

Optical Node Series (NC)

AR4x24G

Ultra High Gain 1 GHz Forward Analog Receivers with ALC

FEATURES

- Forward path receivers for NC4000 and NC2000 series Optical Nodes
- Passband options:
54–1002, 70–1002, 85–1002, or 102–1002, and 120–1002 MHz
- Automatic level control to support route redundancy with unequal optical paths
- Ultra high gain supporting high output nodes, lower input levels and longer reach of new architectures
- Low noise figure
- Optical and RF test points
- LED optical level indicator
- RF pad and EQ plug-ins
- Hot plug in/out
- Local and remote status monitoring capability



PRODUCT OVERVIEW

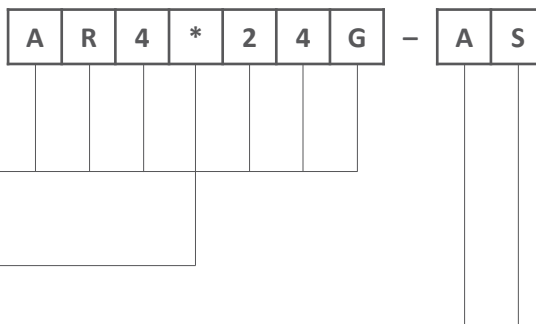
The AR4x24G series Analog Forward Path Receivers (FPRs) are designed as plug-in modules for ARRIS's NC4000 and NC2000 series Optical Nodes. Forward path receivers convert incoming optical signals (from the Headend or hub) to RF signals that are sent to the RF amplifier tray. These receivers are available for 51–1002, 70–1002, 85–1002, 102–1002, and 120–1002 MHz passbands. One or more AR4xxx series modules are shipped with each node—the exact model and quantity dependent on network architecture requirements.

The AR4x24G series receivers feature ultra high gain and ALC circuitry and are each optimized for four very different applications: North American Node (51–1002 MHz), Japanese Node (70–1002 MHz), European Node (85–1002 MHz), and 102-1002 MHz and 120-100s MHz forward architectures.

Following optical-to-electrical (O/E) conversion of the incoming optical signals, level and slope control of the RF signal can be adjusted with plug-in pads and equalizers (EQs). These levels can be maintained when in ALC mode; this functionality is particularly well suited for route redundancy applications with unequal optical paths.

SPECIFICATIONS	
Characteristics	Specification
Physical	
Dimensions	4.0" D x 1.4" H x 2.2" W (10.2 cm x 3.6 cm x 5.6 cm)
Weight	0.6 lbs (0.27 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	
O/E transmission path	
Manual level and slope control	
Selectable ALC mode (On/Off)	
Hot plug-in/out	
RF and Optical Interface	
RF output	connector at base of module
Optical connectors	SC/APC
Power Requirements	
Input voltage	5 V _{DC} and 24 V _{DC}
Power consumption	11.5 W typical
Optical	
Wavelength	1260 nm – 1620 nm
Optical input power range	-6 to +2 dBm
Electrical	
Passbands	51–1002, 70–1002, 85–1002, 102-1002, and 120-1002 MHz
Output level (minimum at full gain)	52 dBmV (over entire optical ALC range, 3% OMI, EQ installed, 0 dB pad)
RF output level control	via plug-in pad (0 to 12 dB)
ALC control	over optical input range: -6 to +2 dBm
Slope control	via plug-in EQ (0 to 12 dB)
Output return loss	16 dB
Local Test Facilities	
Optical input level test point	1 ± 0.2 V/mW (2.08 mm sockets)
RF test point	-20 ± 1 dB (F-male)
LED Indicators	
Alarm: Optical input level	<ul style="list-style-type: none"> Green: -6 to +2 dBm Blinking Green -- ALC out of range: -12 to -6 dBm Red: Low level < -12 dBm High level > +3 dBm
ALC	Green: ALC on Amber: Manual ALC off

ORDERING INFORMATION



Analog Forward Path Receiver for Optical Nodes
* = 1 (70–1002 MHz Passband) 2 (51–1002 MHz Passband) 4 (85–1002 MHz Passband) 5 (102–1002 MHz Passband) 6 (120–1002 MHz Passband)
AS = SC/APC Connector

RELATED PRODUCTS

NC4000 Optical Node	Optical Patch Cords
NC2000 Optical Node	Optical Passives
Fiber Service Cable	Installation Services

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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