

## Features

- Digitizes 5–65 MHz RF return paths
- Multiplexes two return segments into a single data stream
- Optical outputs on 100GHz-spaced DWDM grid (ITU-T G.694.1) for up to 40 wavelengths per fiber
- 5 dBm transmit power
- Transmits at bit rate of 3.1875 Gbps
- Compatible with Aurora's BP-35M4 series of multiplexing back plates for dramatically simplified interconnect cabling
- Front panel laser On/Off interlock switch
- Hot plug-in/out
- Local and remote status monitoring
- Occupies one full-depth slot

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## Digital Transmitter (5–65 MHz)



The DT3515C Digital Transmitter digitizes two RF return paths (with 5–65 MHz pass band), multiplexes them and transmits them at 3.1875 Gbps on a single return fiber on a DWDM ITU grid wavelength. By providing two RF returns on an ITU grid wavelength, the DT3515C alleviates fiber exhaustion and greatly simplifies the network by enabling the use of DWDM transport from hubs to the headend. The 5 dBm output transmitter power supports link losses up to 23 dB and 200 km dispersion limits.

The unique mid-plane packaging of the DT3515C features two back plate options: a compact one-module width design for single wavelength applications (using optional back plate model BP-A6) or an integrated "Back Plate" multiplexer for DWDM applications (using optional back plate model BP-35M4x-1-02-AS) which eliminates the need for a separate multiplexer module.

The high density packaging enables network operators to install up to 12 transmitters per 3RU chassis, all of which can be monitored remotely or locally from the power supply module. The compact design minimizes rack space requirements in hubs.

# DT3515C

## 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:  
1.5 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

### General:

- Hot plug-in/out
- Optical transmission bit rate: 3.1875 Gbps
- Manual gain alignment

### Power Requirements:

- Input voltage: 12 V<sub>DC</sub>
- Power consumption: 12 W

### Interface:

- Optical connector: SC/APC (on Back Plate BP-A6 or BP35M4x-1-02-AS)
- RF input connectors: 2 F-type connectors (on Back Plate BP-A6 or BP35M4x-1-02-AS)
- RF input test points: 2 G-type male connectors on front panel

### Optical Output:

- Number of channels (models): 44  
(DWDM ITU-T G.694.1 Chs 16 thru 59)
- Optical channel spacing: 100 GHz
- Wavelength: *See DWDM ITU Channel Plans description.*
- Wavelength stability: ±0.1 nm
- Output power: 5 dBm ±0.5 dBm
- Output level stability: ±0.2 dB
- Dispersion limit (SMF-28 fiber): 200 km

### RF Inputs:

- Number of inputs: 2
- Isolation between channels: 60 dB  
(combined with receiver)

### Channel characteristics (each channel):

- Passband: 5–65 MHz
- Frequency response: ±0.5 dB
- Input return loss, min: 18 dB
- Level stability: ±0.5 dB
- Gain control range, min: 16 dB (1 dB steps)
- Input level, RF test point: -20 ±0.5 dB
- Test point return loss, min: 18 dB
- System nominal gain: 23 dB

### Distortions:

- Input, nominal: -56 dBmV/Hz
- Loading, nominal: 5–65 MHz (QPSK carriers or equivalent Gaussian noise)
- Dynamic range @ 40 dB CNR: 11 dB
- Peak NPR: 47 dB

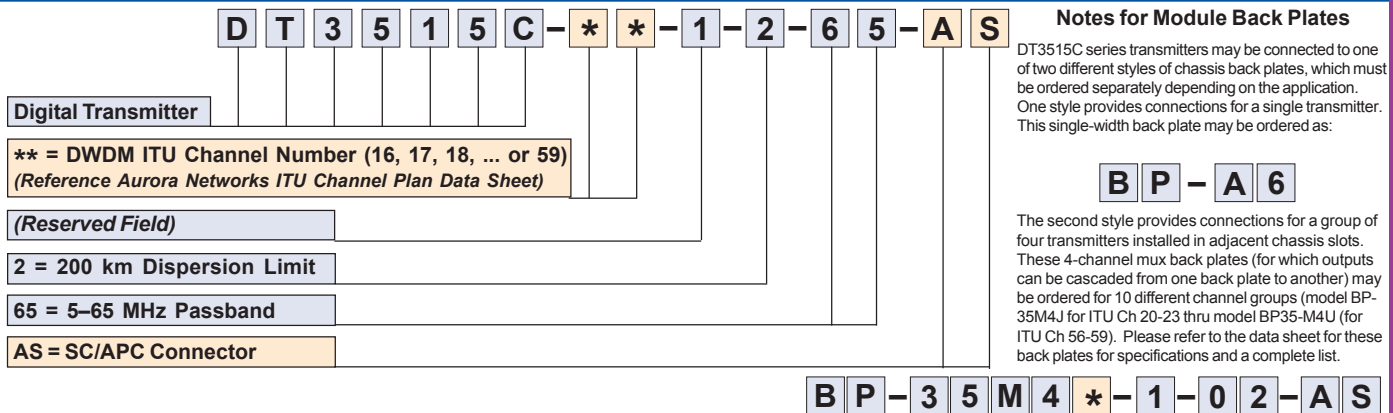
### DWDM ITU Channel Plans:

Aurora Networks supports DWDM network architectures with a variety of products on the standard DWDM ITU Grid (ITU-T G.694.1).

For more complete description of available DWDM ITU Grid channels and Aurora's partitioning into convenient logical groups of 4, 8 and 16 channels in products for DWDM applications, please refer to the Aurora Networks DWDM ITU Grid Channel Plan data sheet.

When ordering DT3515C transmitters on the ITU grid please note, for network planning purposes, that AT3550 "BA" series broadcast transmitters operate at 1563.0 nm ±0.9 nm, occupying the approximate region of DWDM ITU Grid channels 17 through 19. Similarly, AT3550 "BC" series broadcast transmitters operate at 1545.3 ±0.9 nm, occupying the approximate region of DWDM ITU Grid channels 39 through 41.

## Ordering Information



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