



Loop-H3300 SERIES G.SHDSL RACK CARD



Features

- 1-pair/2-pair/1+1 protection mode selectable
- STU-C or STU-R mode selectable
- E1 speed of $n \times 64$ Kbps, where $n = 1\sim 32$
- T1 speed of $n \times 64$ Kbps, where $n = 1\sim 24$
- Distances vary by line speeds, wire thickness and environmental factors, depending on max n
- DTE interface supports speeds up to 4.608MHz
- E1/T1 (selectable) interfaces
- Bridge Interface
- Uses industry standard 16PAM line format
- A pair of Loop-H3300 can be configured as DTE at one end and E1/T1 at the other in a bridge application
- Multi-color LED indicators
- Standard compliance:
 - G.SHDSL: ITU-T G.991.2 Annex A,B
 - Transmission rate up to 2.304M bps on 1-pair
 - Transmission rate up to 4.608M bps on 2-pair

Description

The Loop-H3300 provides high speed digital transport over twisted copper pairs using 16PAM technology. This versatile card offers a choice of digital interfaces and a choice of data rates, with the lower data rates applicable to longer reaches. Repeaters are available for extending the reach beyond a single span.

This rack version is for central office use, while a stand-alone version is intended for customer premises installation. Either version, installed in pairs, can provide (a) an E1 link, with E1 interfaces, (b) a high speed data link with DTE interfaces, or (c) a data access to E1/T1 with DTE interface at one end and E1/T1 at the other, as shown in the application illustrations.

From the shared common controller card of the rack cage, Loop-H supports configuration and diagnostics using keypads and a LCD display on the front panel, or from a local or remote terminal. In addition to commercial management systems, a graphical user interface (GUI) based network management system, LoopView, is also available from Loop. This enables users to execute in-service diagnostics and fault isolation.

**CERTIFIED
ISO-9001**

Ordering Information

To specify options, choose from list below:

Note: RoHS compliant units are identified by the letter **G** appearing immediately at the end of ordering code.

Model (non RoHS compliant)	Model (RoHS compliant)	Description
Loop-H3300-R-dte-sp-pp	Loop-H3300-R-dte-sp-pp- G	<ul style="list-style-type: none"> For Loop-C5500-CC-SNMP controller and Loop-C5500-CCA-SNMP controller G.SHDSL line rate with 200 Kbps to 2056 Kbps
Loop-H3300-RA-dte-sp-pp	Loop-H3300-RA-dte-sp-pp- G	<ul style="list-style-type: none"> For Loop-C5500-CCA-SNMP controller only G.SHDSL line rate with 200 Kbps to 2312 Kbps
Accessories		
User's Manual (All User's Manuals are RoHS compliant)		
Loop-H3300-R-UM	Loop-H3300-R-UM	User's Manual (paper, hard copy-optional). A CD version of the manual is already included as standard equipment.

Where **dte**=

non RoHS compliant	RoHS compliant	Description	Note
11	11G	V.35 DTE interface with M34 connector and speed up to 2.048 Mbps	For H3300-R and H3300-RA
1A	1AG	V.35 DTE interface with M34 connector and speed up to 4.608Mbps	For H3300-RA only
22	22G	V.35 DTE interface with DB25 connector and speed up to 2.048 Mbps	For H3300-R and H3300-RA
2A	2AG	V.35 DTE interface with DB25 connector and speed up to 4.608Mbps	For H3300-RA only
33	33G	EIA530 DTE interface	For H3300-R and H3300-RA
44	44G	X.21 DTE interface	For H3300-R and H3300-RA
88	88G	T1 interface with RJ48C connector	For H3300-R and H3300-RA
89	89G	T1/E1 interface with RJ48C connector (T1/E1 selectable by jumper)	For H3300-RA only
99	99G	E1 interface with RJ48C and BNC connector	For H3300-R and H3300-RA
BR	BRG	Bridge interface	For H3300-R and H3300-RA
RT	RTG	Router interface	For H3300-R and H3300-RA

NOTE: Options 1A, 2A and 89 are only supported by Loop-H3300-RA only.

Where **sp**=

kk	for 1-pair G.SHDSL
mm	for 2-pair G.SHDSL

Where **pp**=

(non RoHS compliant)	(RoHS compliant)	Description
P1	P1G	-48 Vdc
P3	Not available	-48 Vdc with line power source
P5	Not available	-48 Vdc with sealing current source

LOOP-H3300 G.SHDSL PRODUCT SPECIFICATIONS (Rack Card)

E1 Interface

Line Rate	2.048 Mbps \pm 50 PPM	Framing	ITU G.704 or Unframe
Line Code	HDB3, AMI	Input Impedance	75 Ω Coax/120 Ω twisted pair
Input Signal	ITU G.703	Output Signal	ITU G.703
Compatible with ISDN PRI NTUs		Connector	BNC/RJ48C

Note: E1/T1 is selected by jumpers configuration

T1 Interface

Line Rate	1.544 Mbps \pm 32 bps	Framing	D4 / ESF/ Unframe (selectable)
Line Code	AMI / B8ZS	Output Signal	DSX1
Input Signal	DS1 ABAM cable length up to 655 feet	Connector	RJ48C
Input Impedance	100 Ω		

DTE Interface

Data Port	1
Data Rate	Loop-H3300-R: N x 64 Kbps, N =1 to 32 (64 Kbps to 2.048 Mbps) for 1-pair or 2-pair G.SHDSL
	Loop-H3300-RA: N x 64 Kbps, N =1 to 36 (64 Kbps to 2.304 Mbps) for 1-pair G.SHDSL N x 64 Kbps, N =1 to 72 (64 Kbps to 4.608 Mbps) for 2-pair G.SHDSL
Connector	M34 (female) for V.35, DB25 (female) for V.35, EIA530, DB9 (female) for X.21

Bridge

Number of Ports	1
Physical Interface	10/100 Base-T Ethernet half/ full duplex, comply with the IEEE 802.3/ IEEE 802.3u
Data Rate	Loop-H3300-R: N x 64 Kbps, N =1 to 32 (64 Kbps to 2.048 Mbps) for 1-pair or 2-pair G.SHDSL
	Loop-H3300-RA: N x 64 Kbps, N =1 to 36 (64 Kbps to 2.304 Mbps) for 1-pair G.SHDSL N x 64 Kbps, N =1 to 72 (64 Kbps to 4.608 Mbps) for 2-pair G.SHDSL
Bridging capability	-Supporting a self-learning bridge specified in the IEEE 802.1d full protocol transparent bridging function -Supporting bridge filter function based on source MAC addresses
Connector	RJ45

Performance Monitor (E1/T1)

Performance Store	The last 24 hours performance in 15-minute intervals and last 7 days in 24-hour summary
Monitor Registers	Network, E1/T1/DTE, and remote site
Performance Reports	Errored Second, Unavailable Second, Severe Errored Second
Alarm History	Alarm Type, Loop1, Loop2, E1/T1 (LOS, ES, SES, UAS, CRC), and DTE Clock Loss
Alarm Queue	Contains 40 alarm records which record the latest alarm type, and date & time

xDSL Line Interface

SHDSL standard ITU-T G991.2 / G994.1

Full duplex with adaptive echo cancellation 16-TCPAM line coding

One or two unconditioned 19-26 AWG twisted pairs

Line Rate Available **Loop-H3300-R:**
200 Kbps to 2056 Kbps each pair for 1-pair G.SHDSL

Loop-H3300-RA:
200 Kbps to 2312 Kbps each pair for 1 pair G.SHDSL

Sealing current 6 mA.

Connector RJ45

Clock xDSL looped, Internal, or E1/T1/DTE

Console Ports on a shared Controller Card of the Rack Cage

Connector	DB9 at front panel	DB25 at Rear	RJ-45 at Rear
Electrical	RS232	RS232	10Base-T Ethernet
Protocol	VT-100 Menu driven	SLIP/Telnet	Telnet

System Configuration Parameters (All in non-volatile memory)

Active Configuration Current working configuration

Default Configuration Manufacture default configuration

Diagnostics Test

xDSL Loopback	To-DTE, To-LINE
DTE Loopback	To-DTE, To-LINE
E1 Loopback	To-E1, To-LINE
T1 Loopback	To-T1, To-LINE
Slave Loopback	DTE-Side, Line-Side (through EOC and ITU-T V.54)

Front Panel

LED POWER, LOOP1, LOOP2, TEST, ALARM,
E1: [E1, BPV, RAI/AIS, SYNC/TEST],
DTE: [DTE, RTS, TD, TEST, RD, CLK-LOSS]
Bridge: [Link Act, COL]
Router: [Router, WAN UP, LINK ACT, TEST, COL, WAN DOWN]

Physical/Electrical

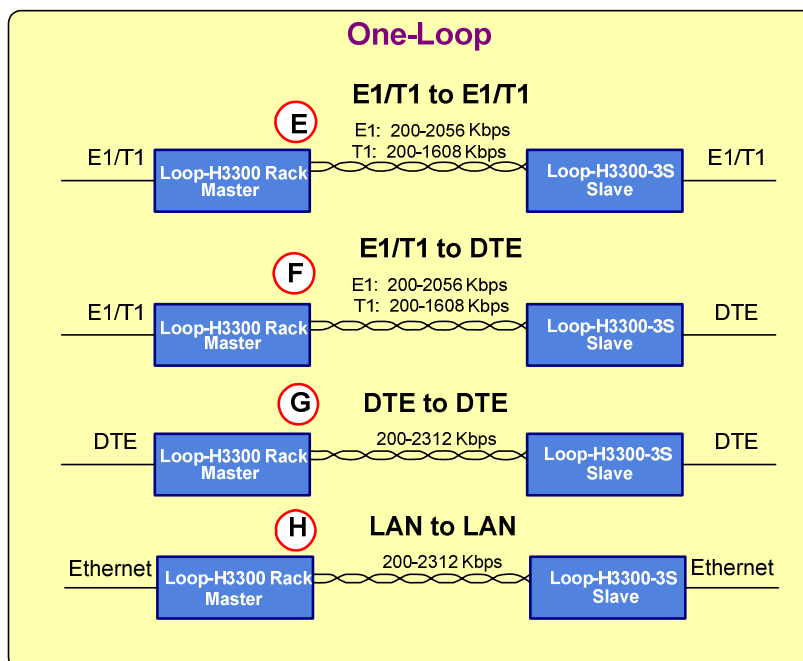
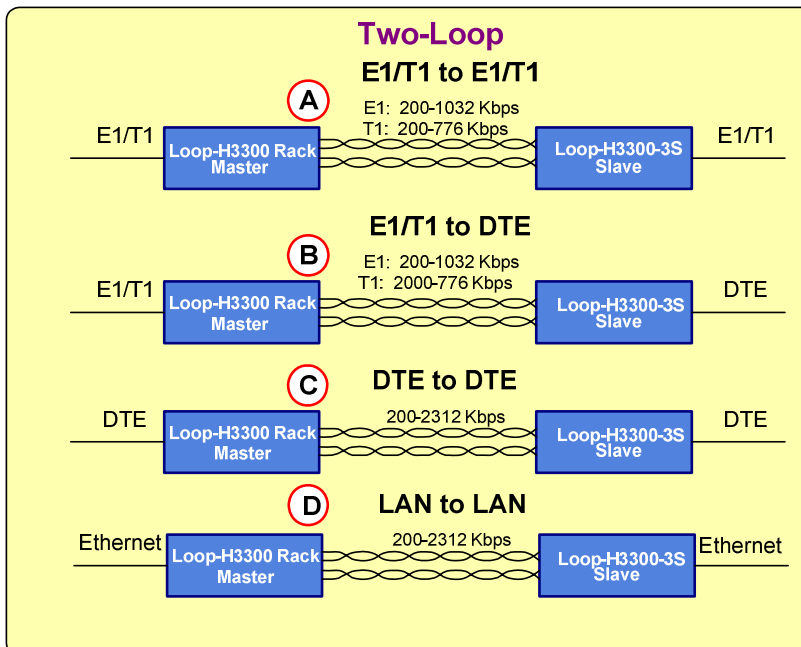
Dimensions	2.6 x 16.95 x 29.5cm (W x H x D)
Power	7 Watts max per card without line power or 22 Watts max per card with line power
Temperature	0 – 50 °C
Humidity	0 – 95% RH (non-condensing)
Mounting	Rack card fits into Loop-C 5500 Rack cage

Compliance

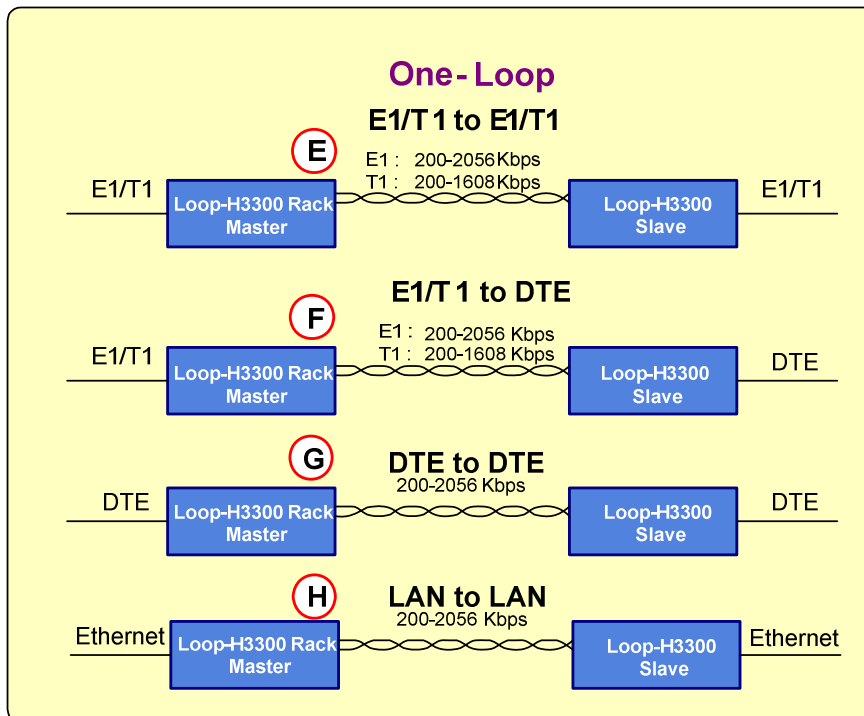
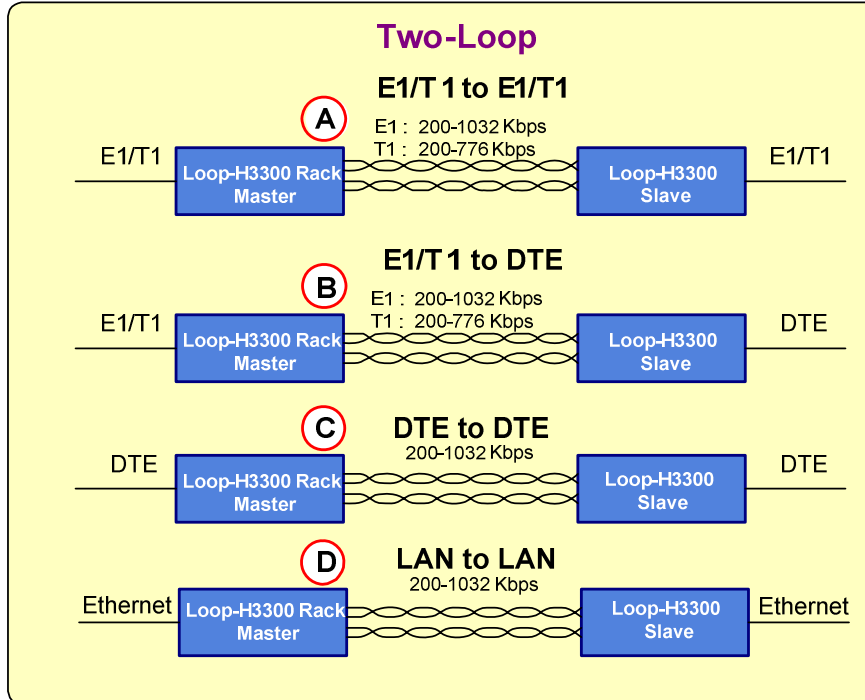
EMI/EMC	EN55022	EN50081-1	EN50082-1
Safety	EN60950		
G.SHDSL	G.991-2, G.994-1		

Application Illustrations

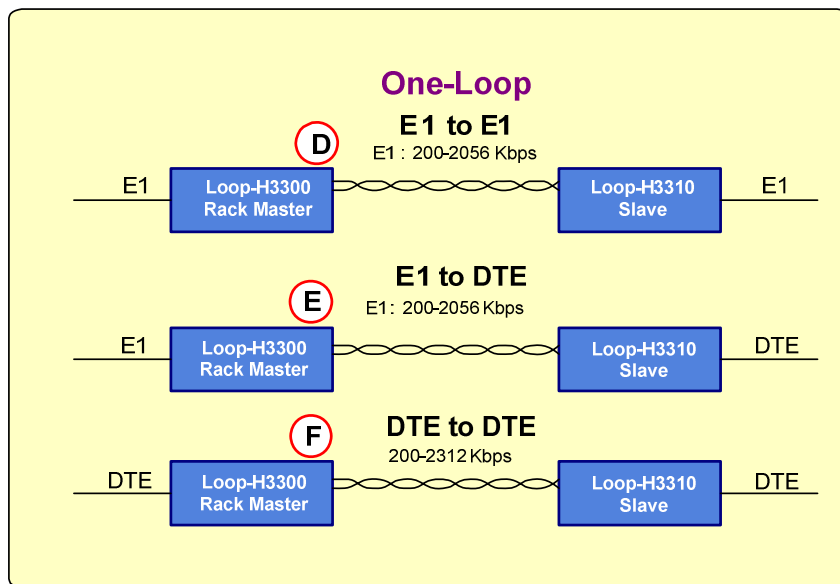
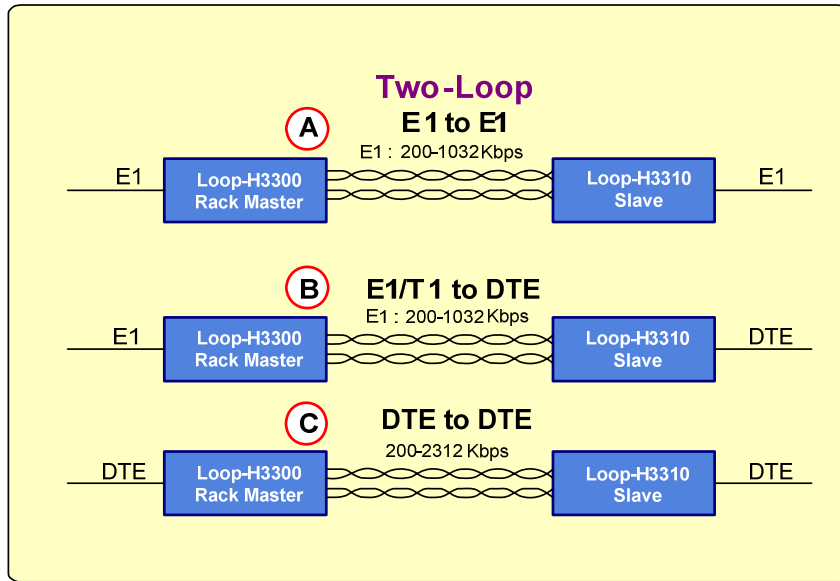
H3300 Rack Card to H3300-3S Stand Alone



H3300 Rack Card to H3300 Stand Alone



H3300 Rack Card to H3310 Stand Alone



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