

## BX1000 – Multiservice Access Mux



- **Add/Drop multiplexer for STM-4 and STM-16 metro and access networks**
- **Multiservice access for data, leased line or voice traffic over SDH, PDH, Ethernet or DSL interfaces**
- **Applications:**
  - **Multiservice aggregation in the metro**
  - **GbE and PDH access at CPE**
  - **Backhaul for wireless networks**
  - **Carrier grade Ethernet over SDH**

### Highlights

The BX1000, the next-generation SDH ADM of AimBridges, enables true multi-service provisioning and serves the requirements of tomorrow's converged networks. The cost-effective add/drop multiplexer integrates voice, leased line and packet services on a compact platform. All applications are served by a common set of cards for two system configurations; designed for customer premises and access as well as metro aggregation networks. The BX1000 has the following key features:

- SDH interfaces: STM-1, STM-4 and STM-16 supporting multiple ring closure
- Access interfaces: E1, DS1, E3, DS3, SDSL, Fast Ethernet and Gigabit Ethernet
- Non-blocking cross connect at all VCn levels
- Standards compliant Ethernet mapping via GFP and Virtual Concatenation; Ethernet private line or Multipoint Virtual LAN service with bandwidth sharing
- High-density interface cards with hot-pluggable SFP modules for optical and electrical interfaces
- System configurations with 2 or 6 slots, allowing optimal choice per application, size or capacity needs
- Vertical and horizontal rack mount configurations
- Low power, small size, no fans
- Very low-cost start-up configuration

### Reduced capital and operational expenses

The BX1000 is highly scalable: the operator can start with a basic single card configuration at lowest price and cost-effectively upgrade the system as service demand requires more capacity or more interfaces. In addition, the operator can choose from two configurations to match system capacity and price level with quality of service demand. Capex and Opex reductions are the main benefits of the BX1000:

- Highly integrated architecture with all system core, line and control functions combined on a single card, optionally protected; high-density tributary cards with up to 63 interfaces each
- Convergence of data and voice combined with high integration density significantly reduces the amount of equipment; this results in lower investment, installation, operational and maintenance costs
- Optimal bandwidth utilization and flexibility is guaranteed by data mapping using GFP, Virtual Concatenation and LCAS. Bandwidth is allocated according service demand with a granularity down to 100 kbit/s
- The integrated data switch provides local switching and oversubscription to best utilize the available network capacity; while retaining full customer isolation and enforcing individual service level agreements
- Hot-pluggable small form factor pluggable (SFP) modules for STM-N optical and electrical as well as Gigabit Ethernet interfaces reduce the amount of spare parts and allow for step by step interface deployment

### Integration in existing networks

The BX1000 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 BX1000 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 in-band via a 2 Mbit/s payload channel. The BX1000 provides SNMP management as well as web-browser based provisioning; system management via the 7-layer OSI G.773 protocol stack can be supported as well.

## Specifications

<b>Interfaces</b>	STM-1o, STM-1e, STM-4 and STM-16 via SFP PDH: E1 75 Ohm and 120 Ohm, DS1, E3, DS3 Ethernet electrical: 10/100/1000BASE-T Ethernet optical: 1000BASE-X via SFP Synchronization inputs and outputs: 2 Mbit/s or 2MHz
<b>Cross connect and Protection</b>	Non-blocking higher order and lower order cross connect Unidirectional, bidirectional, broadcast and loopbacks cross connections SNC protection, MSP protection, Collapsed node multi ring closure and protection LCAS protection and Ethernet service layer protection
<b>Equipment protection</b>	Redundant system core, cross connect, sync and power (6 slot configuration)
<b>Ethernet applications</b>	Point-to-point Ethernet Private Line Multipoint Ethernet Transparent LAN Service Multipoint Ethernet Virtual LAN service with bandwidth sharing, statistical multiplexing and trunk port aggregation
<b>Ethernet mapping</b>	GFP-F or LAPS encapsulation Virtual Concatenation VC4-xv, VC3-xv and VC12-xv, and LCAS
<b>Ethernet services</b>	IEEE802.1D bridging, 802.1Q VLAN and GVRP, 802.1ad stacked VLAN, 802.1w rapid STP, DiffServ QoS, flow classification, rate control and flow based queuing
<b>OAM&amp;P</b>	Performance monitoring on all ports, connection and termination points Fault management and reporting Local and remote software and database download Miscellaneous Discrete inputs and outputs and alarm loop contacts Universal Serial Bus USB expansion port
<b>Management</b>	SNMP management Web-browser based provisioning Ethernet 10/100BASE-T for local access DCC or in-band via 2 Mbit/s payload for remote access Transparent DCC cross connect and IP tunneling for third party transport
<b>Dimensions</b>	6 slot configuration: 224 mm wide, 300 mm high, 270 mm deep 2 slot configuration vertical placement: 88 mm wide, 300 mm high, 270 mm deep 2 slot configuration horizontal placement: 19" wide, 2U high, 270 mm deep
<b>Power</b>	Redundant -48V or -60V DC power inputs 6 slot version: 100 Watt, 2 slot version: 35 Watt 230V AC installation version available
<b>Environment</b>	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
<b>Standards compliance</b>	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.

AimBridges B.V.  
Anton Philipsweg 1  
1223 KZ Hilversum  
The Netherlands

tel: +31 35 689 1900  
fax: +31 35 689 1901

[www.aimbridges.nl](http://www.aimbridges.nl)

**AimBridges**

Printed Dec 3, 2004 v0.6