Data Sheet

ETX-26

Ethernet Access Switch

- Ethernet Access switch with three Gigabit Ethernet and six Fast Ethernet ports
- Link resiliency using Ethernet Ring Protection Switching per ITU-T G.8032
- Quality of Service with queue mapping per port, P-Bit, DSCP, or ToS
- Ethernet bridging and switching with VLAN-aware and VLAN-unaware modes, and VLAN stacking
- Compact design with 8.5-inch enclosure

Gigabit Ethernet fiber connectivity with Ethernet Ring Protection Switching

ETX-26 is a compact Ethernet access switch with three Gigabit Ethernet and six Fast Ethernet ports. Featuring non-blocking architecture, small form factor, and low power consumption, the device enables wire-speed data transmission for Layer-2 Ethernet connectivity. It is ideal for providing Ethernet Private Line connectivity and LAN-to-LAN interworking to small and medium enterprises.

Supporting Ethernet Ring Protection Switching (ERPS) per ITU-T G.8032, ETX-26 enables link resiliency to ensure high survivability and service continuity in the event of link failures.

The device features an internal bridge that can operate in VLAN-aware or VLAN-unaware mode. VLAN stacking can be used for traffic separation between different users or services, by defining a service VLAN ID per customer or service. When VLAN stacking is used, a service VLAN tag is added to user traffic and removed from network traffic. Both VLAN ID and VLAN priority can be defined for services.

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ETX-26

Ethernet Access Switch

PORT COMBINATIONS

ETX-26 offers flexible Ethernet port combinations:

- Six 10/100BaseT Fast Ethernt
- One or three Gigabit Ethernet ports with electrical or optical interfaces.

QoS

Different service types require different levels of QoS to be provided end-to-end. QoS can be defined per subscriber as well as per service. QoS has two aspects: rate limitation and traffic prioritization.

ETX-26 supports four priority queues per Ethernet port with configurable scheduling (strict priority or WFQ). In addition the device supports ingress and egress rate limiting to control the incoming and outgoing traffic bandwidth.

To prioritize user traffic, ETX-26 features up to four separate queues that handle traffic with different service demands, such as real-time traffic, premium data, or best-effort data. In case of congestion, the relevant service receives higher priority at the customer premises.

Traffic can be classified dynamically and mapped to different priority queues according to VLAN priority, DSCP, per port, or ToS. Appropriate QoS can be achieved without customer marking, by mapping different services and different user ports (port-based priority).

NETWORK INTERFACE REDUNDANCY

To ensure high survivability and service continuity, ETX-26 features Ethernet ring protection switching per ITU-T G.8032v1, allowing the device to be connected to an Ethernet ring topology and achieve 50 msec protection restore time in case of link failure.

PROPRIETARY POWER OVER ETHERNET (PoE)

Power over Ethernet is provided on Fast Ethernet ports 5 and 6 if the unit has a 48V DC power supply.

The ETX-26 device with proprietary Power over Ethernet capability can be used to feed the outdoor unit (ODU) of RAD's Airmux-200/400 broadband wireless transmission devices, providing a single indoor device for Ethernet connectivity and ODU power feeding.

DYING GASP

ETX-26 reports power failure (if the unit is connected to AC power), thus enabling the device to properly disconnect from the network with notification of the reason for the service problem.

MANAGEMENT

The unit can be managed using the following ports and applications:

- Local management via an ASCII Terminal connected to the RS-232 port
- Inband management via any Ethernet port
- Remote management via Telnet, Web browser, or an SNMP-based management system.

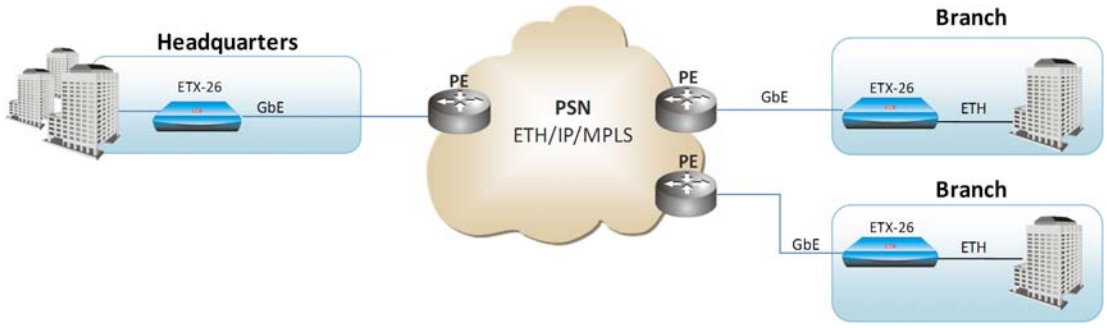

Figure 1. Interoffice Layer-2 connectivity over Gigabit Ethernet

Specifications

ETHERNET INTERFACE

Number of Ports
9

Port Combinations
6 built-in UTP, optionally 1 or 3 SFP/UTP

Type
Fast Ethernet electrical: 10/100BaseT

Gigabit Ethernet electrical: 10/100/1000BaseT

Gigabit Ethernet fiber optic (SFP-based): 100/1000BaseFX

Connector
SFP slot
RJ-45

SFP Transceivers
For full details, see the SFP Transceivers data sheet at www.rad.com

***Note**: It is strongly recommended to order this device with **original** RAD SFPs **installed**. This will ensure that prior to shipping, RAD has performed comprehensive functional quality tests on the entire assembled unit, including the SFP devices. RAD cannot guarantee full compliance to product specifications for units using non-RAD SFPs.*

INTERNAL BRIDGE

Compliance
IEEE 802.3, 802.3u, 802.1D, 802.1Q, 802.1p

MAC Address Table Size
Up to 8K learned addresses
64 static addresses

Max Frame Size
1,632 bytes

Operation Mode
VLAN-unaware
VLAN-aware including double VLAN

Filtering and Forwarding
Transparent or filtered

Traffic Classification and Priority Mapping Mode
VLAN priority
ToS
DSCP
Physical port

GENERAL

Diagnostics
Ethernet cable test

Management
Out-of-band: via V.24 (RS-232) DCE port; DB-9 female connector
Inband: via network or user port

Indicators
PWR (green):
On –ETX-26 is powered up
TST (yellow):
On – Diagnostic loopback is active
ALM (red):
On – One of the Ethernet links is down or a system alarm exists
ETH LINK/ACT (green/yellow):
On (green) – Ethernet link is OK
On (yellow) – Data is being transmitted or received on the Ethernet link

Power
Wide-range AC/DC:
100–240 VAC, 50/60 Hz or
48/60 VDC nominal (40–72 VDC)
DC (PoE option only): -48VDC

Current Protection (PoE)
Max 0.75A

Line Protection (PoE)
Max 15kW

Power Consumption
Max 4W
PoE: Max 36W@48V (on two PoE ports)

Physical
Height: 43 mm (1.7 in)
Width: 217 mm (8.5 in)
Depth: 170 mm (6.7 in)
Weight: 0.5 kg (1.1 lb)

Environment
Temperature:
Regular unit: 0 to 50°C (32 to 122°F)
Temperature-hardened unit:
-40 to 60°C (-40 to 140°F)
Humidity: Up to 90%, non-condensing

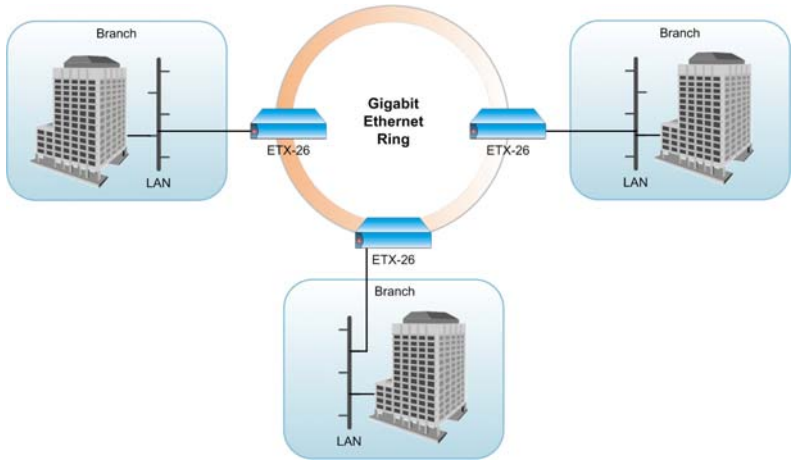

Figure 2. Resilient Ethernet Connectivity

Data Sheet

ETX-26

Ethernet Access Switch

Ordering

STANDARD CONFIGURATIONS

ETX-26/GESFP

ETX-26/GEUTP

ETX-26/GEUTP/2GESFP

ETX-26/48/GEUTP/2GESFP/POE

ETX-26/48/GEUTP/2GESFP/POE/H

SPECIAL CONFIGURATIONS

ETX-26/!/+1/+2/WIRC/?

Legend

! Power supply (Default=AC/DC wide range power supply):

- **48** -48V DC power supply

+1 Gigabit Ethernet port

- **GEUTP** Gigabit Ethernet port with electrical UTP interface
- **GESFP** Gigabit Ethernet port with SFP interface

+2 2 Gigabit Ethernet ports

- **2GEUTP** Two Gigabit Ethernet ports with electrical UTP interface
- **2GESFP** Two Gigabit Ethernet ports with SFP interface

WIRC Wireless components (Default=No Power over Ethernet):

- **POE** Power over Ethernet

? Temperature range (Default=Regular temperature range):

- **H** Temperature-hardened

SUPPLIED ACCESSORIES

DC adapter plug

DC terminal block (supplied with option ETX-26/48/GEUTP/2GESFP/POE or ETX-26/48/GEUTP/2GESFP/POE/H

OPTIONAL ACCESSORIES

RM-35/@
Hardware kit for mounting one or two ETX-26 units in a 19-inch rack

@ Rack mount kit (Default=Both kits):

- **P1** Kit for mounting one unit
- **P2** Kit for mounting two units

CBL-DB9F-DB9M-STR

Control port cable

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