ENT100-4W Ethernet Over TDM

The ENT100 transports Fast Ethernet services over single or multiple (bonded) E1 interfaces. It can operate in full E1 or fractional E1 modes and has full 64K cross connection capabilities. The device supports layer 2 switching and has QoS and VLAN capabilities thus enabling the use of existing E1 infrastructure to deliver Fast Ethernet services.

Enterprises are finding that their demand for Fast Ethernet Services is growing exponentially. They are therefore looking at methods to map these Ethernet services over existing unused E1's circuits available at the transport layer (higher order PDH, SDH, DWDM).

With the ENT100, this can be achieved without the costs associated with replacing existing hardware.

The ENT100 is capable of aggregating up to 4x10/100Base-T Fast Ethernet Interfaces over four E1 circuits.
This is available in a 1RU stand-alone version or as a plug in line card, which can be plugged into Avara's 3RU M4 sub-rack.

Benefits:

- Rapid deployment of Ethernet for PDH installations
- Effective use of unused E1 transport capacity (SDH)
- Eliminates need for expensive Ethernet modules at the transport level and for any external switches/routers

The ENT100 delivers high performance layer 2 Ethernet switching. Tag based VLANs (802.1p/.1q) are supported, allowing network segmentation without restrictions by physical connections and providing QoS.
Rate limiting function is also supported. Additionally, RMON statistics are available for the Ethernet ports.

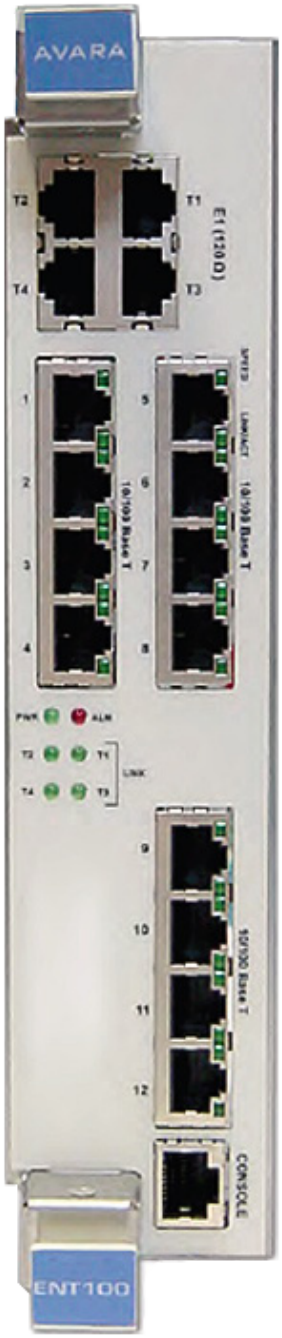
The ENT100 is capable of bonding up to 4 E1 interfaces to provide higher bandwidth connections. It is capable of compensating for up to 10 ms of differential delay. 50ms compensation is available on special request.

The ENT100 E1 interfaces can operate in clear channel G.703/2M mode or G.704/Nx64K fractional E1 mode. In fractional E1 mode, the ENT100 provides full Nx64K cross connection capabilities thus offering the user to pack E1 streams to maximise bandwidth utilisation. Performance monitoring and diagnostics on the E1 interfaces, such as loop backs and bit error rate on a per interface basis, is provided.

Four asynchronous V.11 interfaces, which are sampled at 64kbps, are also available. These circuits can be individually connected to any time slot on any E1 port.
Additionally, these interfaces can be logically ANDed together to allow the provision of multidrop circuits and is ideal to transport Q1 management circuits.

Full remote configuration using Telnet, SNMP and HTTP Protocols are available. Software download also using TFTP is supported, thus reducing installation time.
In addition, for those organizations using HPOV, a plug-in is available to streamline the management of the ENT in a HPOV environment.
A comprehensive set of SNMP traps and alarms are provided to assist fault management and isolation.

The ENT100 can be managed locally via CLI or remotely using Telnet, SNMP or a Web Browser.
These management interfaces can be supported over a separate VLAN thus offering a greater level of security for management traffic.



Technical Highlights

Customer Interfaces

- 4 x 10/100Base-T Ethernet Ports

Network Interfaces

- 4 x G.703/G.704 (unframed / framed / CRC4)

Key Features

- Extend the bandwidth to 7.4Mbps when bonding 4 E1 links
- Point to point, linear and ring topology support
- Supports 4 WAN directions for switched Ethernet support in linear and loop operating topologies.
- 64K cross connect capability
- High performance Ethernet layer 2 switch fabric with 802.1p/q VLAN capabilities, Rate Limiting, both VLAN access and trunk port modes
- Has digital summing capabilities for point to multi-point application support for serial interfaces

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Technical Specifications

Model Order Code	P21015.06
Mechanical	
Height	233mm
Depth	160mm
Width	100mm
Interfaces	
E1	G.703/G.704 2M/Nx64K, Framed, Unframed, CRC4
Ethernet (Electrical)	10/100Base-T (RJ45) (Switched)
Voice	2/4W with E&M signalling (Available on request)
Serial	V.11
Serial Interface Parameters	
Speeds	9600 or lower
Operating Modes	Asynchronous
Control Signal Support	None
VF Interface Parameters (Available on request)	
Speed	64K
Codecs Supported	G.711, G.721
E&M	Optically isolated and balanced
Switch Parameters	
Speed	10/100Base-T
Autonegotiation	Yes
Duplex	Full/Half
MDI/MDIX Support	Yes
IEEE 802.1p/q	Yes
MAC Address Size	2K
VLANs Supported	4096
Rate Limiting	128K, 256K, 512K, 1M, 2M, 4M, 8M
Traffic Shaping	Strict & Weighted Round Robin
Priority Queues Per Output	4
Port Mirroring	Yes
Management	
Local	CLI via Console
Remote	Telnet, SNMP, Web Server

Security	
Data Interfaces	Dedicated VLAN
Management	Password Protection, Dedicated VLAN
Power	
Power Supply	-20 to -72 VDC
Power Consumption	10W
Alarm Contacts	2x Relay outputs with current carrying capacity of 1A @ 24V Capable of driving A & B sub-rack alarms on M4 or sub-racks 5-90% (Non-condensing)
MTBF	65 Years
Environmental	
Operating Temperature	-5 °C to +65 °C
Relative Humidity	5-90% (Non-condensing)
Standards	IEEE 802.3 Ethernet IEEE 802.3u Fast Ethernet IEEE 802.1p VLAN Tagging IEEE 802.1q Prioroty Queing IEEE 802.3x Flow Control RFC1157 SNMP RFC1213 MIB II RFC854 Telnet RFC783 TFTP S002 PSTN Interconnection S003 Customer Premises Switching S004 VF Performance EN55022 Class A Emissions EN60950 Safety AS/ACIF S016 EN55024 Immunity EN50082-2 Generic Immunity ITU-T X.21 ITU-T V.11 ITU-T G.823 ETS 300 019 -1-1 Operational ETS 300 019 -1-2 Storage ETS 300 019 -1-3 Transport

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