

FEATURES

- Digitizes 5–100 MHz RF return paths
- Multiplexes two RF return segments into a single optical SFP
- DWDM, CWDM, 1310 nm, and 1550 nm optical SFP options
- Hot plug-in/out
- Local and remote status monitoring
- High density: occupies one half-depth slot in the CH3000 Chassis

The DT3550N Digital Transmitter digitizes two RF return paths (with 5–100 MHz passband), multiplexes them, and transmits them on a single return wavelength. By combining two RF returns on a single wavelength, the DT3550N alleviates fiber exhaustion and greatly simplifies the network by enabling the use of WDM transport from hubs to the headend. The SFP optical transceiver socket supports options of DWDM, CWDM, 1310 nm, or 1550 nm returns.

The high-density half-depth packaging enables network operators to install up to 24 transmitters with 48 RF returns per 3RU chassis, with redundant power supplies, all of which can be monitored remotely or locally. The compact design minimizes rack space requirements in hubs.



SPECIFICATIONS

Characteristics	Specification
Physical	
Dimensions	6.6" D x 4.3" H (3RU) x 1.0" W (16.8 cm x 11 cm x 2.5 cm)
Weight	1.2 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
Interface	
Optical Connector	LC/UPC (in SFP transceiver)
RF Input Connectors	Two F-type connectors on front panel
RF Input Test Points	Two G-type male connectors on front panel
Power Requirements	
Input Voltage	12 V _{DC} nom. (provided by chassis resident power supply)
Module Power Consumption	10 W (including SFP transceiver)
General	
Optical Transmission Bit Rate	4.25 Gbps
	Hot plug-in/out
	Manual Gain Alignment
Optical Output	
Supports TKx series SFP Transceivers	Please see individual TKx SFP data sheets for technical specifications
RF Inputs	
Number of Inputs	2
Channel Characteristics (Each Channel)	
Passband	5 to 100 MHz
Frequency Response (flatness)	± 0.5 dB
Input Return Loss, min	16 dB
Level Stability	± 0.5 dB
Input Level RF Test Point	-20 ± 0.5 dB
Test Point Return Loss, min	18 dB
System Minimum Gain	27 dB (with DR3450N receiver)
Isolation Between Channels	55 dB 5–90 MHz, 50 dB 90–100 MHz (with DR3450N receiver)
Distortions	
Input, nominal	-61 dBmV/Hz (7 dBmV/6.4 MHz channel)
Loading, nominal	5 to 100 MHz (64 QAM carriers or equivalent Gaussian noise)
Dynamic Range @ 40 dB CNR	11 dB with full 5 to 100 MHz channel loading
Peak NPR	47 dB

ORDERING INFORMATION

Part Number	Description
DT3550N-99-00	5–100 MHz Return Passband Digital Transmitter with Dual RF Inputs

RELATED PRODUCTS

CH3000 Chassis	DR3450N Receiver
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Note: Specifications are subject to change without notice.

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87-11047_RevC_ST3550N-DualXmtr_5-100KHz_Return