

DR3600N

204 MHz Quad Digital Return Receiver
with Selectable Bandwidth Range

FEATURES

- Operates in two RF bandwidth ranges: 5–204 MHz high split or 5–100 MHz mid-split (firmware selectable)
- High packaging density, four receivers per single width, full-depth module
- Provides single channel “1-fer” and dual channel “2-fer” link modes selectable via software user interface
- High RF output: up to 35 dBmV per 6.4 MHz carrier
- 30+ dB of system RF gain from DT4600N transceiver input to receiver output
- Supports links from Return Transceivers installed in NC2000 and NC4000® nodes, VHubs, and UVHubs
- Superior noise performance
- Front access -20 dB RF test point, selectable for each input
- Hot plug-in/out
- Local and remote management and monitoring using Opti-Trace® NMS
- Occupies one full-depth chassis slot

The innovative DR3600N Quad Digital Return Receiver utilizes CommScope’s state-of-the-art digital return technology to receive 5–204 or 5–100 MHz RF signals. The 5–100 MHz modes can be used to carry common mid-band splits such as 5–85 MHz RF return. The model’s greater bandwidth capabilities allow deployment of compact and robust DOCSIS® 4.0 high-split 5–204 MHz digital return optical links.

CommScope’s DR3600N receiver interfaces with the BP3400C-AS Optical Receiver Back Plate, enabling up to 16 digital receivers (four DR3600N modules per BP3400C back plate) to be installed in four adjacent module slots of CommScope’s 3RU CH3000 chassis. A total of up to 48 receivers (12 DR3600N modules) and three associated BP3400C back plates can be installed in a single CH3000 chassis while supported by PS3006 (or PS3248) redundant power supplies.



In single channel “1-fer” mode, each DR3600N receiver module can terminate digital return transmission from four nodes. The data extracted from each optical link is converted through a high-speed digital-to-analog converter (DAC), resulting in a single RF output signal. Up to four optical links are received per module in this mode providing four RF outputs.

In dual channel “2-fer” mode, each DR3600N module processes the signals from up to two return path wavelengths. For each return optical wavelength, the advanced design provides simultaneous conversion of digital return path traffic from two RF return segments coming from the node. Using this operating mode therefore enables two wavelengths to provide a total of four RF outputs from each DR3600N module operating in “2-fer” mode.

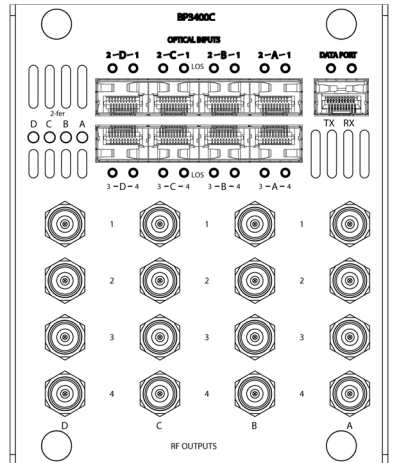
Used in combination with NC2000/NC4000 node and VHub based DT4600N Digital Transceivers, the DR3600N allows quick and cost effective 204 MHz high-split digital return bandwidth links from any node in the network to extend the value of the cable operators’ investment in the fiber network.

SPECIFICATIONS

Characteristics	Specification				
Physical					
Dimensions	13.0” D x 4.3” H (3RU) x 1.0” (33 cm x 11 cm x 2.5 cm)				
Weight	1.75 lbs (0.80 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	LC/UPC (on the RR40x0 or RR36x0 pluggable SFP in the BP3400C-00 Back Plate)				
Optical Parameters (BP3400C-00 with RR40x0 or RR36x0 SFP Receiver)	See the data sheet for the SFP for details: RR36x0-00-PI for up to 5–204 MHz modes or RR40x0-00-PI for up to 5–100 MHz modes				
Electrical Interface					
Main RF Outputs (Each Channel)	F-type female connector (on BP3400C-00 Back Plate)				
RF Output Test Point (Selectable for each Input Port)	G-type female connector (front panel, -20 dB)				
Power Requirement					
Input Voltage	12 V _{DC} (provided via chassis mid-plane connection)				
Module Power Consumption, max	24.6 W at 50°C (or 27 W at 65°C) (includes 1/4 of fully loaded BP3400C-00 with all SFPs)				
General					
	Hot plug-in/out				
	Manual gain alignment				
Electrical (RF Path—Each Channel)					
Digital Transmitter Used in the Return Link with DR3600N	DT4600N		DT4600N or DT4250N		
Return Bandwidth/Loading	5–204 MHz		5–100 MHz		
Operation Mode	1-fer	2-fer	1-fer	2-fer	1-fer
Line Rate (Gbps)	10.3125	10.3125	4.250	4.250	2.125
Input Level (dBmV/Hz)	-60	-60	-63	-63	-63
System Min Full Gain (dB)	30	30	30	30	30
Output (dBmV/Hz)	-30	-30	-33	-33	-33
Output (dBmV/6.4 MHz Channel)	38	38	35	35	35
Dynamic Range (dB)	13	11	10	11	11
NPR at which Dynamic Range is specified (dB)	40	40	47	40	40
Peak NPR (dB)	43	43	49	47	47
Frequency Response	± 0.5 dB for 5–100 MHz and ± 1 dB for 5–204 MHz with DT4600N. (With DT4250N also 1 to 1.5 dB of downward slope expected across 5–100 MHz band.)				
Output RF Level Attenuation Adjustment Range	0–26 dB (0.5 dB increments)				
Output Return Loss	16 dB min				

ORDERING INFORMATION

Model Name	Description
DR3600N-00	Quad Digital Receiver supplied with 5–100 MHz and 5–204 MHz firmware pre-loaded
BP3400C-00	Module Back Plate (Back Plate and RR36x0 or RR40x0 SFP Receiver must be ordered separately)



Each back plate accommodates up to four DR3600N receiver modules.

RELATED PRODUCTS

CH3000 Chassis	Opti-Trace CMS, OTS, EMS
DT4600N 204 MHz Return Transceivers	NC2000, NC4000 VHub/UVHub Platforms
Opti-Trace OTS Web Application	BP Back Plates

Contact Customer Care for product information and sales:

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