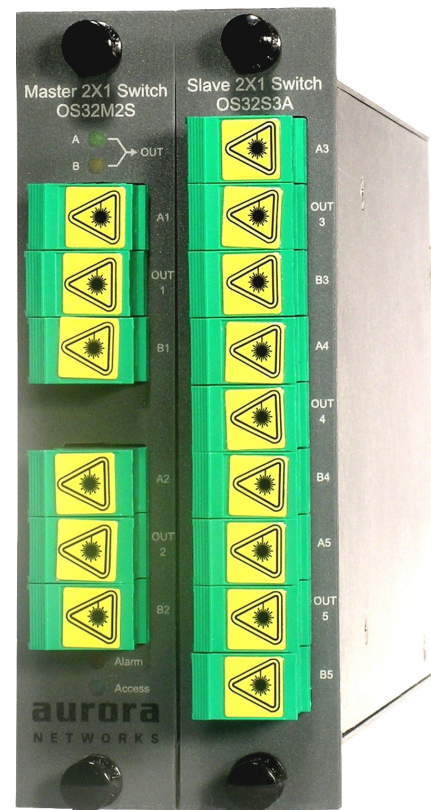


Headend Optics Platform (CH3000)

OS32M2S, OS32S1A, OS32S3A
Master/Slave Optical Switches

FEATURES

- Non-latching 2x1 optical switches in Master/Slave module configurations
- All switches allow simultaneous counter-propagating signals
- Fast switching speed (< 5 ms typical)
- Wide range of user-settable switching thresholds (-22 to +22 dBm) for analog and digital transport applications
- All detection and control on Master switch (with all Slaves always following Master)
- Only light from A and B inputs are detected and control the switch (high isolation from any inputs at "Out" ports)
- ± 0.5 dB switching hysteresis
- Low insertion loss
- Dual wavelength operating windows (1280–1340 nm and 1420–1620 nm)
- Low power consumption
- Hot plug-in/out
- Local and remote status monitoring and control slot
- Occupies one half-depth



PRODUCT OVERVIEW

The ARRIS OS32M2S/OS32Sxx series of Master/Slave Optical Switches for the CH3000 platform offer fast switching times, low insertion loss and high packaging density, and all operate in dual-wavelength windows (ranges of 1280-1340 nm and 1420-1620 nm). Designed primarily to support telephony traffic over alternate routing architectures, OS32M2S/OS32Sxx Master/Slave Optical Switches are guaranteed to have a switching time of less than 10 milliseconds and only switch to the secondary fiber route when the primary route optical input is below threshold setting and optical power on the alternate route is above threshold setting.

The suite of three “Master/Slave” modules includes the model OS32M2S-00-AS that provides one 2x1 switch that functions as the “Master” switch in the suite, operating as a primary optical power sensing optical switch; it also includes a second 2x1 “Slave” switch in the same module that switches to the same path as the primary. This module can also control an optional adjacent auxiliary (slave) switch module: either a single 2x1 slave switch (model OS32S1A-00-AS) or a set of three 2x1 slave switches in the same unit (model OS32S3A-00-AS, as pictured on the previous page). Optical paths in the slave module(s) are automatically set to the same switch position as the master switch.

All OS32M2S/OS32Sxx series switches have a wide dynamic threshold adjustment range to support any combination of both analog and digital transmission applications. A threshold may be established for each switch over an extremely wide dynamic range (–22 to +22 dBm, adjustable in 1 dB steps). These switches are self-sensing of fiber restoration for maximum network reliability and efficiency, and are fully controllable both locally and remotely.

All modules use SC/APC connectors and are single-width, half-depth modules designed for installation in a CH3000 Chassis or PF3000 Passives Frame. The features of the OS3200 series of optical switches make them ideally suited to applications where high reliability is required and space and power consumption are important considerations.

RELATED PRODUCTS

CH3000 Chassis	Optical Patch Cords
Optical Transmitters	Optical Passives
BP Back plates	Installation Services

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 lbs (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)	2x1
Switches per module	<ul style="list-style-type: none"> • OS32M2S-00-AS 2 (1 "Master" and 1 "Slave") • OS32S1A-00-AS¹ 1 (additional "Slave") • OS32S3A-00-AS¹ 3 (additional "Slaves") ¹ Requires 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	1280–1340 nm and 1420–1620 nm
Max input power	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 nm max (both wavelength ranges)
Power Requirements	
Input voltage	12 V _{DC}
Power consumption, max	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Range: -22 to +22 dBm (in 1 dB steps, accuracy ± 0.75 dB)
Operating mode	<ul style="list-style-type: none"> • Auto - switch operates based on threshold setting • Force to Ax (or Bx) - switch permanently stays in position Ax (or Bx)
Wavelength	selection of 1310 nm or 1550 nm region
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	<ul style="list-style-type: none"> • Red "Alarm": major alarm • Blue "Access": illuminated during communication access
Switch status LEDs (for OS32M2S)	<ul style="list-style-type: none"> • Green "Ax → OUTx" (switch in Ax position, or blinking if Forced to Ax), • Yellow "Bx → OUTx" (switch in Bx position, or blinking if Forced to Bx)
Alarms	
	<ul style="list-style-type: none"> • Service-affecting (DC failure, switch output below threshold, Slave switch state not in line with Master) • Non-service-affecting (high internal temperature, A or B input power below threshold)

ORDERING INFORMATION

OS32M2S - 00 - AS

2x1 "Master" and 2x1 "Slave" Optical Switches

OS32S1A - 00 - AS

Single 2x1 "Slave" Optical Switch¹

OS32S3A - 00 - AS

Three 2x1 "Slave" Optical Switches¹

NOTES

All switches are configured with SC/APC connectors.

¹ Also requires OS32M2S "Master/Slave" switch

Customer Care

Contact Customer Care for product information and sales:

- United States: 866-36-ARRIS
- International: +1-678-473-5656

Note: Specifications are subject to change without notice.

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