

HEADEND OPTICS PLATFORM (CH3000)

DR3450N QUAD DIGITAL RETURN RETURN RECEIVER WITH SELECTABLE BANDWIDTH RANGE



FEATURES

- Operates in three RF bandwidth ranges: 5-50 MHz, 5-65 MHz, or 5-100 MHz (firmware selectable)
- High packaging density, four receivers per single width, full-depth module
- Single channel link mode or dual channel “2-fer” link modes, selectable via software user interface
- High RF output: up to 38 dBmV per 6.4 MHz carrier in 50 MHz mode
- Concatenated or point to point applications
- 30+ dB of system RF gain from transmitter input to receiver output
- Superior noise performance
- Front access -20 dB RF test point, selectable for each input
- Hot plug-in/out
- Local and remote status monitoring
- Occupies one full-depth chassis slot



PRODUCT OVERVIEW

The DR3450N Quad Digital Return Receiver utilizes ARRIS’s state-of-the-art digital reverse technology to receive 5–50 MHz, 5–65 MHz, or 5–100 MHz RF signals. 5–100 MHz modes can also be used to carry common mid-band splits such as 5–85 MHz RF return. Its’ capabilities allow deployment of compact and robust high-speed digital broadband systems.

ARRIS's DR3450N receiver interfaces with the BP3400C-AS Optical Receiver Back Plate, enabling up to sixteen digital receivers (four DR3450N modules per BP3400C back plate) to be installed in four adjacent module slots of ARRIS's 3RU CH3000 chassis. A total of 48 receivers (12 DR3450N modules) and three associated BP3400C back plates can be installed in a single CH3000 chassis while supported by redundant power supplies.

In single channel mode, each DR3450N receiver module can terminate digital return transmission from four node clusters. 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. The DR3450N also supports concatenation for daisy chaining of node signals in single channel modes.

In dual channel "2-fer" mode, each DR3450N module terminates up to two return path wavelengths. The advanced design provides simultaneous conversion of digital return path traffic from two RF return segments coming from the node on the same optical wavelength. Two wavelengths providing a total of four RF outputs are supported by each DR3450N module operating in "2-fer" mode.

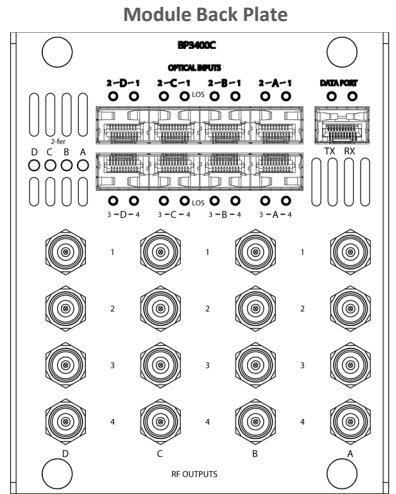
Used in combination with DT4250N Digital Transceivers with CWDM or DWDM SFPs in optical nodes, the "2-fer" mode of the DR3450N allows quick and cost effective doubling of the amount of return bandwidth available from any node in the network, therefore conserving and optimizing the cable operators' investment 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	1.6 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	LC/UPC (on the RR40x0 SFP in the BP3400C-00 Back Plate)						
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	20 W (includes 1/4 of fully loaded BP3400C-00 with all SFPs)						
General							
Hot plug-in/out							
Manual gain alignment							
Electrical (RF Path – each channel)							
Return Bandwidth/Loading	5 - 50 MHz		5 - 65 MHz		5 - 100 MHz		
Operation Mode	1-fer	2-fer	1-fer	2-fer	1-fer	2-fer	1-fer
Line Rate (Gbps)	2.125	2.125	2.125	3.1875	4.25	4.25	2.125
DT4250N Input Level (dBmV/Hz)	-60	-60	-62	-62	-63	-63	-63
System Min Full Gain (dB)	30	30	30	30	30	30	30
Output per Hz (dBmV/Hz)	-30	-30	-32	-32	-33	-33	-33
Output (dBmV/6.4 MHz Channel)	38	38	36	36	35	35	35
Dynamic Range (dB)	11	11	11	11	10	11	11
NPR at which Dynamic Range is specified (dB)	47	40	40	40	47	40	40
Peak NPR (dB)	54	49	49	49	52	48	48
Frequency response	± 0.5 dB						
Output RF level adjustment range	0-26 dB (0.5 dB increments) (-58 dB for diagnostic)						
Output return loss	18 dB minimum						
Optical (BP3400C-00 with RR40x0 SFP receiver)	See the RR40x0-00-PI data sheet for details.						

ORDERING INFORMATION

Part Number	
DR3450N-50-00	(Supplied with 5-50 MHz and 5-100 MHz firmware pre-loaded)
DR3450N-75-00	(Supplied with 5-65 MHz and 5-100 MHz firmware pre-loaded)
BP3400C-00	Module Back Plate (Back plate and RR40x0 SFP Receiver must be ordered separately)



Each back plate accommodates up to four DR3450N receiver modules.

RELATED PRODUCTS

CH3000 Chassis	Optical Patch Cords
Power Supplies	Optical Passives
Management Module	Installation Services

Note: Specifications are subject to change without notice.

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