

# HP-UX SNALink and HP-UX Gateway/SNALink

## Technical Data

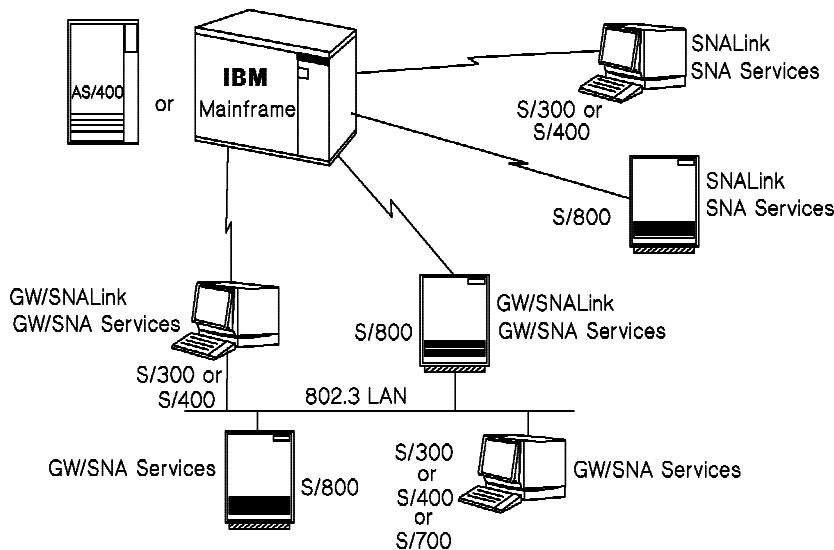
**For HP 9000 Series 300, 400,  
and 800 Computer Systems  
Product Numbers  
36592A, 36593A, 98173A, 98174A**

HP-UX SNALink and HP-UX Gateway/SNALink provide communications between an HP 9000 Series 300, 400, or 800 and an IBM mainframe or an IBM peer system such as the AS/400. The SNALink manages the SDLC line to the host/peer system and emulates the major features of an IBM 3274 cluster control unit using the lower four layers of SNA.

Node Type 2.0 (T2.0) for hierarchical connectivity and Node Type 2.1 (T2.1) for peer-to-peer connectivity are supported. Logical Unit Types 1, 2, 3, and 6.2 (LU1, LU2, LU3, LU 6.2) are supported as well.

The HP-UX SNALink is available in two environments: standalone and client/server (gateway). The standalone environment provides access to IBM mainframes or IBM peer systems for a single HP-UX computer that has its own HP-UX SNALink. Running in the client/server (gateway) environment permits access to the IBM systems from multiple HP-UX computers on a LAN. These systems generally use a single HP 9000 computer with a Gateway/SNALink as a gate-way to access the IBM system.

The HP-UX SNALink products are used in conjunction with a service product (for example HP-UX SNA3270, SNA3770, SNA3179G, or LU 6.2 API. Please refer to the services data sheets for more information). A copy of a service product must reside at each HP-UX client that is to communicate with the IBM system through the server system.



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## Features

- SNALink allows the HP 9000 to emulate the major features of a 3274 cluster controller using SNA protocols.
- SNALink supports multiple Logical Session Units (LUs) as terminals and printers concurrently. An entry level link is available on the workstations. The number of configurable LUs per link varies by processor type and the environment in which you are running:
  - **Standalone/Entry level**  
Series 300, 400: 2 LUs  
Series 800: 32 LUs
  - **Standalone/High Performance**  
Series 300, 400: 32 LUs  
Series 800: 32 LUs
  - **Gateway**  
Series 300, 400: 64 LUs  
Series 800: 64 LUs
- The SNALink products use powerful commands to monitor and control the operation of the product.
- SNALink and G/W SNALink support Node Type 2.0 (T2.0) and Node Type 2.1 (T2.1). T2.0 allows connectivity to IBM System/370 or compatible mainframes. T2.1 allows connectivity to peer systems such as the AS/400.
- SNALink allows concurrent support of T2.0 and T2.1 when connected to a mainframe in a boundary node configuration. The HP system can simultaneously communicate peer-to-peer to the IBM mainframe through LU 6.2 and also communicate interactively to the mainframe through SNA3270 over the same link.
- The microprocessor-based SNA interface card offloads communications line activity, resulting in zero CPU overhead on the HP-UX processor when data is not being transmitted or received.
- The HP-UX Gateway/SNALink supports HP 9000 Series 300, 400, 700, and 800 as client systems running SNA Services and communicating with the server processor over a LAN.
- An HP 9000 Series 300, 400, or 800 with HP-UX Gateway/SNALink functions as a non-dedicated gateway. Depending on the customer's specific application requirements, Gateway/SNALink easily operates on a S/300, S/400, or S/800 while running other HP-UX applications.
- BSD Sockets is the de facto industry-standard interface between the SNALink and the SNA Service products in a client/server environment.
- The SNALink and Gateway/SNALink products support line speeds up to 64 Kbps over switched or leased lines.

## Functional Specifications

When used with HP-UX SNA3270, SNA3770, LU 6.2 API, or SNA3179G (for S/300 and S/400 only), the SNALink and service emulate a 3274 model 51C cluster controller and from 2 to 64 SNA LUs, depending on the model processor and configuration type.

All printers and terminals supported by the HP 9000 Series 300, 400, or 800 running HP-UX are supported by HP-UX SNALink and Gateway/SNALink.

SNALink allows communication with an IBM 370 or compatible mainframe running VM, VM/XA, MVS/SP, MVS/XA, MVS/ESA, or DOS/VSE operating systems and ACF/VTAM through an IBM 37X5 communications controller running ACF/NCP. SNALink also allows communication with IBM midrange systems as peers such as the AS/400, S/36, or S/38.

Up to seven SNALink products may be supported in a single Series 300, 400, or 800 system (depending on the number of card slots available). This allows links to multiple IBM systems.

The SNALink supports synchronous modem speeds up to 64Kbps as described below. SNALink requires synchronous modems that support the following handshake signals: DTR, DSR, RTS, CTS, CD, RI. Modems must also provide transmit and receive clocks for the SDLC interface and ensure ground isolation between the communication systems. Some examples of modems that are supported for SNALink are:

AT&T 201C  
 AT&T 208 BR  
 AT&T 209A  
 AT&T 500B  
 AT&T 2024A  
 AT&T 2048A  
 AT&T 2096A  
 AT&T 2248A  
 AT&T 2556 DSU  
 AT&T 2596 DSU

CODEX 2640  
 CODEX 2660  
 CODEX 2680  
 CODEX 2260

GTE LENKURT 56K

DYNATECH LDM 22  
 Datatel DCP3080

**Message encoding:** Supports NRZ (Non Return to Zero). NRZI (Non Return to Zero Inverted) is supported on Series 800 systems only.

### Customer Installation Responsibility

The products are customer installable. User installation aids, such as automated installation procedure and an IBM host generation guide, are provided to simplify the process. Additional assistance can be provided by an HP System Engineer on a time-and-materials basis. For additional information, contact your Hewlett-Packard Sales Representative.

### Product Requirements

Environment	SNA Link S/300, S400	Gateway/ SNA Link S/300, S/400	SNA Link S/800	Gateway/ SNA Link S/800
<b>Models</b>	310, 320, 330, 332, 340, 350, 360, 370, 375, 4xx	310, 318, 319, 320, 330, 332, 340, 350, 360, 370, 375, 4xx	8X7, 808, 815, 822, 825, 832, 835, 835SE, 840, 842, 845, 850, 852, 855, 860, 865, 870	8X7, 808, 815, 822, 825, 832, 835, 835SE, 840, 842, 845, 850, 852, 855, 860, 865, 870
<b>Operating System</b>	Latest Operating System			
<b>Services Supported</b>	SNA3270 SNA3770 SNA3179G LU 6.2 API	SNA3270 SNA3770 SNA3179G LU 6.2 API	SNA3270 SNA3770 LU 6.2 API	SNA3270 SNA3770 LU 6.2 API
<b>Disk Space</b>	1000K	1000K	1500K	1500K
<b>Memory</b>	700K	700K	1000K	1000K
<b>LAN Config. Requirements</b>	None	LAN 300 Link	None	LAN 800 Link
<b>IBM Host</b>	IBM System/370 or compatible mainframe (Series 30xx or 43xx) in an SNA environment, ACF/VTAM and ACF/NCP			
<b>IBM Midrange</b>	Examples of systems supported are AS/400, S/36, S/38, or IBM systems that can be supported in IBM's APPN environment. IBM system links must support Node Type 2.1. IBM systems must be running the latest operating system version.			

### Additional Implementation Assistance

For implementation needs that go beyond installation, the customer can either provide self-support, or can purchase additional services from HP. These services include Network Startup and HP ConsultLine.

In addition, the customer can also purchase service from HP on a time-and-materials basis.

Network Startup includes implementation scheduling and coordination assistance, network configuration and verification testing, and network documentation.

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## Ordering Information

### Product Description

HP-UX SNALink and HP-UX Gateway/SNALink include right-to-use license and software, interface card, and cable. Requires modem. The SNALink products for the Series 300 and 400 are only available in 1/4-inch cartridge tape. For the Series 800, a choice of 1/4-inch cartridge tape, 1600 BPI magnetic tape, or DAT tape is available.

For Series 800, choose 98173A or 98174A, a media option, and a processor option. Models 807, 808, 815, 817, 822, 827, 832, 837, 842, 847, 852, 857, 867, and 877 also require option 005 (for the Precision Bus PSD).

**36592A** HP-UX SNALink  
Series 300, 400

#### Options:

- 0A0** Single-User, 2 LUs  
RS-232 Interface (19.2 Kbps)
- 001** Single-User, 2 LUs V.35  
Interface (64 Kbps)
- 0A1** Multiuser, 32 LUs  
RS-232 Interface (19.2 Kbps)
- 002** Multiuser, 32 LUs V.35  
Interface (64 Kbps)

**36593A** HP-UX GW/SNALink  
Series 300, 400

#### Options:

- 003** RS-232 Interface (19.2 Kbps)
- 004** V.35 Interface (64 Kbps)

**98173A** HP-UX SNALink  
Series 800

**98174A** HP-UX GW/SNALink  
Series 800

**Media options** (98173A and  
98174A only):

#### **98173A Opt. AA0**

Multiuser 32 LUs, 1/4-inch  
cartridge tape

#### **98173A Opt. AA1**

Multiuser 32 LUs, 1600 BPI  
magnetic tape

#### **98173A Opt. AAH**

Digital Audio Tape (DAT)

#### **98173A Opt. 005**

Precision Bus PSI Card (807,  
808, 817, 815, 822, 827, 832,  
837, 842, 847, 852, 857, and 860  
only)

#### **98174A Opt. AA0**

Multiuser 64 LUs, 1/4-inch  
cartridge tape

#### **98174A Opt. AA1**

Multiuser 50 LUs, 1600 BPI  
magnetic tape

#### **98174A Opt. AAH**

Digital Audio Tape

#### **98174A Opt. 005**

Precision Bus PSI Card (807,  
808, 817, 815, 822, 827, 832,  
837, 842, 847, 852, 857, and 860  
only)

**Series 800 processor options**  
(98173A and 98174A only):

**AHO** Model 807/808/817  
version

**AEL** Model 815/822/827/837  
version

**AE5** Model  
825/832/847/857/635  
version

**AE6** Model 835/842/645  
version

**AEN** Model 840/845/852  
version

**AEP** Model 850/855/860/865  
version

**AH1** Model 870 version

**98173A Opt. 1AU** for V.35  
Interface (64 Kbps)

**98174A Opt. 1AU** for V.35  
Interface (64 Kbps)

Upgrade options are available  
for all the SNALink products.  
Please consult the HP 9000  
price guides for details.

## Documentation

- **36592-61002** HP-UX SNALink  
and Gateway/SNALink  
Manager's Reference Manual
- **36592-61003** HP-UX SNA/9000  
Manual Reference Pages  
(generally referred to as "Man  
Pages")

## Support Products

HP offers a spectrum of support  
service products to help plan,  
implement, operate, and  
manage your multivendor  
network throughout the  
network lifecycle.

For more information, contact  
your HP Sales Representative,  
or refer to the HP data sheets  
for specific support services.

Customers with hardware  
support agreements must add  
the appropriate level of  
coverage for the link product to  
their support agreements.