

Ethernizer E-313B, E-613B, E-313B-I TDM to IP Protocol Converter

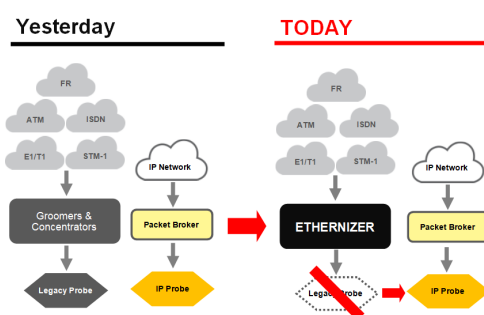
Technical Data Sheet

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Product Description

Telecom Operators are migrating from Legacy network infrastructures to more scalable, flexible and efficient Internet protocol (IP) networks, to support the new IP services. As this migration is not so fast and easy, due to technical and budget constraints, operators are currently handling a mixed architecture TDM & IP, both for links and monitoring probes.

Microtel's Ethernizer enables to monitor the whole infrastructure using IP probes, saving money in future investment and optimizing the whole monitoring system.



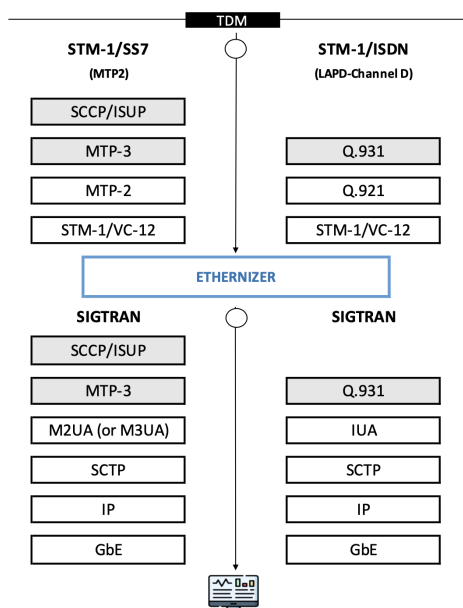
Key features

- Convert **SS7 Signalling (MTP-2) to SIGTRAN (M2UA or M3UA)**
Product: E-313B/E-613B;
- Convert **STM-1/ISDN PRI (LAPD- Channel D) to SIGTRAN (IUA)**
Product: E-313B-I;
- Interface **TDM STM-1 links** (VC12/E1 HSL&LSL) at physical level;
- **Perform signalling translation to IP protocol**, forwarding the converted IP packets to 1/10 Gb/s output interfaces, which are directly connected to the IP monitoring tools;
- **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 Layer 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 alarm 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 thanks to Ethernizer, which converts SS7 Signaling to SIGTRAN
- **No additional IP probes are required:** SIGTRAN traffic can be delivered to centralized IP tools, using L2GRE tunnel encapsulation
- **Fully compliant with SIGTRAN standard**, no need to customize
- **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-313B, E-613B, E-313B-I — Technical Specification

| | Ethernizer E-313B, E-313B-I | Ethernizer E-613B |
|---------------------------|---|--|
| Input/Output Capabilities | | |
| Input modules | 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 10/100/1000Mb/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-313B/B-I | Dimensions E-613B |
|--|---|---|---|
| <ul style="list-style-type: none">Operating temperature: 0°C to 45°CStorage temperature: -20°C to 70 °CRelative humidity: up to 90% not condensing | <ul style="list-style-type: none">220-110 Vac 50-60 Hz Redundant hot swap power modules48 Vdc hot swap power modulesMax consumption: (fully equipped) 350 W (E-613B) - 150 W (E-313B/B-I) | <ul style="list-style-type: none">Chassis 1U surface or 19" rack mount 482,6 mm W, 437 mm D, 44 mm HWeight: (fully equipped) 6 Kg (13.3 lbs) | <ul style="list-style-type: none">Chassis 2U surface or 19" rack mount 482,6 mm W, 453 mm D, 88 mm HWeight: (fully equipped) 10 Kg (22,04 lbs) |

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Ethernizer E-313B, E-313B-I — Ordering Information

| | |
|---------------------------|--|
| E-313B-B1-2AS-2G | Ethernizer 1U, 19" rack mount including: 1 input module with 2 STM-1 singlemode (4rx) Input: 4 SFP on front panel (included) Output: 2x1G Ethernet front ports with SFP cages, these SFP are not included Includes software licence for protocol conversion from SS7/STM-1 to SIGTRAN |
| E-313B-B1-4AS-2G | Ethernizer 1U, 19" rack mount including: 1 input module with 4 STM-1 singlemode (8rx) Input: 8 SFP on front panel (included) Output: 2x1G Ethernet front ports for with SFP cages, these SFP are not included Includes software licence for protocol conversion from SS7/STM-1 to SIGTRAN |
| E-313B-I-B1-4AS-2G | Ethernizer 1U, 19" rack mount including: 1 input module with 4 STM-1 singlemode (4rx) Input: 8 SFP on front panel (included) Output: 2x1G Ethernet front ports with SFP cages, these SFP are not included Includes software licence for protocol conversion from ISDN STM-1 (LAPD-Channel D) to SIGTRAN (IUA) |
| PS1-3/160-AC | Redundant power supply AC |
| PS1-5/160-DC | Option: unit with redundant power supply DC |
| E-313B-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 |

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Ethernizer E-613B — Ordering Information

| | |
|----------------------------|--|
| E-613B-B2-4AS-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 |
| E-613B-B2-8AS-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 |
| E-613B-B2-12AS-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 |
| E-613B-B2-16AS-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 |
| PS2-3/460-AC | Redundant power supply AC |
| PS2-5/460-DC | Option: unit with redundant power supply DC |
| IN-008-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 |