DATA SHEET

Headend Optics Platform (CH3000)

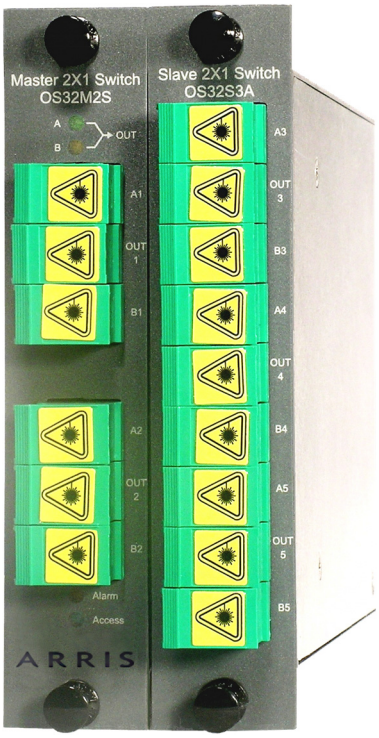
OS32M2S, OS32S1A, OS32S3A

Primary/Secondary Optical Switches

FEATURES

- Non-latching 2x1 optical switches in Primary/Secondary configurations
- Primary switch controlled by user-programmed optical levels on A and B inputs with secondary switches tracking the primary switch
- Dual wavelength operating windows of 1270–1350 nm and 1420–1620 nm
- Wide range of user-settable switching thresholds (-22 to +22 dBm) for analog and digital transport applications
- All switches allow simultaneous counter-propagating signals
- Fast switching speed (< 5 ms typical)
- ± 0.5 dB switching hysteresis
- Low insertion loss
- Hot plug-in/out
- Local/remote status monitoring and control
- Single width, half-depth modules

The CommScope OS32M2S/OS32Sxx series of Primary/Secondary Optical Switches for the CH3000 platform switch to the alternate fiber route when the optical input of the default fiber route is below the threshold setting and the optical power on the alternate route is above the threshold setting. Designed primarily to support telephony traffic over alternate routing architectures, OS32M2S/OS32Sxx Primary/Secondary Optical Switches operate in dual-wavelength windows of 1270–1350 nm and 1420–1620 nm maximizing network reliability and efficiency.



This suite of three Primary/Secondary modules includes the model OS32M2S-00-AS that provides a 2x1 switch that functions as the primary switch in the suite, operating as an optical power sensing optical switch; it also includes a secondary 2x1 switch that tracks the primary switch.

The OS32S1A-00-AS is a single 2x1 secondary switch module which attaches to the OS32M2S-00-AS Primary/Secondary module providing a system total of two secondary switches tracking the primary switch in a two-slot format.

The OS32S3A-00-AS is a three secondary switch module which attaches to the OS32M2S-00-AS Primary/Secondary module providing a system total of four secondary switches tracking the primary switch in a two-slot format.

Optical paths in the secondary module(s) are automatically set to the same switch position as the primary switch.

OS32M2S/OS32Sxx series switches have a broad threshold adjustment range to support any combination of both analog and digital transmission and are self-restorative with 0.5 dB hysteresis. All modules feature SC/APC connectors and are single-width, half-depth modules designed for installation in a CH3000 Chassis.

SPECIFICATIONS

Characteristics	Specification
Physical	
Dimensions	6.5” D x 5.25” H x 1.0” W (3RU) (17 cm x 13.3 cm x 2.5 cm)
Weight	1.0 lb (0.45 kg)
Environmental	
Operating Temperature Range	-20° to +65°C (-4° to 149°F)
Storage Temperature Range	-40° to +85°C (-40° to 185°F)
Humidity	5% to 95% non-condensing
General	
Optical Connector	SC/APC
Switch Configuration (All Models)	Non-latching 2x1
Switches per Module	• OS32M2S-00-AS Primary switch module with one integrated Secondary switch • OS32S1A-00-AS[1] Single Secondary switch module that mounts on OS32M2S-00-AS • OS32S3A-00-AS[1] Three Secondary switch modules that mount on OS32M2S-00-AS
Switch Type	Non-latching
Switching Speed	< 5 ms typical, 10 ms Max
Switching Hysteresis	± 0.5 dB
Optical Connector	SC/APC
	Hot plug-in/out
Optical	
Wavelength	1270–1350 nm and 1420–1620 nm
Input Power, Max	25 dBm
Insertion Loss	1.5 dB Max
Isolation	55 dB Min
Return Loss	55 dB Min
Polarization Dependent Loss	0.1 dB Max
Spectral Flatness	0.5 dB Max
Power Requirements	
Input Voltage	12 V_{DC} nominal from CH3000 chassis power supply
Power Consumption, Max	OS32M2S-00-AS: 1.6 W OS32S1A-00-AS: 0.4 W OS32S3A-00-AS: 1.2 W
Local Controls and Monitoring	
Switching Threshold (User-settable, Independent for Each Input) for OS32M2S	Range: -22 to +22 dBm (in 1 dB steps, accuracy ± 0.75 dB)
Operating Mode	Auto: switch operates based on threshold setting Force to A input or B input: switch permanently stays in position A Input or B Input
Wavelength	Selection of 1310 nm or 1550 nm window
Locally Monitored Parameters	Chassis slot number, powering voltage, internal temperature, input optical power, switch position (A or B), operating mode (Auto or Forced to A or B)
Front Panel Indicators	
Module Status LEDs	Red “Alarm”: major alarm Blue “Access”: illuminated during communication access
Switch Status LEDs (for OS32M2S)	• Green LED Illuminated: A Input switched to OUT or if blinking, A Input is forced to OUTPUT • Yellow LED Illuminated: B Input switched to OUT or if blinking, B Input is forced to OUTPUT
Alarms	
	Service-affecting (DC failure, switch output below threshold, Secondary switch state not in line with Primary) Non-service-affecting (high internal temperature, A or B input power below threshold)

NOTE:
1. Requires OS32M2S-00-AS

ORDERING INFORMATION

Model Name	Description
OS32M2S-00-AS	2x1 Primary with single 2x1 Secondary switch
OS32S1A-00-AS	Single 2x1 Secondary switch[1]
OS32S3A-00-AS	Three 2x1 Secondary switches[1]

NOTE:
1. Requires OS32M2S-00-AS Primary/Secondary switch.

RELATED PRODUCTS

CH3000 Chassis	Optical Patch Cords
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Note: Specifications are subject to change without notice.

87-10307-RevG_OS32xxx-OptSwitches