

Optical Node Series (NC)

AR4041 Analog Quad Return Receiver

FEATURES

- Quad return path receiver for NC4000 series optical nodes
- Four separate RF signals (from optical inputs) combined into a single RF output
- Two dynamic optical input ranges
- Passband options of 5–45 MHz or 5–65 MHz
- Optical input level test points for each of four paths
- RF pad facilities provided for each of four signal legs
- Hot plug in/out
- Local and remote status monitoring capability



PRODUCT OVERVIEW

The AR4041 series Analog Quad Return Path Receivers (RPRs) are designed as plug-in modules for ARRIS's NC4000 optical nodes. These receivers are available for low or high RF gain (for corresponding optical input ranges of -7 to $+3$ dBm, or -15 to -7 dBm, respectively) for both 5–45 or 5–65 MHz passbands. Their compact design (single-width module) makes them the highest density packaging RPRs available.

To exploit the benefits of digital return technology, the high and low gain options of the AR4041 series receivers are each optimized for two very different applications. The high gain of the model AR4041H series makes them ideally suited for return paths in new FTTH architectures, where cascaded optical taps and NIUs are utilized. The low gain of the model AR4041L series, conversely, makes them the ideal candidate for receiving analog returns from up to four nodes each, where conversion to digital return and re-transmission is desired.

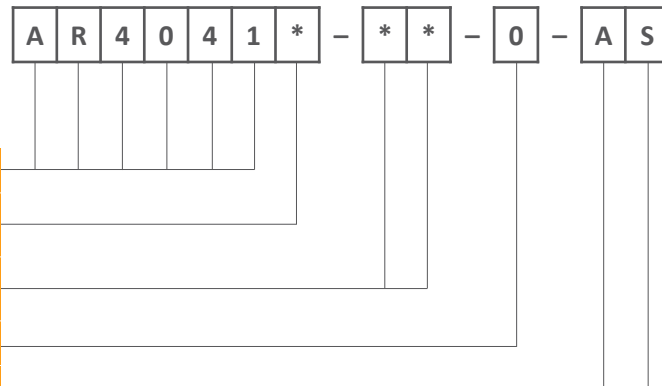
Following optical-to-electrical (O/E) conversion of the incoming optical signals, and prior to combining into a single common RF output signal, gain control of the RF signal of each path can be independently adjusted with plug-in pads (with 75 ohm pads used to terminate unused paths).

In ARRIS's NC4000 series optical nodes, the combined RF signal of these receivers is typically used as input to a DT4000 series Digital Transceiver, where it is digitized and re-converted to an optical signal for transport back to the headend.

SPECIFICATIONS

Characteristics	Specification
Physical	
Dimensions	4.0" D x 2.2" H x 2.2" W (10.2 cm x 5.6 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	quad/combined
Manual gain alignment	
Hot plug-in/out	
RF and Optical Interface	
RF output	connector at base of module
Optical connectors	SC/APC
Power Requirements	
Input voltage	24 V _{DC}
Power consumption	5 W
Optical	
Wavelength	1300 nm – 1600 nm
Optical power input range	<ul style="list-style-type: none"> Low gain: -7 to +3 dBm High gain: -15 to -7 dBm
Electrical	
Passband	5–45 or 5–65 MHz
Frequency response	± 0.5 dB
Standard output level	2.5 dBmV (1% OMI, 1310 nm)
Output return loss	Minimum 18 dB
Level stability	± 0.5 dB
Gain control range (each path)	0–20 dB (with plug-in pads)
Local Test Facilities	
Optical input level test points (2.08 mm sockets)	1 ± 0.2 V/mW
Optical input LED indicator (available only on AR4041L models)	<ul style="list-style-type: none"> Green (input signal > -10 dBm) Red (input signal < -10 dBm)

ORDERING INFORMATION



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.