

BX28 – Optical Access Device



Highlights

The BX28, the next-generation SDH Access Device of AimBridges, enables true multi-service carrier-grade access network solutions for tomorrow's converged networks. The cost-effective add/drop multiplexer and small cross-connect integrates voice, leased line and packet transport on a compact platform. The system is designed for customer premises access as well as metro aggregation networks, furthermore it is very well suited as a transport device in the wireless infrastructure. The BX28 is optimized to provide unparalleled density and small size at low cost.

The BX28 has the following key features:

- SDH interfaces: Two STM-4/1 and two STM-1 interfaces enabling SDH carrier class transport
- Access interfaces: E1, E3/DS3, FE and full-rate Gigabit Ethernet
- Hot-pluggable SFP modules for flexible reach and rate selection of SDH interfaces
- Standards compliant Ethernet mapping via GFP, Virtual Concatenation and LCAS for Ethernet private line applications
- Intuitive web-browser based user interface
- Compact design measuring only 1RU high, 19" wide
- Low power and low cost start configuration

Reduced capital and operational expenses

Capex and Opex reductions are the main benefits of the BX28:

- Highly integrated architecture with all functions combined on a single low-cost box
- The scalable system allows to start with a STM-1 terminal configuration and later upgrade with additional SFP modules to create a multi-ring STM-4 add/drop multiplexer
- The system is preconfigured to ease installation and simplify service turn up without the need for costly and trained staff
- Convergence of data and voice combined with high integration density significantly reduces the amount of equipment; this results in considerable lower investment, installation, operational and maintenance costs
- Optimal bandwidth utilization and flexibility is guaranteed by data mapping using GFP, Virtual

- **Add/Drop multiplexer for STM-1/4 metro access networks**
- **Multiservice access for data, leased line or voice traffic over SDH, PDH and Ethernet**
- **Very compact Ethernet access system**
- **Applications:**
 - **Full-rate GbE, FE, E3/DS3 and E1 access at CPE**
 - **Backhaul for wireless networks**
 - **Carrier grade Ethernet over SDH**

Concatenation and LCAS. The operator can allocate a specific amount of bandwidth per end user, in steps of 1 Mbit/s up to 1 Gbit/s.

- Hot-pluggable small form factor pluggable (SFP) modules for the STM-1 or STM-4 optical interfaces allows flexibility to select the required optical power budget and link distance

Integration in existing networks

The BX28 protects the investments made in the installed SDH network and improves the operator's TDM services and revenue through its higher integration and lower cost solution. In addition, the system supports effective Ethernet transport over the existing network without the need for costly deployment of an overlay network.

Management of the BX28 is easily integrated in an existing network management solution. The system provides an Ethernet management port for on-site craft maintenance. Remote management is via DCC channels or via dedicated VC12s so as to not conflict with DCC channels already in use for existing network management. The TCP/IP stack and OSPF routing simplify management of remote BX28 systems from a single operations system.

The BX28 provides SNMP alarm traps as well as web-browser based provisioning.

Specifications

Traffic Interfaces	2x STM-4 or STM-1 via SFP 2x STM-1 via SFP 2x E3/DS3 (mini coax) 4x E1, 75 or 120 Ohm (RJ45) 2x Gigabit Ethernet: 10/100/1000BASE-T (RJ45) 2x Fast Ethernet: 10 or 100 Mb/s (RJ45)
Pluggable modules	STM-1 (S1.1) 15km, STM-1 (L1.1) 40km, STM-1 (L1.2) 80km STM-4 (S4.1) 15km, STM-4 (L4.1) 40km, STM-4 (L4.2) 80km STM-1 electrical Single fiber operation
Cross connect and Protection	Pre-defined configurations for cross connect and VCAT bandwidth allocation Non-blocking cross connects MSP and LO-SNC protection LCAS based protection Loopbacks on E1 and Ethernet ports
Synchronization	Internal 4.6 ppm SEC G.813 clock Station clock input and output: 2 MHz or 2 Mb/s, 75 or 120 Ohm Clock reference modes: Locked to STM-N timing or station clock input, Hold-over or Free running
Ethernet applications	Point-to-point Ethernet Private Line Up to full-rate 1 Gb/s end-to-end Ethernet rate control in steps of 1 Mb/s up to 1 Gb/s
Ethernet mapping	GFP-F encapsulation Virtual Concatenation VC-4-xv (1..7), VC3-xv (1..9) or VC12-xv (1..63) LCAS
OAM&P	Ethernet Port Performance counters SDH Performance Monitoring Fault management and reporting Local and remote software and database download Alarm contact and discrete inputs
Management	Ethernet 10/100BASE-T for local management access Console port (RS232) SNMP traps for alarming Web-browser based provisioning TCP/IP and PPP over DCC or dedicated VC12 for remote management access OSPF routing for remote management access
Dimensions	19" wide, 1 RU high, 180 mm deep
Power	Power input configurations (factory option): - 230V AC power or - Redundant 48V/60V DC power Power dissipation less than 25 Watt
Environment	Operating condition: ETS 300 019, class 3.1E Storage condition: ETS 300 019, class 1.2 Transport condition: ETS 300 019, class 2.3 Free convection cooling without the need for fans
Standards compliance	In compliance with the latest ITU, ETSI, IEC and IEEE standards for SDH and Ethernet equipment

The information in these materials is given to describe certain component concept and shall not be considered as a guarantee of characteristics. Please note that AimBridges' product information does not constitute or contain any guarantee, warranty or legal binding representation, unless expressly identified as such in duly signed writing.

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