

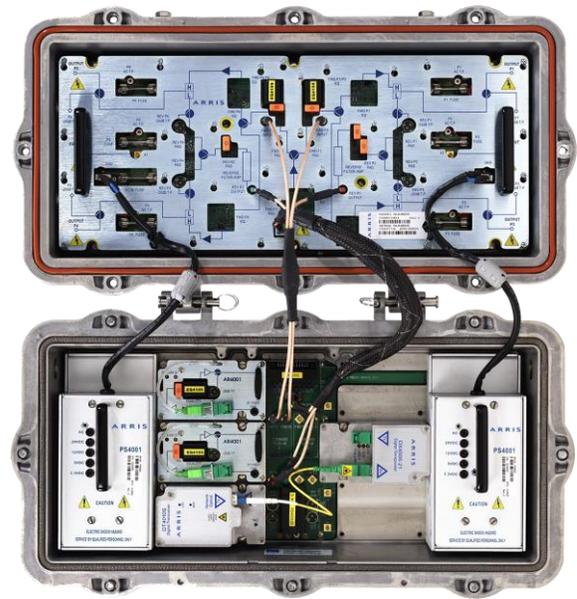
Optical Node Series (NC)

NC4000HG

Fiber Node Platform with Segmentable OA4114HG RF Amplifier for PAL Fiber Deep Applications (5–65/85–1002)

FEATURES

- Four RF outputs, two auxiliary ports for power or signal/video injection, and two optical ports
- 1x2 segmentable (1 or 2 return segments)
- Highest output level: 56.5 dBmV at 1002 MHz
- Optical capabilities:
 - Forward: 1300 to 1600 nm
 - Return: 1310 nm, 1550 nm, DWDM, or CWDM
- Accommodates up to 6 optical transport or Ethernet modules
- Broadcast/narrowcast receiver option
- EDFA and optical switching options available
- Forward optical or RF redundancy switching, and return redundancy options
- Return ingress switch options
- A family of advanced digital return modules
- Ethernet add/drop capability for commercial business services applications
- Redundant power supply option
- Pedestal or strand mounting



PRODUCT OVERVIEW

The ARRIS NC4000HG optical outdoor platform is designed to support a wide range of advanced architectures and is ideal for traditional HFC or deep fiber applications, including PAL (Phase Alternating Line) systems. It can be deployed in 1x1 or 1x2 with redundancy configurations.

With 56.5 dBmV at 1002 MHz available on four RF output legs, the NC4000HG can be used to extend the reach of the coax distribution network with Fiber Deep architectures. Furthermore, this flexible and rugged platform has the capability of segmenting two upstream paths using ARRIS's patented digital return solutions further expanding the deployment of advanced "bandwidth hungry" services (including 100 Mbps Ethernet for commercial services) in fiber poor areas while reducing real estate requirements in the field.

The NC4000HG supports deployment of field-hardened EDFAs to cost effectively extend fiber reach into new service areas. For optimal performance and reliability in a wide range of applications, ARRIS offers EDFAs at various power levels, and optical switches are available for different routing applications.

Status monitoring capability is provided via an integrated network management plug-in, eliminating the need for added-cost status monitoring transponders. The node can be configured to support split-band applications.

SPECIFICATIONS

Characteristics	Specification	
Physical		
Dimensions	20" L x 10.75" H x 9.5" W (51 x 27.3 x 24.3 cm)	
Weight	38 lbs (17.1 kg)	
Housing Ports	6 AC/RF ports and 2 fiber ports	
Environmental		
Operating Temperature Range	-40° to +60°C (-40° to 140°F)	
Storage Temperature Range	-40° to +85°C (-40° to +185°F)	
Humidity	5% to 95% non-condensing	
General		
RF Test Points (Fwd and Rtn)	-20 dB	
Flatness	± 1 dB	
Output return loss (at the node output)	> 16 dB	
Power Requirements		
Operating Input voltage range	44 to 95 V _{RMS} (47–70 Hz Quasi-Square Wave)	
Power passing	15 A _{RMS}	
Power supply start-up input voltage	40–44 V _{RMS}	
Power supply turn off input voltage	34–38 V _{RMS}	
Power supply efficiency	73% typical	
DC power consumption	<ul style="list-style-type: none"> 73 W (standard configuration of 4 RF outputs and 1 optical Rx) 11 W (second Optical Receiver) 6 W (Digital Transponder) 6 W (Return Transceiver) 9 W (Node EDFA) 	
RF Performance for HFC Applications (See Note 1)		
	Application	
	Fiber Deep	HFC
System standard	B/G	D/K
Forward passband (MHz)	85–1002	85–1002
Channel Loading		
Up to 600 MHz	64	60
600-1002 MHz	256 QAM at -6 dBc	256 QAM at -6 dBc
Optical input level at Node Receiver (dBm)	-3	-3
Nominal slope, linear (dB) 85–1002 MHz	17.5	17.5
Nominal output level (per port, dBmV)		
at 1002 MHz	56.5	56.5
at 85 MHz	39	39
Output return loss at the Node output (dB)	> 16	> 16
Link performance (see Note 2)		
CNR (dB)	47	47
CSO (dB)	58	58
CTB (dB)	56.5	56

NOTES:

- Performance with input to node's Optical Receiver from a Normal grade Model ATxxG-N-1-AS 1310 nm Transmitter
- Link performance, including transmitter (with CW channel loading to 600 MHz and 256QAM loading above 600 MHz at -6 dBc)

ORDERING INFORMATION

A typical configuration of the NC4000HG series optical node includes the NH4000-H housing with external test ports, one PS4001 power supply, one 85–1002 MHz optical receiver module (AR4403G) with SC/APC connectors, the OA4114HG high output 4-port RF amplifier module, and standard equalizers and pads. A backup PS4001 power supply may be separately ordered. Also available are additional optional plug-in modules that are described on separate data sheets. These include FA4500 series Optical Amplifiers, DT4032 and DT4232 series Digital Return Transceivers, DX4515 series Digital Return Transponders (ITU Grid), optical or RF redundancy switches, and return ingress switch options. Please contact your ARRIS sales representative for information regarding specific equipment configuration options to meet your particular requirements.

RELATED PRODUCTS

Digital Return Transmitter	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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Nodes-NC4000HG