MAXNET® II

Platinum Series

RF & Optical Signal Management

Patented
U.S.# 7,142,414

3RU Active Chassis
(front view)

Active Products

Amplifiers:

Forward RF Amplifiers:

- 17, 21, 28, 31, & 34 dB, GaAs, 1000 MHz amplifier module offerings
- High performance MCX connectors (with optional F connectors)
- Front access input & output test points
- Front access to plug-in pad & EQ locations
- Front LEDs provide an indication of amplifier power & status
- Amplifier module voltage, current, temperature, fan status, nominal RF output power, & RF output power alarm threshold are easily monitored & controlled over the network (HMS compliant (SNMP v2c)) or through a web browser; e-mail alarm notification is also supported
- Amplifier module takes up 2 slots in MAXNET® II chassis (total of 24 slots)

Forward RF Amplifier Specifications

PART NUMBER[6]	GAIN		GAIN AND SLOPE CONTROL[1]	TEST POINTS[7]	RETURN LOSS[5]	DISTORTION PERFORMANCE[3,4]			NOISE FIGURE[4]	OPERATING CURRENT[2]
	BW (MHz)	GAIN (dB)	PLUG-IN	I/O (dB)	I/O (dB)	OUTPUT LEVEL (dBmV)	CTB (-dB)	CSO (-dB)	(dB)	(mA)
QMP1000-17GP	40-1000	17 +/- 1.0	INPUT / OUTPUT	20 +/- 1.0	16/15	43	74	72	6	470
QMP1000-21GP	40-1000	21 +/- 1.0	INPUT / OUTPUT	20 +/- 1.0	16/15	43	74	72	6	470
QMP1000-28GP	40-1000	28 +/- 1.0	INPUT / INTERSTAGE	20 +/- 1.0	16/15	43	74	72	6.5	520
QMP1000-31GP	40-1000	31 +/- 1.0	INPUT / INTERSTAGE	20 +/- 1.0	16/15	43	74	72	6.5	520
QMP1000-34GP	40-1000	34 +/- 1.0	INPUT / INTERSTAGE	20 +/- 1.0	16/15	43	74	72	6.5	520
QMP1000-17GPF	40-1000	17 +/- 1.0	INPUT / OUTPUT	20 +/- 1.0	16/15	43	74	72	6	470
QMP1000-21GPF	40-1000	21 +/- 1.0	INPUT / OUTPUT	20 +/- 1.0	16/15	43	74	72	6	470
QMP1000-28GPF	40-1000	28 +/- 1.0	INPUT / INTERSTAGE	20 +/- 1.0	16/15	43	74	72	6.5	520
QMP1000-31GPF	40-1000	31 +/- 1.0	INPUT / INTERSTAGE	20 +/- 1.0	16/15	43	74	72	6.5	520
QMP1000-34GPF	40-1000	34 +/- 1.0	INPUT / INTERSTAGE	20 +/- 1.0	16/15	43	74	72	6.5	520

NOTES:
(1) See functional schematics.
(2) DC load current at + 24 VDC.
(3) 79 CW NTSC Analog Channels from 54-550 MHz with 320 MHz QAM loading 6 dB below Analog Carrier levels.
(4) Specified with 0 dB plug-in attenuators and 0 dB plug-in EQs.
(5) Return Loss is 15 dB minimum from 870 MHz to 1000 MHz.
(6) GP = MCX connectors; GPF = F connectors.
(7) At input test point specified with 0 dB plug-in attenuator and 0 dB plug-in EQ.

OTHER NOTES:
Minimum / Maximum composite RF detection level is 20.5/80 dBmV.

Ordering Information

Part Number	Description
QMP1000-17GP	1000 MHz, 17 dB GaAs Single Stage, MCX Connectors
QMP1000-21GP	1000 MHz, 21 dB GaAs Single Stage, MCX Connectors
QMP1000-28GP	1000 MHz, 28 dB GaAs Dual Stage, MCX Connectors
QMP1000-31GP	1000 MHz, 31 dB GaAs Dual Stage, MCX Connectors
QMP1000-34GP	1000 MHz, 34 dB GaAs Dual Stage, MCX Connectors
QMP1000-17GPF	1000 MHz, 17 dB GaAs Single Stage, F Connectors
QMP1000-21GPF	1000 MHz, 21 dB GaAs Single Stage, F Connectors
QMP1000-28GPF	1000 MHz, 28 dB GaAs Dual Stage, F Connectors
QMP1000-31GPF	1000 MHz, 31 dB GaAs Dual Stage, F Connectors
QMP1000-34GPF	1000 MHz, 34 dB GaAs Dual Stage, F Connectors

Specifications subject to change without notice.

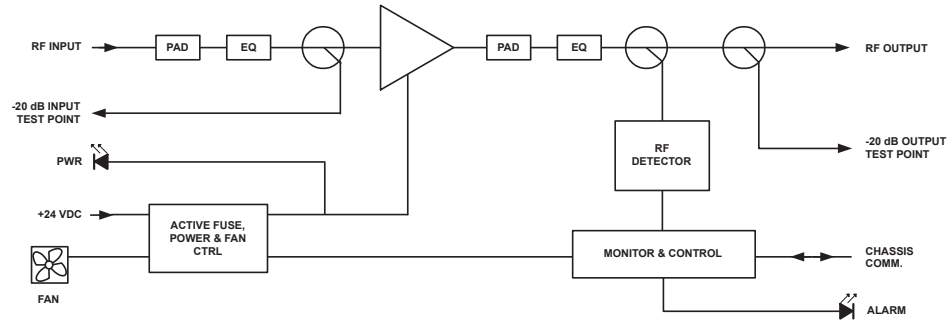
RF & Optical Signal Management

Amplifiers:

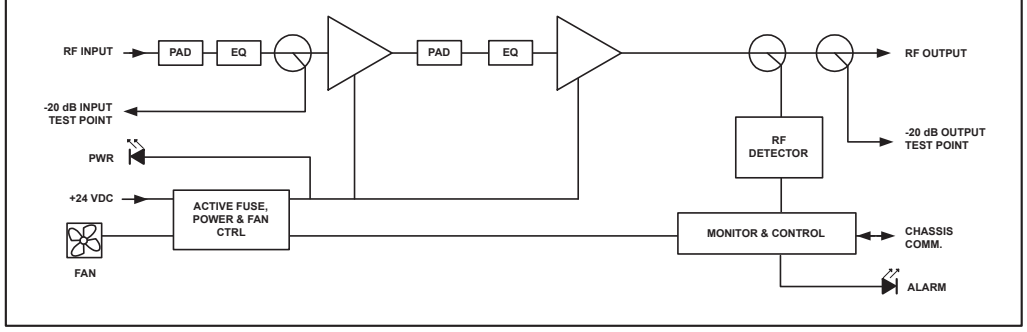
Forward RF Amplifiers (cont'd):

Functional Schematics

Single Stage Forward Amplifier



Dual Stage Forward Amplifier



Specifications subject to change without notice.

Amplifiers:

Return RF/IF Amplifiers:

- 20 & 28 dB, 5-200 MHz Si PP versions available
- High performance MCX connectors (with optional F connectors)
- Front access input & output test points
- Front access to plug-in pad & EQ locations
- Front LEDs provide an indication of amplifier power & status
- Voltage, current, temperature, fan status, nominal RF output power, & RF output power alarm threshold are easily monitored & controlled over the network (HMS compliant (SNMP v2c)), through a web browser or proprietary network interface; e-mail alarm notification is also supported
- Amplifier module takes up 2 slots in MAXNET® II chassis (total of 24 slots)

Return RF/IF Amplifier Specifications

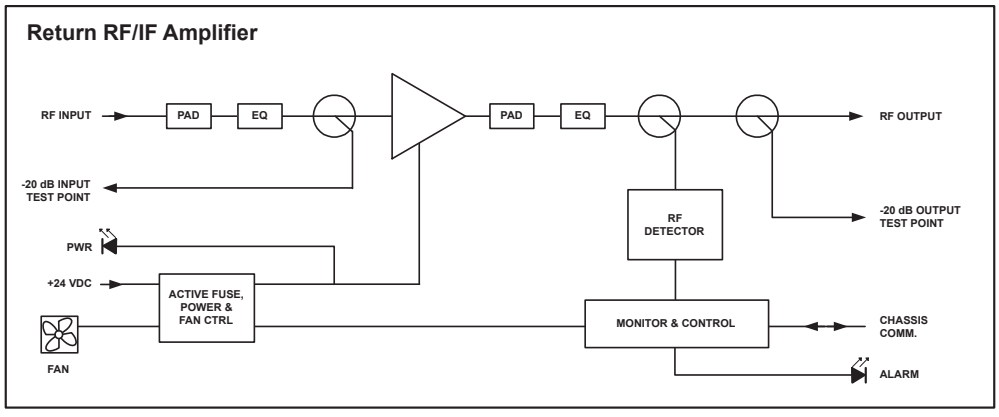
PART NUMBER[3]	GAIN		GAIN AND SLOPE CONTROL[1]	TEST POINTS[4]	RETURN LOSS	DISTORTION PERFORMANCE					NOISE FIGURE	OPERATING CURRENT[2]
	BW (MHz)	GAIN (dB)	PLUG-IN	I/O (dB)	I/O (dB)	OUTPUT LEVEL (dBmV)	CH. LOAD (#)	CH. SLOPE (dB)	CTB (-dB)	CSO (-dB)	(dB)	(mA)
QMP200-28L	5-200	28 +/- 1.0	INPUT / OUTPUT	20 +/- 1.0	18	50	10	0	74	65	7	140
QMP200-20L	5-200	20 +/- 1.0	INPUT / OUTPUT	20 +/- 1.0	18	50	10	0	75	65	7	140
QMP200-28LF	5-200	28 +/- 1.0	INPUT / OUTPUT	20 +/- 1.0	18	50	10	0	74	65	7	140
QMP200-20LF	5-200	20 +/- 1.0	INPUT / OUTPUT	20 +/- 1.0	18	50	10	0	75	65	7	140

NOTES:
(1) See functional schematics.
(2) DC load current at + 24 VDC.
(3) L = MCX connectors; LF = F connectors.
(4) At input test point specified with 0 dB plug-in attenuator and 0 dB plug-in EQ.

Ordering Information

Part Number	Description
QMP200-28L	200 MHz, 28 dB Gain Single Stage, MCX Connectors
QMP200-20L	200 MHz, 20 dB Gain Single Stage, MCX Connectors
QMP200-28LF	200 MHz, 28 dB Gain Single Stage, F Connectors
QMP200-20LF	200 MHz, 20 dB Gain Single Stage, F Connectors

Functional Schematic



Specifications subject to change without notice.

RF & Optical Signal Management

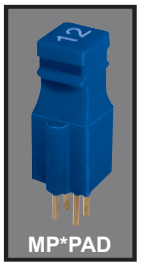
Plug-in Pads/EQs:

- Pads & EQs can be easily inserted or removed with fingertips or by using the pad tool (pad tool part # MPPT - see MAXNET® II Accessories spec sheet)
- Plug-in pads are available from 0-20 dB in 1 dB increments, 16-20 dB recommended for return band only

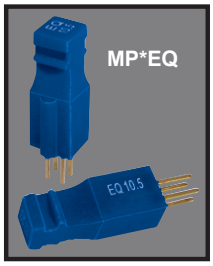
Plug-in Pad/EQ Specifications

dB VALUES	FREQ. RANGE	IMPEDANCE	RETURN LOSS	TILT	FLATNESS
0 dB	5 - 1000 MHz	75 ohm	≥ 20 dB	N/A	N/A
1-20 dB	5 - 1000 MHz	75 ohm	≥ 20 dB	≤ 0.5 dB	+/- 0.2 dB

EQ VALUES	SLOPE 1000/45 MHz	INSERTION LOSS	EQUALIZER TOLERANCE	RETURN LOSS	IMPEDANCE
1.5 dB	1.4 dB	≤ 1 dB	+/- 0.5 dB	≥ 18 dB	75 ohm
3 dB	3.2 dB				
4.5 dB	3.8 dB				
6 dB	5.1 dB				
7.5 dB	6.2 dB				
9 dB	7.1 dB				
10.5 dB	8.7 dB				



* = PAD Value



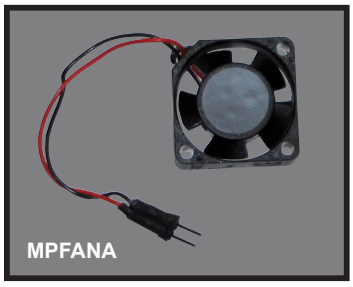
* = EQ Value

Ordering Information

Part Number	Description
MP*PAD	Plug-in Pad (* = dB value, 0 to 20 dB) (must order in quantities of 10)
MP*EQ	Plug-in Equalizer, 1000 MHz (* = dB value, 1.5 to 10.5 dB) (must order in quantities of 10)

Replacement Fan:

- Front access replacement fan



Ordering Information

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

Specifications subject to change without notice.

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