

Ethernizer E-315B, E-615B TDM to IP Protocol Converter

Technical Data Sheet

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Product Description

STM-1 to IP Voice and Signaling Converter

Telecom Operators are migrating from Legacy network infrastructures to more scalable, flexible and efficient Internet protocol (IP) networks, to support the new IP services, which are significantly more cost-effective and versatile than their legacy TDM counterparts

However, this migration introduces significant challenges, as they still need complete end-to-end service performance assurance visibility, **gathering signalling and voice information from the TDM networks.**

Also monitoring systems are more and more focused on IP only probes, as network operators ask for future proof solutions to save money and protect their investment.

In this scenario, the Signaling&Voice Ethernizer can be used to feed IP monitoring probes with both TDM signalling and voice information, to provide a complete visibility of the end-to-end connection.

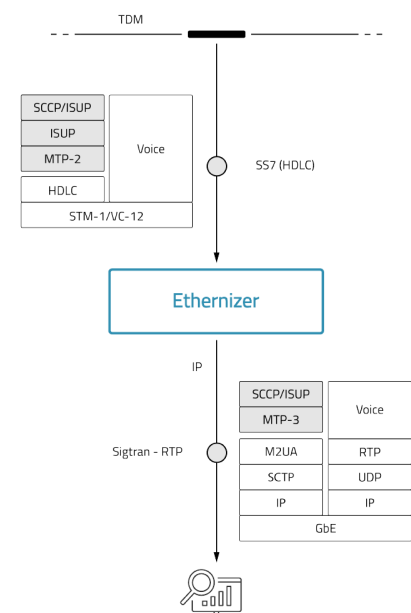
Key features

- Ethernizer E-615B&E-315B Signaling&Voice allow an IP probe to monitor multiple STM-1 channelized links (VC-12/DSO-64kbps), **carrying SS7 Signaling and Voice simultaneously**
- Interface **TDM STM-1 links** (VC12/E1 HSL&LSL) at physical level,
- Protocol Conversion:
 - * **SS7 (HDLC): Message Transfer Part2 (MTP-2) - User adaptation Layer (M2UA);** up to 1024 SIGTRAN streams,
 - * Voice: **RTP (Real-Time Transport Protocol) encapsulation of Voice Data Streams,** without transcoding function; up to 7812 RTP streams.
- Different source/destination IP addresses can be assigned to each SIGTRAN stream** (1024 streams for each input module), providing aid to IP probes for SS7 link-sets identification;
- L2GRE/NVGRE tunnel encapsulation;**
- Support **Layer 1 and 2 alarms** through SNMP traps:
 - * STM-1 LOS (Loss of Signal) & LOF (Loss of Frame),
 - * VC12/E1 LOF (Loss of Frame), AIS (Alarm Indication Signal) & RAI (Remote Alarm Indication),
 - * SS7 Link Activity Alarm.
- CLI and GUI** available for system configuration, management and alarms status monitoring. Import/export of "csv files" is supported for easy mapping and configuration.



Highlights

- No need for legacy probes: IP probes can interface TDM links, both Signaling and Voice channels**
- No additional IP probes are required:** output traffic can be delivered to centralized IP tools, using L2GRE tunnel encapsulation
- Fully compliant with SIGTRAN standard,** no need to customize the IP probe
- All information are captured from the TDM links,** layer 1 and layer 2 alarms are available through SNMP traps



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Ethernizer E-315B, E-615B — Technical Specification

	Ethernizer E-315B	Ethernizer E-615B
Input/Output Capabilities		
Input module	1 module, with 4xSTM-1	Up to 4 modules, each one with 4xSTM-1
Output ports	2x1Gb/s Ethernet ports	2x1Gb/s or 2x10Gb/s Ethernet ports,
Management		
Management ports	1 x 10/100/1000 Mb/s with RJ45 connector	
Protocols	IPV4, SNMPv1, HTTPS	
Statistics and Alarms	Real time statistics and counters available for each input/output port SNMP alarms	
Transceiver type		
Copper (SFP)	1000 Base T	
Singlemode (SFP/SFP+)	1000 Base LX (1310nm)	1000 Base LX (1310 nm) 10Gb/s Base LR (1310 nm)
Multimode (SFP/SFP+)	1000 Base SX (850nm)	1000 Base SX (850 nm) 10Gb/s Base SR (850 nm)

Operating	Power	Dimensions E-613SA	Dimensions E-313SA
<ul style="list-style-type: none"> Operating temperature: 0°C to 45°C Storage temperature:-20°C to 70 °C Relative humidity: up to 90% not condensing 	<ul style="list-style-type: none"> 220-110 Vac 50-60 Hz hot swap power module 48 Vdc hot swap power module Max consumption: (fully equipped)350 W (E-613B) - 150 W (E-313B) 	<ul style="list-style-type: none"> Chassis 2U surface or 19" rack mount 482,6 mm W, 453 mm D, 88 mm H Weight: (fully equipped)11kg (24.2 lbs) 	<ul style="list-style-type: none"> Chassis 1U surface or 19" rack mount 482,6 mm W, 453 mm D, 44 mm HCE Weight: 5.50(fully equipped) 12.1lbs

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Ethernizer E-315B – Ordering Information

E-315B-2AS-2G	Ethernizer 1U, 19" rack mount including: 1 input module with 2 STM1-1 singlemode (4rx) Input: 4 SFP on front panel (included) Output: 2 x1G Ethernet front ports with SFP cages, these SFP are not included Includes software licence for protocol conversion from SS7/STM-1 to SIGTRAN & RTP incapsulation of Voice Data Stream
E-315B-4AS-2G	Ethernizer 1U, 19" rack mount including: 1 input module with 4 STM-11 singlemode (8rx) Input: 8 SFP on front panel (included) Output: 2 x 1G Ethernet front ports for with SFP cages, these SFP are not included Includes software licence for protocol conversion from SS7/STM-1 to SIGTRAN & RTP incapsulation of Voice Data Stream
PS1-3/160-AC	Redundant power supply AC
PS1-5/160-DC	Option: unit with redundant power supply DC
E-315B-L2AS	Ethernizer E313B, capacity licence to enable additional 2 STM-1
SFP-GT/J	SFP-GT/J 1000 Base T Copper with RJ-45 connector
SFP-GS/L-24	SFP-GS/L-24 1000 Base SX (850nm) Multimode with LC connector
SFP-GL/L-23	SFP-GL/L-23 1000 Base LX (1310nm) Single Mode with LC connector
SFP+-HR/L-11	SFP+-HR/L-11 10 GE Base-SR (850 nm) Multimode with LC connectors
SFP+-HP/L-14	SFP+-HP/L-14 10 GE Base-LR (1310 nm) Single Mode with LC connectors

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Ethernizer E-615B – Ordering Information

E-615B-4AS-2G2H	Ethernizer 2U, 19" rack mount including: 1 input module with 4 STM-1 singlemode (8rx) Input: 8 SFP on front panel (included) Output: 2x 1G and 2 x10G Ethernet rear ports for filtering/aggregation with SFP cages, these SFP/SFP+ are not included Includes software licence for protocol conversion from SS7/STM-1 to SIGTRAN & RTP incapsulation of Voice Data Stream
E-615B-8AS-2G2H	Ethernizer 2U, 19" rack mount including: 2 input modules with 8 STM-1 singlemode (16rx) Input: 16 SFP on front panel (included) Output: 2x1G and 2 x10G Ethernet rear ports for filtering/aggregation with SFP cages, these SFP/SFP+ are not included Includes software licence for protocol conversion from SS7/STM-1 to SIGTRAN & RTP incapsulation of Voice Data Stream
E-615B-12AS-2G2H	Ethernizer 2U, 19" rack mount including 3 input modules with 12 STM-1 singlemode (24rx) Input: 24 SFP on front panel (included) Output: 2x1G and 2 x10G Ethernet rear ports for filtering/aggregation with SFP cages, these SFP/SFP+ are not included Includes software licence for protocol conversion from SS7/STM-1 to SIGTRAN RTP incapsulation of Voice Data Stream
E-615B-16AS-2G2H	Ethernizer 2U, 19" rack mount including 4 input modules with 16 STM-1 singlemode (32rx) Input: 32 SFP on front panel (included) Output: 2x 1G and 2 x10G Ethernet rear ports for filtering/aggregation with SFP cages, these SFP/SFP+ are not included Includes software licence for protocol conversion from SS7/STM-1 to SIGTRAN & RTP incapsulation of Voice Data Stream
PS2-3/460-AC	Redundant power supply AC
PS2-5/460-DC	Option: unit with redundant power supply DC
IN-009-SB	Additional module with 4 STM-1 singlemode (8rx) Input: 8 SFP on front panel (included)
SFP-GT/J	SFP-GT/J 1000 Base T Copper with RJ-45 connector
SFP-GS/L-24	SFP-GS/L-24 1000 Base SX (850nm) Multimode with LC connector
SFP-GL/L-23	SFP-GL/L-23 1000 Base LX (1310nm) Single Mode with LC connector
SFP+-HR/L-11	SFP+-HR/L-11 10 GE Base-SR (850 nm) Multimode with LC connectors
SFP+-HP/L-14	SFP+-HP/L-14 10 GE Base-LR (1310 nm) Single Mode with LC connectors