

Optical Node Series (NC)

AR4x20G

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
- 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 AR4x20G 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, or 102–1002 MHz passbands. One or more AR4xxx series modules are shipped with each node—the exact model and quantity dependent on network architecture requirements.

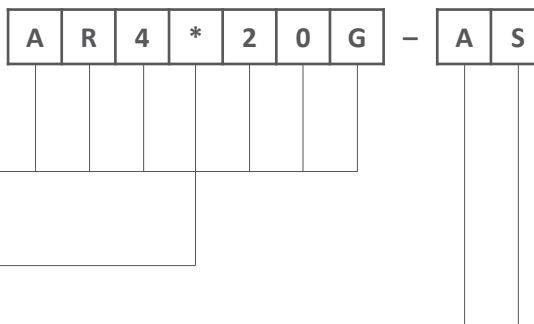
The AR4x20G series receivers feature ultra high gain and ALC circuitry and are each optimized for four very different applications: North American Node (51–1002 MHz), Japanese Node (70–1002 MHz), European Node (85–1002 MHz), and newer 102-1002 MHz forward architectures.

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" 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 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, and 102-1002 MHz
Output level (minimum at full gain)	52 dBmV (over entire optical ALC range, 3% OMI, EQ installed, 0 dB pad)
Output return loss	Minimum 16 dB
RF level control	via plug-in pad (0 to 12 dB)
EQ control	via EQ plug-in (0 to 12 dB)
ALC control	over optical input range: -6 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 (input signal > –11 dBm) Red (input signal < –11 dBm)
ALC	On/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)
- 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.

Copyright Statement: ©ARRIS Enterprises, LLC, 2016. All rights reserved. No part of this publication may be reproduced in any form or by any means or used to make any derivative work (such as translation, transformation, or adaptation) without written permission from ARRIS Enterprises, LLC (“ARRIS”). ARRIS reserves the right to revise this publication and to make changes in content from time to time without obligation on the part of ARRIS to provide notification of such revision or change. ARRIS and the ARRIS logo are registered trademarks of ARRIS Enterprises, LLC. Other trademarks and trade names may be used in this document to refer to either the entities claiming the marks or the names of their products. ARRIS disclaims proprietary interest in the marks and names of others. The capabilities, system requirements and/or compatibility with third-party products described herein are subject to change without notice.