

Fiber Receiver & Distribution Amplifier

Trailblazer Series - FRRRA



○ Features & Benefits

- LED For Optical Input Status
- Gain and Slope Controls
- Exceptional CNR Performance At Low Optical Input Levels
- 550 and 860 MHz Power Doubling Hybrid Models
- Optical Input Power Jack Scaled 1V/mW

The FRRRA is a fiber optic receiver module integrated with a rack mounted broadband distribution amplifier (RMDA). The FRRRA is used as a launch amplifier in a coaxial distribution sub-system fed from a single mode broadband fiber network. The FRRRA's optical receiver section provides exceptional CNR performance at low optical input levels. This feature is also a cost saving one, since it permits the use of lower optical power transmitters. The FRRRA is available in two models with RF bandwidths of 550 MHz and 860 MHz. Both models feature power doubling hybrid amplifier technology for high RF output levels and low distortion. The FRRRA operates with the FIBT Series of transmitters as well as those from other leading manufacturers.

○ Specifications

Optical Receiver

Bandwidth: 45 to 860 MHz
 Bandpass Flatness: 1 dB P/V
 Operating Wavelength: 1310/1550 nm
 Optical Input Range: -6 to +3.0 dBm
 Input Impedance: 75 Ohm
 CNR (-1 dBm Input, 40 Ch. Load): 56 dB (d)
 CNR (-1 dBm Input, 79 Ch. Load): 55 dB (d)
 CNR (-1 dBm Input, 110 Ch. Load): 54 dB (d)

Connectors

Optical Input: FC/APC
 RF Output and Test Ports: "F"

Distribution Amplifier

Impedance - All Ports: 75 Ohms
 Return Loss Input: 16 dB
 Return Loss Output: 16 dB
 RF Gain: 43 dB
 Test Port Level: -30, ±2 dB
 Gain Control Range: 10 dBm
 Slope Control Range: 8 dBm
 Operating Temperature: -20 to +60 °C
 Power Supply Requirements:
 117 VAC, 60 Hz: 28 W
 Size (WxHxL): 19 x 1.75 x 6.25 in
 48.26 x 4.45 x 15.88 cm
 Weight: 5.75 lbs, 2.61 kg
 Number Of Hybrids: 2
 Hybrid Technology: Power Doubling

Channel Loading

FRRRA-550: 77
 FRRRA-860: 110

Flatness

FRRRA-550: ±0.5 dB
 FRRRA-860: ±0.75 dB

Output Level

FRRRA-550: 36/44 dBmV
 FRRRA-860: 34/42 dBmV

Composite Triple Beat (CTB) (a, b, c, d)

FRRRA-550: -63 dB
 FRRRA-860: -60 dB

Composite Second Order (CSO) (a, b, c, d)

FRRRA-550: -57 dB
 FRRRA-860: -58 dB

Hum Modulation: -70 dB

Optical Input dBm	mW
-10	0.10
-9	0.13
-8	0.16
-7	0.20
-6	0.25
-5	0.32
-4	0.40
-3	0.50
-2	0.63
-1	0.79
0	1.00
1	1.26
2	1.58
3	2.00
4	2.51
5	3.16

Increase Optical Input Power
 Orange Optical LED Indication

Optical Input dBm	mW	Attenuation	Notes
-6	0.25	0 dB	
-5	0.32	2 dB	
-4	0.40	4 dB	
-3	0.50	6 dB	Recommended Attenuator Value (4006A-xx)
-2	0.63	8 dB	
-1	0.79	10 dB	
0	1.00	12 dB	
1	1.26	14 dB	
2	1.58	16 dB	
3	2.00	18 dB	
4	2.51		Decrease Optical Input Power Red Optical LED Indication
5	3.16		

Please refer to the Product Instruction Manual for more specifications.

○ Ordering Information

Model	Stock No.	Description
FRRRA-S4A-550-43PA	7411P54A	Fiber Optic Receiver/RF Distribution Amplifier, Single-mode 47-550 MHz, 1310/1550 nm, FC/APC Conn., 43 dB Gain, Rack Mount Power Doubling
FRRRA-S4A-860-43PA	7411P84A	Fiber Optic Receiver/RF Distribution Amplifier, Single-mode 47-860 MHz, 1310/1550 nm, FC/APC Conn., 43 dB Gain, Rack Mount Power Doubling