

# ARRIS NC 2000

## 1.2 GHZ SCALABLE NODE PLATFORM

The 1.2 GHz NC2000 Optical Node Platform is designed to support both HFC and Fiber Deep architectures. The node's modular design features two high RF output levels of up to 60 dBmV at 1.2 GHz and 2x2 segmentation. The bottom entry port enables wall, pedestal, or cabinet mounting as needed.

The NC2000 includes an RF amplifier module and three module slots that can be populated according to network architecture requirements—flexibility being a key feature of this node. Two of these slots are used for a forward receiver and a universal digital return module, with the third slot commonly used for forward path redundancy or segmentation.

The node can also be populated with other single-slot ARRIS node modules such as an optical switch or EDFA, optimizing performance and reliability for a wide range of applications. When deployed the Remote Phy module occupies all three available slots, generating the forward signals and providing the return path connectivity for the node.



- Bottom entry ports for vertical mounting in cabinets
- Multiple powering option: Mains AC 100-240 V, Line power 30-60 or 42-90 V
- High-level outputs: 60 dBmV at 1.2 GHz
- 2x2 Segmentable
- Third RF output port enabled with internal splitter
- Field upgradeable return bandwidth
- Forward path redundancy with RF switching in applications with 1x2 configuration
- Power saving option in 1x1 mode
- Digital return transmitter for optical performance
- Integrated SNMP monitoring and management
- Supports Remote PHY Implementation
- Customer configurable output level and slope
- Expansion slot available for 2nd receiver, optical switch or EDFA
- Return ingress switch options
- Based on the proven ARRIS NC4000 and NC2000 platforms, utilizing common modules and accessories

## SPECIFICATIONS

PHYSICAL	
Dimensions	45.9 cm L x 27.9 cm W x 16.0 cm D (18.7" x 11.0" x 6.3")
Weight	11.5 kg (25.4 lbs)
Housing ports	1 AC power port, 1 fiber entry port, 3 RF/AC output ports
RF connectors	5/8" (PG11 adapter optional)
Protection class	IP67
ENVIRONMENTAL	
Operating Temperature Range	-40° to +60°C (40° to +140°F)
Storage Temperature Range	-40° to +85°C (-40° to +185°F)
Relative Humidity	5% to 95% non-condensing

POWERING AND POWER PASSING						
Operating Input voltage:						
• PS4102 or PS4102E (from cable powering)		44-95 VAC, PS4102E 30-64 VAC, both 47-63 Hz				
• PS4003 (from AC Mains plug-in)		90-250 VAC (47-63 Hz)				
Max current for RF and AC IN ports		10 A, per port 15 A max combined				
Power consumption, fully loaded:						
• Two outputs with single AR and DT		46.9 W				
• One output with single AR and DT		33.7 W				
• AR4x14E		11.5 W				
• DT4250		6 W				
AC test point		TP at AC entry port				
GENERAL						
Passband split option		Return		Forward		
		5 – 42 MHz		51 – 1218 MHz		
		5 – 60 MHz		72 – 1218 MHz		
		5 – 65 MHz		85 – 1218 MHz		
		5 – 85 MHz		102 – 1218 MHz		
		5 – 204 MHz		258 – 1218 MHz		
OTHER ACCESSORIES						
RF switch for alternate routing						
RF board for auxiliary input						
FORWARD PATH						
Performance						
		Mixed Load Analog + QAM/OFDM ALL		QAM		
• Channel Loading						
	Up to 278 MHz	Analog				
	284-1218 MHz	256 QAM at -6 dBc		256 QAM at -6 dBc		
• Nominal output level (per port)						
	At 1218 MHz	60 dBmV (120 dBµV)		54 dBmV actual (114 dBµV)		
	At 102 MHz	39 dBmV		33 dBmV actual		
	At 51 MHz	38 dBmV		32 dBmV actual		
• Nominal slope		22 dB linear		22 dB linear		
• Link performance						
	CCN (CNR + CIN)	51 dB				
	CSO	62 dB				
	CTB	64 dB				
	MER	> 38 dB		> 38 dB		
	Pre-FEC BER	< 1x10-6		< 1x10-6		
		Note: Performance for HFC application with 0 dBm input to the node's optical receiver from a 1.2 GHz Model AT3312G Analog 1310 nm Transmitter, 27 km fiber.				
Optical interface		SC/APC connector on optical receiver				
Gain control range		0–22 dB (plug-in attenuators)				
Slope control		5–22 dB in 1 dB steps (plug-in equalizers, typ factory set)				
Flatness		± 1.0 dB				
Return Loss (all ports and test points)		16 dB				
Test points, directional		–20 ± 1 dB				
RETURN PATH						
Passband Supported		5–42 MHz	5–60 MHz	5–65 MHz	5–85 MHz	5–204 MHz
Digital return transmitter		DT4250N-50	DT4250N-75	DT4250N-75	DT4250N-50 DT4250N-75 DT4250E-99	n/a
For return performance please refer to the DT4250 Digital Transceiver Data Sheet.						

## ORDERING INFORMATION

A typical configuration of the NC2000 series optical node includes the NH2000 housing, one PSxxx power supply, one optical receiver module (AR4x14E) with SC/APC connectors, an OA2224 series 3-port RF amplifier module, and standard equalizers and pads.

Also available are additional optional plug-in modules that are described on separate data sheets. These include DT4250N-50 and DT4250N-99 Digital Return Transceivers.