

Optical Node Series (NC)

OR4148H-xx-0, -1 RFoG Diplexer/Return Receiver

FEATURES

- Enables deployments of extended reach RFoG applications
- Single compact plug-in module for NC4000 and NC2000 series VHub™ platforms
- RF attenuator facilities provided
- Low insertion loss
- Passband options:
5–42 MHz (models OR4148H-42-x-MP) or 5–65 MHz (models OR4148H-65-x-MP)
- Two MPO connectors provide eight 1550 nm forward signal inputs and eight network outputs
- Local and remote status monitoring capability
- Hot plug in/out



PRODUCT OVERVIEW

ARRIS' OR4148H RFoG Diplexer/Return Receiver is offered in a double-wide plug-in module for NC4000 and NC2000 series Virtual Hubs (VHub). Two MPO connectors provide eight 1550 nm forward signal inputs and eight network outputs. RF return signals are output through four SMB connectors.

In the forward path, eight 1550 nm broadcast inputs are injected into the BC port and distributed to eight output fibers. The forward/return optical diplexer separates the eight downstream 1550 nm signals from the eight upstream signals (1310 nm for models OR4148H-xx-0-MP, or 1310/1590/1610 nm for models OR4148H-xx-1-MP), and integrated analog receivers perform the optical-to-electrical (O/E) conversion. Following optical-to-electrical (O/E) conversion of the incoming reverse signals, gain control of the RF signal can be adjusted with built-in attenuators.

In ARRIS's NC4000 or NC2000 series VHub, the resulting RF signals from these receivers can be combined from one to four upstream segments and then input to a DT4000 series Digital Transceiver, where they are digitized and reconverted to an optical signal for transport back to the headend.

This compact design, with MPO connectors, eliminates most fiber jumpers and associated losses which are normally created with separate multiple filters and receiver modules. The OR4148 offers the highest density packaging RFOG module available.

SPECIFICATIONS

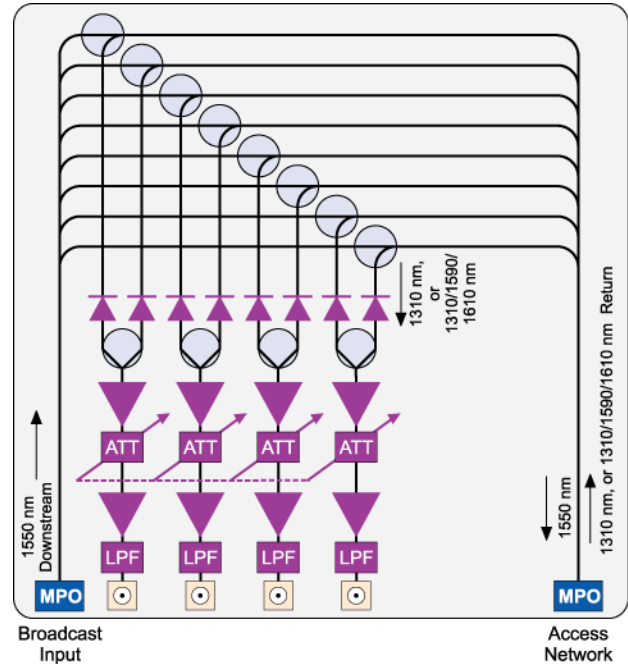
Characteristics	Specification
Physical	
Dimensions	4.0" D x 4.5" H x 2.0" W (10.2 cm x 11.4 cm x 5.1 cm)
Weight	2.0 lbs (0.91 kg)
Environmental	
Operating Temperature Range	-40° to +85°C (-40° to 185°F)
Storage Temperature Range	-40° to +85°C (-40° to 185°F)
Humidity	5% to 95% non-condensing
General	
Nominal wavelengths	Broadcast passthrough: 1550 nm O/E upstream: OR4148H-xx-0-MP: 1310 nm OR4148H-xx-1-MP: 1310/1590/1610 nm
Hot plug-in/out	
Power Requirements	
	700 mA at +5 V _{DC}
Power consumption, typ	3.5 W
Connectors	
Optical connectors	Broadcast input MPO for eight forward 1550 nm signal inputs Access network MPO for eight network outputs
Return path connectors	RF return signals output through four SMB connectors
Optical	
BC INP to Access Network	
Passband (forward)	OR4148H-xx-0-MP: 1530-1565 nm OR4148H-xx-1-MP: 1540-1565 nm
Insertion loss, max	1.7 dB
Isolation to O/E, min	60 dB
Access Network to O/E	
Passband (return)	OR4148H-xx-0-MP: 1310 ± 50 nm OR4148H-xx-1-MP: 1310 ± 50 nm, 1590 ± 10 nm, 1610 ± 10 nm
Isolation to BC INP, min	35 dB
Insertion loss, max	1.5 dB
Optical input range	-9.5 to -17 dBm
Electrical, Return RF	
Passband	5-42 or 5-65 MHz
Frequency response	± 0.5 dB for 42 MHz, ± 0.75 dB for 65 MHz
Output return loss, min	18 dB
Level stability	± 0.75 dB
Standard output level at min full gain	2.5 dBmV (with -16 dBm optical input, 1% OMI, 1310 nm)
Gain control range	0-15 dB (set with DIP switch; same for all paths)
Path-to-path isolation	45 dB
Local Test indicators	
Optical level test point	10 ± 1 V/mW
Dummy load indicator	green LED

ORDERING INFORMATION

Order Part Number: OR4148H-xy-z-MP

xy= Passband (MHz): (42 = 5-42 MHz, 65 = 5-65 MHz)

z = Upstream Wavelength (nm): (0 = 1310 nm, 1 = 1310/1590/1610 nm)



RELATED PRODUCTS

NC4000 VHub	Optical Patch Cords
NC2000 VHub	Optical Passives
DT4xxxx Digital Transceiver	Installation Services

Customer Care

Contact Customer Care for product information and sales:

- United States: 866-36-ARRIS
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Note: Specifications are subject to change without notice.

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