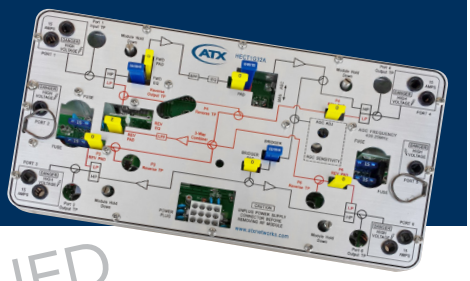
HFC Enhance®

Drop-in Modular Amplifier Upgrades



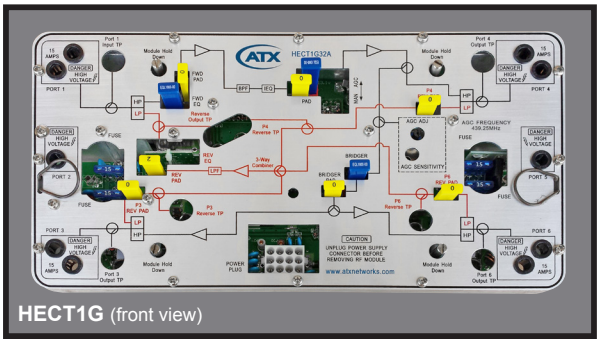
D3.1 / CCAP™ Compliant

DISCONTINUED

C-Cor HECT1G 1 GHz Trunk:

Features & Benefits:

- 1 GHz drop-in upgrade for 750 MHz C-Cor 900 series Trunks
- 1 GHz enables providers to economically increase forward capacity for addition of new services
- Save time & money with drop-in upgrades vs complete swap & resplice
- Enables reuse of legacy line extender housings & power supplies
- GaN options for twice as much RF output power as legacy GaAs solutions
- GaN options for same RF output power as legacy GaAs solution, but at less wattage = lower OPEX. The “Green” solution
- Now with QAM AGC option to reclaim valuble spectrum
- High performance return amplifier
- Capable of handling up to 15A of AC through-current



HECT1G (front view)

HECT1G 1 GHz Trunk Specifications

SPECIFICATIONS		FORWARD	RETURN
BANDWIDTH		54-1002 MHz	5-42 MHz
SLOPE	54-1002 MHz	15 dB	n/a
	54-550 MHz	7 dB	
FLATNESS		+/- 0.75 dB	+/- 0.5 dB
TRUNK OPERATIONAL GAIN, dB @ 1 GHz(1)		See Options (32-35 Trunk)	18 dB
TRUNK OUTPUT LEVEL, GaAs & HE GaN(2,4)		35/28 dBmV @ 550/54 MHz (Analog) 36/29 dBmV @ 1000/550 MHz (QAM)	n/a
TRUNK OUTPUT LEVEL, GaN(2,4)		38/31 dBmV @ 550/54 MHz (Analog) 39/32 dBmV @ 1000/550 MHz (QAM)	n/a
TRUNK, CTB/CSO, -dBc(2)		80/80	69/70
BRIDGER OPERATIONAL GAIN, dB @ 1 GHz(1)		See Options (41-44 Bridger)	18 dB
BRIDGER OUTPUT LEVEL, GaAs & HE GaN(2,4)		44/37 dBmV @ 550/54 MHz (Analog) 45/38 dBmV @ 1000/550 MHz (QAM)	n/a
BRIDGER OUTPUT LEVEL, GaN(2,4)		47/40 dBmV @ 550/54 MHz (Analog) 48/41 dBmV @ 1000/550 MHz (QAM)	n/a
BRIDGER, CTB/CSO, -dBc(2)		73/74	69/70
NOISE FIGURE		See Options (~6 dB + input loss)	4 dB
RETURN LOSS		16 dB	16 dB
AC CURRENT PASSING		15 Amps	n/a
AC CURRENT @ 60V(3)		930mA	n/a
AC CURRENT @ 90V(3)		660mA	n/a
AGC CONTROL RANGE		-3 to 0 dB	n/a
AGC CONTROL ACCURACY -40ºC to +60ºC (-40ºF to +140ºF)		+/- 1	n/a
PILOT FREQUENCY (Recommended)		439.25 MHz (specify other at time of order)	n/a
OPERATING TEMPERATURE		-40ºC to +60ºC (-40ºF to +140ºF)	
HUMIDITY		20%-55% (without condensation, inside housing)	
DIMENSIONS		7.0"H x 13.5"W x 2.0"D (17.8H x 34.3W x 5.1D cm)	
WEIGHT		3.8 lbs (1.74 kg)	

NOTES:

(1) All Operational gains specified with 0 dB pads and either 15 dB forward slope or 0 dB return slope, where applicable. Specified as peak gain at highest rated frequency (1 GHz).

(2) Based on output of 79 Analog channels 54-550 MHz, 75 QAM channels 550-1000 MHz @ -6 dB. Tilted 7 dB from 54-550 MHz (15 dB from 54-1002 MHz).

(3) See options for GaN output power savings of up to 2W (-33mA @ 60 VDC, -22mA @ 90 VDC).

(4) The HE (high efficiency, part number code "N") version of GaN output has same RF output rating as GaAs device. The advantage is in the almost 2W of power savings.

Specifications subject to change without notice.

C-Cor HECT1G 1 GHz Trunk:

Ordering Information for C-Cor Compatible Trunk/Bridger Upgrades

Example Part Number:
HECT1G - L - N - H - A
1 2 3 4

1. FORWARD INPUT GAIN

Forward Input Gain Stage				
Part Number Code	**NF**	**Wattage**	**Min. Analog Input (QAM @ -6 dB)**	**Advantage**
L	6.2 dB	6W	10 dBmV/Ch	--

2. FORWARD TRUNK GAIN

Forward Trunk Gain Stage (GaAs/GaN)				
Part Number Code	**Wattage**	**Max. Analog Output @550M (QAM @ -6 dB)**	**Tech**	**Advantage**
L	11W	44 dBmV	GaAs	--
N	9W	44 dBmV	GaN	2W Less Power
H	11W	47 dBmV	GaN	+3 dB Gain, High Output/Ch

3. FORWARD BRIDGER GAIN

Forward Bridger Gain Stage (GaAs/GaN x2)				
Part Number Code	**Wattage**	**Max. Analog Output @550M (QAM @ -6 dB)**	**Tech**	**Advantage**
L	11W	44 dBmV	GaAs	--
N	9W	44 dBmV	GaN	4W Less Power (2W each)
H	11W	47 dBmV	GaN	+3 dB Gain, High Output/Ch

4. AGC OPTION: **A** = AGC with Analog/CW Pilot
Q = AGC with Digital/QAM Pilot

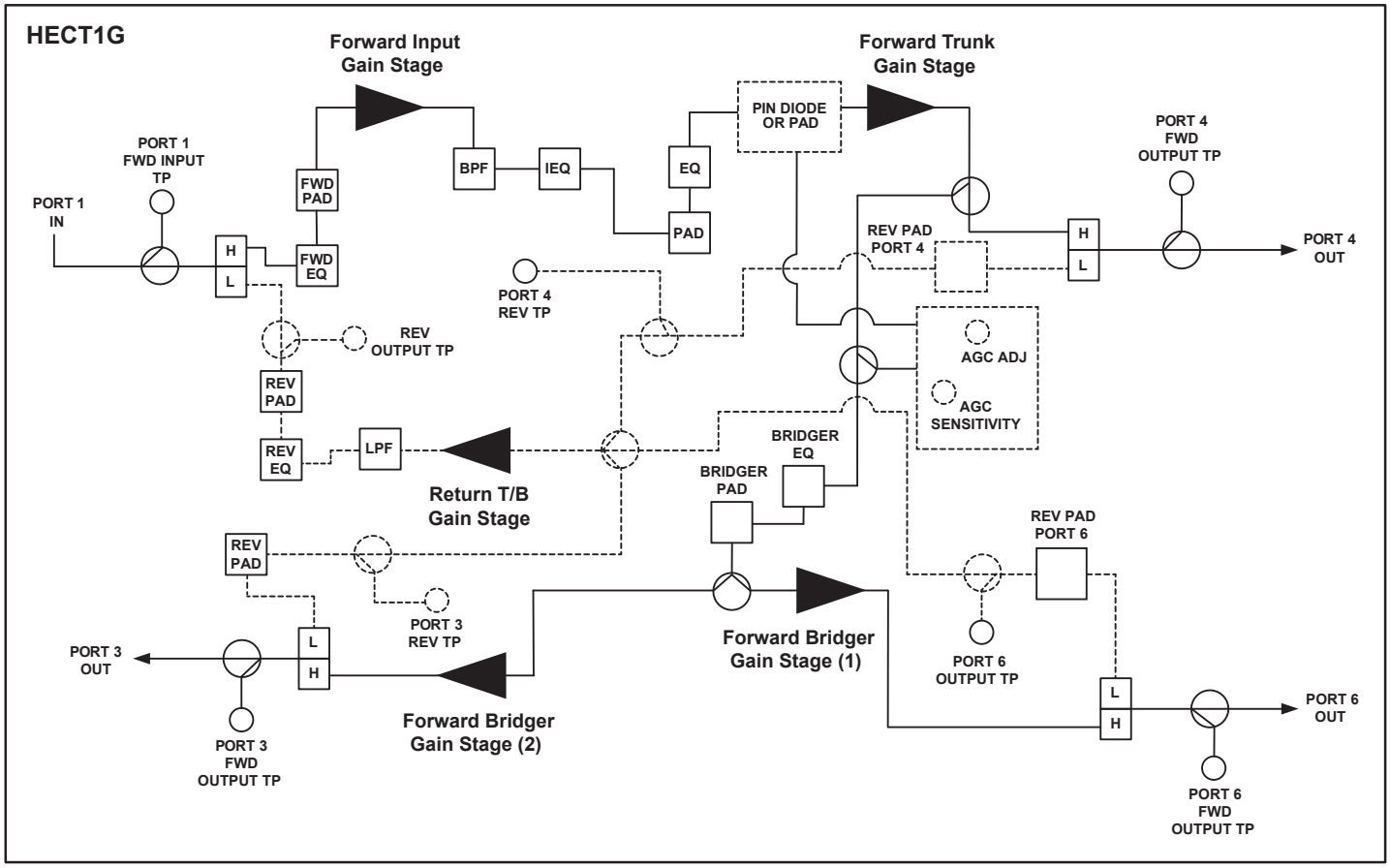
AGC Module		
Part Number Code	**Mode**	**AGC Range**
A	Analog AGC	+/- 3 dB
Q	QAM AGC	+/- 3 dB

Common Part Number Combinations

Part Number	Description
Drop-in Upgrades	
HECT1G-L-L-L-A	All GaAs, +32/+41 dB, 43W, Analog AGC
HECT1G-L-N-H-A	HE GaN Trunk, High Gain/Power GaN Bridger, +32/+43 dB, 39W, Analog AGC
HECT1G-L-H-H-A	High Gain/Power GaN Trunk & Bridger, +35/+44 dB, 43W, Analog AGC
HECT1G-L-L-L-Q	All GaAs, +32/+41 dB, 43W, QAM AGC
HECT1G-L-N-H-Q	HE GaN Trunk, High Gain/Power GaN Bridger, +32/+43 dB, 39W, QAM AGC
HECT1G-L-H-H-Q	High Gain/Power GaN Trunk & Bridger, +35/+44 dB, 43W, QAM AGC
NOTE: **Always Specify Pilot Channel or Frequency at Time of Order for AGC**	
Accessories	
JXP-GM-XX	Forward & Return Pads/Attenuators (XX = 0-20 dB in increments of 1 dB)
JXPEQC-XX	Forward EQ (XX = 0-20 dB in increments of 1 dB)
HECE1G-QAM	Additional QAM AGC Module Plug-in

C-Cor HECT1G 1 GHz Trunk:

Functional Schematic



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