

Features

- High packaging density, two receivers per single-width, full-depth module
- 8 to 12 bit dynamic range for digital return
- High RF output (–32 dBmV/Hz typical)
- Superior noise performance
- RF output level independent of optical input power provides output level stability in alternate routing applications
- Front access –20 dB test points
- Hot plug-in/out
- Local and remote status monitoring
- Occupies one full-depth slot

Dual Digital Receiver



DR3002 Dual Digital Receiver

Associated BP-3108C-AS Optical Receiver Back Plate (supporting up to four dual receiver modules)

The DR3002 Dual Digital Receiver utilizes Aurora's state-of-the-art digital reverse technology to receive both 5–45 MHz RF signals and data communications for Ethernet services and element management.

Aurora's DR3002 receiver interfaces with the BP-3108C-AS Optical Receiver Back Plate, enabling up to eight digital receivers (two receivers per module) to be installed in four adjacent module slots of Aurora's 3RU CH3000 chassis. A total 16 receivers (8 DR3002 modules), and two associated BP-3108C back plates can be installed in each chassis (with provision for redundant chassis power supplies).

Each receiver module can terminate two node clusters through two SC/APC-type optical connectors. The major portion of data extracted from each optical link is converted through a high speed digital-to-analog converter (DAC) to an analog RF signal output. The remaining portion of the data is multiplexed with data received from the adjacent channel of the same receiver, as well as from the adjacent receiver module in the chassis, and forwarded to the next receiver module sharing a common interface with the BP-3108C back plate.

DR3002

Product Specifications

Physical:

- Dimensions: 13.0" D x 4.3" H x 1.0" W (3RU) (33 cm x 11 cm x 2.5 cm)
- Weight: 1.6 lbs (0.72 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

Optical Interface:

- Optical connectors: SC/APC (on Back Plate BP-3108C-AS)

Electrical Interface:

- Main RF outputs (each channel):
F-type female connector (on Back Plate BP-3108C-AS)
- Output test points (each channel):
G-type female connector (front panel, -20 dB)

Power Requirements:

- Input voltage: 12 V_{DC} (provided via chassis mid-plane connection)
- Power consumption: 20 W (excluding 1.5 W power feed to BP-3108C-AS)
Note: Max power consumption is 19 W when operating temperature is maintained at or below +35°C (+95°F).

General:

- Hot plug-in/out
- Manual gain alignment

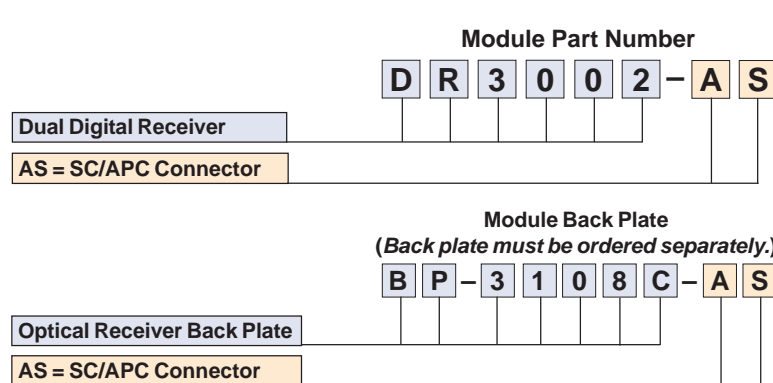
Electrical (RF path - each channel):

- Passband: 5-45 MHz
- Frequency response: ±0.5 dB
- Nominal output level: -32 dBmV/Hz with 5-40 MHz loading and -60 dBmV/Hz input to digital transceiver
- Output RF level adjustment range: 0-26 dB (1 dB increments)
- Output return loss: 18 dB min

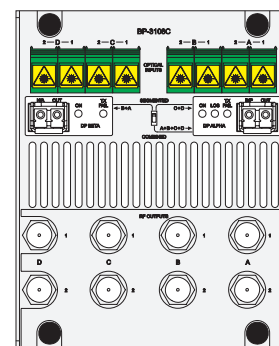
Optical:

- Wavelength: 1300 nm – 1620 nm
- Input return loss: 30 dB
- Optical power input range:
P_{IN} min : -19 dBm
P_{IN} max: -3 dBm

Ordering Information



Module Back Plate



Model BP-3108C-AS

Each back plate accommodates up to four DR3002 receiver modules.



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