



Loop-IP 6440 IP I-MUX

Description

Preliminary



The Loop-IP 6440 IP Inverse Mux provides connectivity from 10/100 BaseT LAN to E1 WAN through multiple E1, up to 4 E1 links. Loop-IP 6440 also provides a bridging function from Ethernet to E1 links. This unit can provide customers from 2Mbps to 8Mbps network bandwidth.

Features

- Support WAN link, which is virtually concatenated $n \times E1$ (n can be 1 to 4)
- Support up to 64ms (configurable for 16, 32, and 64ms) of transmission different delay between E1s.
- GFP (Generic Frame Protocol) is used to map the Ethernet packet into the virtually-concatenated E1's.
- Support 10/ 100 BaseT Ethernet
- Support Tx (Transmit)/ Rx (Receiver) auto reverse function
- Support 10M or 100M auto detecting function
- Support timing sources selection from (1) a certain E1 from $n \times E1$, (2) External clock, (3) Internal
- Support Alarm Relay
- Support local control and diagnostic via DB9S console port
- Support Ethernet, SNMP, and inband management
- Support VLAN packet transparent:
 - Up to 1916 bytes for optional MAC learning is included.
- Multicolor LED indicators.

Loop-IP 6440 offers automatic E1 channel failure detection and can re-assign the number of E1 channels for transport of Ethernet traffic. For example, if there are 4 E1s configured for 10/100 Ethernet traffic transport, and one E1 fails during the service, the other 3 pick up the entire load. This minimizes loss of IP packets.

Loop-IP 6440 support DB9S console port, which allows users to execute in-service diagnostics and fault isolation from a local or remote terminal. Loop-IP 6440 also allows remote site to telnet via Ethernet port. The IP 6440 series also provides multicolor LED indicators on the front panel and ACO (Alarm Cut-Off) button.

**CERTIFIED
ISO-9001**

Ordering Information

To order specify:

Model	Description	Note
Main Unit		
Loop-IP 6440-1UA-4E- pp1-pp2-Add	1U height ANSI (rear & front access) shelf w/ 4E1 channels	• where pp1 , pp2 , and Add are defined in below tables
Loop-IP 6440-1UE-4E- pp1-Add	1U height ETSI (fully front access) shelf w/ 4E1 channels	• where pp1 and Add are defined in below tables

Plug-in Power Module:

Loop-IP 6440-SA	Single AC power supply	For power redundancy, order extra power supply
Loop-IP 6440-SD24	Single DC power supply (24Vdc: 18-36 Vdc)	
Loop-IP 6440-SD48	Single DC power supply (48Vdc: 40-75 Vdc)	

■ where **pp1** are used to select power supply for main shelf:

pp1 =	Description	Note
AC	Fixed AC power	
SA	Single plug-in AC power supply	
SD24	Single plug-in DC power supply (24Vdc: 18-36 Vdc)	
SD48	Single plug-in DC power supply (48Vdc: 42-72 Vdc)	

■ where **pp1** and **pp2** are used to select power supply for main shelf:

pp2 =	Description	Note
SA	Single plug-in AC power supply	
SD24	Single plug-in DC power supply (24Vdc: 18-36 Vdc)	
SD48	Single plug-in DC power supply (48Vdc: 42-72 Vdc)	

■ where **Add** is used to select other additional options (**Multiple option choices are available**) :

Add =	Description	Note
EXT	External Clock	
LCD	LCD front panel(see Note)	LCD is supported for ANSI shelf only

Loop-IP 6440 IP I-MUX Product Specification

Line Interface

Line Rate	2.048 Mbps ± 50 ppm	Connector	BNC (75 ohm), RJ48C (120 ohm)
Data Rate	n x 30 x 64Kbps (n=1 to 4) or n x 29 x 64Kbps (n=1 to 4)	Output signal	ITU G.703
Line Code	AMI/ HDB3	Electric	75 ohm/ 120 ohm twisted pair
Input Signal	ITU G.703	Jitter	ITU G.823

Clock Source

Primary Clock	Any one of E1 line, external, internal
Secondary Clock	Any another of E1 line, external, internal

Diagnostics Test

Loopbacks	Line Loopback, Payload Loopback, and Local Loopback
Remote Loopbackfs	Line Loopback, and Payload Loopback

Performance Monitor

Performance Store	Last 24 hours performance in 15-minute intervals and last 7 days in 24-hour summary line, user, and remote site
Performance Reports	Date & Time, Errored Second, Unavailable Second, Bursty Errored Second, Severe Errored Second, Controlled Slip Second, and Loss of Frame Count
Monitor Registers	Line, User, and Remote Site
Alarm History	Date & Time, Alarm Type (i.e. Master Clock Loss, RAI, AIS, LOS, BPV, ES, CSS)
Alarm Queue	Maximum 40 alarm records which record the latest alarm type, location, and date & time
Alarm Threshold	Bursty seconds, severely errored second,degrade minutes

Ethernet

Connector RJ45
Protocol Telnet and embedded SNMP
Speed 10 or 100 BaseT, auto-detect

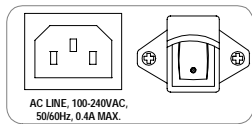
Physical

Dimensions 432 x 44 x 255 cm (WxHxD)
Power Source (AC) 100-240V, 50/60 Hz AC
Power Source (DC) 24Vdc: 18-36 Vdc, dual DC hot swappable
48Vdc: 42-72 Vdc, dual DC hot swappable
Temperature 0 -50°C
Humidity 0-95% RH (NON-CONDENSING)
Mounting Desk-top stackable, wall mount

Front Panel

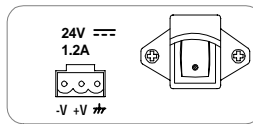


1



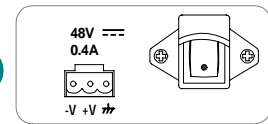
AC plug-in power supply

2

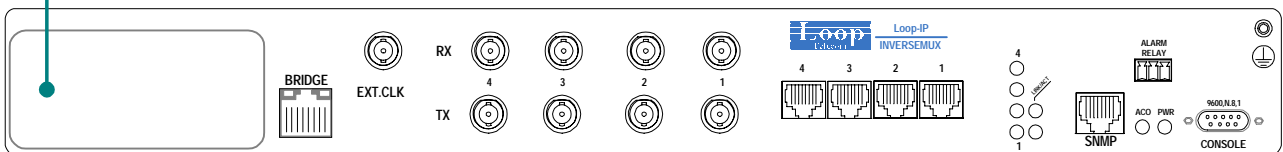


24V DC plug-in power supply

3

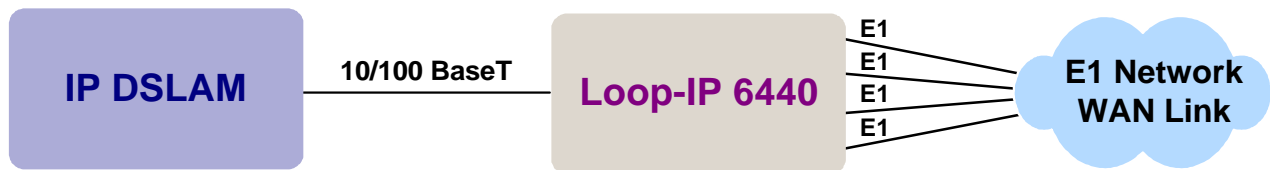


48V DC plug-in power supply



Rear Panel

Application Illustration



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