ETX-2
PM Controller

- Acts as generator for always-on and on-demand performance monitoring
- Monitors Key Performance Indicators in heterogeneous mobile backhaul networks
- Measures quality of experience in premium Carrier Ethernet and IP business services
- Monitors diagnostics and troubleshooting with multidimensional tools
- Allows online access and generates scheduled reports for service providers and end customers.

The ETX-2 PM Controller is a high capacity, central generator for always-on performance monitoring (PM), on-demand testing, diagnostics, and troubleshooting of mobile backhaul networks, as well as for premium Carrier Ethernet and IP business services. It uses a wide variety of standard tools to provide deep visibility into network and service performance, ensure optimal quality of experience for users of LTE/LTE-A backhauling networks, and support rapid small cell deployments.

INTEROPERABILITY

As part of RAD's Service Assured Access offering, the ETX-2 PM Controller interoperates with routers, switches, mobile base stations, and third-party responders, as well as with RAD's ETX-2 and MiNID NIDs. As a non-disruptive add-on, the ETX-2 PM Controller is an ideal solution for existing heterogeneous networks. It enables top-line PM and testing in a dynamic environment, regardless of the capabilities of the underlying installed base.

MONITORING AND DIAGNOSTICS

As a member of RAD's ETX-2 family of IP and Carrier Ethernet demarcation devices, the PM Controller also offers service demarcation and monitoring capabilities for Carrier Ethernet 2.0 services and IP services in complex topologies. This includes high scale, multi-layer OAM and PM tools with hardware-based monitoring and diagnostics

at high precision. End-to-end connectivity OAM and testing tools ensure flow-level fault management and performance monitoring over Layer-2 and 3 networks and also quickly detect connectivity failures and performance degradation.Layer-2 and 3 wire-speed loopbacks offer flexible diagnostic tools.

For more information on ETX-2 capabilities, refer to ETX-2 datasheet.

MANAGEMENT AND SECURITY

PM Controller is managed by RADview Network Management System and Performance Monitoring Portal, offering real-time monitoring of Ethernet and IP service performance SLA reports.

It can also be managed by any SNMP-based management system. PM controller supports a variety of access protocols, including Telnet, SNMPv3, and TFTP. Security features include SNMPv3, RADIUS (client authentication), TACACS+ (client authentication, authorization, and accounting), SSH, and SFTP. Access Control Lists (ACL) can also be used to flexibly filter and mark management traffic, enabling service providers to maintain network security by dropping unwanted packets.

Specifications

ETHERNET INTERFACES

Number of Ports
Four FE/GbE combo ports

Type
SFP or Copper

MONITORING AND DIAGNOSTICS

- IPv4 and IPv6 frame format
- L2: untagged, tagged.

L3 Performance Monitoring
- Protocols: RFC-5357 TWAMP "full" and "light" modes, UDP Echo, ICMP ping
- Total number of controllers: 64
- Total number of peers: 3000
- Total number of test sessions: 3000 (@10PPS)
- Packet rate: configurable between 1 to 10PPS.

Service Activation Tests
RFC-2544: 8 built-in wire-speed testers
ITU-T Y.1564 over L2 or L3

Monitoring

L3 monitoring includes:

- Monitored Statistics: Loss, Availability, Delay, PDV, IPDV with current and interval statistics; two-way and one-way TWAMP for all statistics
- Counters: Fragmented packets, reorders, duplication; two-way and one-way TWAMP for all counters
- User configurable test packet size

RAD
Your Network's Edge

ETX-2
PM Controller

Reporting

SLA and quality of experience (VoLTE mean opinion score) reporting with aggregated and drill-down views per PM session by RADview PM portal

MANAGEMENT AND SECURITY

Out-of-band management via RS-232 and Ethernet ports

In-band management over management flow

GENERAL

Physical
Height: 43.7 mm (1.7 in)
Width: 440 mm (17.4 in)
Depth: 240 mm (9.5 in)

Power
AC power supply:
     100–240 VAC, 50/60 Hz

Power Consumption
90W max

Environment
Temperature: 0–45°C (32–113°F)
Humidity: Up to 90%, non-condensing

COMMON ETX-2 CAPABILITIES

For Carrier Ethernet, bridging, and other common capabilities of the ETX-2 product line, refer to the ETX-2 datasheet.

Ordering

ETX-205A/AC/19V/DC2X/128S/PMC

AC power supply, dual core 2.5 GHz x86 processor, 128 GB solid state disk (SSD), high-scale PM controller application

SUPPLIED ACCESSORIES

AC power cord

CBL-RJ45/D9/F/6FT
Control port cable with male RJ-45 and female DB-9 connector

RM-34
Hardware kit for mounting one 19" ETX-205A unit in a 19" rack

OPTIONAL ACCESSORIES

RM-34-23
Hardware kit for mounting one 19" ETX-205A unit in a 23" rack
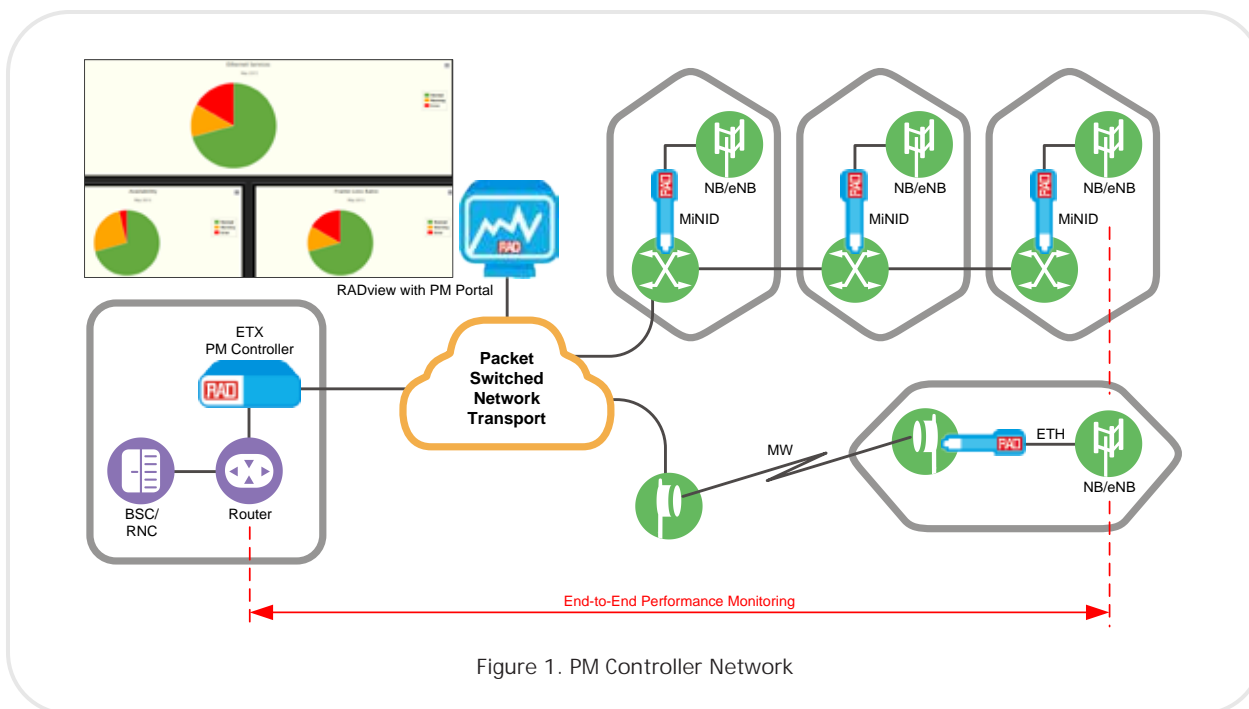
WM-34
Wall-mount hardware kit for one 19" ETX-205A unit

Figure 1. PM Controller Network

www.rad.com   Order this publication by Catalog No. 805055

RAD
Your Network's Edge