

# 80 W Ku-band GaN KRFU

## Compact and Lightweight

Designed and built for in-flight entertainment and connectivity applications.

## Highly Efficient

CPI has incorporated state-of-the-art Gallium Nitride (GaN) HEMT technology into its popular and field-proven Mini-BUC packaging. 30% to 50% more efficient than comparable GaAs-based products.

## Comprehensive M&C Functionality

Accessible anytime, anywhere via Internet or mobile phone. Integrate with SNMP to NMS. Enables effective operational management and minimizes network outage. Allows change of IP address without serial cable. Serial interface, with options for Ethernet and dual LO.

## Internal Self-Resetting Protection

Protects against high temperatures, open/short/overdrive RF output conditions, INT/EXT reference 10 MHz conditions, prime power fluctuations. RF output overdrive protection prevents damage from higher than rated input power.

## Global Applications

Meets Electromagnetic Compatibility Directive 2014/30/EU to satisfy worldwide requirements and is CE-marked.

## Worldwide Support

Backed by over 35 years of satellite communications experience, and CPI's worldwide 24-hour customer support network that includes more than 20 regional factory service centers.



### Model 8980

Ku-band GaN BUC for  
**IFEC satellite uplink applications**

#### OPTIONS

- Reverse power meter
- AC or +48V DC power supply
- Dual LO
- Ethernet interface (incl. SNMP v2c, Telnet, web)
- WR62 or WR75 output interface
- Internal reference option (Contact CPI)



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## 80 W Ku-band GaN BUC

Specification	Model 8980
Frequency	13.75 to 14.50 GHz
L-Band Input	950 to 1700 MHz
Linear Output Power (min.)	40 W (46 dBm) min, per intermodulation specification
Local Oscillator Frequency	12800 MHz (+13050 MHz with Dual LO option)
Gain at 0 dB Attenuation	75 dB $\pm$ 1.0 dB
Gain Stability Over temp., frequency set Over 24 hours, fixed temp.	$\pm$ 1.5 dB max. at 50°C, constant drive $\pm$ 2.0 dB max. $\pm$ 0.25 dB
Gain Flatness	$\pm$ 1.50 dB max. over full band; $\pm$ 0.75 dB max. over 40 MHz
Intermodulation	-25 dBc max. at 40 W output power with respect to each of two equal carriers 5 MHz apart
Spectral Regrowth	<-30 dBc @ 1.0x symbol rate, 1024 kbps, QPSK 7/8 Vit
Reference Freq. Input (external)	Type TNC Female or multiplexed on IF input
Reference Freq. Level (external)	-10 to +5 dBm
Ref. Freq. Level Meter	Yes, via M&C
IF Input Level Meter	-45 to 0 dBm, $\pm$ 0.5 dBm
Output Phase Noise	-65/Hz at 100 Hz, -75 dBc/Hz at 1 kHz, -85 dBc/Hz at 10 kHz, -95 dBc/Hz at 100 kHz
Transmit Attenuator	0 to 30 in 0.1 dB
AM/PM Conversion	2.0°/dB max. at 2 dB output backoff
Output Power Meter Range	15 dB; RF forward 32 to 47 dB; RF reverse 32 to 47 dBm
Output Power Meter Absolute Accuracy Relative Accuracy	RF $\pm$ 1 dB max. RF Rev $\pm$ 3.0 dB
Output Power Meter Modes	CW and burst with adjustable threshold
Spurious/Harmonic Output	-60 dBc max. at linear output power
Group Delay	0.03 ns/MHz linear max, 0.01 ns/MHz <sup>2</sup> parabolix max, 1.0 ns pk-pk ripple max. in any 80 MHz band
Prime Power	DC: 48V (36 to 60V, turn-on @ 40V min) AC (WF); 115 VAC, 360 to 800 Hz Note: can be powered from standard 110-240 VAC AC mains
Power Consumption	380 W at linear output power typ, 500 W max.
Ambient Temperature	-15 to +55 operating, -40°C to +70°C short term (de-rated) operation
Relative Humidity	100% condensing
Weatherproofing	Weatherproof vented enclosure
Altitude (operating)	5000 m (15,000 ft)
Shock and Vibration	20 g peak, 11 msec, 1/2 sine; 2.1 g <sub>rms</sub> , 5 to 500 Hz; DO -160 Vibration S2C, Shock B
RF Output Connection	WR-62 MIL-DTL-3922/59-2/001, grooved, 6/32 threaded holes
L-Band Input Connection	Type TNC female
M&C Interface	LAN (Ethernet standard, incl SNMP v2c protocol and others); Serial RS-232 or RS422/485
Connectors	AC Inlet Connector: Amphenol Aerospace TVPS00RF-13-4P DC Inlet: TBD Mating Connector (on AC loom): Amphenol Aerospace TVPS06RF-13-4S M&C Connector: Amphenol Aerospace TVPS00RF-13-35P Mating Connector (on loom): Amphenol Aerospace TVPS06RF-13-22
Dimensions, L x W x H (not including connectors, isolator or top screws, contact CPI for outline drawing if needed)	270 x 182 x 151 mm (10.6" x 7.2" x 5.9")
Weight	10 kg (22 lbs)