

FEATURES

- Enables deployments of extended reach RFoG applications
- Single compact plug-in module for NC2000, NC4000, and NH4000 series VHub and UVHub platforms
- RF attenuator facilities provided
- Low insertion loss
- Passband options: 5–42 MHz or 5–85 MHz
- Passes all CommScope narrowcast and full spectrum transmitter wavelengths (ITU 59-16)
- Two MPO connectors provide eight 1550 nm forward signal inputs and eight network outputs
- Local and remote status monitoring capability
- Hot plug-in/out

CommScope's OR4148H-xx-2 RFoG Diplexer/Return Receiver is offered in a double-wide plug-in module for NC2000, NC4000™, and NH4000/NH4600 series Virtual Hubs and Universal Virtual Hubs (VHub and UVHub). 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 access path fibers. The forward/return optical diplexer separates the eight downstream 1550 nm signals from the eight 1310/1610 nm upstream signals 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.

The OR4148H-xx-2 model offers an extended forward optical transmission window that passes all CommScope's narrowcast and full spectrum transmitter wavelengths (ITU 59-16).



In CommScope's NC2000, NC4000 nodes, or NH4000 series VHub, the resulting RF signals from these receivers can be combined from one to four upstream segments and then input to a DT4xxx series Digital Transceiver, where they are digitized and reconverted to an optical signal for transport back to the headend.

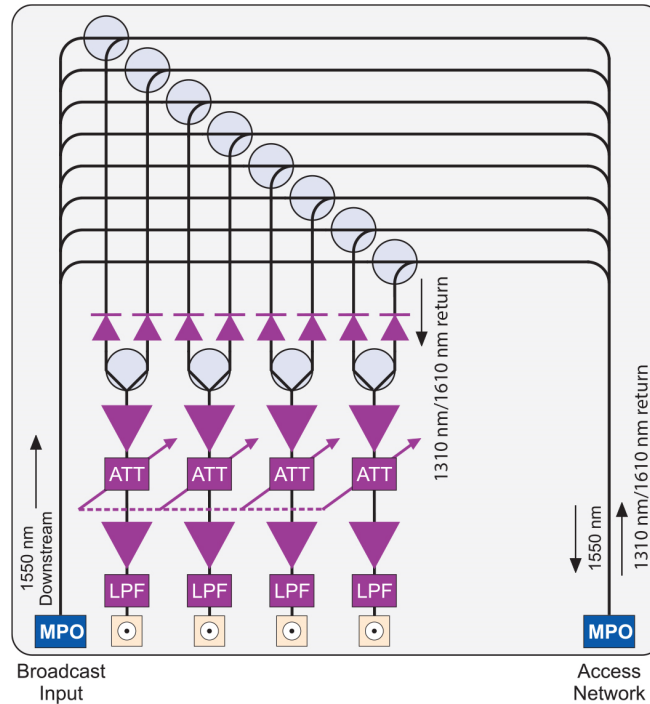
This compact design, with MPO connectors, eliminates most fiber jumpers and associated losses which are normally created with separate multiple filters and receiver modules. The OR4148H-xx-2 offers the highest density packaging RFoG module available.

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	
	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)	1530 to 1565 nm
Insertion Loss, max	1.7 dB
Isolation to O/E, min	60 dB
Access Network to O/E	
Passband (Return)	1310 ± 50 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 MHz or 5–85 MHz
Frequency Response	± 0.5 dB for 42 MHz, ± 0.75 dB for 85 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

Model Name	Description
OR4148H-42-2-MP	RFoG Diplexer 5–42 MHz Return Receiver
OR4148H-85-2-MP	RFoG Diplexer 5–85 MHz Return Receiver



RELATED PRODUCTS

NC2000, NC4000 Nodes	Optical Patch Cords
NH4000 UVHub	OR4178H, OR4216 RFPON Receivers
DT4xxx Digital Transceivers	CP8xxx RFoG/RFPON ONUs

Contact Customer Care for product information and sales:

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Note: Specifications are subject to change without notice.

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