

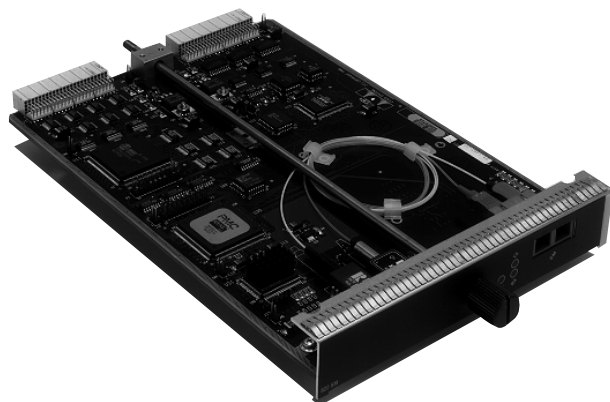
LightStream 1010 622-Mbps OC-12-ATM Port Adapter Module

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 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 eight OC-12 (622-Mbps) ATM ports can be supported.

OC-12-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 module. This scenario 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 will utilize all the current PAMs, preserving investments and facilitating the sharing of spares.

Each PAM port can be configured to support a variety of clocking options:

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

The LightStream 1010 and the Catalyst 5500 offer one of the most comprehensive choices for OC-12 (622-Mbps) modules, including:

- One-port multimode fiber (MMF)
- One-port single-mode fiber (SMF) (intermediate reach)
- One-port single-mode fiber (SMF) (long reach)

One-Port Multimode Fiber

The multimode fiber 622-Mbps Synchronous Optical Network (SONET), (STS-12c)/Synchronous Digital Hierarchy (SDH) Synchronous Transport Module level 4 (STM-4) PAM supports a single port. With a typical reach of 500m, the module is ideal for very high-performance intercampus links. This PAM supports an SC-type connector for ease of use.

One-Port Single-Mode Fiber (intermediate reach)

The SMF, 622-Mbps SONET STS-12c/SDH STM-4 PAM supports a single port, and with its intermediate reach of 15 km, it is ideal for very high-performance intercampus, metropolitan, or wide-area links. This PAM supports an SC-type connector for ease of use.

One-Port Single-Mode Fiber (long reach)

The SMF, 622-Mbps SONET STS-12c/SDH STM-4 PAM supports a single port, and with its long reach of 40 km, it is ideal for very high-performance intercampus, metropolitan, or wide-area links. Because of its expanded distance, this module is extremely useful in service provider networks. This PAM supports an SC-type connector for ease of use.

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: 10 watts

Components

- The LightStream 1010 and Catalyst 5500 support 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

PAM	Connector	TX		RX		Distance	
		Max	Min	Max	Min	km	Miles
OC-12 MM	SC	-14	-20	-14	-26	0.5	0.3
OC-12 SM-IR	SC	-8	-15	-8	-28	15	9
OC-12 SM-LR	SC	2	-3	-8	-28	40	25
IR = Intermediate Reach LR = Long Reach							



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