



Loop-AM3420 ACCESS MULTIPLEX

Description

Loop-AM3420 is an Access Multiplexer that can combine various digital access interfaces into a single E1 or T1 line for convenient transport and switching. Interfaces include E1 Router, HDSL, U type used in ISDN, RS232, and V.35. These interfaces are compatible with other Loop products such as Loop-H 3900 for HDSL and Loop-U 3500 for U. Using these products, a DTE interface can be extended over RS232 copper wire pairs. Up to 30 time slots for the HDSL, U, RS232 and V.35 interfaces are multiplexed to fill an E1 or T1 line, with full flexibility of time slot assignment.

Features

- 4 slots available for 5 plug-in types:
 - 8-port U-interface plug-in compatible to Loop-U 3500
 - 3-port HDSL-interface plug-in compatible to Loop-H 3900 with line power option
 - 6-port V.35-interface plug-in
 - 5-port RS232/ X.50/ X.50 mux interface plug-in
 - Plug-in with E1 and Router Interface
- Any combinations of n x 64 Kbps data streams can be multiplexed to fill an E1 or T1 line
- Connection to LAN/WAN or host services
- Remote configuration and diagnostics
- Optional GUI NMS with LoopView
- Optional in-band 64-Kbps management
- 2-line by 40-character LCD and key pad for local administration, monitoring, and maintenance
- LED indicators for each port
- Single AC or redundant DC plug-in modules
- Remote download of software
- SNMP Network Management Systems or simple terminal supervisory port

Loop-AM3420 supports local control and diagnostics by using 2-line by 40-character LCD display and keypads on the front panel, or by using a VT-100 terminal connected to the console port. Loop-AM3420 also supports Ethernet, SLIP, Telnet, and SNMP, so that it can be controlled and diagnosed from remote locations as well. Optional in-band management channel and LoopView with GUI are available. In addition to the LCD display, there is one status LED for each U, HDSL, V.35, or RS232 interface, and 4 LEDs for the E1 line.

**CERTIFIED
ISO-9001**

Ordering Information

To specify options, choose from list below:

Model	Description	Note
Loop-AM3420-E1	Main Unit for E1 Interface	Must select a main unit and chassis with T1 or E1 port.
Loop-AM3420-T1	Main Unit for T1 Interface	
Loop-AM 3420-E1RT	Plug-in with E1 and Router Interface	Select 0 or 1 card.
Loop-AM3420-8U	8-Port IDSL plug-in Module	Select 1 to 4 cards from the list.
Loop-AM3420-3H	3-Port MDSL plug-in Module	
Loop-AM3420-6V35	6-port plug-in, V.35 DB25S connector, for M34 please order conversion cable connector below.	
Loop-AM3420-5RS232	5-port plug-in, RS232 with X.50 subrate, with subrate mux	
Loop-AM3420-SA	Single AC Power Module	Select single AC, or 1 or 2 single DC (2 for redundant DC). For AC choose an appropriate power cord.
Loop-AM3420-SD	Single DC Power Module	

Accessories

Loop-AM3420-LP	MDSL line power daughter board	Factory installed option available with -48 Vdc powered chassis only.
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Cable

Loop-ACC-CAB-DTE-001	V.35 DB25 to M34 conversion cable, 1 feet
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User's Manual

Loop-AM3420-UM	User's Manual (paper, hard copy-optional). A CD version of the manual is already included as standard equipment.
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Power Cord

Loop-ACC-PC-USA	AC power cord for Taiwan/USA
Loop-ACC-PC-EU	AC power cord for Europe
Loop-ACC-PC-UK	AC power cord for the UK
Loop-ACC-PC-AUS	AC power cord for Australia
Loop-ACC-PC-CH	AC power cord for China

For example:

Loop-AM3420-E1

Loop-AM3420-U

Loop-AM3420-SA

For model 3420 for E1 interface with one 8-port IDSL plug-in module, and one single AC power.

Loop-AM3420 Access Multiplex Product Specifications

HDSL Line Interface

Up to 4 plug-in cards, with 3 HDSL interfaces per card with line power option.

Full duplex with adaptive echo cancellation HDSL line coding

Unconditioned 19-26 AWG twisted pair

Line rate: 272, 400, 528, 784, 1168, 1552, 2320 for data rates n x 64 Kbps.

U Interface

Type Full duplex with echo cancellation

Line Type Unconditioned twisted pair 19-26 AWG

Line Rate 64 or 128 Kbps

Line Coding 2B1Q

Connector RJ48C

DTE Interface (V.35)

Data Port 6-port DTE V.35

Data Rate n x 64 Kbps

Connector DB25S (optional conversion cable DB25S to M34 connector)

DTE Interface (RS232-X.50 mux.)

Data Port 5-port RS232 with X.50 plug-in, subrate, with subrate mux

MUX (a) 5 independent RS232, or (b) 5 subrate RS232 (X.50) muxed to 64K

Data Rate

- For mode (a) 5 independent RS232: 1.2K, 2.4K, 4.8K, 9.6K, 19.2K, 38.4K, 48K, 64K SYNC
1.2K, 2.4K, 4.8K, 9.6K, 19.2K ASYNC
- For mode (b) 5 mux together: 1.2K, 2.4K, 4.8K, 9.6K SYNC
1.2K, 2.4K, 4.8K, 9.6K ASYNC

NOTE: Mode (a) and mode (b) cannot be mixed.

Connector DB25S

Network Line Interface - T1

Line Rate 1.544 Mbps \pm 50 bps

Line Code AMI/ B8ZS

Input Signal ABAM cable length up to 655 feet

Output Signal DSX1

Framing D4/ ESF (selectable)

Connector RJ48C

Network Line Interface - E1

Line Rate 2.048 Mbps \pm 50 ppm

Line Code AMI/ HDB3 (selectable)

Input Signal ITU G.703 to -10dB

Output Signal ITU G.703

Framing ITU G.704

Connector BNC/ RJ48C

Electrical 75 ohm Coax/ 120 ohm twisted pair

Jitter ITU G.823

E1 Interface with Router Port

■ E1 Interface

Line Rate 2.048 Mbps \pm 50 ppm

Line Code AMI/ HDB3 (selectable)

Input Signal ITU G.703 to -10dB

Output Signal ITU G.703

Framing ITU G.704

Connector BNC/ RJ48C

Electrical 75 ohm Coax/ 120 ohm twisted pair

Jitter ITU G.823

■ Router Port

Number of ports 1

Physical Interface 10 BaseT x 1

Connector RJ45

Routing Protocol RIP-I, RIP-II

Data Rates N x 64 Kbps, N = 1 to 31, 15,000 frames per second

Supporting Protocols TCP/IP, PPP, HDLC

Management VT-100, SNMP

Front Panel

Keypad 4 operation keys plus ACO key

LED 1 per U/ HDSL/ V.35-interface, ACO, Power, SYNC/TEST, LOF, BPV, RAI/AIS

LCD 2 lines by 40 characters

Physical / Electrical

Dimensions	432 x 176 x 298 mm (W×H×D)
Power	100-240V, 50/60 Hz AC or Dual/ Single -48V DC, 30 Watts
Temperature	0-50°C
Humidity	0-95%RH (non-condensing)
Mounting	Desk-top stackable, 19" / 23" rack mountable
Line Power Supply	Available only with DC power. 60 mA constant current source, selectable peak voltage of 190 Vdc

Clock Source

Internal, E1/ T1 Line

Alarm Relay

Alarm Relay, Fuse alarm, and performance alarm

System configuration Parameters

Active Configuration, Stored Configuration, and Default Configuration (Stored in Non-volatile Memory)

Supervisor

RS232, VT-100 - front panel

SLIP - rear panel

10 Base-T, SNMP - rear panel

In-band 64 Kbps

Performance Monitor

Performance Registers Last 24 hours performance in 15 minutes interval and last 7 days in 24 hours summary

Separate Registers 12 HDSL ports, network, user, and remote site

Performance Reports Reports include HDSL port unsync Date & Time, Errored Second, Unavailable Second, E1 Bursty Errored Second, Severe Errored Second, Degraded Minutes, and Controlled Slip Second. Also available in Statistics (%).

Alarm Queue Containing 40 alarm records which record the latest alarm type, location, and date & time

Threshold Bursty Seconds, Severely Errored Second, Degraded Minutes

Diagnostics Test Line

Loopback E1/ T1 interface (Line Loopback, Payload Loopback, Local Loopback)

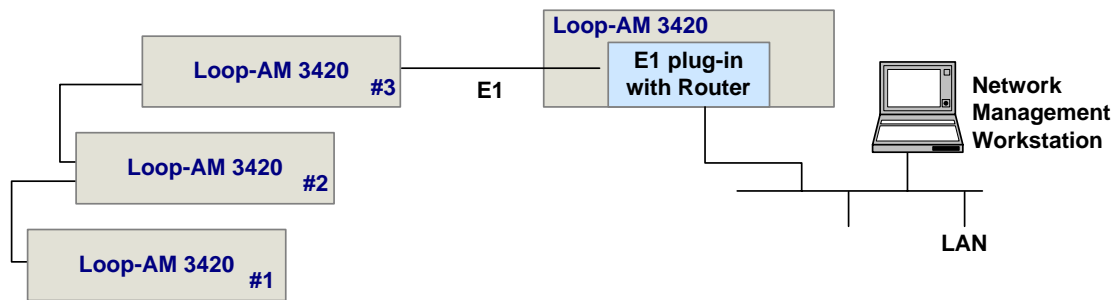
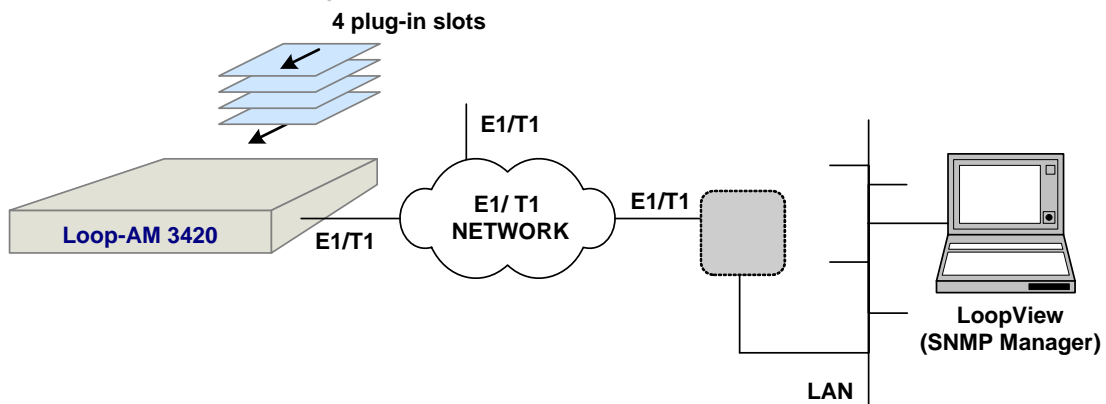
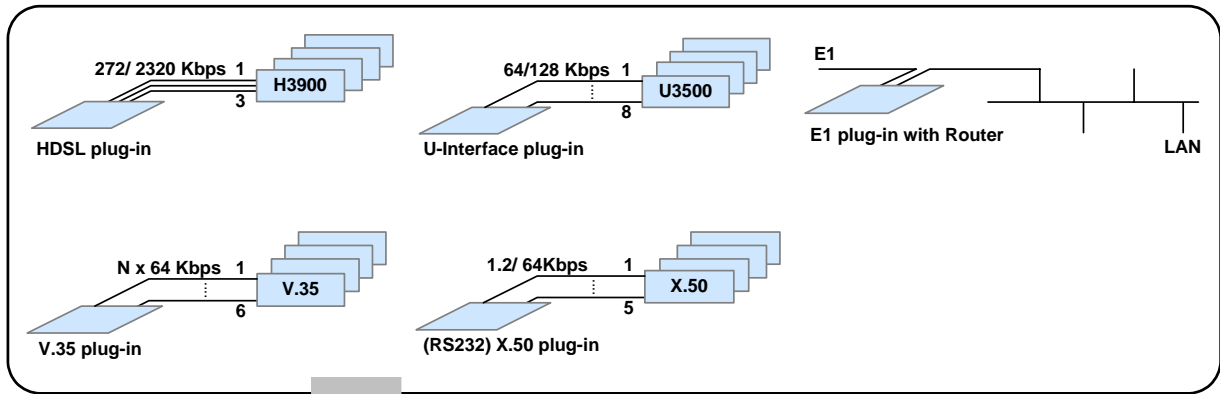
HDSL interface (Payload Loopback, Local loopback)

U interface (Local Loopback, Payload Loopback)

Test Pattern E1/ T1 interface (2¹⁵-1 PRBS, 3-in-24, 1-in-8, 2-in-8, 1:1 patterns)

U/ HDSL/ DTE interface (2¹¹-1 BERT)

Application Illustration



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