



1 GHz Fixed Output Transmitters

CHP-GFXF-D
CHP-GFX-D

C-COR® CHP Max5000

- 1GHz technology
- Value line series transmitters
- Dual input accommodates broadcast and narrowcast inputs
- Low profile footprint allows 200 transmitters in a standard rack
- Universal local or remote management through Craft interface and SNMP with HMS



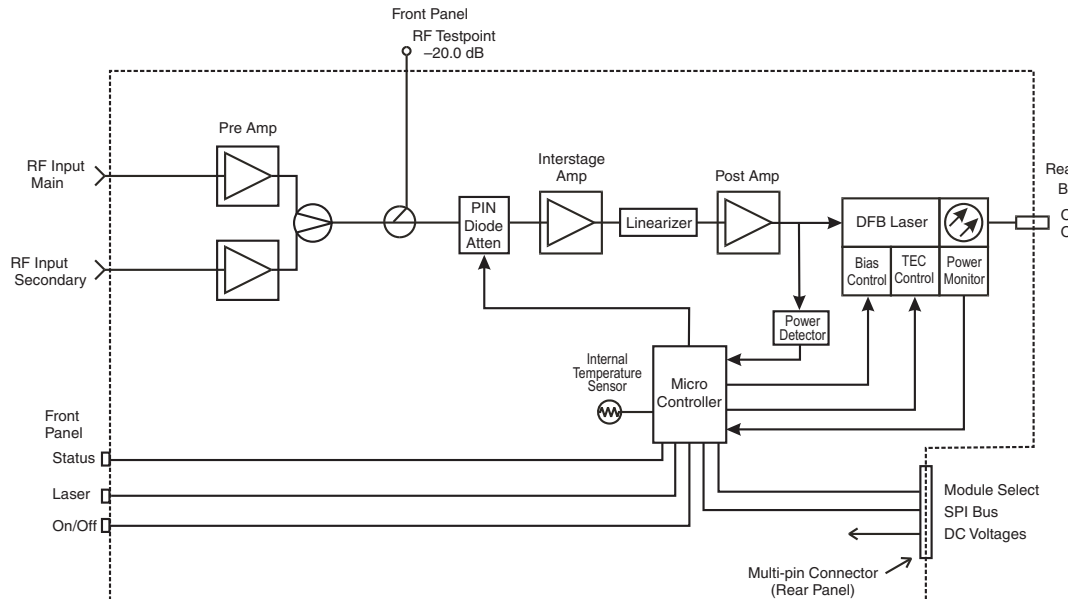
ARRIS C-COR CHP Max5000 Value Line series transmitters for the CHP Max5000 headend platform are 1GHz forward path transmitters available with fixed output levels of 2, 4, 6, 8, 10, and 12dBm. Additional 1GHz forward path fixed output transmitters are available with output levels of 13, 14, and 15 dBm.

Extending bandwidth from 870MHz to 1GHz will enable broadband service providers to increase the overall forward capacity by 16% and the digital spectrum by 40%. This transmitter will be designed as an economical alternative to the premium grade variable output 1GHz forward path transmitter to deliver advanced video, voice, and data services.

Features

- Unparalleled price/performance benefits
- Up to 10 transmitters per chassis and 200 transmitters per standard rack for high density and reduced operational costs
- Superior performance to facilitate 256-QAM digital channel transmission capability
- Plug-in attenuators for RF gain control
- Front-panel RF testpoint for convenient monitoring
- Local or remote monitoring
- Downloadable firmware upgrades

Functional Block Diagrams



Specifications

Carrier to Thermal Noise	(Value Line) CHP-GFXF-D-						CHP-GFX-D-		
	02	04	06	08	10	12	13	14	15
Output Power (dBm)	2.0	4.0	6.0	8.0	10.0	12.0	13.0	14.0	15.0
Fiber Length (km)	4.0	7.0	13.8	15.0	15.0	20.0	20.0	20.0	20.0
Optical Loss Budget (dB)	CNR (dB) for part fiber/part passive link, typical								
2	54.2	—	—	—	—	—	—	—	—
3	53.6	54.5	—	—	—	—	—	—	—
4	—	54	—	—	—	—	—	—	—
5	—	53.4	53.8	—	—	—	—	—	—
6	—	—	53.2	—	—	—	—	—	—
7	—	—	52.6	53.8	—	—	—	—	—
8	—	—	—	53.2	—	—	—	—	—
9	—	—	—	52.6	53.8	—	—	—	—
10	—	—	—	—	53.2	—	—	—	—
11	—	—	—	—	52.6	53.8	—	—	—
12	—	—	—	—	—	53.2	53.4	—	—
13	—	—	—	—	—	52.6	52.8	53.4	—
14	—	—	—	—	—	—	52.2	52.8	53.4
15	—	—	—	—	—	—	51.5	52.2	52.8
16	—	—	—	—	—	—	50.6	51.5	52.2
17	—	—	—	—	—	—	—	50.6	51.5
18	—	—	—	—	—	—	—	—	50.6

Notes:

- Optical output power specified before transmitter's bulkhead.
- CNR is measured using only CW analog carriers per SCTE test procedures. Performance shown is ambient. Subtract 0.5 dB for performance over full temperature range.
- Specifications measured using typical receiver with 0.85 mA/mW, 7 pA/Hz^{0.5} performance.

Specifications subject to change without notice

Specifications (continued)

	CHP-GFXF-D (Value Line)	CHP-GFX-D
Optical		
Optical Wavelength	1310 ± 10nm	1310 ± 10nm
Optical Output Power	2, 4, 6, 8, 10, and 12dBm	13, 14, and 15 dBm
RF		
Analog Channel Range	54 to 550MHz	54 to 550MHz
Digital Channel Range	550 to 1002MHz	550 to 1002MHz
Response Flatness, P-V, typ.	1.0dB	1.0dB
Input Return Loss, min.	16 dB	16 dB
Port-to-Port Isolation	>42 dB, narrowcast to broadcast >18 dB, broadcast to narrowcast	≥60 dB from 54 to 870 MHz ≥50 dB from 870 to 1002 MHz
ADC Range	± 1.5 dB	± 3.0 dB
Powering		
Power Consumption	17.4W	17.4W
Performance		
Channel Plan	79 NTSC channels (up to 75 256-QAM channels)	79 NTSC channels (up to 75 256-QAM channels)
Analog Channel RF Input Power (Notes 1 and 2)	15 dBmV/ch	15 dBmV/ch
Digital QAM Channel RF Input Power	9 dBmV/ch	9 dBmV/ch
Composite Second Order (Notes 1 and 3)	-63 dBc	-65 dBc
Composite Triple Beat (Note 1)	-69 dBc	-70 dBc
Mechanical		
Optical Connector	SC/APC	SC/APC
RF Connector	F-type	F-type
RF Input Testpoint (Note 4)	-20 ± 1.25 dB	-20 ± 1.0 dB
Dimensions (W x H x D) (Note 5)	single-slot width 1.25 x 3.4 x 18.5 in. (3.2 x 8.7 x 47.0 cm.)	
Weight	2.75 lbs (1.24 kg)	
Environmental		
Temperature (Note 6)	Operational: 0 to 50°C (32 to 122°F); Storage: -40 to 70 °C (-40 to 158°F)	
Humidity, noncondensing, max	Operational: 85%; Storage: 95%	

Notes:

- Distortions are measured using only CW analog carriers per SCTE recommendation by standard RF test methods. Performance shown represents typical performance for ≥85% of production units tested over typical Corning SMF-28 fiber (or equivalent). For minimum CSO and CTB, subtract 2dB from typical.
- OMI is 3.9% at 79 NTSC channel loading.
- CSO performance for NTSC channels is for the in-band (high-side) beats.
- Relative to main port with 0 dB pad and 0 dB EQ.
- Includes handles and connectors.
- Operational temperature measured at transmitter module's air inlet.

Specifications subject to change without notice

C-COR™ CHP Max5000 1 GHz Fixed Output Path Transmitters

Ordering Information

							1	2	3	4	5			
C	H	P	-	G	F	X	x	-	D	-	x	x	-	S
1 Fixed Output Transmitter Type														
F							Value Line series 1GHz fixed output transmitter			a				
blank							1GHz fixed output transmitter			b				
a) Select "02", "04", "06", "08", "10", or "12" in #3-4 block, Optical Output Power														
b) Select "13", "14", or "15" in #3-4 block, Optical Output Power														
2 Optical Output Wavelength														
D							1310nm dual-input rear fiber access							
3-4 Optical Output Power														
02							Value Line fixed output power of 2dBm							
04							Value Line fixed output power of 4dBm							
06							Value Line fixed Fixed output power of 6dBm							
08							Value Line fixed Fixed output power of 8dBm							
10							Value Line fixed Fixed output power of 10dBm							
12							Value Line fixed Fixed output power of 12dBm							
13							Fixed output power of 13dBm			a				
14							Fixed output power of 14dBm			a				
15							Fixed output power of 15dBm			a				
a) GFX "13", "14", and "15" have ADC control button on the front														
5 Optical Connector														
S							SC/APC							

Contact your C-COR sales professional for the availability of the Value Line transmitters and to discuss how our exciting new 1 GHz products can add value to your network.



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