

Optical Node Series

AR4x14G

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 MHz
- Automatic level control to support route redundancy with unequal optical paths
- High gain to support 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 AR4x14G 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 54–1002, 70–1002, 85–1002, or 102–1002 MHz passbands. One or more AR4x14G modules are shipped with each node—the exact model and quantity dependent on network architecture requirements.

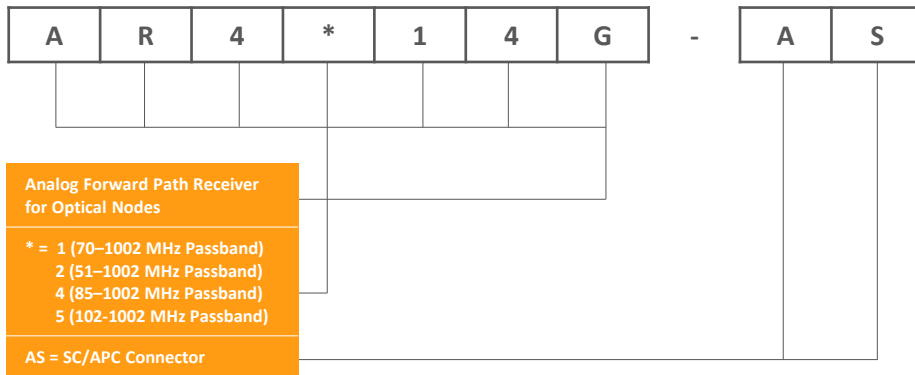
The AR4x14G series receivers feature high gain and ALC circuitry and are each optimized for four very different applications: North American Node (54–1002 MHz), Japanese Node (70–1002 MHz), European Node (85–1002 MHz), and new 102-1002 MHz forward architectures.

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" L 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)
Micro USB port for firmware update and local management	
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 connector	SC/APC
Power Requirement	
Input voltage	24 V _{DC}
Power consumption	10.5 W typ
Optical	
Wavelength	1260 nm – 1620 nm
Optical input power range	–10 to +2 dBm
Electrical	
Passbands	51–1002, 70–1002, 85–1002, and 102-1002 MHz
Output level (minimum at full gain)	44 dBmV (over entire optical ALC range, 3% OMI, EQ installed, 0 dB pad)
Output return loss	Minimum 16 dB
Level control	via plug-in pad (0 to 12 dB)
EQ control	via EQ plug-in (6 to 12 dB)
ALC control: over optical input range	–8 to +2 dBm
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: –8 to +3 dBm Blinking Green -- ALC out of range: –12 to –8 dBm: Red: Low level < –12 dBm High level >+3 dBm
ALC	<ul style="list-style-type: none"> Green: ALC on Amber: Manual ALC off

ORDERING INFORMATION



RELATED PRODUCTS

Optical Nodes	Optical Patch Cords
SFPs	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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