

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 cascaded 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.

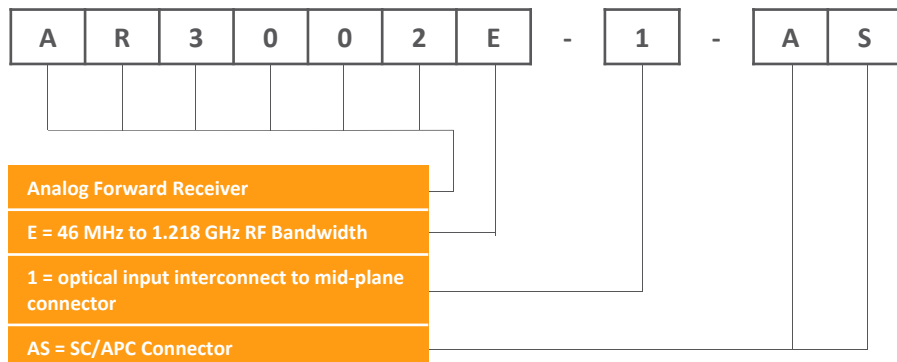
For DWDM applications, the receiver can be used with integrated demultiplexing back plates, providing a dramatic reduction in rack space and fiber jumper requirements. Each Model BP-35D4x back plate provides a common DWDM optical input with individual RF outputs for up to four adjacent receivers in the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



Back Plate Options for AR3002E FPR

When ordering an AR3002E FPR the back plate (optical input interconnect to the chassis mid-plane) must be ordered separately. Two different styles of back plate are available in this case, depending on the application. One style provides connection for a single receiver. This single-width back plate may be ordered as:

| | | | | |
|---|---|---|---|---|
| B | P | - | A | 5 |
|---|---|---|---|---|

The second style 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:

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| B | P | - | 3 | 5 | D | 4 | * | - | * | - | 0 | 0 | - | A | S |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

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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