

# MAXNET® II

Platinum Series

RF & Optical Signal Management

Patented  
U.S.# 7,142,414



3RU Active Chassis  
(front view)

## Active Products

### Return Path Optical Receivers:

- ▶ Patented return path receivers (RPRs) with integrated RF splitting technology optimize rack space efficiency
- ▶ Module offerings include:
  - Modules provisioned with MCX connectors for direct connection to MCX terminated minicable.
    - ▶ Dual RPR with 8 RF outputs per RPR & rear fiber (MPRX2-8)
  - A module provisioned with F connectors for interfacing with “wire once” F connector backplane. The “Wire once” backplane concept allows users to hot swap multiport receiver modules without ever having to remove connections to the RF lashup.
    - ▶ Single RPR with 8 (7 rear and 1 front) F connector RF outputs & front fiber (MPRX-8F)
    - ▶ Dual RPR with 4 F connector RF outputs & front fiber (MPRX2-4F)
- ▶ Install up to 10/12 modules in one 3 RU chassis with redundant / remote powering
- ▶ Optimized optical & RF performance specifications (5-250 MHz bandwidth)
- ▶ RF attenuation can be controlled remotely on a port by port basis (not yet available on MPRX2-8)
- ▶ Front access to RF test point & one RF output (MPRX-8F module only) and RF attenuator & mute controls
- ▶ Front LEDs indicate receiver module power & status
- ▶ Voltage current, temperature, fan status, nominal received optical power, received optical power alarm threshold, RF attenuator level, & receiver mute are easily monitored over the network (HMS compliant (SNMP v2c)) or through a web browser; e-mail alarm notification is also supported

**NOTE:** MPRX-8F and MPRX2-4F (F connector based receiver modules) require MP3FA chassis



MPRX2-4F (includes MPRX24FBP as pictured)



MPRX-8F (includes MPRXF8FBP as pictured)

## RF & Optical Signal Management

### Return Path Optical Receivers:

#### Return Path Optical Receiver Specifications

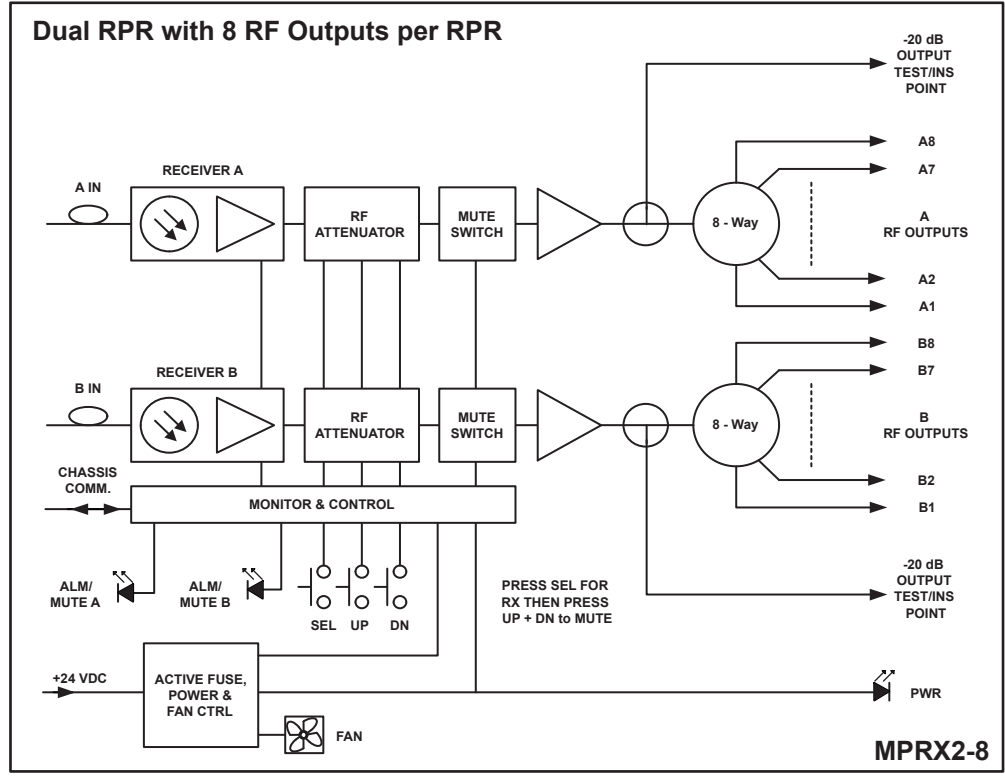
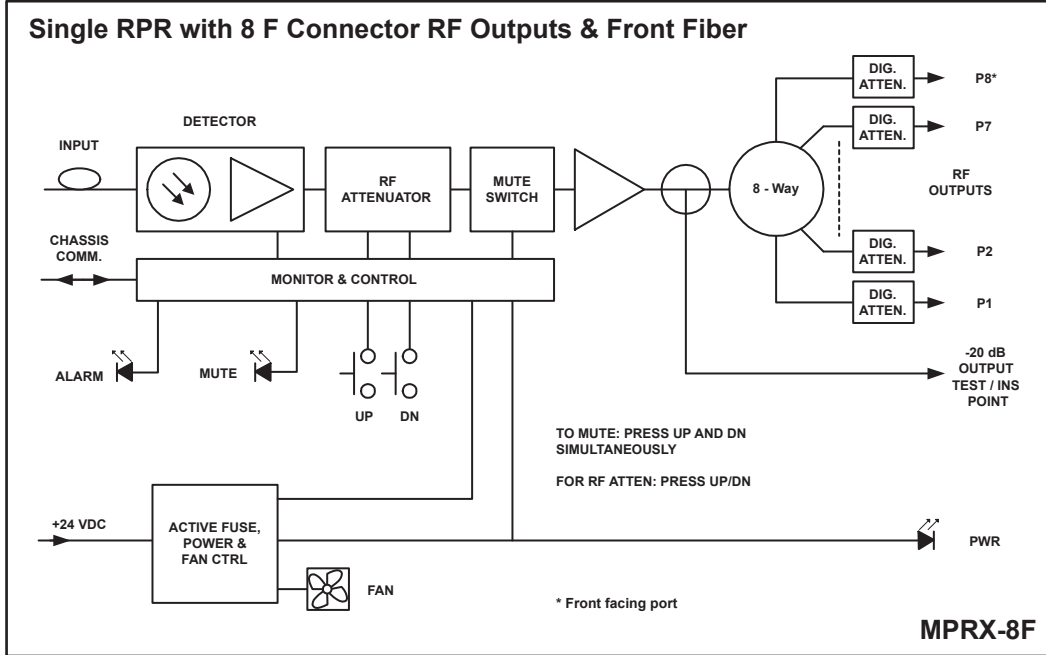
SPECIFICATIONS	MPRX-8F	MPRX2-8	MPRX2-4F
<b>OPTICAL</b>			
WAVELENGTH	1200 - 1620 nm		
INPUT POWER	-20 to +3 dBm		
OPTICAL RETURN LOSS (Min)	45 dB		
CONNECTOR TYPE	SC/APC (std.), Others on Special Order		
<b>RF OUTPUT PERFORMANCE</b>			
BANDWIDTH	5 - 250 MHz		
NOMINAL OUTPUT LEVEL <sup>(1)</sup>	25 +/- 2.0 dBmV	25 +/- 2.0 dBmV	28 +/- 2.0 dBmV
RESPONSE FLATNESS	+/- 0.5 dB / 6 MHz		
RF TEST POINT (Relative to RF Out)	-10.0 +/- 1.0 dB		
RF OUTPUT LEVEL ADJUST	31.5 dB in 0.5 dB Increments (common path and per port as shown in schematics) Front Access Pushbutton, HMS SNMP v2c, Web Browser, Proprietary Network Interface		
PORT TO PORT ISOLATION	> 30 dB, 5-250 MHz		
RX TO RX ISOLATION	N/A	> 70 dB, 5-85 MHz > 60 dB, 85-200 MHz > 58 dB, 200-250 MHz	
RECEIVER MUTE (ISOLATION)	> 70 dB, 5-85 MHz > 60 dB, 85-250 MHz Front Access Pushbutton, HMS SNMP v2c, Web Browser, Proprietary Network Interface		
SECOND ORDER DISTORTION <sup>(2)</sup>	> 60 dBc		
THIRD ORDER DISTORTION <sup>(2)</sup>	> 60 dBc		
OUTPUT RETURN LOSS	20 dB		
<b>OTHER</b>			
RECEIVER STATUS INDICATION	Front LEDs, HMS SNMP v2c, Web Browser, Proprietary Network Interface		
CURRENT <sup>(3)</sup>	290mA	520mA	
<b>NOTES:</b>			
(1) -9 dBm and 7% OMI per channel, no RF attenuation. Level shown is after 8-way splitter.			
(2) Two laser test: -3 dBm and 40% OMI per laser. Measurement made with 40 dBmV carrier level at internal receiver output, before any splitting circuitry.			
(3) DC current required from 24V chassis bus.			

#### Ordering Information

Part Number	Description
MPRX2-8	Dual RPR with 8 RF Outputs per RPR
MPRX-8F	Single RPR with 8 RF Outputs, F Connector Backplane (including MPRXFBP), Front Fiber, SC/APC
MPRX2-4F	Dual RPR with 4 RF Outputs, F Connector Backplane (including MPRXFBP), Front Fiber, SC/APC
MPRXFBP	Replacement F Connector Backplane for MPRX-8F Module; Fastens to MP3FA Chassis
MPRX24FBP	Replacement F Connector Backplane for MPRX2-4F Module; Fastens to MP3FA Chassis

### Return Path Optical Receivers:

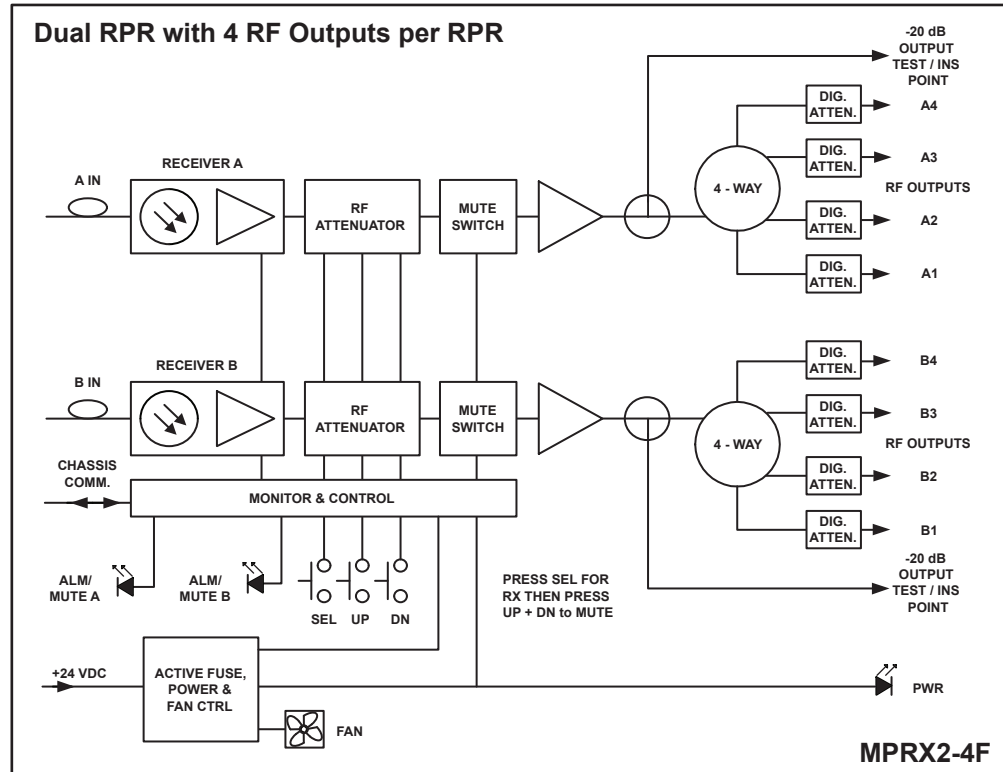
#### Functional Schematics



## RF & Optical Signal Management

### Return Path Optical Receivers:

### Functional Schematics (cont'd)



### Replacement Fan:

- ▶ Front access replacement fan



### Ordering Information

Part Number	Description
MPFANA	Replacement Fan for MAXNET II Receivers, Power Supplies & Amplifiers

