

Alcatel-Lucent 1665 DMXtend

DATA MULTIPLEXER EXTEND | RELEASE 8

The Alcatel-Lucent 1665 Data Multiplexer Extend (DMXtend) cost effectively delivers voice, private line and data services to the access network edge. These capabilities speed delivery of high-margin IP services by combining high capacity, protected transport, up to OC-192, in a compact, economically sized unit. The Alcatel-Lucent 1665 DMXtend offers increased revenue opportunities through its comprehensive multiservice capabilities for TDM, Ethernet and storage area networks (SAN). For deployment and operational simplicity, it shares common software and many interfaces with its higher capacity companion product, the Alcatel-Lucent 1665 DMX. The Alcatel-Lucent 1665 DMXtend and 1665 DMX are key components of the comprehensive Alcatel-Lucent optical portfolio, providing end-to-end optical solutions for today's metro and long-haul networks.



Features

- TDM interfaces from DS-1 to OC-192
- Ethernet support up to full line-rate GE
- SAN interfaces: FC/FICON/ESCON
- SONET protection on all services
- 120 G STS-1 and 20 G VT1.5 switch fabric with a very large fabric (VLF) main
- Rich, full featured Ethernet capabilities and services; Metro Ethernet Forum certified
- Outside plant (OSP) hardened for cabinet and hut deployments
- Shared software and many shared interface modules with the Alcatel-Lucent 1665 DMX

Benefits

- Increases revenue potential with high TDM port density and integrated Ethernet, SAN and resilient packet ring (RPR) interfaces supported by a robust feature set
- Helps preserve investments in SONET infrastructure while expanding packet services on a common platform

- Helps reduce operating costs with simplified maintenance, training and spare parts inventory
- Leverages space limitations with compact size and reduces power consumption
- Offers an ultra low-cost start-up configuration using a single card with integrated OC-3 optics and 16 DS-3 ports

Applications

- Multiservice aggregation: TDM (for voice and private line data), Ethernet, SAN
- Carrier Ethernet Services
- Mobile backhaul network build-out
- Loop access/cabinet deployment
- High-capacity fiber build-outs for enterprise data centers and high-volume services
- Alcatel-Lucent DDM-2000 ring upgrade

Technical specifications

Frame specifications

- Height: 8.75 in. (223 mm)
- Width: 17.5 in. (445 mm)
- Depth: 15 in. (381 mm)
- Weight (with circuit packs): 30 lbs (14 kg)
- Fits in both 19-inch and 23-inch racks
- Integrated chassis

Interfaces (ports per pack)

- 16-port DS-1, 28-port DS-1 and 56-port DS-1/E-1
- 3-port DS-3, 12-port DS-3/EC-1 and 48-port DS-3/EC-1 (DS3 loopbacks available)
- 16 DS-1 ports, 3 DS-3 ports (1 card)
- 12-port TransMUX (TMUX) and 48-port ported/portless TMUX
- 1-port OC-3 1.3 IR1/1.3 LR1 main packs
- 1-port OC-3 1.3 IR1 LR1 main pack with 16 DS1 ports
- 4-port OC-3 pack with Small Form Factor Pluggable (SFP) optics
- 8-port OC-3 tributary with SFP optics
- 12-port OC-3/12, 4-port OC-48 pack with SFP optics
- 1-port OC-12 1.3 IR1/1.3 LR1/1.5 LR2 main packs
- 4-port OC-12 pack with SFP optics
- CWDM SFP optics for OC-3/12 tributary packs
- 1-port OC-48 main with SFP optics
- 4-port OC-48 pack with SFP optics
- 1-port OC-48 1.3 IR1 and DWDM compatible packs
- 8-port OC-3/12, 2-port OC-48 main pack with SFP optics and 16-port DS-1 and 3-port DS-3
- 1-port OC-192 VLF main with 120 G STS/ 20 G VT fabric and XFP optics
- 24-port 10/100BASE-TX with auto-negotiation
- 4-port FC-DATA (ESCON or FC/FICON) with compression and SFP optics

- 4-port 10/100/1000BASE-T or 1000BASE-LX/SX/ZX with 4-port 100BASE-LX (SFP optics)
- 4-port 1000BASE-LX/SX private line (SFP optics)
- 8-port 1000BASE-TX/SX/LX/ZX private line (SFP optics)
- 4-port 1000BASE-LX/SX with 4 port 100BASE-LX/SX and RPR
- 16-port 100BASE-TX (electrical ports) with 8 100BASE-LX (SFP optics)
- 8-port VMUX/DMUX

Switched data services

- Ethernet (10/100/1000 Mb/s) switched and private line
- Optical and electrical Ethernet (10/100/1000 Mb/s) interfaces with SFP optics
- ESCON or FC/FICON SAN transport using private line with 2x compression
- Point-to-point LAN transport (E-Line)
- Multipoint LAN interconnect (E-LAN)
- Hub and spoke WAN (E-Tree)
- Link Capacity Adjustment Scheme (LCAS) dynamic bandwidth provisioning (ITU-T G.7042)
- Generic Framing Procedure (GFP, ITU-T G.7041)
- RPR with basic and enhanced bridging (IEEE 802.17)
- Link aggregation (LAG, IEEE 802.3ad)
- VT1.5 and STS-1 virtual concatenation (VCAT, ITU-T G.707)
- Rapid spanning tree restoration per IEEE 802.1w and spanning tree per IEEE 802.1d
- IEEE 802.1q virtual local area networks (VLANs)
- IEEE 802.1p prioritization
- Wire-speed switching
- Ethernet facility loopbacks
- Rate limiting using CIR and PIR

Network protection

- SONET UPSR, 1+1, unswitched UPSR, 0x1, 0x1Sn
- IEEE 802.1d, 802.1w spanning tree and rapid spanning tree
- Facility loopbacks
- DS3 loopbacks
- UPSR DRI
- Bridge and Roll
- Pipe-mode cross-connects
- ASON/GMPLS E-NNI

Operating environment

- Hardened for outside plant deployment
- Operating temperature: -40°F to +149°F (-40°C to +65°C)
- Storage temperature: -40°F to +158°F (-40°C to +70°C)
- Humidity: 5% to 95%

Power

- Power feeds: -48V DC dual redundant
- Power consumption:
 - Configuration dependent
 - Typically 4.2 amps/202 watts (at 48 V DC)

Network management

- TL1
- Alcatel-Lucent Optical Management Solution (OMS)
- Alcatel-Lucent 1340 Integrated Network Controller (INC)
- Telcordia TIRKS, NM and transport support
- Alcatel-Lucent craft interface
- User panel includes
 - Status LEDs
 - RS-232 local and remote CIT
 - LAN interface
- Software download – local and remote using TCP/IP or OSI (over DCC for remote)

Standards

- ANSI
- EMC
- NEBS Level 3
- Telcordia GR-253, GR-496, GR-499, GR-1400
- ITU-T
- UL and CSA certified
- CE Marking
- Telcordia
- ISO 9001
- Rural Utility Service (RUS) certified
- Metro Ethernet Forum: MEF 9 and MEF 14 certified

