



ENTRA

# Entra® FPXT-B OLT Line Card



The Entra® FPXT-B OLT Line Card allows cable multiple system operators (MSOs) to provision and support the greater scale required for fiber-based service offerings. DOCSIS® provisioning of EPON (DPoE™) reduces operating expenses by allowing MSOs to integrate and manage the line card as they do their DOCSIS networks. By deploying these technologies, MSOs can position themselves to deliver higher bit rates (10 GB/s symmetrical services), use their fiber more efficiently, and capture a greater share of the lucrative commercial and residential services markets.



Vecima sells the 7360 ISAM FX platform, augmenting it with Vecima's FPXT-B and DPoE capabilities, so that cable operators have an industry-proven 10G EPON service delivery system. Operators can choose from two shelf sizes that can be mounted in the headend, hub, or outside plant – a 4-slot version or an 8-slot version, known as FX-4 and FX-8. ANSI and ETSI versions of the chassis are available.

These flexible equipment options ensure that MSOs can address any deployment scenario cost-effectively.



# Entra FPXT-B OLT Line Card

## Highlights

- High-capacity nonblocking backplane.
- High-capacity 1.28 Tb/s controller card (network termination [NT]) with 360 Gb/s network capacity (can be used as uplink, downlink, or direct user link).
- Full NT redundancy with active/active and load-sharing options.
- 4-slot (FX-4) and 8-slot (FX-8) shelf options.
- DPoE 2.0 feature set.
- Simultaneously supports multiple line card symmetric and asymmetric rates, including 10/10, 10/1, 2/1, and 1/1 Gb/s.
- Supports IPv4 + IPv6 IP high-speed data (IPHSD service, IPTV/multicast, and DPoE 2.0 MEF service on a single platform).
- Internet Group Management Protocol (IGMP) and high-bandwidth capabilities enable customers to deploy unicast and multicast video.
- IP/Ethernet access platform supports multiprotocol label switching (MPLS).
- Added resilience with support for MPLS and link aggregation.
- Shelf size options to support any network size or deployment model in a headend, hub, or outside plant.
- Enables a smooth migration from DOCSIS to fiber-based DPoE-based services.
- Advanced traffic management capabilities for premium video delivery.
- Automatic configuration and transparent optical network unit (ONU) management with DPoE.
- Leverages existing DOCSIS provisioning system with DPoE support.
- Supports current practices with proven ISAM technology.

## Specifications

### Physical

#### FX-4

Height: 222 mm (8.7 in)

Width: 446.5 mm (17.6 in), can be used in 19-in rack

Depth: 278.3 mm (11 in)

#### FX-8

Height: 355 mm (14 in)

Width: 446.5 mm (17.6 in), can be used in 19-in rack

Depth: 278.3 mm (11 in)

Rack mounting pitch: 25 mm (1 in)

### Operating Environment

Temperature: -40°C to 65°C -40 to 65 C (-40 to 149 F)

Relative humidity: 5% to 93%, noncondensing

Over-temperature sensors and shutdown



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## Power Requirements

Input: 48 V DC/60 V DC nominal

Fully redundant power feeding (branch A and B)

## Full-service platforms

Multiservice access support

- IPTV services
- Multimedia service
- High-speed internet access
- Business access
- Cell site backhaul

Line termination (LT) card support: high-density 8-port 10 Gb/s line card with high-capacity, nonblocking backplane

NT support:

ISAM FANT-G

- 1.28 Tb/s switching matrix (bidirectional)
- Active/active redundancy in the data plane and active/standby in the control and management plane
- 360 Gb/s uplink capacity
- C form-factor pluggable (CFP4)

Network termination input output (NTIO) support:

FNIO-A

- Eight configurable 10 Gb/s or 1 Gb/s network links
- SFP+ cages
- Used as uplink, downlink, or direct user link

## Management

DOCSIS provisioning of line card with existing DOCSIS operations support systems (OSS)

## Eco-sustainability

### (European Telecommunications Standards Institute [ETSI])

Product lifetime maximized by modular, shelf-based concept and by implementing new features and functionalities through remote software download

Power consumption targets Code of Conduct (CoC) power consumption limits

Compliant with the European Directive 2002/95/EC on the restriction of hazardous substances (RoHS)

Product collection and treatment under Vecima responsibility complies with the national laws on product treatment applied at the end of life for Waste Electrical and Electronic Equipment (WEEE), implementing the European Directive (2002/96/EC)

Product packaging materials are free from hydrochlorofluorocarbons (HCFCs)

Plastic product packaging material is marked according to ISO 11469, referring to ISO 1043 (97/129/EEC)



# Entra FPXT-B OLT Line Card

## Standards Compliance

### EPON

IEEE 802.3 av, IEEE 802.3-2018 EPON/10G EPON applicable clauses

### Environmental

ETS EN 300 019-1-1 storage – Class 1.1  
weather-protected, partly temperature-controlled locations  
ETS EN 300 019-1-2 transport – Class 2.3 public transportation  
ETS EN 300 019-1-3 stationary use – Class  
3.1E and Class 3.3 (assuming no condensation and icing)  
GR-63-CORE  
TP76200MP  
GR-3108-CORE

### Powering

ETS EN 300 132-2

### Protection

ITU-T K.20 enhanced and K.45 basic

### Safety

IEC 60950, EN60950 Class 1, AS/NZS 60950.1  
UL/CSA 60950-1-03  
EN 60950-1

### Electromagnetic compatibility (EMC)

ETS EN 300 386 for telecommunications center installation environment  
ETS ES 201 468  
GR-1089-CORE  
FCC Part 15 Class A  
EN 55022

### Acoustic noise

ETS 300 753