

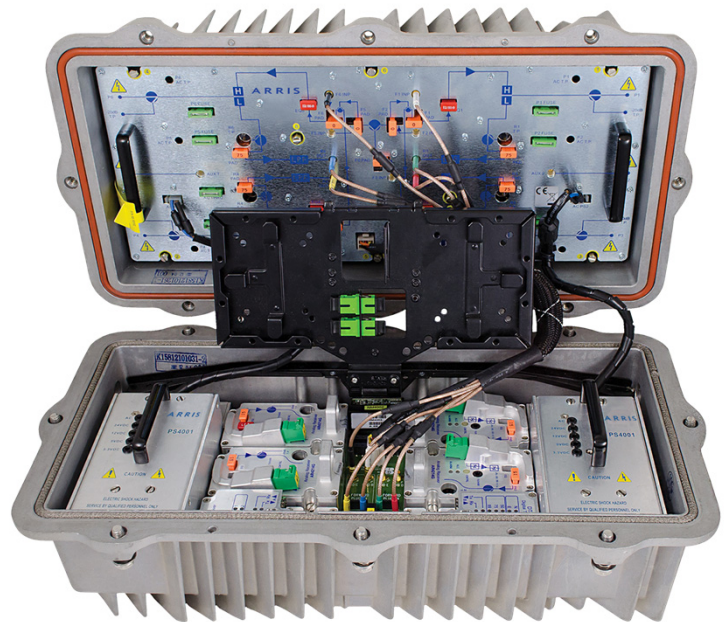
Optical Node Series (NC)

NC4000S3

4x4 Fully Segmentable 1 GHz Node Ultra-High Output

FEATURES

- 60 dBmV ultra-high output via GaN technology for Fiber Deep applications
- 4x4 fully segmentable for HFC applications
- Four RF outputs, two auxiliary ports for power or video, and two fiber ports
- Multiple forward/return frequency split options
- Uses automotive blade fuses and JXP pads and equalizers
- Improved upstream performance via advanced universal digital return modules
- Built-in, all-digital node status monitoring
- Redundant power supply option
- Strand or pedestal mounting



PRODUCT OVERVIEW

The ARRIS NC4000S3 series 4x4 segmentable node is designed to provide the utmost reliability, flexibility, and adaptability in an outdoor optical node platform, and is ideal for both Fiber Deep and HFC applications.

With an ultra-high output level of up to 60 dBmV (at 1002 MHz) available on all four RF output ports of the OA4344SG RF Output Amplifier, the NC4000S3 can be used to extend the reach of the coax distribution network in Fiber Deep architectures. Utilizing the very high gain AR4x24 optical receiver enables optical inputs between +2 and -6 dBm.

This flexible and rugged platform is also fully scalable. All four downstream paths and upstream paths can be fully segmented using ARRIS's universal digital return solutions. This includes a host of ITU CWDM and DWDM options, further expanding the deployment of advanced "bandwidth-hungry" services (including MEF Ethernet for commercial services) into fiber-poor areas while reducing real estate and powering requirements in the field.

The NC4000S3 supports deployment of a wide range of field-hardened EDFAs and optical switches for extended fiber reach, routing options, and system reliability. Remote monitoring capability is provided with an integrated network management plug-in, eliminating the added cost of a third-party status monitoring transponder.

The NC4000S3 node platform also supports next-generation architectures and technologies such as Node PON, Node QAM, EPoC, and more, providing a seamless migration to support tomorrow's services.

SPECIFICATIONS		
Characteristics	Specification	
Physical		
Dimensions	20" L x 9.5" W x 10.75" H (50.8 cm x 24.1 cm x 27.3 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		
Passband options	Return	Forward
	5 - 42 MHz	51 - 1002 MHz
	5 - 65 MHz	85 - 1002 MHz
	5 - 85 MHz	102 - 1002 MHz
RF Test Points (Fwd and Rtn)	-20 dB	
Flatness	± 1 dB	
Output return loss (at the node output)	> 16 dB	
Optical input range	-6 to +2 dBm into AR4x24G receiver	
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"> • 57 W (standard configuration of 4 RF outputs and 1 optical Rx) • 11 W (second Optical Receiver, AR4x24) • 6 W (Digital Transponder, DX4515) • 6 W (Return Transceiver, DT4250 with TR4000 SFP) • 9 W (Node EDFA, single-width FA4500 series) 	
RF Performance for HFC Applications (See Note 1)		
	High Level HFC Application	
Channel Loading (see Note 2)		
	Up to 550 MHz	Analog NTSC
	550-1002 MHz	256 QAM at -6 dBc
Nominal output level (per port)		
	at 1002 MHz	60 dBmV
	at 51 MHz	42 dBmV
Nominal slope		
	51/1002	18 dB linear
Link performance (see Note 3)		
	CCN (CNR + CIN)	51 dB
	CSO	62 dB
	CTB	64 dB

NOTES:

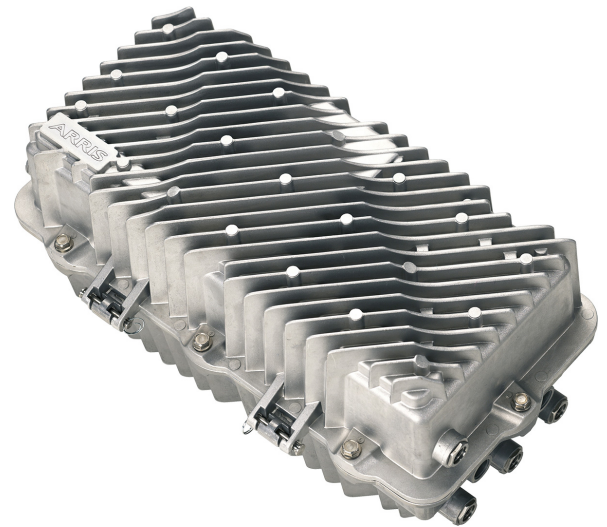
1. Performance with 0.5 dBm input to node's Optical Receiver from a 1 GHz Model AT33xxG-A-2-AS Analog 1310 nm Transmitter
2. For alternate channel loading performance, contact your ARRIS Sales Representative
3. Link performance, including transmitter (with CW channel loading to 550 MHz and 256 QAM loading above 550 MHz at -6 dBc)

ORDERING INFORMATION

A typical configuration of the NC4000S3 series optical node includes the NH4000-H housing with external test ports, one PS4001 power supply, one 51–1002 MHz optical receiver module (AR4x24) with SC/APC connectors, the OA43445G 4-port RF amplifier module, and JXP equalizers and pads. A backup PS4001 power supply may be separately ordered. Also available are optional plug-in modules that are described on separate data sheets; FA4500 series Optical Amplifiers, DT4250N Universal Digital Return Transceivers, 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-NC4000S3