



Loop-D7163 E1 Digital Cross-Connect Platform

4" BOX

Front Side

Rear Side



19" BOX

Front Side

Rear Side



Features

- Three 21E1 plug-in slots.
- On the 19" box, for each plug-in slot, a connector panel is provided.
- One STM1 plug-in slot.
- DS0 Digital cross-connect amongst all plug-in ports, low speed or high speed.
- Console port and Ethernet port and connection to SNMP and Telnet.
- LED indicators for CPU, STM1, High Density E1, and Power Module.
- Redundant power supply
- In-band management, out-band management

Description

Loop-D7163 takes up to three low speed slots and one high speed slots for traffic signals. Loop-D7163 supports 21-E1 low speed card and STM1 high speed card. With any combination of cards, the Loop-D has full DS0 cross-connect capability built inside.

It can be used as a 63 E1 DS0 cross-connect, using input streams from the three 21-E1 plug-in cards, or the input stream from the single STM1 plug-in.

It can also be used as a multiplex to combine 63 E1 from the low speed inputs into a single STM1 stream.

Local control and diagnostics could be supported by using a VT100 terminal connected to the console port. The Loop-D7163 also supports Ethernet, Telnet, and SNMP, so that it can be controlled and diagnosed from remote locations.

Data from any port, or any time slot of that port, can be channeled to any port or any time slot of any other port, whether from low speed cards or high speed card.

Loop-D7163 is available in two physical configurations. In the 10.5" (6U) high by 4" box the E1 interface is a pair of 68-pin SCSI connector. In the 10.5" high by 19" box the E1 interface can be BNC, RJ48, or others as desired, which can be ordered one for each 21E1 plug-in.

The main chassis has one slot reserved for the main controller board, one slot reserved for the high speed card, and three slots reserved for the 21E1 plug-in cards.

**CERTIFIED
ISO-9001**

Ordering Information

To specify options, choose from list below:

Models	Description	Note
Main Unit		
Loop-D7163-CH4	Main unit w/o CPU and power (4" Box)	Basic Chassis
Loop-D7163-CH19	Main unit w/o CPU and power (19" Box)	
Loop-D7163-CC-E	CPU/DCS card w/ E1 External Clock	
High Speed Optical Module (OC-3/STM-1)		
Loop-D7163-STM1-T-OPT	STM1 interface w/ T1 mapping	Order two for redundancy
Loop-D7163-STM1-E-OPT	STM1 interface w/ E1 mapping	
Loop-D7163-OC3-T-OPT	OC3 interface w/ T1 mapping (future option)	
Loop-D7163-OC3-E-OPT	OC3 interface w/ E1 mapping (future option)	
Low Speed Module for 4" Box (also used in 19" Box)		
Loop-D7163-21E1-75	High Density 21E1 interface card (75 ohm)	Used with SCSI cable
Loop-D7163-21E1-120	High Density 21E1 interface card (120 ohm)	
Power Module		
Loop-D7163-SD48	Single DC supply (48Vdc)	Order two for redundancy
Accessories		
User's Manual		
Loop-AM3440-UM	User's Manual (paper, hard copy-optional). A CD version of the manual is already included as standard equipment.	
Connector panel		
Loop-D7163-21E1-BNC	21E1 BNC connector panel (for 75 ohm E1 and CH 19 only)	Includes 30cm SCSI cable
Loop-D7163-21E1-RJ	21E1 RJ48 connector panel for CH 19 only	Includes 30cm SCSI cable
CABLE		
Loop-ACC-CAB-EXT-006	SCSI 68pin/Male to SCSI 68 pin/Male Extension cable L: 30cm	
Tray		
81.7163TR.100	Tray (One tray for three D7163 4" Boxes)	
Blank Panel		
30.000523.A00	Blank Panel for STM1 Slot	
30.000531.A00	Blank Panel for (21E1) Slot	
where OPT=		
OPT =	Description	Note
SAA	single optical module with dual uni-directional fiber, 1310 nm, SC optical connector, 30 km reach (Min. -49dB)	• Use 2 fibers
SDD	single optical module with dual uni-directional fiber, 1550 nm, SC optical connector, 20 km reach (Min. -40dB)	• Use 2 fibers
For other optical modules:		
MMSnn	Other special optical modules for special order	• nn = 01 to 99 (contact sales for details)

Loop-D7163 E1 Digital Cross-Connect Platform Product Specifications

Time Slot Interchange

Less than 700µs delay
One active map, 3 user-stored maps

Voice Channel Conversion

CAS signaling transparent

Performance Monitor

Performance Store The last 24 hours performance in 15-minute intervals
Monitor Registers Line, user, and remote site
Performance Reports Date & time, error second, degraded minutes, unavailable second, bursty error second, severely errored second, controlled slip second, and loss of frame count
Alarm History Date & time, alarm type(i.e. master clock loss, RAI, AIS, LOS, BPV, ES, CSS)
Threshold Bursty seconds, severely errored second, degraded minutes

Ethernet

Connector RJ45
Protocol Telnet and embedded SNMP

Diagnostics Test

Loopback Line loopback, payload loopback and local loopback

Network Line Interface (21 E1)

Line Rate	2.048 Mbps ± 50 ppm	Framing	ITU G.704
Line Code	AMI/HDB3	Connector	Two SCSI 68 connectors (Used 68-pin on first connector and 16-pin on second)
Input Signal	ITU G.703		
Jitter	ITU G.823		
Output Signal	ITU G.703	Electrical	75Ω coax/120Ω twisted pair

STM1 Interface

STM1 Optical Transmitter (for 1310 nm STM1 Interface)

RMS	Max. 6 nm
Wavelength	1310 ± 50 nm
Output Power	Min. -12 dBm
Extinction Ratio	Min. 10 dB
Connector	SC

STM1 Optical Transmitter (for 1550 nm STM1 Interface)

RMS	Max. 6 nm
Wavelength	1550 ± 40 nm
Output Power	Min. -12dBm
Extinction Ratio	10db
Connector	SC

STM1 Optical Receiver

Sensitivity	Max. input power 0 dBm, Min. input power -34 dBm
Wavelength	Max. 1600 nm, Min. 1100 nm
Connector	SC

Front Panel

LED for power supply: POWER
LED for CPU: each for POWER, ACTIVE, and ALARM
LED for STM1: one for ACTIVE, POWER, and ALARM, each for LOS, LOF, and TEST
LED for High Density E1: one for ACTIVE, POWER, and ALARM

Physical/ Electrical

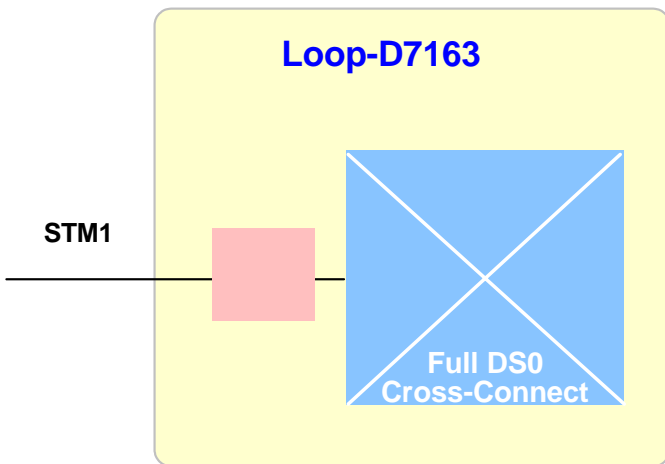
Dimensions For 19" box: 433 x 266 x 279 mm (W×H×D)
For 4" box: 101.5 x 266 x 279 mm (W×H×D)

Power Dual/ Single -48V DC, 45 Watts
Temperature 0-50°C
Humidity 0-95%RH (non-condensing)
Mounting Desk-top stackable, 19" / 23" rack mountable

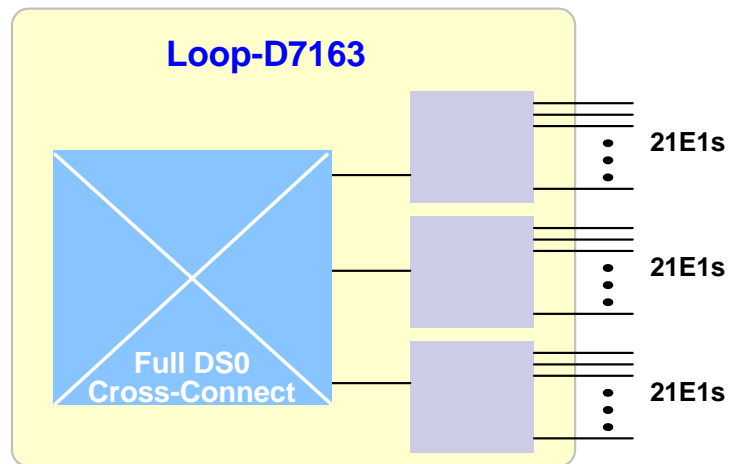
Alarm Relay

Alarm Relay, Fuse alarm, and Performance alarm

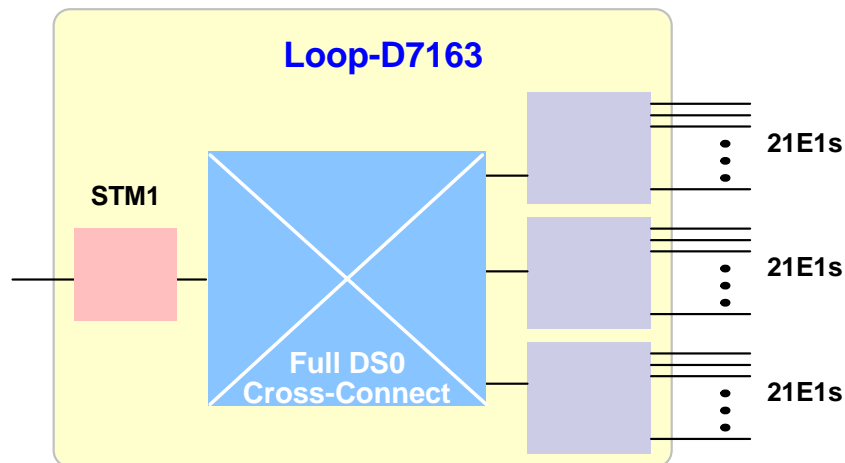
Application Illustrations:



As a DS0 Cross-Connect for STM1



As a DS0 Cross-Connect for 63 E1s



As a Multiplex plus Cross-Connect for 63 E1s to STM1



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