

BX21 - Optical Access Device



Highlights

The BX21, AimValley's next-generation SDH Access Device, enables true multi-service carrier-grade access network solutions for tomorrow's converged networks. The cost-effective terminal multiplexer 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 BX21 is optimized to provide unparalleled density and small size at low cost.

Features

- SDH interfaces: STM-1 interface enabling SDH carrier class transport
- Access interfaces: E1 and Fast Ethernet
- Hot-pluggable SFP module for flexible reach selection
- 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

Capex & Opex Reduction

Capex and Opex reductions are the main benefits of the BX21:

- Highly integrated architecture with all functions combined on a single low-cost box
- 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

- **Add-Drop Multiplexer for STM-1 Access Networks**
- **Multi-service access for data, leased line or voice traffic over SDH, PDH and Ethernet**
- **Very compact Ethernet Access system**
- **Applications**
 - * **Full-rate FE and E1 access at CPE**
 - * **Backhaul for wireless networks**
 - * **Carrier grade Ethernet over SDH**

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 Concatenation and LCAS. The operator can allocate a specific amount of bandwidth per end user, in steps of 2 Mbit/s up to 100 Mbit/s.
- Hot-pluggable small form factor pluggable (SFP) Modules for the STM-1 optical interface allows flexibility to select the required optical power budget and link distance

Integration in existing networks

The BX21 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 BX21 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 a dedicated VC12 and does not conflict with DCC channels already in use for existing network management. The TCP/IP stack and OSPF routing simplify management of remote BX21 systems from a single operations system.

The BX21 provides SNMP alarm traps as well as web-browser based provisioning.

Technical Specifications

Traffic interfaces

- 1x STM-1 via SFP
- 4x E1, 75 or 120 Ohm (RJ45)
- 2 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-1 single fiber
- STM-1 electrical

Cross connect and Protection

- Pre-defined configurations for cross connect and VCAT bandwidth allocation
- LCAS based protection
- Loopbacks on E1 and Fast Ethernet interfaces

Synchronization

- Internal 4.6 ppm SEC G.813 clock
- Clock reference mode selection:
 - Locked to STM-1 line timing
 - Hold-over mode
 - Free running on local clock

Ethernet applications

- Point-to-point Ethernet Private Line
- Up to 100 Mb/s end-to-end on Ethernet port 1
- Up to 20 Mb/s end-to-end on Ethernet port 2

Ethernet mapping

- GFP-F encapsulation
- Virtual Concatenation VC3-xv (1..2) or VC12-xv (1..46)
- LCAS

OAM&P

- Ethernet Port Performance counters
- STM-1 MS 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 15 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

AimValley is a global supplier of telecom and data networking solutions that enable network operators to provide services with optimized quality of experience. With its innovative solutions for Ethernet demarcation, Circuit Emulation and Carrier Class switching, AimValley addresses the demands of next generation packet based networks, supporting applications ranging from legacy based services to bandwidth demanding data and video.

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 AimValley's product information does not constitute or contain any guarantee, warranty or legal binding representation, unless expressly identified as such in duly signed writing.

v300.20.1 2012-10-11 v1.15

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