

Network Demarcator EDD-1000



Description

Demarcation

Located typically in the client's residence, acts as UNI-C as described in the MEF-4 and defines the limits of responsibility between client and supplier, providing traffic control functionality, monitoring and fault and degradation of service detection tools. Allows QinQ labeling of the customer traffic for the virtual circuit configuration point to point (E-Line) or multipoint (E-LAN).

High Availability

Robust and reliable equipment, with the possibility of being integrated in ETSI and 19" cabinets, which provides dual redundant power supply with the possibility of -48VDC or 220VAC. Configurable dual-homing redundancy in the provider's fiber port to allow connection to two different equipments.

Interoperability

Support for standard Ethernet OAM management protocols to allow interoperability with other network elements. Link management using IEEE 802.3ah. OAM management provided at service level according to ITU-T.1731 and IEEE.802.1ag protocols for complete management of client-client circuits or client-provider. Direct integration with standard SNMP management tools.

SLA compliance verification

Active analysis of traffic parameters such as PDV, latency and lost packets, without loss of performance of customer traffic, between any equipment of the Metropolitan Network Access Cards of Telnet Redes Inteligentes.

Value added

Support of QoS mechanisms with four queues per VLAN traffic classification, 802.1p and DSCP. Provides a clock output of 2Mbps as ITU-T G.703 sync to a remote clock reference by IEEE1588v2. Provides information on the operation of optical modules, such as the optical power and allows the detection of fails in the fiber using OTDR modules.

Features

The EDD-1000 of TELNET Redes Inteligentes is a network demarcation equipment serving as the domain boundary between operator and client in the UNI interface as defined in MEF-4, providing a redundant fiber link of 1Gbps to the provider's domain.

Oriented to work as UNI-C, the typical location is the client building being managed by the operator, offering standard Operation, Administration and Maintenance (OAM) and standard management mechanisms in-band and out of band.

As a differentiator, EDD-1000 has the ability to perform traffic measurements actively between any team from of the family of Metropolitan Networks Access Cards of TELNET Redes Inteligentes, extracting relevant information for the operator to ensure compliance with the SLAs.

For a complete access solution, the equipment acts as an 802.1Q bridge capable of supporting QoS and VLAN stacking allowing the provider encapsulation of customer traffic and customer VLAN assignment.

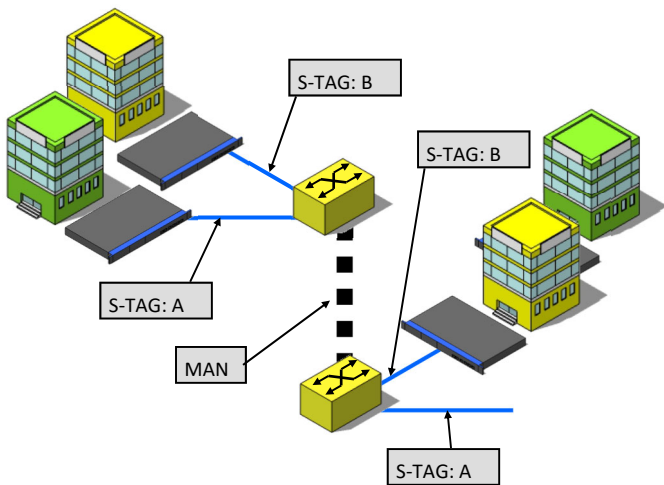
The EDD-1000 supports IEEE1588v2 synchronization protocol, offering the possibility of generating a clock synchronized with a remote source accurately for clock synchronization between equipments and mobile BTS.

The EDD-1000 is part of the family of Demarcation Equipment from TELNET Redes Inteligentes and with the family of Media Converters equipment, form a complete solution for access to metropolitan networks.

E-Line or E-LAN Topologies

Through this kind of topologies it is allowed the coexistence of different user traffic through a network.

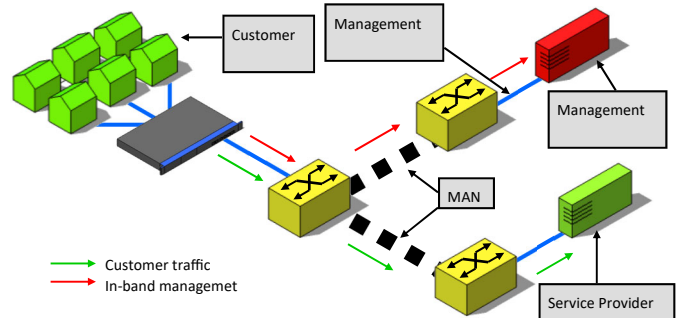
By configuring the QinQ labeling by the provider, the EDD-1000 can be used for point to point (E-Line) or point-to-multipoint (E-LAN) without requiring that the central equipment to perform such aggregation operation.



In-band management

Independence of customer traffic and in-band management traffic by VLAN tagging.

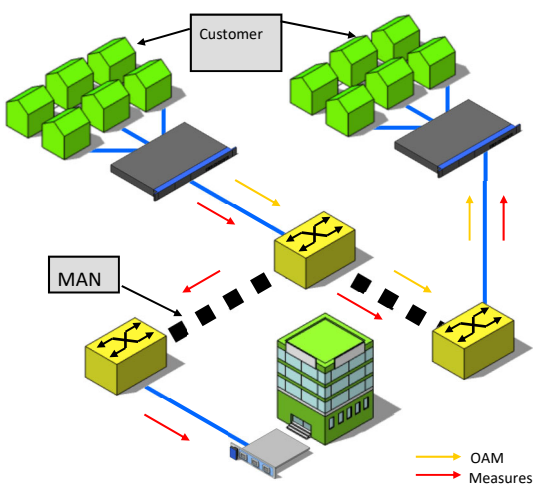
Through redundancy based on dual-homing ensuring the availability of client traffic.



Traffic Characterization

Characterization of traffic between any two points on the network with computers on the Metropolitan Network Access Family equipments by own measurement protocol. Active traffic measurements do not interfere with customer traffic.

Interoperability with any network equipment with support for OAM Ethernet for failure monitoring and performance measures.



Management capabilities

In-Band management using VLAN tagging and out of band via the Ethernet console interface.

SNMP v1, v2c y v3 Management

CLI management

TELNET Management System

Multiple IP addressing

Acquisition of routes via RIP

Management via TELNET Management System

Administration maps of cards equipments with self-discovery

Reception and alarm filtering

Real-time display of the front of equipment

Graphical configuration and provision of equipment and ports.

Graphical configuration of VLANs.

Configuration and implementation of graphical traffic measures on equipments.

SNMP tables views

Security and Management

SNMP v3

CLI access via SSH

Copying files and updating via SCP

TACACS+ Authentication

Ethernet norms

IEEE 802.3

802.3j

802.3u

802.3x

802.3z

802.3ab

802.3q

802.1ad

OAM norms

802.3ah

802.1ag

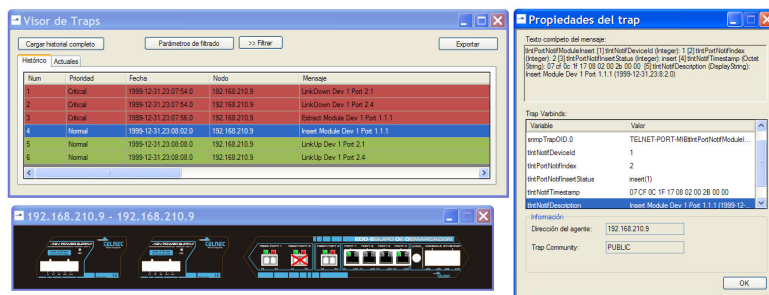
ITU-T.1731

Synchronization

IEEE 1588v2

G.703

NTPv4



SNMP Management

SNMPv3 users and access configuration according to VACM.

IP access filtering available for SNMP v1, v2c y v3

Configurable notifications to multiple destinations.

Disabling individual submissions by alarm or destination.

Sending notifications as traps, reports or syslog.

CLI management

Access to the CLI through Telnet, SSH or serial RS-232 console

AAA Authentication configurable based on local or TACACS + authentication

Storage of upgrade images in the equipment.

Storing of configuration files.

Copying files via TFTP or SCP

Time synchronization by NTPv4 and IEEE1588v2, time zone settings and the possibility of time storage.

User Management

Defining levels of privileges and restrictions on the execution of commands.

Standard MIBs

SNMPv2-MIB

IF-MIB

IP-MIB

TCP-MIB

UDP-MIB

SNMP-USER-BASED-SM

SNMP-VIEW-BASED-ACM

IEEE8021-CFM-MIB

TELNET R.I. MIBs

TELNETRI-MIB

TELNET-STACK-MIB

TELNET-PORT-MIB

TELNET-VLAN-MIB

TELNET-MEASURES-MIB

TELNET-GENERIC-NOTIFICATION-MIB

TELNET-ETHERNET-MIB

TELNET-SFP-MIB

TELNET-SYSCONFIG-MIB

TELNET-IEEE1588-MIB

TELNET-SOAM-EXT-MIB

Features

- Complies with IEEE 802.3, with traffic port 100Base-FX, and 10/100/1000Base-T 1000BaseX.
- Support MDI/MDX on copper ports.
- Optional SFP optical pluggable modules.
- 802.3x Flow Control.
- Support for a maximum MTU of 2048 bytes.
- Configurable ports fault propagation.
- Implements 802.1Q bridge with five ports on the client side and a port with dual-homing redundancy into the provider's domain.
- QinQ support according 802.1ad in the network port, allowing VLAN tagging.
- Configurable Provider Ethertype and Customer Ethertype
- Support of standard OAM management protocols.
- IEEE 802.3ah for network link management.
- ITU-T.1731 Protocols and IEEE.802.1ag for OAM management of end-end service.
- Active analysis of traffic parameters such as PDV, latency or packet loss using proprietary protocol without loss of customer traffic performance.
- Measures point-to-point or in loop, can be performed in L2, L3 or L4.
- QoS functions, featuring four buffers per port classifying incoming traffic based on the VID, 802.1po DSCP.
- Enables Strict Priority (SP) policies or Weighted Round Robin (WRR) assigning weights to each of the buffers of traffic classification.
- Provides a clock signal output of 2Mbps as ITU-T G.703 sync to a remote clock reference by IEEE1588v2.
- Highly configurable redundancy in the operator's fiber port with switching for LOS, Linkdown and 802.3ah Connectivity Check.
- 3 modes of redundancy: manual, automatic or reversible.

Interfaces

- 4x 10/100/1000BaseT Client ports
- 1x 1000BaseX Client port
- 2x 1000BaseX dual-homing provider ports
- 1x RJ45 RS-232 management port; 115200bps 8N1.
- 1x 100BaseT out of band management port
- 1x G.703 2Mbps output port

Specs

- Dimensions: 440 x 215 x 43 mm
- Power supply:
 - 220 VAC
 - 48 VDC
- Consumption: 10W
- Temperature:
 - Operation: 0-40 °C
 - Storing: -10 a 70 °C
- Humidity: 0 - 80 %



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