MUXpro 820

MUXpro 8216

MUXpro 822F

MUXpro 822G

Ethernet over SDH

Today, as an optimized TDM technology, Telecom carrier's legacy SDH network is facing critical challenges in dealing with Ethernet based traffic. The more efficient equipments adapting to data protocols are required. Without change existing network infrastructure, TAINET MUXpro Series will provide Carrier Network new revenue source and bring efficiency.

Telecom Carriers can use Ethernet interface on MUXpro Series to map data multiples of VC-12s by using Virtual Concatenation (VCAT). Two ITU framing standards are selectable, Generic Framing Procedure (GFP) or LAPS (X.86). The Link Capacity Adjustment Scheme, LCAS (G.7042), provides bandwidth control for service over Virtual Concatenated channel. Network Manager, in real time base, could plan a bandwidth-on-demand provisioning service over SDH networks.

Incorporated with Multiplex Section Protection(MSP), MUXpro Series's STM-1 standard main link provides 1+1 dedicated protection in point to point constellation. On board E1(820/8216 only) / Ethernet interfaces design allows MUXpro Series integrate IP/ TDM service. Applications like Ethernet leased line, Inter POP services and transportation for Mobile voice/ Data networks could be refined over existing Infrastructure. Furthermore, MUXpro Series can be managed easily through Web interface, IP over DCC, VC-12 channels, telnet and Tainet Universal NMS.
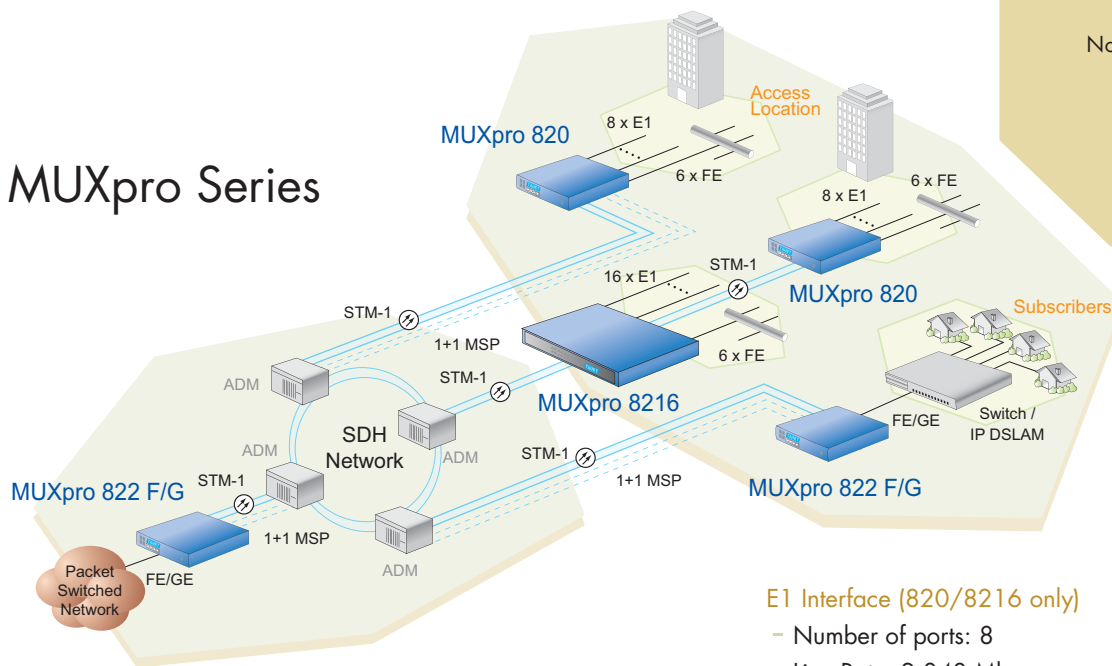
System

- Using GFP (ITU-T G.7041) or LAPS (ITU-T X.85/86) encapsulation transport Ethernet over SDH
- Link Capacity Adjustment Scheme (LCAS) compliance with ITU-T G.7042 for seamless bandwidth control
- Support VC-3/VC-12 cross connect mapping
- High order payload with virtual concatenation - mapping the Ethernet traffic over up to 1 x VC-4 links
- Low order payload with virtual concatenation - mapping the Ethernet traffic over up to 63 x VC-12 /3 x VC-3
- GFP Mux, groom multiple Ethernet ports traffic into different bundles of Virtual Containers, (up to 6 bundles)
- Ethernet Line-Service (Point to Point) and Ethernet LAN-Service (Multipoint to Multipoint)
- System clock synchronization from primary internal clock and secondary clock from STM-1 or tributary (820/8216 only)
- Configurable through user friendly Web-Interface
- Manage remote units via dedicated VC-12 channel or DCC channel
- Selectable DCC channels: D1~D3, D4~D12, D1~D12

Ethernet

- MUXpro 820/8216/822F support L2 switch function for LAN1~LAN4, transparent bridge function for LAN5~LAN6; MUXpro 822G supports 1GE interface with L2 switch function
- Spanning Tree Protocol (STP IEEE 802.1D, MUXpro 820/8216/822F only), and status monitor
- QoS (VLAN or DSCP selection) via four priority queues, supporting IEEE 802.1P, IPv4 TOS/DiffServ
- Provide port-based VLAN, 802.1Q VLAN tagging up to 64 VLAN IDs

MUXpro Series

Diagram labels: MUXpro 820, Access Location, 8 x E1, 6 x FE, 8 x E1, 6 x FE, MUXpro 820, STM-1, 16 x E1, Subscribers, STM-1, 1+1 MSP, STM-1, ADM, MUXpro 8216, 6 x FE, Switch / IP DSLAM, SDH Network, ADM, ADM, STM-1, FE/GE, MUXpro 822 F/G, MUXpro 822 F/G, STM-1, 1+1 MSP, 1+1 MSP, ADM, Packet Switched Network, FE/GE

Transmission Mode
- MUXpro 820/8216 :
  8/16 E1 + 6 Fast Ethernet
- MUXpro 822F/G :
  6 Fast Ethernet / 1GE interface
  GE : Electrical Interface or Optical Interface (optional)

STM-1 Interface
- Number of ports: 2, 1+1 MSP protection available
- Bit Rate: 155 Mbps
- Jitter Performance: compliant with ITU-T G.783
- Optical Wavelength: 1310nm
- Optical output power: -6dBm
- Receiver sensitivity: -32dBm
- Connectors: SC or FC/PC

Ethernet Interface
- FE interfaces: 6 (4 VLAN ports and 2 Transparent LAN ports)
- Ethernet Type: 10/100 BaseT
- Compliance: IEEE802.3u, 802.3x
- Connectors: RJ45, Shielded
- GE Interface
  Number of port : 1
  Ethernet Type : 10/100/1000 BaseT
  Compliance : IEEE802.3ab
  Connectors : RJ45 , Shielded
- GE Interface (SFP, optional)
  Number of port : 1
  Ethernet Type : 1000 BaseX
  Compliance : IEEE802.3z
  Connectors : LC
- Ethernet packet length:
  1536 bytes for FE 4 VLAN ports
  9600 bytes for FE 2 Transparent LAN ports
  1632 bytes for GE LAN port

E1 Interface (820/8216 only)
- Number of ports: 8
- Line Rate: 2.048 Mbps
- Line Coding: HDB3
- Jitter Performance: compliant with ITU-T G.823
- Connector: SCSI II, female
- Support local cross connect for all tributary E1

Timing Source Setting
- Provide internal, optical 1, optical 2
- Recovered clock from STM-1 interface, auto switching in auto mode
- External clock from E1 tributary (820/8216 only)

Diagnostic Function
- Local loopback from SDH
- Remote loopback from SDH
- E1 side local and remote loopback (820/8216 only)

Management
- Easy to use Web UI configuration management
- SNMP v2 with Tainet UNMS
- Provide 5 SNMP trap IP and read/write/trap community setting
- Support configuration upload/download and Fireware upgrade throuth TFTP

Dimensions
- MUXpro 820/822F/G:
  210mm (W) x 285mm (D) x 41mm (H)
- MUXpro 8216:
  437mm (W) x 287mm (D) x 44mm (H)

Operating Environment
- Operation temperature: 0°C ~ 50°C
- Storage temperature: -25°C ~ 70°C
- Relative humidity: up to 95% (non-condensing)

Power Requirement
- MUXpro 820/822F/G:
  AC : 110V ~ 240V, 50 ~ 60Hz
  DC : -36V ~ -72V
- MUXpro 8216:
  AC + DC, DC + DC