

VCL-STM1-OE-MUX

With upto 16 E1 & 4 Ethernet / SDH Equipment

Introduction:

STM-1 (Optical / Electrical), E1 and Ethernet Multi-Service SDH Transmission Unit is a modular platform unit with two 155.52Mbps optical / electrical interfaces, which may be used in a point-to-point, chain or ring application to provide an ultra-compact, cost effective and flexible multi-service platform.



STM-1 (Optical/Electrical) Add-Drop Multiplexer

Interface card options include the 8xE1 interface card (120 Ohms [RJ-45] and 75 Ohms [BNC]), 4x100BaseT Ethernet interface card (1 VCG, 4 Ports 1 Channel), 4x100BaseT Ethernet interface card (4 VCG, 4 Ports 4 Channels) and Gigabit Ethernet interface card options along with Engineering Order Wire is available. The user removable / replaceable STM-1 Optical / Electrical interface option makes it easy to meet various and changing user requirements. STM-1, E1 and Ethernet over SDH Transmission Equipment provides full capability to cross-connect at VC-12 level between all tributaries.

The equipment can be used as Terminal Multiplexer (TM) or an Add-Drop-Multiplexer (ADM) to build a point-to-point, ring and chain (add-drop) transmission network.

Service interfaces

- 2 x STM-1 optical interfaces, MSA compliant SFP (pluggable) optical module (LC connector) based design, which supports onsite optical port replacement
- 2 x STM-1 electrical interfaces, SFP electrical module (Mini BNC connector) Optional
- Maximum 16 E1 interfaces compliant with ITU-T G.703 (8 E1 interfaces per card)
- 120 Ohms E1 and 75 Ohms E1 interfaces options available
- 4 x 10/100BaseT Ethernet (electric) interface
- 10/100BaseT (FE) Ethernet Interface Options
 - 4 Ports, 4 Channels (4 VCG), and
 - 4 Ports, 1 Channel (1 VCG)
- 1 x GigE (Gigabit) Ethernet interface Options
 - Optical GigE (Gigabit) Ethernet interface
 - Electrical 1000BaseT (Gigabit) Ethernet Interface

Features:

- 1U high, - 19 Inch standard rack-mountable Stand-alone chassis
- Provides complete diagnostics facilities to the user for monitoring optical ports and provide reading of optical transmit and receive power, laser temperature, bias current in voltage alarms etc.
- Performance Monitoring and Alarms - Error counts for B1, B2, B3
- Performance Analysis - Error Seconds (ES), Several Error Seconds (SES), Unavailable seconds (UAS), Higher Order Virtual Container - Remote Error Indication (HOVC-REI), Higher Order Virtual Container - Pointer Justification Event (HOVC-PJE)
- Supports 1+1 Line Protection and Automatic Protection Switching (APS) with less than 50ms recovery
- Supports point-to-point, ring and chain topology (4 VCG card only)
- Local management and network-based management via a unified platform
- Supports Remote Power Down Detection and Auto Laser Shutdown
- Supports STM-1 and E1 loop-back for troubleshooting
- 850nm multi-Mode, 1310nm Single Mode and 1550nm Single Mode optical interface options offered
- Ethernet mapping adopts GFP/VC-12 virtual concatenated technology; according with MSTP criterion
- Provides Ethernet over SDH mapping through standard GFP and VC-12 virtual concatenation (VCAT)
- Ethernet bandwidth can be adjusted by the user between 2Mbps ~126 Mbps (VC-12 mapping)
- Supports MAC Address list filtration, learning and updating function
- Easy to operate.

Management and Maintenance interfaces

- 10/100BaseT Ethernet management interface
- RS232 serial management interface
- Remote (Telnet) management interface
- Windows XP based Graphical User Interface (GUI)
- Windows 7 based Graphical User Interface (GUI)
- SNMP V2 Monitoring
- Engineering Order Wire (EOW) interface (RJ-11)
- NMS (Network Management System) for monitoring multiple units from a single / central location.

Ordering Information

Ethernet (Any One) Options:

Part	Description
0169E	4 x Ethernet Port [100Mbps, Electrical RJ45 (F), 1VCG (1 Channel) + VLAN]
0212E	4 x Ethernet Port [100Mbps, Electrical RJ45 (F), 4VCG (4 Channel)]
0264E	4 x Ethernet Port [100Mbps, Electrical RJ45 (F), 4VCG (4 Channel) +VLAN]
0223OE	Gigabit Ethernet Port (4VCG, 4 Channel, 100M bandwidth) - 2 x Electrical Ethernet Port [RJ45 (F)] OR - 1 x Optical Ethernet Port [SFP based - without SFP]

STM-1 SFP Options: (Maximum Two SFPs Per Core Unit)

Part	Description
VCL-EMOD 0193	155Mbps SFP Transceiver, SDH/STM-1, SONET/OC-3, Fast Ethernet, S-1.1, Duplex LC, 1310nm, 15Km, SMF
VCL-EMOD 0194	155Mbps SFP Transceiver, SDH/STM-1, SONET/OC-3, Fast Ethernet, L-1.1, Duplex LC, 1310nm, 40Km, SMF
VCL-EMOD 0217	155Mbps SFP Transceiver, SDH/STM-1, SONET/OC-3, Fast Ethernet, L-1.2, Duplex LC, 1550nm, 80Km, SMF
VCL-EMOD 0156	155Mbps SFP Transceiver, SDH/STM-1, SONET/OC-3, LR-2/LR-3, Fast Ethernet, L-1.2, Duplex LC, 1550nm, 120Km, SMF
VCL-EMOD 0243	155Mbps SFP Transceiver, SDH/STM-1, SONET/OC-3, L-1.2, Duplex LC, 1550nm, 150Km, SMF
VCL-EMOD 0195	155Mbps SFP Copper Transceiver, STM-1e (ES1) [Electrical], 75Ω DIN 1.0/2.3 female coaxial, MSA, Grounds Isolated, RoHS

Gigabit SFP Options: (Maximum One SFPs Per Optical Ethernet Card)

Part	Description
VCL-EMOD 0231	1.25Gbps SFP Transceiver Duplex LC, 1310nm, 15Km, SMF, +3.3V
VCL-EMOD 0255	1.25Gbps SFP Transceiver Duplex LC, 1310nm, 40Km, SMF, +3.3V
VCL-EMOD 0256	1.25Gbps SFP Transceiver Duplex LC, 1550nm, 80Km, SMF, +3.3V

Power Supply (Any One) Options:

Part	Description
AC220	1 x 100-240V AC Power Supply Input
DC048	1 x (-) 48V DC Power Supply Input
ACDC	1 x 100-240V AC Power Supply Input 1 x (-) 48V DC Power Supply Input
AC220R	2 x 100-240V AC Power Supply Input [Redundant]
DC048R	2 x (-) 48V DC Power Supply Input [Redundant]

Cables and Accessories Options (As per Site Requirement):

Part	Description
VCL-HRNS 1246	8E1 75 Ohm Connectorized Cable [DB37F-16BNCF]
VCL-HRNS 1255	8E1 120 Ohm Connectorized Cable [DB37F-8RJ45F]
VCL-HRNS 1229	Optical Patch Cord Connectorized Cable [2LC-2LC, 3m, SM]
VCL-HRNS 1238	Optical Patch Cord Connectorized Cable [2LC-2LC, 10m, SM]
VCL-HRNS 1242	Optical Patch Cord Connectorized Cable [LC-FC, 10m, SM]
VCL-HRNS 1243	Optical Patch Cord Connectorized Cable [2LC-2FC, 10m, SM]
VCL-HRNS 1239	Optical Patch Cord Connectorized Cable [LC-SC, 10m, SM]
VCL-HRNS 1258	Optical Patch Cord Connectorized Cable [2LC-2SC, 10m, SM]
VCL-ECON 1216	Mini-BNC-to-Big-BNC Connectorized Cable [3m]
VCL-ECON 1172	Connector (Attenuator LC-LC (10 db.))
VCL-ECON 1173	Connector (Attenuator LC-LC (20 db.))
VCL-ECON 1186	Connector (Attenuator FC-FC (10 db.))
VCL-ECON 1187	Connector (Attenuator FC-FC (20 db.))
VCL-ECON 1197	Connector (Attenuator SC-SC (10 db.))
VCL-ECON 1198	Connector (Attenuator SC-SC (20 db.))



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