

1RU Optical A/B Switch for HFC Fiber Solution



AT5000 Series

- **Laser/Fiber Protection**
- **Low Insertion Loss**
- **Switching Speed**
- **Manual/Automatic Mode**
- **High Reliability and Compact Design**
- **Hot Swappable Redundant AC/DC Power**
- **Intuitive Front Panel LCD Display**
- **Universal management through web and SNMP**

The AT5000 1RU Optical A/B Switch is a high-reliability optical fiber route switching platform designed for applications such as CATV high-quality video transmission, fiber ring redundancy, and FTTX video overlay systems. It ensures the protection of optical paths in network architectures and features low insertion loss and high performance.

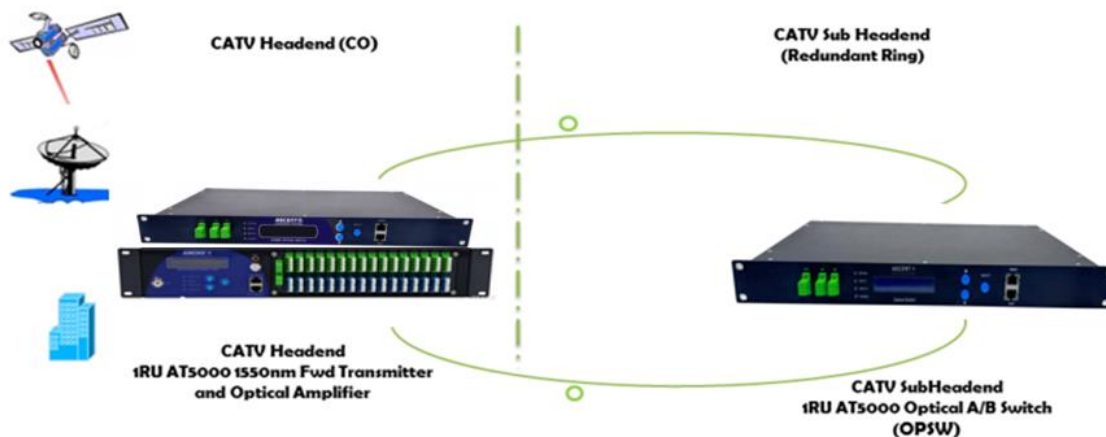
The switch is equipped with an electrically operated optical switch that can function in both manual and automatic modes. With a fast-switching time and low loss, it is ideal for fiber ring and redundant standby networks. In automatic mode, the switch detects when the primary line fails or falls below a threshold, transitioning to the standby line and reverting back when the primary line recovers. In manual mode, operators can force switching between lines as needed. The device also includes optional RF detection functionality to monitor signal quality, ensuring reliability by automatically switching lines based on RF thresholds when optical power input is above 0 dBm.

Packaged in a 1RU 19" subrack, the AT5000 OPSW offers an intuitive front-panel LCD for user-friendly operation. When combined with ACT 1RU AT5000 XMOD and EDFA amplifiers, the switch delivers robust fiber protection for long-distance video, medium video overlays, and FTTX networks. Its versatile design meets the reliability demands of traditional HFC and high-density FTTX networks.

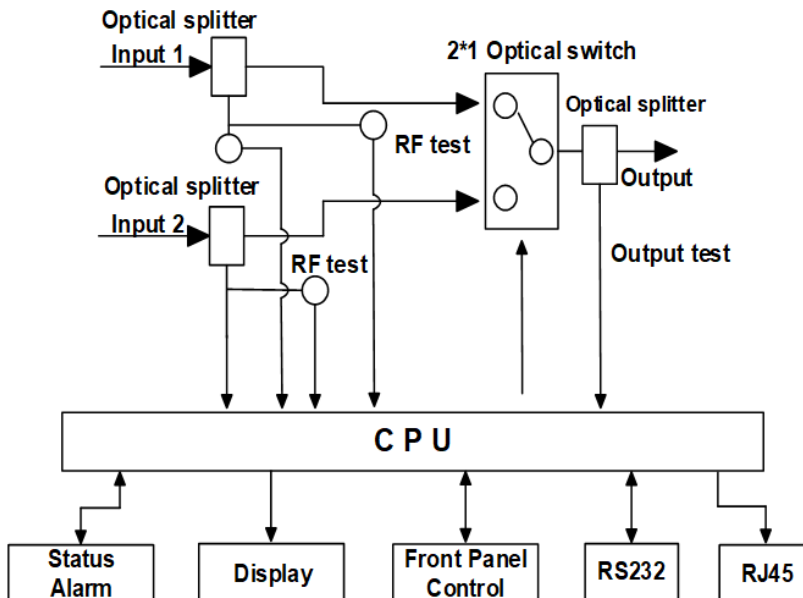
Key Features

- Power-off protection: When the device itself fails or its power supply off, it will automatically remain on the current line before the failure to maintain the working status of the network
- Any route can be chosen as the main road in automatic mode
- Intelligent switching function
- Short switching time, low loss, with automatic switching and forced manual switching function
- Large switching dynamic range
- RF detection function (optional)
- Built-in dual power supply, automatically switched and hot plug in/out supported
- The LCD status display: laser status monitoring, parameter display, fault alarm, network management
- Standard RJ45 interface supporting SNMP and web remote network management

Application Diagram



Block Diagram



Specifications

Category	Items	Unit	Index			Remarks
			Min.	Typ.	Max.	
Optical Index	Operating Wavelength	nm	1200		1620	
	Switching Fiber Input Range	dBm	-15		+24	
	Switching Fiber Input Range	dBm	-35		+24	Telecommunication level
	Insertion Loss	dBm	1		1.3	
	Switching Time	ms			8	
	PDL				0.2	
	Optical Return Loss	dB	50			
General Index	Fiber Connector		SC/APC			FC/APC, LC/APC
	RF Detection Function					Optional
	Network Management Interface		SNMP, WEB supported			
	Power Supply	V	90		265	AC
		V	-72		-36	DC
	Power Consumption	W			5	Dual PS, 1+1 standby
	Operating Temp	°C	-5		+65	
	Storage Temp	°C	-40		+85	
	Operating Relative Humidity	%				
	Dimension	mm	240×483×44			D、W、H
	Weight	Kg	2.0			
	Ship weight	Kg	4.0			

Ordering Information

AT5000 OPSW Series	Description
AT-50-OPSW-00-M-SC	AT5000 1RU Optical A/B Switch, 2x1, 1200 nm to 1620 nm, -15 dBm to 24 dBm, SC/APC connectors, dual PS slots
AT-50-OPSW-00-RF-SC	AT5000 1RU Optical A/B Switch, 2x1, 1200 to 1620nm, -15 dBm to 24 dBm, with RF detection, SC/APC connectors, dual PS slots
AT-50-OPSW-AC	AC PS for AT5000 1RU Optical A/B Switch
AT-50-OPSW-DC	DC PS for AT5000 1RU Optical A/B Switch

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