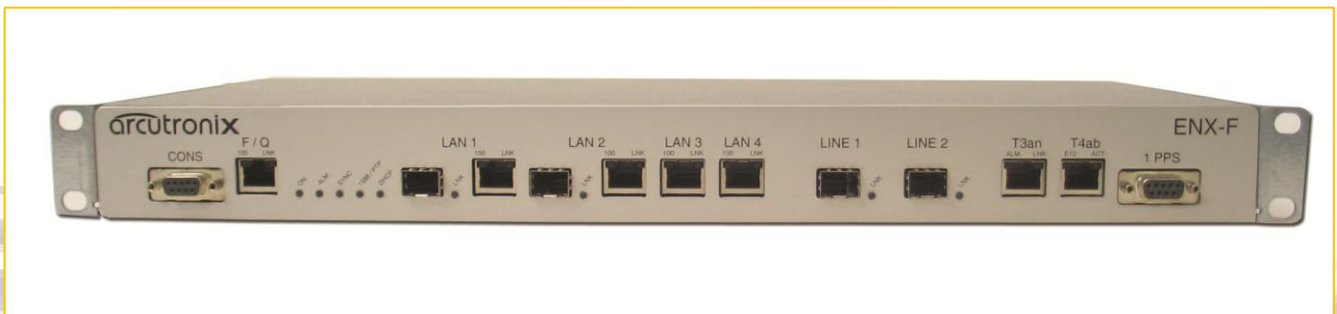


## ENX-F

## Synchronous Ethernet Network Termination



## Introduction

The ENX-F is a smart and versatile access network device for Ethernet access links and expanded services, such as reducing operating expenses and improving margins. It offers SyncE and Precision Time Protocol (PTP; IEEE 1588) support to expand provider's clock-domain till the end-customer.

Its functions cover current and future access network requirements and it enables efficient solutions through easy configuration, test and monitoring interfaces.

ENX-F implements a fully managed demarcation function between customer network and service provider network. It monitors end-to-end connectivity and SLAs via its integrated test functionality.

ENX-F can derive SyncE from all ports and fulfills ITU requirements for jitter, wander and hold-over. For IEEE 1588 it can operate as Boundary Clock (BC) and Ordinary Clock (OC). It provides accurate distribution of the PTP protocol across multi-port networks. As boundary clock it may be slaved to a master on one port and act as master on all other ports.

ENX-F offers independent interface and service control with integrated throughput test functions according to RFC 2544 (benchmark for network interconnect devices).

It incorporates Ethernet operations management according to Y.1731 (OAM functions), 802.1ag and 802.3ah (EFM), configuration management via HTML browser, via SNMP and SSH.

## Features

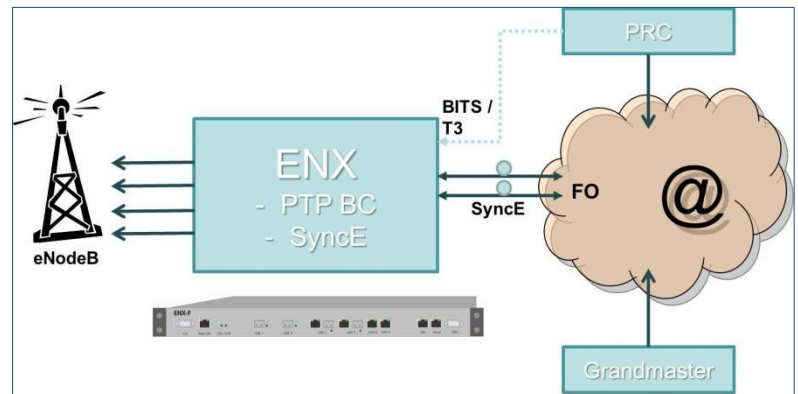
- ▶ ENX-F brings synchronicity to the edge of provider's network
- ▶ ITU-T G.8261 etc., G.823
- ▶ IEEE 1588v2 (PTP)
- ▶ BITS (T3) input
- ▶ 1pps and T4 output for sync of slave devices
- ▶ Jumbo Frames (>10k) supported
- ▶ Functions cover current and future access network requirements
- ▶ Implements a fully managed demarcation function between customer network and service provider network
- ▶ Fibre and copper Ethernet ports
- ▶ Offers built-in independent interface and service supervision with integrated throughput test functions (acc. RFC 2544)
- ▶ Connectivity Fault Management
- ▶ Network management to monitor and manage
  - HTML based WEB-OPI,
  - Built-in SNMP-agent and
  - SSH (CLI)
- ▶ In-band management capability
- ▶ Fan less solution at Rack-mountage and Desktop Units
- ▶ Redundant AC (110/230V) and DC power supply
- ▶ Compact design: 19"/1RU ("Pizza Box")

## ENX-F

### Synchronous Ethernet Network Termination

#### Application Example

Realisation of mobile back-hauling for next generation of eNodeB (LTE).  
The synchronous feature supports the extending demand for clock accuracy and phase alignment.



#### Specifications

##### Network I/F (WAN) / Service

- 2 x 1000BaseSX/LX/ZX/BX
  - Pluggable SFP types
  - Connector: SFP
  - Electrical (RJ45) SFP for GbE

##### Service I/F (LAN)

- 4 x 10/100/1000BT
  - IEEE 802.3
  - IEC 60870-5-104
  - Auto Negotiation, Auto MDIX
  - Connector: RJ45
  - 2x Combo-Port
    - 1x SFP and/or 1x RJ45

##### Timing Interfaces

- T3-input (BITS) acc. ITU-T G.703 (T12)
- T4-output acc. ITU-T G.703 (E12 or T12)
- T4-output in E12-mode: Multiframing acc. ITU-T G.704
- 1pps (1 pulse-per-second)

##### Features

- ITU-T G.8261 - G.8264
- IEEE 1588v2 (PTP)
- QoS IEEE 802.1p, Q
- Provider Tagging, IEEE 802.1ad
- RMON
- Jumbo frames supported (>10.000 Bytes)
- IPv6 supported

##### Management

- Network Management port (front access):
  - 10/100BaseTx (RJ45)
  - HTMLv2 based WEB-OPI
- SNMPv2e, SNMPv3
- SSH & CLI
- CFM Management
  - IEEE 802.1ag
  - ITU-T Y.1731
- Link Layer Management
  - IEEE 802.3 ah

##### Environmental

- Operating: -40 to +70°C
- Storage: -35 to +55°C
- Humidity: < 100% (30°C), non-condensing

##### Power

- Consumption: < 20 VA
- Input AC
  - Voltage: 110-230 VAC (+/- 10%)
  - Connector: IEC 60320-C14
- Input DC
  - Voltage: -48V / -60 VDC (+/- 20%)
  - Connector: RIA (3 pin)

##### Physical

- Pizza-Box
  - Standalone: 44mm H x 448mm W x 306mm D
  - 19" version: 44mm H x 483mm W x 306mm D
  - Weight: 2,3 kg

Specification may change without prior notice. Please refer to [www.arcutronix.com](http://www.arcutronix.com) for latest data-sheets.

For more information please contact arcutronix GmbH or visit us at [www.arcutronix.com](http://www.arcutronix.com).

Version 03/11 © 2011 arcutronix GmbH