



## IP DSLAM EDN312x

*EDN312x is a small cost-efficient 12-port IP DSLAM designed for Ericsson's EDA broadband solution. EDN312x aggregates 12 ADSL lines to two 100 Mbps Ethernet and offers aggregation both as bridge mode or routed encapsulation mode. EDN312x includes ADSL2+ facilities and offers a unique solution to the operator for inexpensive deployment of ADSL from large high-density sites to small remote areas with low subscriber density.*

### Key benefits of EDA IP DSLAMs

- Cost-effective ADSL deployment
- Ethernet as transmission technology - fewer layers needed to manage and activate the network
- Full DSL performance on all lines simultaneously
- High-quality support of voice, data and video services
- Revenue generating multimedia services
- Base-band and in-band telephony solution
- Built-in filters for POTS, ETSI POTS, and ISDN
- Multicast (IGMP snooping) for video services
- IGMP White List
- Plug-and-play line card replacement
- Single Ended Line Test (SELT) and Loop Diagnostics
- Service selection with service separation via VLAN
- DHCP relay agent information option (Option 82)
- PPPoE to PPPoA conversion between Point-to-Point protocols over Ethernet and ATM (CPE to network)
- Unique scalability

### DSL technologies

EDN312x supports ADSL/ADSL2/ADSL2+ and offers 12 downlink ports, each supporting asymmetrical up to 28.7 Mbps downstream and 1.5 Mbps upstream as well as symmetrical up to 3.4 Mbps. The uplink aggregates the 12 ports to 2 x 100 Mbps Ethernet.

### Telecom Grade and easy installation

EDN312x offers two uplink ports as well as high service availability by introducing both RSTP and dual Power over Ethernet (PoE) in the EDN312x. EDN312x has the possibility to use both uplink ports in a link aggregation scenario giving the double average capacity on each ADSL2+ port in an EDN312x. EDN312x is powered over the Ethernet cable, making installation easier as both data and power run in the same cable.

### Security

EDN312x ensures a secure network by offering forced forwarding to a gateway, by enabling virtual MAC and by setting up a range of filters.

### Management

The Public Ethernet Manager (PEM) is the element manager for EDN312x. The northbound interface offers generic interfaces, such as CORBA and SNMP, enabling use of the same provisioning and management system already employed in the operator's network.

# Technical data

## THIS DOCUMENT IS VALID FOR RELEASE

- EDA 2.0

## GENERAL

- Built-in base-band filters in three variants:
  - EDN312xp with cost-effective POTS
  - EDN312xe with ETSI POTS
  - EDN312xi with ISDN
- Built-in Gas Discharge Tube (GDT) Over Voltage Protection (OVP)
- LED in front to indicate status for each line

## SUPPORTED STANDARDS

- ITU-T G992.1 Annex A (ADSL over POTS)
- ITU-T G992.1 Annex B (ADSL over ISDN)
- ITU-T G992.3 Annex A (ADSL2 over POTS)
- ITU-T G992.3 Annex B (ADSL2 over ISDN)
- ITU-T G992.3 Annex L (ADSL2 Reach Extended)
- ITU-T G992.3 Annex M (ADSL2 Symmetrical ADSL)
- ITU-T G992.5 Annex A (ADSL2+ over POTS)
- ITU-T G992.5 Annex B (ADSL2+ over ISDN)
- ITU-T G992.5 Annex M (ADSL2+ Enhanced upstream)
- ITU-T G994.1 (Handshake Procedures)
- ITU-T G997.1 (Operation and Management)
- ETSI TS 101 388 (European requirements)
- ETSI ETR 328 (ADSL requirements and performance)
- TR-048 (Test specifications (DSL Forum))
- ANSI T1.413-1998 (Metallic Interface)
- ETSI TS 101-952-1-1 v.1.1.1 (2002-05) POTS
- ETSI TS 101-952-1-3 v.1.1.1 (2002-05) ISDN

## CONNECTION METHODS

- DHCP
- Static IP address
- Transparent LAN/VLAN
- PPPoE (over Ethernet) and PPPoA (over ATM)
- IPoA (RFC 2684 routed encapsulation)

## SECURITY AND QUALITY OF SERVICE

- Forced forwarding to a fixed gateway
- Virtual MAC address
- DHCP with Relay Agent
- TCP/UDP filtering
- 6 PVCs selectable from CBR, VBR-rt, VBR-nrt or UBR
- PVC mapped Ethernet interface, using IEEE 802.1Q

## PERFORMANCE AND REDUNDANCY

- 2 x 100 Mbps Ethernet uplink
- Rapid Spanning Tree Protocol (RSTP) on both uplinks
- Dual Power over Ethernet (PoE) inlet
- 12 ADSL lines downlink
- Asymmetric up to 28.7/1.5 Mbps (ADSL2+ Annex A)
- Symmetric up to 3.4 Mbps (ADSL2+ Annex M)

## MANAGEMENT

- Ericsson's Public Ethernet Manager (PEM)
- Default VLAN pre-configured for management
- RFC 1907 SNMPv2

## POWER CONSUMPTION

- Standard cable lengths of 1.3 m:
    - 12 lines: Idle/Typical/Max: 5.0/17.1/19.8 W
    - Per line: Idle/Typical/Max: 0.42/1.42/1.65 W
  - Extended cable lengths of 100 m:
    - 12 lines: Idle/Typical/Max: 5.1/18.4/23.0 W
- Preconditions: -48 volt, 25°C. Line length of 6000 feet.  
Typical = 8/1 Mbps. Maximum = Worst case at full speed.

## DIMENSIONS

- HxWxD: 185 x 35 x 157 mm
- Weight: 589 / 636 / 661 g (xp/xi/xe respectively)
- Mounted on KRONE PROFILE rod mounting system (Krone LSA-PLUS EC 25)
- Plastic Box: Flame-retardant material UL94 - V1

## RELIABILITY

- MTBF xp/xi/xe: 46/46/43 years at 25°C ambient

## ENVIRONMENTAL

- ETS 300 019-2-1 class 1.2, Storage
- ETS 300 019-2-2 class 2.3, Transportation.
- ETS 300 019-2-3 class 3.2, Operation.
- Earthquake (Belcore GR-63-Core) zone 4
- ETS 300 019 2-4 class 4.1E (outdoor cabinet)
- EN 300 386 V1.3.1 (2001-09) Class B
- FCC 47CFR15: 2000 (FCC part 15) Class B
- K.20 (02/2000) and K.21 (10/2000) (OVP)
- EN 60950-1:2002
- The lifecycle is optimized according to ISO 14001

## OUTDOOR CABINET INSTALLATIONS

- GR-63-CORE Section 2.9.4 (-40°C to +65°C) for Non-Environment Controlled Equipment Housings

Subject to change without notice