

Headend Optics Platform (CH3000)

DT3515C Digital Transmitter (5–65 MHz)

FEATURES

- Digitizes 5–65 MHz RF return paths
- Multiplexes two return segments into a single data stream
- Optical outputs on 100 GHz-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 ARRIS'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



PRODUCT OVERVIEW

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.

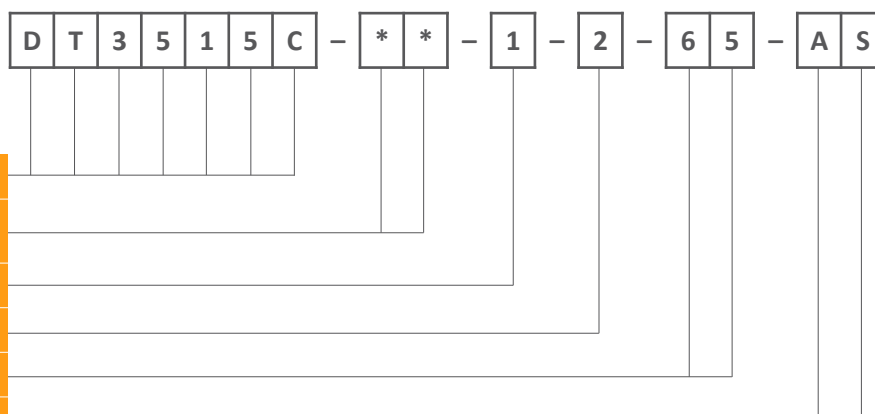
The unique mid-plane packaging of the DT3515C features two back plate options: a compact one-module width design for single wavelength applications (using optional back plate model BP-A6) or an integrated “Back Plate” multiplexer for DWDM applications (using optional back plate model BP-35M4x-1-02-AS)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

SPECIFICATIONS

| Characteristics | Specification |
|--|--|
| 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 _{DC} |
| 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 | |
| ARRIS 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 ARRIS's partitioning into convenient logical groups of 4, 8 and 16 channels in products for DWDM applications, please refer to the ARRIS 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



Digital Transmitter

** = DWDM ITU Channel Number (16, 17, 18, ... or 59)
 (Reference ARRIS ITU Channel Plan Data Sheet)

(Reserved Field)

2 = 200 km Dispersion Limit

65 = 5–65 MHz Passband

AS = SC/APC Connector

Notes for Module Back Plates

DT3515C series transmitters may be connected to one of two different styles of chassis back plates, which must be ordered separately depending on the application. One style provides connections for a single transmitter. This single-width back plate may be ordered as:



The second style provides connections for a group of four transmitters installed in adjacent chassis slots. These 4-channel mux back plates (for which outputs can be cascaded from one back plate to another) may be ordered for 10 different channel groups (model BP-35M4J for ITU Ch 20-23 thru model BP35-M4U (for ITU Ch 56-59). Please refer to the data sheet for these back plates for specifications and a complete list.



RELATED PRODUCTS

CH3000 Chassis Optical Patch Cords

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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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