HFC Enhance®

Drop-In Modular Amplifier Upgrades

QPAL - Drop-In Module Upgrade for Texscan and Jerrold / GI / Motorola*

Features & Benefits:

- Drop-in module provides cost-effective & efficient bandwidth enhancements up to 1 GHz in any network equipped with Texscan / Jerrold / GI / Motorola line extenders
- Gain control options include manual gain control (MGC), thermal pad or automatic gain control (AGC)
- Interstage response circuit can be user defined in order to accommodate the specific amplifier station spacing in the network
- Plug-in diplex filters provide a future-proof solution in the event of new forward/return bandwidth splits
- 40-90 VAC high efficiency switching power supply combined with state-of-the-art gain technology allows upgrade to be accomplished without any change to the system powering architecture
- All plug-in accessories (pads, EQs, thermal pad, AGC circuitry) fully supported
- Power directors allow unit to pass power and/or to be powered from the input or output
- Equipped with 24V power LED indication as well as AC & 24V test points

Sample QPAL Specifications
(Various Gains, 1 GHz, 14.5 dB Interstage EQ, 0 dB Pads)

FORWARD GAIN		GAIN AND SLOPE CONTROL	TEST POINTS	RETURN LOSS[2]	DISTORTION PERFORMANCE[3,4]			NOISE FIGURE	OPERATING CURRENT[6]	REVERSE GAIN	
BW	OPERATING GAIN[1]	PLUG IN	I/O (dB)	I/O (dB)	OUTPUT LEVEL (dBmV)	CTB (-dB)	CSO (-dB)	(dB)	(ma)	BW (MHz)	OPERATING GAIN[7]
52 MHz - 1 GHz	29	INPUT / INTERSTAGE	20 +/- 1.0	15 / 14	45 / 30.5	81.6	77.7	5.0	950	5-42 or 5-65	20
52 MHz - 1 GHz	32	INPUT / INTERSTAGE	20 +/- 1.0	15 / 14	45 / 30.5	81.0	77.2	5.0	950	5-42 or 5-65	20
52 MHz - 1 GHz	36	INPUT / INTERSTAGE	20 +/- 1.0	15 / 14	45 / 30.5	81.4	77.5	5.0	950	5-42 or 5-65	20
52 MHz - 1 GHz	38	INPUT / INTERSTAGE	20 +/- 1.0	15 / 14	45 / 30.5	81.6	77.7	5.0	950	5-42 or 5-65	20

NOTES:

(1) Operating Gain is specified with 0 dB pads and interstage equalizer installed (14.5 dB slope).
(2) Return Loss is 14 dB minimum from 54 MHz to 1 GHz.
(3) Measured with 54 MHz - 1 GHz analog CW (6 MHz spacing) and 550 MHz - 1 GHz noise at -6 dBc (average power per 6 MHz).
(4) Specified with 0 dB plug-in pads and 0 dB input equalizer. Interstage Equalizer with 14.5 output slope is installed.
(5) The reverse amplfier is a PP hybrid module. Current has been calculated into the total above.
(6) DC load current at +24 VDC.
(7) Operating Gain is specified with 0 dB pads.

Ordering Information

Part Number	Description
QPAL	Call Factory for Quote

* The Texscan name is the property of previous Texscan Corp. in the United States and/or other countries (then ANTEC Corp. and ARRIS).
The Jerrold name is the property of previous Jerrold Electronics in the United States and/or other countries (then General Instrument and Motorola Inc.).

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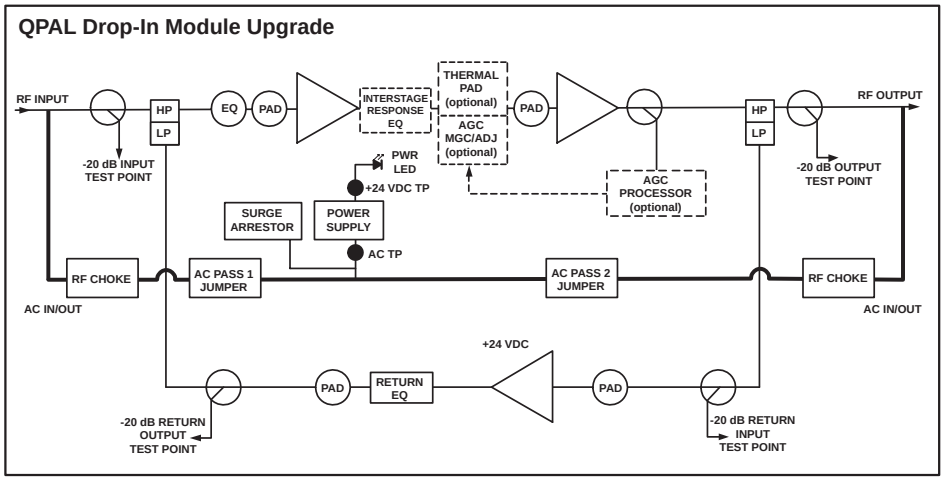
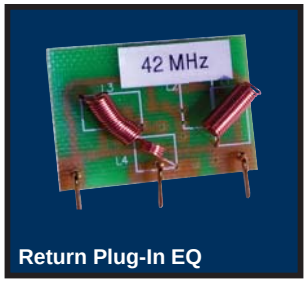
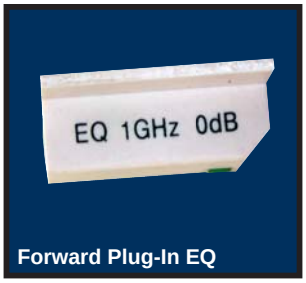
Functional Schematic



Accessories:





Ordering Information

Part Number	Description
IPB-xx	Plug-In Attenuator: xx = 0 to 20 dB in increments of 2 dB
QAExxx-yy-y	Plug-In Forward Path EQ: xxx = 550, 750, 860, 930, 000 MHz; 000 = 1000 yy-y = 0 to 24 dB in increments of 1.5 dB
QEQDAxx-y-y	Plug-In Return Path EQ: xx = 42, 65 MHz y-y = 0 to 9.0 dB in increments of 1.5 dB

Specifications subject to change without notice.