advanced media technologies®

MODEL

CHP MAX™ HEADEND OPTICS PLATFORM

CHP-R4RRXF-30-L
CHP-4RRXF-30-L

Redundant/Non-Redundant
Quad Return Path Receiver

ARRIS

FEATURES

- Expand subscriber upstream capacity without increasing headend footprint
- Optimize headend and hub efficiencies with industry leading density and low power consumption
- 300 MHz bandwidth meeting DOCSIS® 3.1 requirements
- Improve system uptime with automatic failover option
- Configure, monitor, and manage with CORView™ Element Management System

PRODUCT OVERVIEW

The CHP Quad Return Path Receiver is an integral part of a flexible return path system design and can operate as either a stand-alone or redundant module. As bandwidth demands increase in networks, it is necessary for operators to segment nodes. The CHP can now support a clean migration from the Dual Receiver to the Quad Receiver, allowing operators to increase network capacity for subscribers, while reducing operational power and footprint. The CHP Quad Receiver provides up to 300 MHz of return bandwidth to comply with the DOCSIS 3.1 standard, which enables operators to migrate band splits in the future with no need to upgrade receivers.

The CHP Quad Return Path Receiver accepts four optical inputs into a single width module. This solution provides up to 40 receivers in a single 2RU CHP chassis (up to 800 receivers in one standard 40RU rack), delivering industry leading density as bandwidth is added to the network.

The redundant model enables optical path and hardware protection for mission critical applications such as VoIP and business data services. The integral optical and RF switches alternate between diverse paths when an optical path module hardware fault is detected. Switch time is less than 50 milliseconds. Module pairs can reside in the same CHP chassis or in a spare chassis up to 6 meters away.

The CHP Quad Receiver offers high RF output with excellent power efficiency, typically consuming less than 3 Watts per RF channel. The modules are hot-swappable ensuring minimal loss of uptime. Monitoring, configuration control, and firmware download are provided through Craft Graphical User Interface (GUI) locally using the Craft Management Module (CMM). Local and remote IP access of the Craft GUI, firmware download, and remote SNMP HMS interface is achieved using the System Management Module (SMM).

OPTIONS

Redundant or Non-Redundant
CORView Element Management System

RELATED PRODUCTS

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

GENERAL SPECIFICATIONS

	CHP-R4RRXF-30-L	CHP-4RRXF-30-L
Optical Specifications		
Input Wavelength Range	1260 to 1620 nm	1260 to 1620 nm
Optical Input Range	–20 to 3 dBm	–20 to 3 dBm
Optical Return Loss	55 dB	55 dB
RF Specifications		
RF Output Bandwidth	5 to 300 MHz	5 to 300 MHz
RF Output Level, min. per channel (Note 1)	40 dBmV	40 dBmV
Flatness, peak-to-valley	±0.75 dB with respect to gain slope	±0.75 dB with respect to gain slope
Gain Slope	±1.0 dB	±1.0 dB
RF Gain Adjustment Range (Note 2)	0 to –31.5 in 0.5 dB steps	0 to –31.5 in 0.5 dB steps
RF Output Return Loss, min.	16 dB	16 dB
RF Testpoint	–20 ± 0.5 dB	–20 ± 0.5 dB
Performance Specifications		
Equivalent Input Noise	<4.5 pA/Hz$^{0.5}$	<4.5 pA/Hz$^{0.5}$
Maximum Peak NPR Variation	4 dB	4 dB
Noise-to-Power Ratio (NPR)/Dynamic Range	40/13 dB	40/13 dB
BER Dynamic Range	>40 dB	>40 dB
Optical Input to RF Output Terminated Isolation	≥60 dB	≥60 dB
Channel-to-Channel Isolation	5 to 300 MHz@60 dB	5 to 300 MHz@60 dB
Redundant Switching Time	50 ms	N/A
Power Consumption	12 W	12 W
Mechanical Specifications		
Dimensions (W x H x D) in (cm)	1.25 x 3.44 x 18.5 in (3.18 x 8.74 x 46.99 cm)	1.25 x 3.44 x 18.5 in (3.18 x 8.74 x 46.99 cm)
Environmental Specifications		
Operating Temperature Range	0 to 50°C (32 to 122°F)	0 to 50°C (32 to 122°F)
Operating Humidity, Non-condensing	10 to 90%	10 to 90%

Notes:
1. RF output is based on –9 dBm optical input at 7% OMI.
2. The attenuator for each channel in the modules may be adjusted in 0.5dB steps from 0 to 31.5 dB.

Note: Specifications are subject to change without notice.

CHPQuadRx_DS_06JAUG4