

Headend Optics Platform (CH3000)

AR3002E

Analog Forward Receiver (1218 MHz)

FEATURES

- Supports bandwidth up to 1218 MHz
- High RF output with excellent distortion performance (28 dBmV/ch at 0 dBm input, 4% OMI)
- Demultiplexing back plates available for DWDM applications (up to four receivers per cascadable back plate)
- Configurable output attenuator, up to 15 dB
- High packaging density (up to 14 receivers per chassis)
- Front access -20 dB output test point
- Hot plug-in/out
- Local and remote status monitor capability
- Occupies one full-depth slot



PRODUCT OVERVIEW

The AR3002E analog receiver supports a forward path passband from 46 to 1218 MHz. Its compact design (single-width module) supports high density and allows the operator to install up to 14 receivers in one 3RU chassis. The output power levels of the AR3002E receiver allow passive RF splitting, saving rack space, and increasing reliability.

Alternate network fiber routing is supported via use of two AR3002E receivers and a user-programmable A/B switch that occupies one half-depth slot in the chassis.

For DWDM applications, the receiver can be used with integrated demultiplexing back plates, providing a dramatic reduction in rack space and fiber jumper requirements. Each Model BP-35D4x back plate provides a common DWDM optical input with individual RF outputs for up to four adjacent receivers in the chassis, and DWDM optical output ports permit cascading of additional back plates.

The compact design of the AR3002E receiver minimizes rack space requirements and enhances deployment of DOCSIS 3.1 HFC networks.

SPECIFICATIONS

Characteristics	Specification	
Physical		
Dimensions (without Connectors)	13.0" D x 4.3" H x 1.0" W (3RU) (33 cm x 11 cm x 2.5 cm)	
Weight	1.5 lbs (0.68 kg)	
Environmental		
Operating Temperature Range	-20° to +65°C (-4° to 149°F)	
Storage Temperature Range	-40° to +85°C (-40° to +185°F)	
Humidity	5% to 95% non-condensing	
RF and Optical Interface		
RF Outputs	F-type (female connectors at Back Plate)	
RF Output Test Points	G-type (male connectors at front panel, -20 dB)	
Optical Connector	SC/APC (connector at mid-plane mates to BP-A5 or BP-35D4x, see Ordering Information)	
Power Requirements		
Input Voltage	12 V _{DC}	
Current Consumption	11 W	
General		
Hot Plug-in/out		
Optical		
Wavelength	1110–1650 nm	
Input Return Loss	45 dB	
Optical Power Input Range	<ul style="list-style-type: none"> • P_{IN} (1310/1550 nm), typ: -6 to +3 dBm • Max P_{IN}: +6 dBm (<i>damage level</i>) 	
Responsivity (1310/1550 nm) Nominal	0.85/0.95 A/W	
Electrical		
Passband	46–1218 MHz	
Frequency Response (Flatness)	± 0.75 dB	
Nominal Output Level	28 dBmV/Ch (@ 0 dBm input, 4% OMI, 1310 nm)	
Output Return Loss minimum	18 dB between 46 MHz and 1100 MHz; 16 dB between 1100 MHz and 1218 MHz	
Level Stability	± 0.75 dB	
Level Repeatability	± 0.5 dB	
Configurable Attenuator	0 to 15 dB, 0.5 dB step size	
Distortions (at Nominal Output Level)		
AR3002E (nominal output level +28 dBmV/Ch)		
77 CW		
	Min	Typ
C/CSO (dB)	72	74
C/CTB (dB)	82	84
C/XMOD (dB)	70	76

ORDERING INFORMATION

Model Name	Description
AR3002E-1-AS	Analog Forward Receiver, 46 MHz to 1.218 GHz RF Bandwidth with optical input interconnect to mid-plane bus connector, and SC/APC Connector
Back Plate Options	
	When ordering an AR3002E Forward Path Receiver, the back plate (optical input interconnect to the chassis mid-plane) must be ordered separately. Two different styles of back plates are available, depending on the application.
BP-A5	Single-width Back Plate provides connection for a single receiver
BP-35D4*-*-00-AS	Back Plate provides connections for a group of four receivers installed in adjacent chassis slots. These 4-channel demux back plates (for which the DWDM inputs can be cascaded from one back plate to another) may be ordered for various channel groups as specified on the associated data sheets.

RELATED PRODUCTS

CH3000 Chassis	Optical Passives
Digital Return	Optical Patch Cords
BP Back Plates	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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