs.

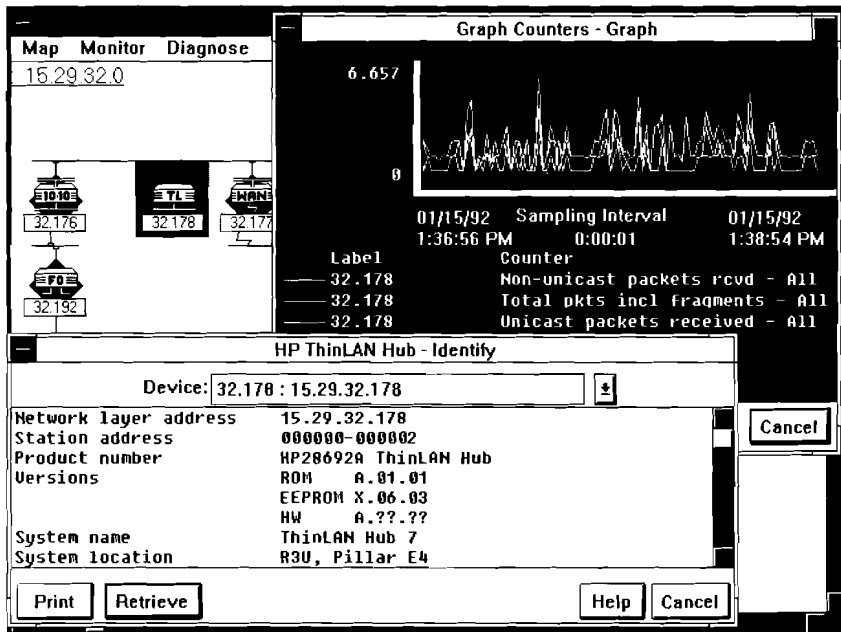
Specifications

System Requirements

- MS-DOS, version 3.2, 3.3, 4.01, or 5.0
- Microsoft Windows version 3.0A or 3.1
- 2 Mbytes minimum of extended memory
4 Mbytes recommended
- 5 Mbytes available hard disk space
- VGA or EGA monitor (VGA recommended)
- Microsoft Windows-compatible mouse

Warranty

HP 28686D OpenView Hub Manager/DOS is warranted for 90 days against defects.



HP OpenView Interconnect Manager/DOS

The HP 27256D OpenView Interconnect Manager/DOS is an integrated multivendor SNMP manager for personal computers, workstations, printers, network adapter cards, hubs, bridges, and routers. HP OpenView Interconnect Manager is a Microsoft Windows enhanced-mode application that is capable of providing the power of multitasking to manage a multivendor extended LAN and a dynamic environment.

Highlights

- **Management by Remote Control:** You no longer need to sit and watch HP OpenView Interconnect Manager running. Based on a carefully designed and fully integrated remote alarm notification system (RANS), Interconnect Manager can notify you when an alarm is triggered on your network. Regardless of where you are at the time of the alarm—across your desk or across the globe—Interconnect Manager will activate a pager or a voice-activated system to inform you of alarms. You are immediately notified of network utilization, security violation, or other thresholds you set as alarms.
- **Integrated Multivendor Management:** Our leading-edge discovery and layout function automatically discovers and lays out all your NetWare/IPX clients/servers and IP devices in a single network map. Using the map, you can monitor and control devices on your network down to the PC on your desk or the printer on your network. To understand which side of your LAN is generating the most traffic across the LAN Bridge, or which PC is generating the most errors on a specific hub, activate the Interconnect Manager graphing facility. To browse another vendor's MIB (management information base), including proprietary extensions, activate the MIB browser facility. Because the Interconnect Manager application is designed for Microsoft Windows enhanced mode, performance is not compromised by these comprehensive, easy-to-use features.
- **Controlled Levels of Management:** To arm your network managers with different levels of monitoring and control across the network, Interconnect Manager lets you decide at map-drawing time to exclude certain subnets from being drawn. This will eliminate their visibility to certain network management functions. Also, after the map has been drawn, you can assign passwords to devices on your network and provide the password only to network managers who are responsible for control functions like configuration changes. This will make monitoring available to all network managers, with control permitted only for those with the password.

Features

- Notifies you of network alarms remotely—across your desk or across the globe.
- Draws your network map automatically, including multivendor devices with NetWare/IPX or IP support.
- Knows what is on your network, down to the level of identifying personal computers on your desk and printers connected to your network.
- Manages personal computers and/or the personal computer network adapter cards via the ports on the EtherTwist Hub/Plus, avoiding the cost and performance degradation caused by running an SNMP/IP agent on your personal computer.
- Monitors network utilization—including multivendor devices with IP or IPX support—through the graphing facility.
- Provides easy point-and-click browsing of MIB-II or proprietary MIB extensions with Interconnect Manager MIB browser facility.
- Secures network devices through a password encryption for each device on your network.
- Protects your investment through standards support and a seamless upgrade path. HP OpenView Interconnect Manager fully supports SNMP/IP, SNMP/IPX, and MIB-II.
- Reduces your learning curve through an easy-to-use graphical user interface, context-sensitive help, and task-oriented documentation.
- Makes control of your network as simple as setting thresholds and configuring Interconnect Manager to monitor the network and trigger when needed.
- Allows control of bridges through setting spanning tree parameters and setting wildcards for filtering and/or forwarding.
- Performs router configuration through Telnet, which is fully integrated with the discovered routers on your network map.
- Allows uploading and downloading of device configuration files, for modifying an existing configuration or copying of configurations between similar devices.

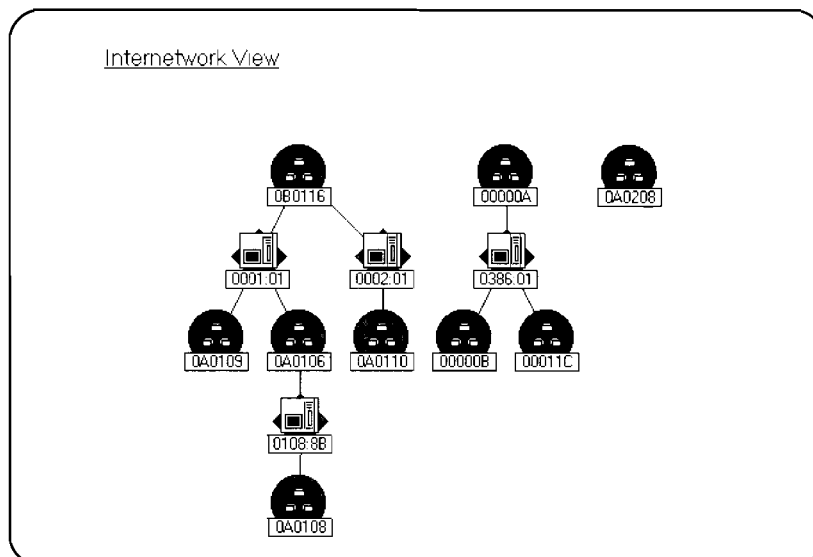
Specifications

System Requirements

- MS-DOS, version 3.2, 3.3, 4.01, or 5.0
- Microsoft Windows version 3.0A or 3.1
- 2 Mbytes minimum of extended memory
4 Mbytes recommended
- 10 Mbytes available hard disk space
- VGA or EGA monitor (VGA recommended)
- Microsoft Windows-compatible mouse

Warranty

HP 27256D OpenView Interconnect Manager/DOS is warranted for 90 days against defects.



HP OpenView Resource Manager/DOS

The HP 27257D OpenView Resource Manager/DOS is an advanced, real-time trend analysis product. It allows network managers to monitor trends on the network by identifying top talkers, heavy users, communication pairs, and errors and their sources. Monitoring is based on IP, IPX, or MAC addresses, and is graphically displayed or printed as pie charts, bar charts, or time-series charts. Resource Manager is fully integrated with HP OpenView Hub Manager and HP OpenView Interconnect Manager/DOS.

Highlights

- **Single View Management:** HP OpenView Resource Manager/DOS uses the HP EASE (Embedded Advanced Sampling Environment) instrumentation functions in HP EtherTwist hubs and bridges to sample network trends. Not only does this help you identify trouble spots on your network—and show you where to focus your high-end LAN analysis instruments—it also delivers the trend information you need right to the management station you use to control the devices on your network, whether that station is across the office or across the globe.
- **Integrated Solution:** HP OpenView Resource Manager/DOS is so thoroughly integrated with HP's OpenView Hub Manager/DOS and Interconnect Manager/DOS that it even shares the same network map with them. To analyze your network's traffic patterns with Resource Manager, simply point and click on the map to select a cable segment, then pull down the menus to choose the analysis options. When the analysis indicates a particular device that needs attention, clicking on that device's icon on the same map will make all the device monitoring and control functions of Hub Manager/DOS or Interconnect Manager/DOS available to you.
- **Easy Upgrade:** Adding the power of embedded instrumentation to your network is as easy as downloading new firmware code to your existing EtherTwist hubs and bridges. Because the HP hubs and bridges store their firmware in flash EPROM, upgrading is like installing a software patch—there are no chips to replace, and you don't even have to open up the cabinet. And when future network management products are introduced, you will be able to download any firmware upgrades across the network from a central network management station.

Features

- Provides real-time trend analysis for any segment on your network.
- Uses Hewlett-Packard's embedded instrumentation architecture.
- Provides full integration with Hub Manager/DOS and Interconnect Manager/DOS.
- Identifies top five talkers/heavy users.
- Identifies top talkers based on bytes or packets as sources or receivers.
- Identifies top multicast and broadcast sources.
- Tracks network errors and their sources.
- Identifies communication pairs involved in various activities.
- Monitors network trends based on IP, IPX, or MAC addresses.
- Displays network trends in pie charts, bar charts, or time series charts.
- Prints network trends in pie charts, bar charts, or time series charts.

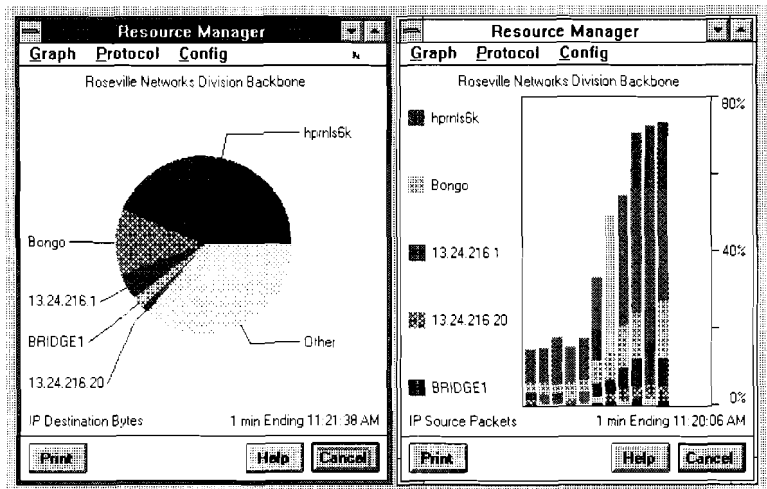
Specifications:

System Requirements

- MS-DOS, version 3.2, 3.3, 4.01, or 5.0
- Microsoft Windows version 3.0A, or 3.1
- 2 Mbytes of extended memory
- 10 Mbytes available hard disk space
- VGA or EGA monitor (VGA recommended)
- HP OpenView Hub Manager/DOS *or* HP OpenView Interconnect Manager/DOS

Warranty

HP 27257D OpenView Resource Manager/DOS is warranted for 90 days against defects.



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