

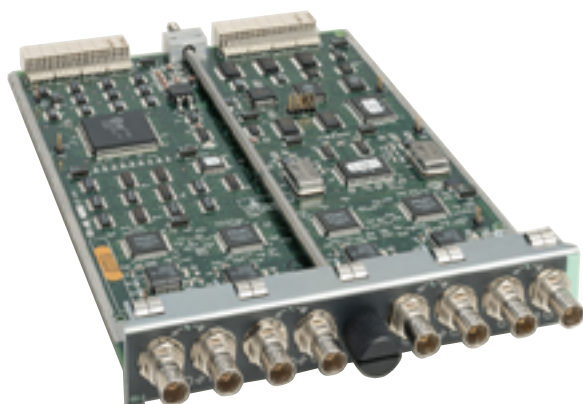
LightStream 1010 DS3/E3-ATM Port Adapter Module

The LightStream[®] 1010 is the first member of Cisco Systems' midrange Asynchronous Transfer Mode (ATM) switches for multiservice applications—from the ATM workgroup and campus backbone to metropolitan-area networks and alternative service provider backbones.

Building upon the Cisco IOS[™] software as well as supporting the latest ATM Forum specifications and Tag Switching, the LightStream 1010 offers the most complete feature set of any switch in its class. It delivers the performance, scalability, and robustness required for production ATM deployment.

The LightStream 1010 uses a five-slot, modular chassis featuring the option of dual, fault-tolerant, load-sharing power supplies and can support up to eight hot-swappable port adapter modules (PAMs). The 5-Gbps, shared-memory, fully nonblocking switch processor of the LightStream 1010 and the port modules can be used in the Catalyst[®] 5500 multilayer LAN switch. In either platform, up to 32 DS3/E3 ATM ports can be supported.

DS3 / E3 ATM Port Adapter Module



Unlike other switch architectures, the shared memory architecture of the LightStream 1010 allows all the advanced traffic management and other mechanisms of the switch to be implemented not on the port modules, but on the field-replaceable feature card on the Switch Processor (SP) module. This feature lowers the costs of the interface modules and facilitates the upgrading of switch features without impacting the port modules. Future members of the LightStream family of switches use all the current PAMs, preserving investments and facilitating the sharing of spares.

The DS3 and E3 PAMs are ideal for wide-area ATM connectivity, to link multiple campuses or to connect to public networks.

Each of the ports on the DS3/E3 PAM can be configured to support the following clock options:

- Self-timing based on ATM Switch Processor clock
- Loop timing from the received data stream—ideal for public network connections
- Time synchronized to a selected master clock port, required to distribute a single clock across a network

Specifications

Hardware

Physical Dimensions

- Carrier module (CAM) H x W x D: 1.2 x 14.4 x 16.0 in. (3.0 x 36.6 x 40.6 cm)
- PAM H x W x D: 1.2 x 6.5 x 10 in. (3.0 x 16.5 x 25.4 cm)
- PAM power budget: 10W

Components

- The LightStream 1010 or the Catalyst 5500 supports up to four CAMs, each supporting up to two PAMs, for a total of eight PAMs per switch

Interface Features

- Debugging: Multiple levels of port loopback
- Supports both cell-streaming mode and physical layer convergence procedure (PLCP) framing

Port LEDs

Receive and transmit LEDs on each port give quick, visual indications of port status and operation, while support for comprehensive statistics gathering and alarm-monitoring capabilities, building on the sophisticated manageability mechanisms of the DS3/E3 interface, allow for detailed network management.

DS3 PAM

- Port capacity—Four DS3 ports per module
- Data rate—44,736 Mbps
- Media—Coaxial
- Connector—BNC
- Line encoding—B3ZS
- Framing—C-bit parity, optionally PLCP with M23, otherwise Add Drop Multiplexer (ADM) (ATM framing)
- Timing—Primary and secondary 8-kHz reference from internal (default) or network
- Loopbacks—Transmit and receive loopbacks
- Impedance—75 ohms nominal

E3 PAM

- Port capacity—Two or four E3 ports per module
- Data rate—34.368 Mbps
- Media—Coaxial
- Connector—BNC
- Line encoding—HDB3
- Framing—G.832 or G.751, optionally PLCP with G.751, otherwise ADM (ATM framing)
- Timing—Primary and secondary 8-kHz reference from internal (default) or network
- Loopbacks—Transmit and receive loopbacks
- Impedance—75 ohms nominal



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