Comet1644
Comet1654

Industrial-grade G.SHDSL.bis V.24/ V.35/ E1 Ethernet Extender



- Point to point Ethernet and TDM MUX data extender over multiple G.SHDSL.bis copper lines
- Compliant with ITU-T G.991.2 standard, TC-PAM 16/ 32/ 64/ 128 lines coding and IEEE 802.3ah EFM 2Base-TL bonding.
- 2 pairs G.SHDSL.bis with 5.7Mbps per pair
- Supports extension rate up to 15.2Mbps over a single pair of copper
- Support various interfaces include Fast Ethernet, E1, RS-232 EIA-530, X.21 and V.35
- DIP switch can be used to quickly configure 8 sets of default profile
- Automatic line rate selection with Line Probe enabled
- Flexible installation by console, Telnet, WEB GUI, SNMP, or DIP-Switch
- Front panel OAM loopback button, easy to perform loop diagnostics
- Remote software upgrade for field-deployed units via TFTP or HTTP/ HTTPS
- Support security-link feature and DSL line protection for data transmission
- Built-in lightning protection circuit
- Ethernet switching and bridging with VLAN prioritization and QoS

TAINET Comet 1654/ 1644 series, is so called Ethernet Access Devices (EAD), Ethernet Media Data Converter (MDC), Ethernet Multiplexer (EMUX) or Ethernet DSL modem, which takes advantage of the latest G.SHDSL.bis standard, is a mini-terminal enabling the transport of traffic from Ethernet, E1, Nx64k Data and RS-232 interface with line rate 15/ 30/ 60Mbps over 4 wires G.SHDSL.bis link.

Comet 1654/ 1644 series supports high-speed dedicated symmetrical data transmission and utilizes DSL bandwidth. When data rate is within 2Mbps, the transmission distance can reach 6km. When the transmission distance is within 3km, the data rate may over 4Mbps.

Comet 1654/ 1644 series is a perfect solution for Telecom Carriers, Service Providers, and business users. To reduce operation/management burden, Comet 1654/ 1644 series can control and monitor remote unit via Embedded Operation Channel (EOC) by following ITU-T G.991.2 standard. Not only manage by local console and DIP-Switch operation, but also can remotely configure them via Telnet/ SSH, Web/ HTTP/ HTTPS or through SNMP agent.

Industrial-grade G.SHDSL.bis Modem

Line Interface - G.SHDSL.bis

- Type: 4-wire
- Standard: ITU-T G.991.2, ETSI 101 524
- Bonding protocol: IEEE 802.3ah EFM 2Base-TL
- Line rate: n x 64Kbps, n=3~239 (2w), 6~478 (4w),
- Connector: 1 x RJ-45
- Line coding: TC-PAM 16/32/64/128
- Impedance: 135Ω

DTE Interface - Ethernet

- Ethernet type: 10/100BaseT
- Connector: 2 x RJ-45
- Supports 802.3x flow control
- Auto-MDI/MDIX detection
- Auto-negotiation for speed and duplex
- Support Layer 2 functions

Ethernet L2 function

- Supports 802.1d transparent bridge function
- Supports Bridge filter function based on source MAC addresses
- Scalable per port bandwidth control (Step = 64K, up to 100M)
- 2K MAC learning address
- Ethernet packet length up to 2000 bytes
- Supports 802.3x flow control
- Provides 802.1q VLAN tagging
- Supports 802.1p QoS facility

DTE Interface - E1

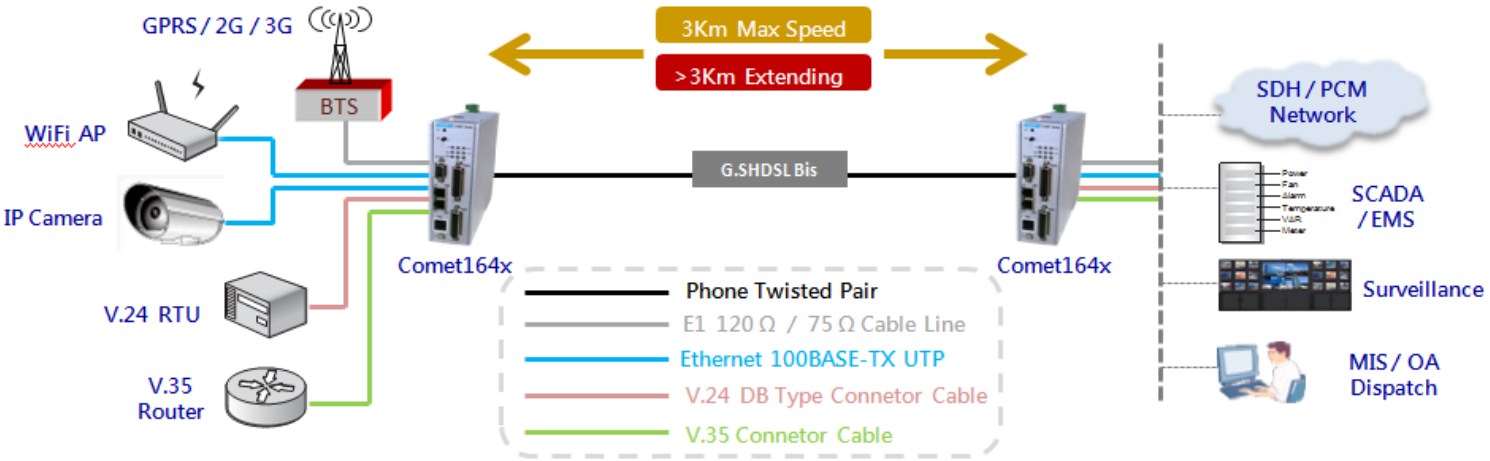
- Data Rate: 2.048Mbps
- Connector: RJ-45 for balanced E1 120 Ω
- (Optional external convert cable for unbalanced 75Ω)
- Line coding: HDB3
- Framing: Framed/ Framed+CRC/ Unframed
- Compliance: ITU-T G.703 and G.704, G.706
- Jitter Performance: compliant with ITU-T G.823
- Support BERT test mode

DTE Interface - Nx64k Data

- Data Rate: n x 64Kbps, up to 4.6Mbps
- Connector: 2 x DB-25 Female with optional adapter cable (V35/ X21/ RS449/ RS530/RS530A)
- DTE and DCE clock settings
- Full duplex
- Synchronous Data Rates

DTE Interface - V.24 (RS-232)

- 2 X DB-25, Support RS-232, RS-422 and RS-485 (optional adapter cable)
- Data Rates: Asynchronous-300/ 600/ 1200/ 2400/ 4800/ 9600/ 19200/ 38400/ 48000/ 56000/ 57600/ 115200 bps
- Synchronous-1200/ 2400/ 4800/ 9600/ 19200/ 38400/ 57600/ 115200 bps
- Full duplex/ Half duplex support
- Packet data bit: 7/ 8 bit
- Packet stop bit (1/ 2 bit) can be selected



Industrial-grade G.SHDSL.bis Modem

Management Interface

- Console port: DB9 connector (RS232C)
- Ethernet port: RJ-45 connector (Fast Ethernet)
- Support remote management
- Support Local and remote diagnostic status
- Support Performance monitoring functions
- Supports management by Ethernet/ RS232 interface
- Support VLAN function
- Support remote upgrade via WEB
- Front panel reset to factory default button

User Management

- Support three access levels for administrator, operator, user
- User can manually add, modify, and delete account and password

Security Management

- Manage permission settings and queries
- Supports security protocol SSHv2/ SNMPv3
- Support login password complexity of 6 characters, uppercase and lowercase letters, digits, special symbols
- Support login account permission level setting, operation log
- Anti-camouflage attack mechanism: lock IP and delay login
- Support SSL1.2, HTTPS secure encrypted connection access

Performance Management

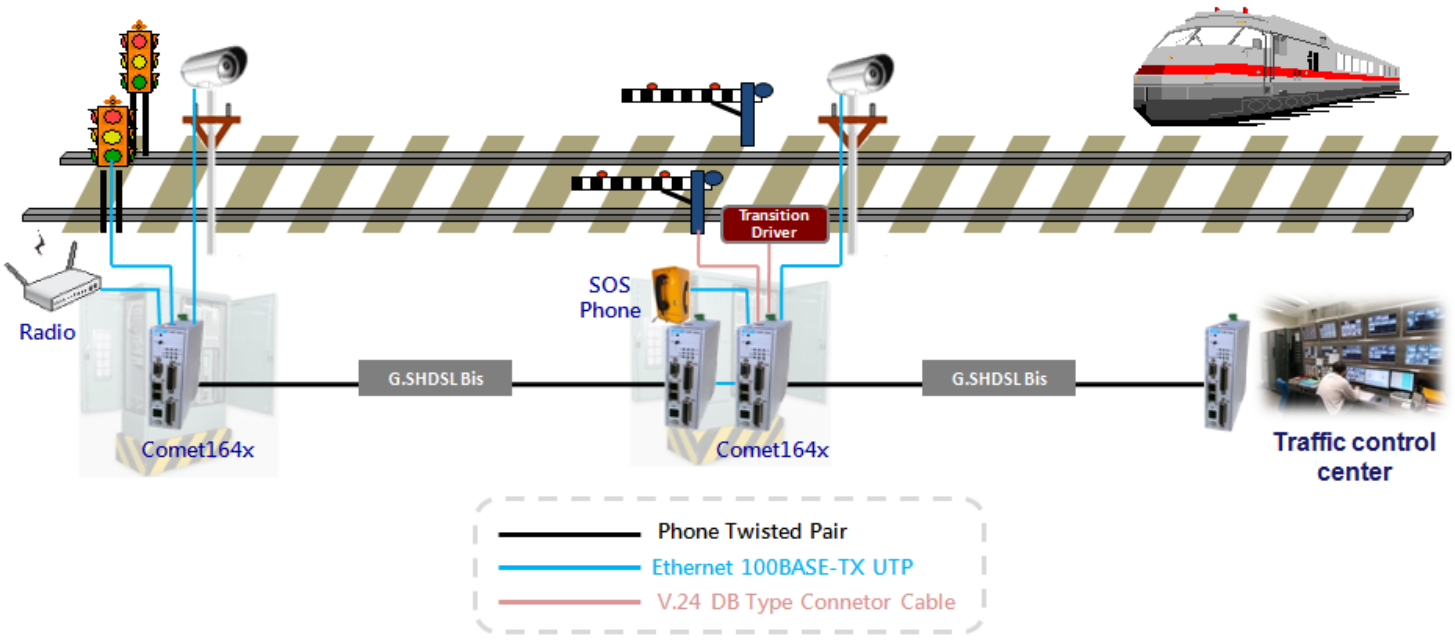
- Historical performance query, report, and monitoring
- Performance data storage and query
- Support ES/ SES, SHDSL UAS count and query
- SHDSL CRC error counting and querying
- SHDSL SNR signal noise rate status query
- SHDSL ATN signal attenuation status query

Fault Management

- Alarm status display
- Support Current/ History alarm log
- Alarm Level setting and query: Critical、Major、Minor、Normal
- Alarm logs (alarm type, time, status, and Level)

Alarm Prompt

- Interface data loss alarm
- Ethernet disconnection alarm
- Clock source automatically switching alarms
- DSL ATN line signal attenuation value alarm
- DSL SNR signal noise rate value alarm
- DSL CRC line loop check value alarm
- E1 signal and packet loss alarm
- Remote Power failure alarm (Dying Gasp)



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System Management

- Supports Telnet/ SSH、Web/ HTTPS
- Supports SNMPv3 network management interface
- Control and monitor remote unit via Embedded Operation Channel (EOC)
- Supports SNTP and OAM functions
- Support Internal/ External clock source

Certification

- ISO 9001 Quality Management
- CE Approval, EN 55032, EN 55024, EN 300 386, EN 61000-3-2, EN 61000-3-3
- CE LVD Safety, IEC/EN 60950-1
- ITU-T K.45 standard

Power Requirement

- Power Interface: Terminal Block * 1/ Standard 12VDC * 1
- Dual power supply with DC Jack 12VDC input
- AC: 90 to 240 VAC, &50~60Hz
- DC: -24/ -48/ -72VDC option

LED indication

- Comet 1644: DSL 2, ALM, PORT 2, PWR, CPE, TST, E1
- Comet 1654: DSL 2, ALM, PORT 2, PWR, CPE, TST

Operating Environment

- Operation Temperature: 0 °C ~ 75 °C
- Storage temperature: -40 °C ~ 85 °C
- Humidity: up to 95% (non-condensing)

Industrial design

- Fully metal housing
- Provide ground terminal, wall hanging hole design
- Power input terminal block
- DIP switch for Quick profile setting
- 42(W) x 160(D) x 160(H) mm

Models

Interface	Wire	Model
FE/ RS-232/ V.35/ E1	4-wire	Comet 1644
FE/ RS-232/ V.35	4-wire	Comet 1654

