



ACION 8000 Series

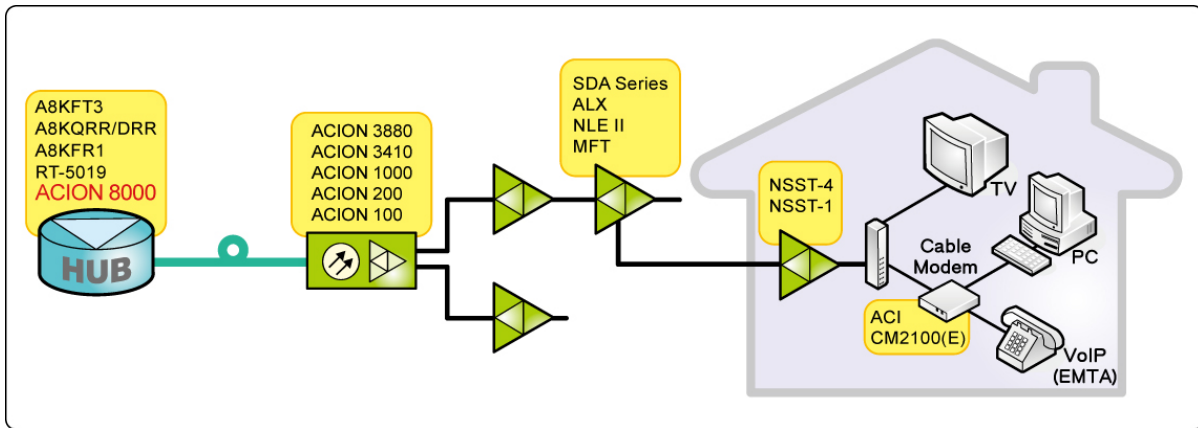
A8KQRR/DRR Quad/Dual Return Receiver

A8KQRR and A8KDRR – Quad/Dual Return Receiver is an integral part of return path system applications. 3RU in height and up to 12 modules can reside in the 19-inch high-density chassis (A8KMF3).

Features

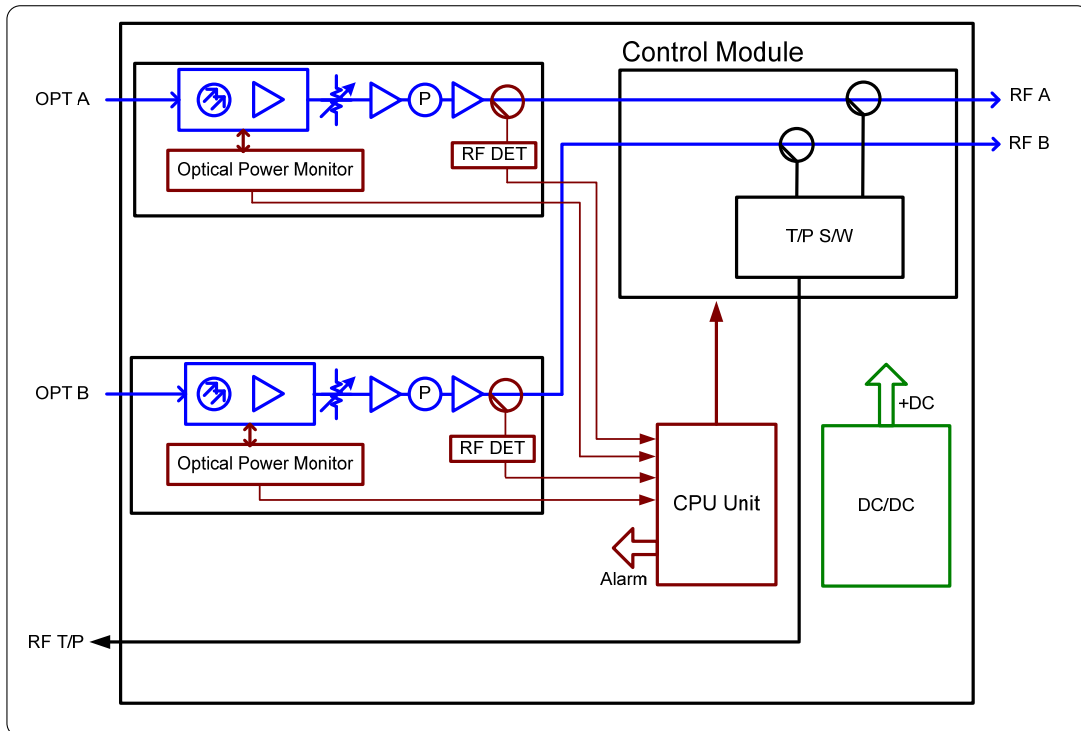
- ◆ 1U 19" rack housing
- ◆ Wide optical input range
- ◆ 4 Return optical inputs and 4 Return RF outputs (A8KQRR)
- ◆ 2 Return optical inputs and 2 Return RF outputs (A8KDRR)
- ◆ Maximum of 48 returns for Quad receiver modules or 24 returns for Dual receiver modules per chassis
- ◆ Wide optical input range
- ◆ Front optical inputs and rear RF outputs
- ◆ Optical wavelength: 1200 to 1600 nm
- ◆ Hot-swappable
- ◆ Remote monitor and control function by HMS or SNMP
- ◆ Stand alone receivers with no redundancy or with A/B switch for redundant receivers (optional)
- ◆ A8KQRR & A8KQRR-AB AGC(optional)

Application

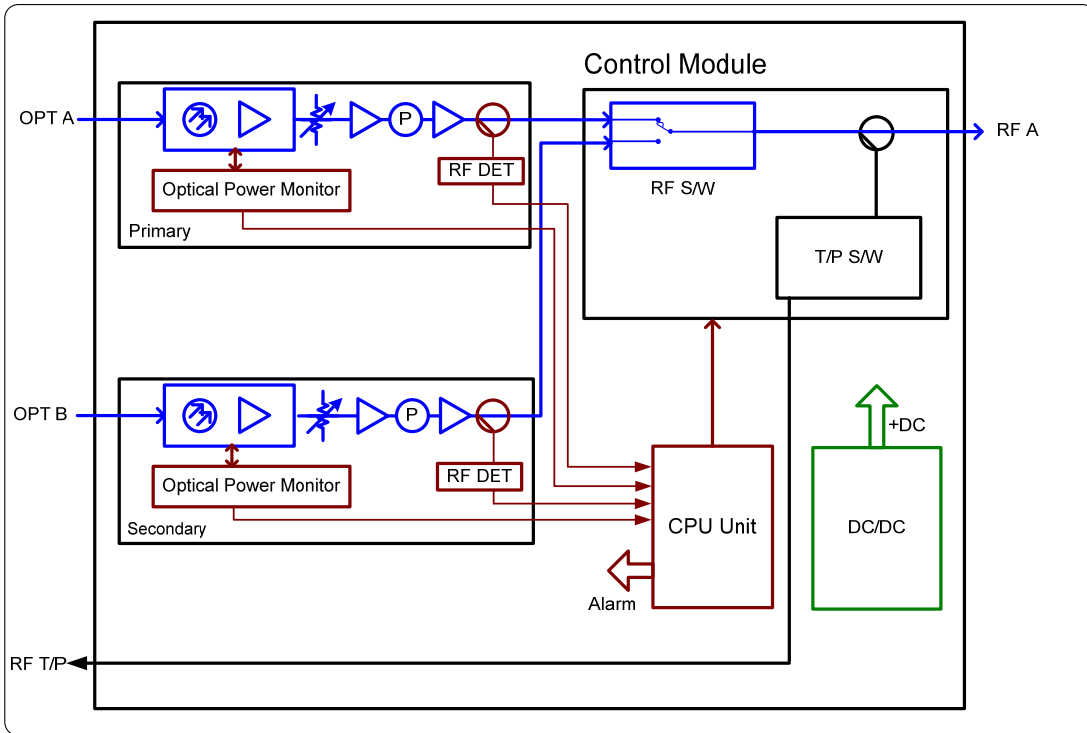


Block Diagrams

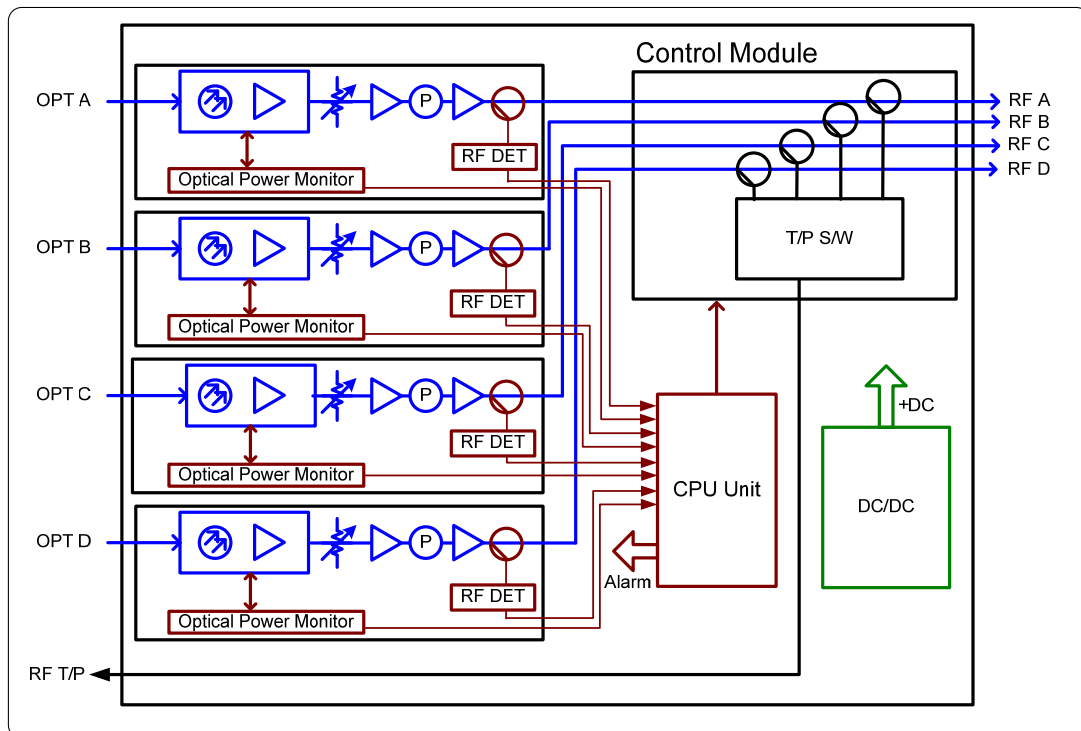
A8KDRR



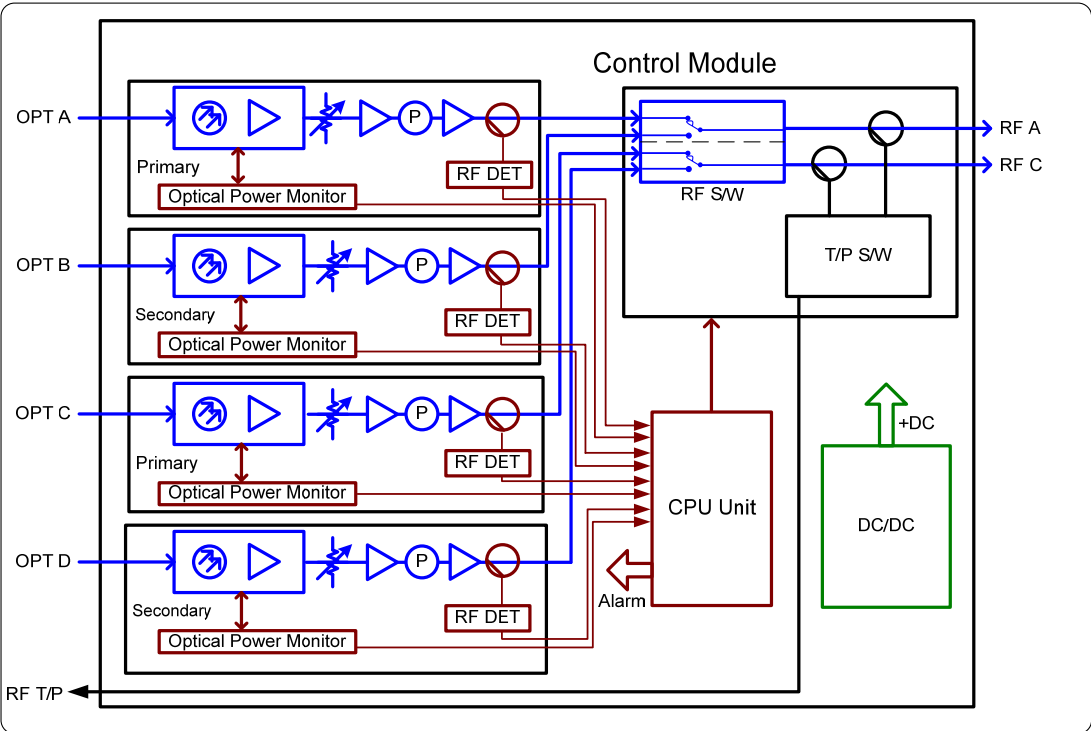
A8KDRR-AB



A8KQRR



A8KQRR-AB



Specifications

ACI				
ACION 8000 Series A8KQRR/A8KDRR Quad/Dual Return Receiver				
PARAMETERS	CONDITIONS	UNITS	SPECIFICATION	NOTES
Optical Specification				
Optical receive power		dBm	+2 ~ -15	
Wavelength		nm	1200 to 1600	
Number of receiver module			4 for QRR 2 for DRR	
A/B switching threshold		dBm	-15	For AB function model only
RF Specifications				
Impedance		Ω	75	
Return loss	Min.	dB	-16 @ 5 - 200 MHz	
Output level	Min.	dBmV	42	Note 1
RF gain adjustment	AGC Mode Tolerance	dB	2@ 0 ~ -10dBm	QRR only
	RGC Mode Range		0 to 20	
Operating bandwidth		MHz	5 to 200	
Flatness	Peak to Valley	dB	± 0.5	
Slope		dB	+0.75 to -0.5	
Test point	Directional coupler	dB	-20 \pm 0.5	
RF gain	A8KQRR/DRR	dB	54	Note 2
Redundancy switch time	Max.	ms	50	
Receiver to receiver isolation	5 to 200 MHz	dB	< -70	
Distortion				
Equivalent noise input	Max.	Pa/Hz ^{0.5}	7	
Second order distortion	Max.	dBc	-58	
Third order distortion	Max.	dBc	-52	
Environment				
Module width		slot	1	
Power consumption	Max. for A8KQRR	W	17.6	
Operating temperature		$^{\circ}\text{F} (^{\circ}\text{C})$	32 to 122 (0 to 50)	
Relative humidity	Non-condensing	%	0 to 95	
Optical connector			SC/UPC, SC/APC	
Dimensions	D x H x W	Inch. (mm)	16.1 x 5.0 x 1.0 (410 x 127 x 26)	

Note 1: At maximum gain with -10 dBm optical input and 10% OMI from return transmitter.

Note 2: Measured from input of first gain stage to output of module with minimum attenuation.

Ordering Matrix

A8KQRR/DRR Configuration Sheet																											
Customer: _____																											
Created By: _____					Order Date: _____																						
ORDERING MATRIX									2012/7/2																		
A 8 K	1	R R	2	3	4	—	5	6																			
<p>1. Number of Receivers in module</p> <table style="margin-left: 20px;"> <tr> <td style="border: 1px solid black; padding: 2px;">D</td> <td style="padding: 2px;">= 2 Receivers</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px;">Q</td> <td style="padding: 2px;">= 4 Receivers (standard)</td> </tr> </table> <p>2. 3. 4. A/B Switch for redundant or not redundant receivers</p> <table style="margin-left: 20px;"> <tr> <td style="padding: 2px;">keep blank(0 0)</td> <td style="padding: 2px;">= Without A/B Switch for Non-redundant receivers</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px;">— A A</td> <td style="padding: 2px;">= With A/B Switch and software AGC function (QRR only)</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px;">— A B</td> <td style="padding: 2px;">= With A/B Switch for Redundant receivers</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px;">— A C</td> <td style="padding: 2px;">= W/ AGC & Without A/B Switch for Non-redundant receivers (QRR only)</td> </tr> </table> <p>5. 6. Connector</p> <table style="margin-left: 20px;"> <tr> <td style="border: 1px solid black; padding: 2px;">S C</td> <td style="padding: 2px;">= SC/APC with shutter (standard)</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px;">F C</td> <td style="padding: 2px;">= FC/APC</td> </tr> <tr> <td style="border: 1px solid black; padding: 2px;">E 2</td> <td style="padding: 2px;">= E2000</td> </tr> </table>										D	= 2 Receivers	Q	= 4 Receivers (standard)	keep blank(0 0)	= Without A/B Switch for Non-redundant receivers	— A A	= With A/B Switch and software AGC function (QRR only)	— A B	= With A/B Switch for Redundant receivers	— A C	= W/ AGC & Without A/B Switch for Non-redundant receivers (QRR only)	S C	= SC/APC with shutter (standard)	F C	= FC/APC	E 2	= E2000
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Rev Q 10-28-2015 Printed in U.S.A.
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