Comet1604FM-R
Comet1608FM-R
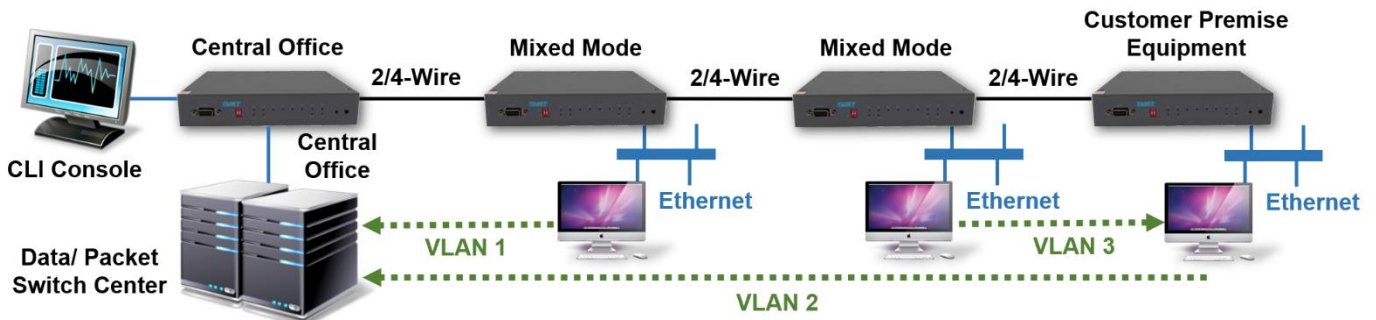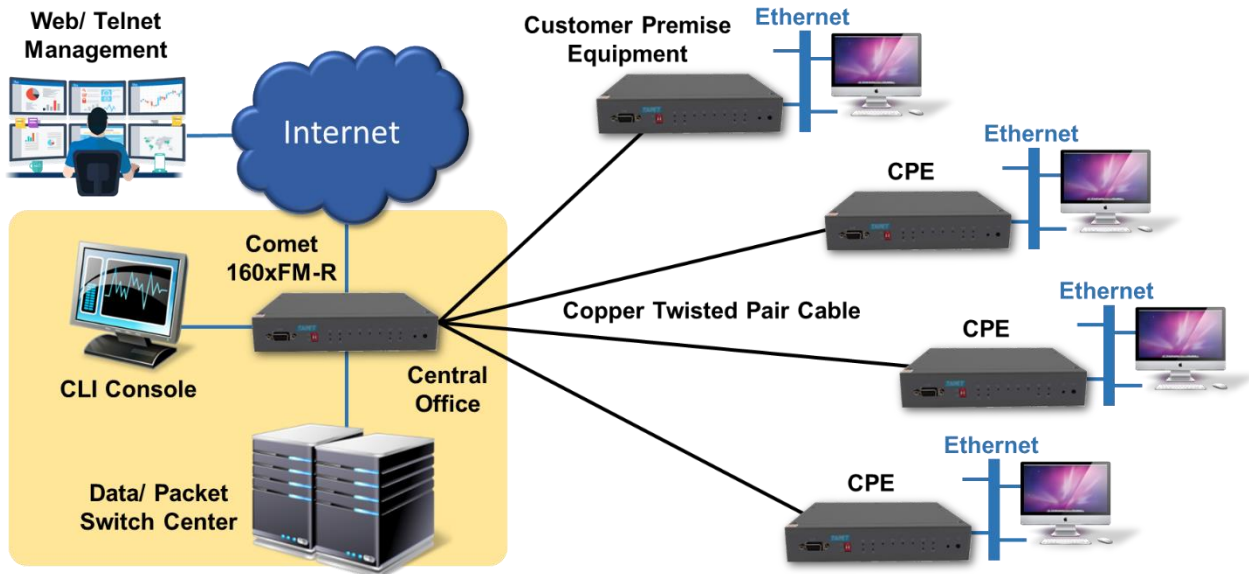
Industrial G.SHDSL.bis Modem
EFM Mixed Mode Router

- EFM Ethernet extender over multiple copper wires
- Compliant with ITU-T G.991.2 standard, TC-PAM 4/ 8/ 16/ 32/ 64/ 128line coding
- 2 or 4 pairs G.SHDSL.bis with 5.7Mbps per pair
- Supports extension rate up to 60Mbps over 4 pairs of copper
- CO, CPE, and Mixed Mode (MM) configurable for P2P, P2MP, Party Line linear link or Ring topology
- Front panel LED indicators for ease of status monitoring
- Easy installation by DIP-Switches, Console, Telnet (SSH), WEB GUI (HTTPS), SNMP (v1/ v2c/ v3) or TR-069
- Remote software upgrade for field-deployed units via TFTP or HTTP/ HTTPS
- Ethernet Routing or Switching with VLAN prioritization and QoS
- IEEE 802.1w RSTP and ITU-T G.8032 ERPS for Ethernet loop and ring protection
- Router function supports NAT/NAPT, DNS relay, DHCP client/ server/ relay, RIPv1/ RIPv2, Static route and OSPF, BGP
- Support security-link feature and DSL line protection for data transmission
- Console/ Serial COM switchable, comply with RFC 2217, may connect via TCP client/server or UDP mode

TAINET Comet 160xFM-R series is industrial Ethernet DSL router, which takes advantage of the latest G.SHDSL.bis standard. This mini-terminal enables the transport of traffic from Ethernet interface with speed of 30/ 60 Mbps over EFM bonded 4/ 8 wires G.SHDSL.bis link.

Comet 160xFM-R series supports high-speed dedicated symmetrical data transmission and utilizes DSL bandwidth. Which may work as Point-to-Point Ethernet Extender, Point-to-Multipoint Ethernet Concentrator, Party Line Linear link for Ethernet data drop and insert because of it works in IEEE 802.1w Rapid Spanning Tree Protocol (RSTP) or ITU-T G.8032 Ethernet Ring Protection Switching (ERPS) mode.

Comet 160xFM-R series is an ideal solution for Telecom Carriers, Service Providers, and business users. In order to reduce operation/ management burden, based on ITU-T recommendation G.991.2 standards, administrators of Comet 160xFM series are entitled to configure the modems through DIP-Switches, Console, Telnet (SSH), WEB (HTTP/ HTTPS), TR-069 or SNMP v1/ v2c/ v3 agent with ease.

Model

- Comet 1604FM-R, 4-wire, 4 Ethernet ports, P2MP
- Comet 1608FM-R, 8-wire, 4 Ethernet ports, P2MP

Line Interface: G.SHDSL.bis

- Type: 4 or 8-wire
- Standard: ITU-T G.991.2, ETSI 101 524
- Bonding protocol: IEEE 802.3ah EFM 2Base-TL
- Line rate: n x 64Kbps, n = 6~478 (4w), 12~956 (8w)
- Connector: 1 x RJ-45
- Line coding: TC-PAM 16/ 32/ 64/ 128
- Impedance: 135 Ω

DTE Interface: Ethernet

- Ethernet type: 10/100BaseT
- Connector: 4 x RJ-45
- Auto-MDI/ MDIX detection, Full/ half duplex support
- Auto-negotiation for speed and duplex
- Support Layer 2 function
- IPv4/ IPv6 supports

DTE Interface: Serial Port

- Serial type: RS-232C, DCE mode
- Connector: D-Sub 9 pin
- Data Rate: Asynchronous. 300~115200bps
- Pattern: 5~8 data bits, Even/ Odd/ Non-parity bit, 1 or 2 stop bit
- Protocol: RFC-2217 (Telnet), TCP (Virtual COM), UDP
- Adaption Mode: Console, Client or Server mode

Timing Source Function

- Internal clock
- Received clock from DSL line

Management

- Configuration via DIP switches, Telnet (SSH), WEB GUI (HTTP/HTTPS), SNMP v1/v2c/v3 and TR-069
- Console: DB9 connector (RS232C)
- Supports Performance Monitoring function (PM)
- Firmware upgradeable via Web or TFTP
- Front panel reset to default button

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- Support three access levels for administrator, operator, user, and operation log
- Support login password complexity of 6 characters, uppercase and lowercase letters, digits, special symbols
- Anti-camouflage attack mechanism: lock IP and delay login
- Dying Gasp function indicates the CPE mode lost power

Ethernet Networking function

- IEEE 802.3x flow control
- IEEE 802.1d transparent bridge function
- IEEE 802.1w RSTP for loop prevention
- IEEE 802.1q VLAN tagging, up to 4094 VLAN and VID
- IEEE 802.1p QoS with priority queues facility
- ACL function support bridge filter on MAC or IP address
- Scalable per port bandwidth control (Step = 64K, up to 100M)
- 2K MAC learning address
- Ethernet packet length 9K Jumbo frame for LAN and up to 2048 bytes for WAN (DSL)
- ITU-T G.8032 Ethernet Ring Protection switching (ERPS)
- Support SNTP protocol to get network time
- DHCP Client/ Server/ Relay
- Static Route, RIPv1/RIPv2 dynamic routing, OSPF, BGP
- Point to Point over Ethernet (PPPoE) protocol support
- Network and Port Address Translation (NAT & NAPT)
- Virtual IP for different VLAN (LAN supports secondary IP)
- VPN provides PPTP & L2TP protocol

LED Indicators

- PWR, TST, ALM, CPE, DSL 1~4, LAN 1~4
- Dual color LED for DSL status monitoring

Power Requirement

- DC 18-60V (Comet 160xFM-R/ DC18-60)
- DC 9-36V (Comet 160xFM-R/ DC9-36)
- Power consumption: 8W

Certification

- ISO 9001 Quality Management
- CE Approval, EN 55032, 55035, 61000-3-2, 61000-3-3

Dimension

- 190 (W) x 145 (D) x 36 (H) mm

Operating Environment

- Operation Temperature:
   Comet 1604FM-R: -20°C ~ 70°C
   Comet 1608FM-R: -20°C ~ 60°C
- Storage Temperature: -20°C ~ 85°C
- Humidity: 90%, non-condensing