High-Speed Ethernet to DS3/E3 Rate Converters

For Wireless, Optical and Wired Applications

March 6th, 2014 -- Models V5.4

Technical Specifications

General

E3Switch provides custom h/w and s/w solutions with short turnaround times to meet requirements not shown below.

Indicators:	LAN Status/Rx; Telcom Status/Rx; Bit Error.
True User Data Rate:	Single: DS3/T3: **43.4 Mbit/s**; E3: **33.2 Mbit/s**. Dual DS3/T3: **86.8 Mbit/s**; E3: **66.4 Mbit/s**
Aggregate Data Rate:	DS3/T3: 44.736 Mbit/s; E3: 34.368 Mbit/s.
Management:	**SNMP**v2c with VACM View-Based Access Control; **HTTP** comprehensive web interface
LAN:	100BASE-TX to 1650 bytes or more – Stacked VLAN q-in-q – 1/2MByte buffer; 1000BASE-X SFP available
VoIP:	**Dedicated VoIP queue** for low-latency VoIP processing
Mechanical:	VAC: 4.75" wide with 19"-**rackmount** brackets;VDC: 3.5" wide, DIN-railmount or rackshelf
Electrical:	100-240VAC or ±35-75VDC
Firmware Upgradeable Features:	GbE/1000BASE-T/**Jumbo-Frame**; Single or **Dual Telco** Path with automatic failover; **Optical SFP** LAN

Network/Link

Total Path Latency:	Through 2 back-to-back units: 0.070ms/0.350ms (60/1518-bytes GbE) – 0.150ms/0.450ms (100Base-TX)
Path Throughput:	39,300 packets/sec simultaneously each direction, or 78,600 in asymmetric unidirectional use.
DS3/E3 Frame Format:	C-bit / M13 / M23 / G.751 – HDB3/B3ZS encoding – Clear channel (no T1/DS1/E1 tributaries) or unframed.
DS3/E3 Waveshape Compliance:	ANSI T1.102-1993, Telcordia TR-NWT-000499 and GR-253-CORE, ITU-T G.703.
DS3/E3 Cabling:	DS3/T3: 300 meters; E3: 480 meters to radio/CSU; BNC – 75ohm one rx, one tx.
LAN Layer-1:	100 Mbit/s full duplex – Autonegotiation – Auto-MDIX crossover correction. 1000BASE-X SFP available.
LAN Layer-2:	802.3x flow-control; 802.1p QOS/priority for VoIP; 1650 byte packets; Transparent VLAN
Packet Filtering:	No filtering. Broad/Multicasts forwarded to link; 400kByte buffering.
Packet Priority:	Separate high-priority queue for 802.1p priority packets (i.e. VoIP).

Mechanical/Electrical

Dimensions (WxLxH):	Standalone: 4.75" wide 1U with 19" rackmount brackets (120mm x 215mm x 38mm (4.75" x 8.5" x 1.5"); 6-slot/1U and 20-slot/3U NEBS-III redundant power chassis available.
Weight:	1 kg / 2 lbs.
Power:	100-240VAC or ±35-75VDC – 6 Watts. Redundant supplies available.
Power Connector:	VAC: IEC connector. VDC: Screw Terminal
LAN Connectors:	One 100BASE-TX, 8P8C (RJ-45); One optional SFP port. Optional 1000BASE-T upgradeable.
DS3/E3 Connectors:	Two 75-ohm BNC – one rx, one tx; Second optional T3/E3/DS3 channel.

Environmental

Operating Temperature:	0° C to 50° C (30° F to 122° F)
Storage Temperature:	-20° C to 70° C (-4° F to 158° F)
Operating Humidity:	10% to 90% -- Non-Condensing
Storage Humidity:	5% to 95% -- Non-Condensing

Regulations

RFI/EMI/RoHS:	FCC Part 15B, Class A; EMC Directive (2004/108/EC) (CE Mark); EN55022/24, Class A; AS/NZS 3548 (C-Tick Mark); ICES-003, Class A; VCCI, Class A; RoHS Directive 2002/95/EC and others.

For More Information :

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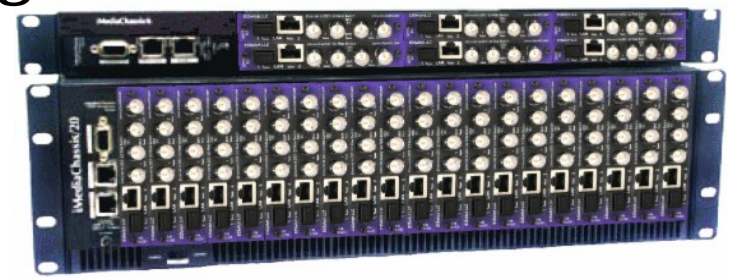
High-Density, Managed Ethernet to DS3/E3 Rate Converters

For Wireless, Optical and Wired Applications

March 6th, 2014 -- Models V5.4-6c/20c



Technical Specifications

General

With up to **40 channels** of **variable-topology** and fault-tolerant **jumbo-GbE** to DS3/E3 conversion in a manageable, carrier-class chassis, the E3Switch multi-card Model 6c/20c provides a high-reliability and high-flexibility option for central office applications. Continuous operation is maintained with **hot-swappable dual or mixed AC/DC supplies,** hot-swappable conversion cards, and independent **SNMP management of chassis** temp/power/fan with last-gasp notification. Per-card single or dual jumbo-frame copper/SFP LAN ports feed bonded or isolated DS3/E3 ports in a variety of **user-configurable VLAN or failover topologies**. Pair this multi-slot chassis with similar or single-units at the remote location.

E3Switch provides custom h/w and s/w solutions with short turnaround times to meet requirements not shown below.

Topology:	6-card or 20-card. 2 DS3/E3 channels per card bonded or isolated and sourced by 1,2 or failover GbE LAN
Indicators:	LAN Status/Rx; Telcom Status/Rx; Bit Error.
User Data Rate:	Single: DS3/T3: **43.4 Mbit/s**; E3: **33.2 Mbit/s**. Dual DS3/T3: **86.8 Mbit/s**; E3: **66.4 Mbit/s** per channel
Aggregate Data Rate:	DS3/T3: 44.736 Mbit/s; E3: 34.368 Mbit/s per channel.
Management:	Cards: **SNMP**v2c with VACM and **HTTP** comprehensive web interface; Independent chassis SNMP.
LAN:	1000BaseT and/or 1000Base-X SFP up to 9700 bytes – Stacked VLAN q-in-q – 500kByte total buffers;
VoIP:	**Dedicated VoIP queue** for low-latency VoIP processing
Mechanical:	19"-**rackmount;** 6-card 1UI, 10" deep; 20-card 3UI, 14" deep;
Electrical:	100-240VAC and/or -48VDC, dual, redundant, load-balancing hot-swappable supplies.

Network/Link

Total Path Latency:	Through 2 back-to-back units: 0.070ms/0.350ms (60/1518-bytes GbE) – 0.150ms/0.450ms (100Base-TX)
Path Throughput:	39,300 packets/sec simultaneously each direction, or 78,600 in asymmetric unidirectional use.
DS3/E3 Frame Format:	C-bit / M13 / M23 / G.751 – HDB3/B3ZS encoding – Clear channel (no T1/DS1/E1 tributaries) or unframed.
DS3/E3 Waveshape Compliance:	ANSI T1.102-1993, Telcordia TR-NWT-000499 and GR-253-CORE, ITU-T G.703.
DS3/E3 Cabling:	DS3/T3: 300 meters; E3: 480 meters to radio/CSU; BNC – 75ohm.
LAN Layer-1:	Single or dual LAN port per card; 1000BaseT and/or 1000Base-X SFP full-duplex – Autoneg/auto-MDIX.
LAN Layer-2:	9700-byte Jumbo Frames; 802.3x flow-control; 802.1p QOS/priority for VoIP; Transparent VLAN
Packet Filtering:	No filtering. Broad/Multicasts forwarded to link; 500kByte aggreagate buffering.
Packet Priority:	Seperate high-priority queue for 802.1p priority >=6 (i.e. VoIP).

Mechanical/Electrical

Dimensions (WxLxH):	19"-**rackmount;** 20-card 3UI, 14" deep; 6-card 1UI, 10" deep.
Weight:	20-card: 35lbs (16kg); 6-card 15lbs (7kg)
Power:	Dual, redundant hot-swap supplies any combination of 100-240VAC or -48VDC – 6 Watt/card
LAN Connectors:	One 1000BaseT, RJ-45 and one optional SFP port per card
DS3/E3 Connectors:	75-ohm BNC – one rx, one tx or second optional T3/E3/DS3 channel per card

Environmental

Operating Temperature:	0° C to 50° C (30° F to 122° F)
Storage Temperature:	-20° C to 70° C (-4° F to 158° F)
Operating Humidity:	10% to 90% -- Non-Condensing
Storage Humidity:	5% to 95% -- Non-Condensing

Regulations

RFI/EMI/RoHS:	FCC Part 15B, Class A; EMC Directive (2004/108/EC) (CE Mark); EN55022/24, Class A; AS/NZS 3548 (C-Tick Mark); ICES-003, Class A; VCCI, Class A; RoHS Directive 2002/95/EC and others.

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