

# 10 and 20 W C-Band Mini-BUCs

## Compact and Lightweight

Designed and built with VSAT stabilized antenna platforms and other similar satcom-on-the-move customer applications in mind.

## Low Cost, High Performance

Designed for operation in high ambient temperature environments, with superior phase noise performance. Guaranteed specified minimum P1dB power.

## 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. Quad LO, serial and LAN interface.

## Internal Self-Resetting Protection

Protects against high temperatures, open/short output conditions.

## Global Applications

Meets Electromagnetic Compatibility Directive 2004/108/EC 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.



## Models 4710 and 4720

10/20 watt C-band LAN mini-BUCs for **satellite uplink applications**

### OPTIONS

- Multi-band BUC - select from multiple factory-set frequency bands within C-band
- Auto-sensing, high stability internal 10 MHz OCXO reference of external multiplexed 10 MHz reference standard
- 1:1 redundant switching - BUC is configured for 1:1 systems as standard. System hardware is sold separately.



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## 10 and 20 W C-Band LAN Mini-BUCs

Specification	Model 4710	Model 4720
Frequency	5.850 to 6.425 GHz, or 5.850 to 6.725 GHz	
L-Band Input	950 to 1525 MHz or 950 to 1825 MHz	
RF Output Power, P1dB	10 W min. (40 dBm)	20 W min. (43 dBm)
Local Oscillator Frequency	4900 and 4975 MHz (with extended band option user may also select 5200 and 5275 MHz)	
Gain at 0 dB Attenuation	70 dB $\pm$ 2.0 dB	
Gain Stability Over any 50°C range, freq. set Over temp, frequency set Over 24 hours	$\pm$ 1.5 dB max. $\pm$ 2.0 dB max. $\pm$ 0.25 dB (fixed temperature and constant drive)	
Gain Flatness Over Any 40 MHz	$\pm$ 1.0 dB max.	
Gain Flatness Over Full Band	$\pm$ 2.0 dB max.	
Intermodulation	-25 dBc max. with respect to each of two equal carriers 5 MHz apart	
VSWR	Input and output: 14 dB return loss, 1.5:1 max.	
Spectral Regrowth	<-30 dBc @ 1.0x symbol rate, 1024 kbps, QPSK 7/8 VIT	
Reference Frequency	10 MHz (internal reference option available)	
Reference Freq. Input (external)	Multiplexed on N-type transmit IF input	
Reference Freq. Level (external)	-10 to +5 dBm	
Ref. Freq. Level Meter	Yes, via M&C	
IF Input Level Meter	-5 to -45 dBm, $\pm$ 2.0 dBm	
Output Phase Noise	-65 dBc/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 20 in 0.25 dB steps	
AM/PM Conversion	2.0°/dB max. at 2 dB output backoff	
Output Power Meter	Range: 15 dB; Absolute Accuracy: $\pm$ 1 dB max. when compensation frequency compensation set; Relative Accuracy: $\pm$ 0.5 dB max. when compensation frequency compensation set; Modes: CW and burst with adjustable threshold	
Spurious	-55 dBc max. at linear output power	
Group Delay	0.03 ns/MHz linear max, 0.01 ns/MHz <sup>2</sup> parabolic max, 1.0 ns pk-pk ripple max. in any 36 MHz band	
Power Supply Voltage	18 to 60 V DC via IF/IP and external DC connector	
Power Supply Turn-On Voltage	+ 20 VDC	Min. input voltage via IF +29 VDC to permit Tx on (IF connector limited to 5 A)
Power Consumption	75 watts typ. at P <sub>LIN</sub> , 90 watts max.	100 watts typ. at P <sub>LIN</sub> , 130 watts max.
Ambient Temperature	-40°C to +60°C operating, -40°C to +70°C non-operating	
Relative Humidity	100% condensing	
Altitude	5000 m operating (16,400 ft)	
Shock and Vibration	20 g peak, 11 msec, 1/2 sine; 2.1 g <sub>rms</sub> , 5 to 500 Hz	
RF Output Connection	WR-137G with tapped M5	
M&C Interface	FSK, RS-232, RS485 (2-wire); LAN	
M&C Protocols	ASCII, NDSatcom v1, SABus, Codan packet, Telnet, SNMP v1, WEB GUI	
Dimensions, L x W x H	247 x 151 x 85 mm (9.72" x 5.9" x 3.5"), contact CPI for outline drawing if needed.	
Weight	2.6 kg (5.7 lbs) typ.	

## 10 and 20 W C-band Mini-BUCs

## Configure your C-band Mini-BUC

Configuring your BUC is easy. For this product, most of the configuration is predetermined. All that is left is to indicate output power, whether the LAN option is required, which frequency range is needed, and whether internal reference is required. Instructions follow:

Box 1: Model number/desired power

- Enter "4710" for 10 watt model
- Enter "4720" for 20 watt model

Box 2: LAN configuration

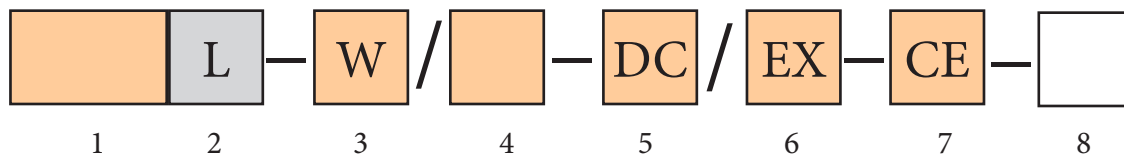
- "L" is entered here because the LAN option is standard
- Contact CPI if LAN option is not desired

Box 4: Frequency range (within Ku-band)

- Enter "S" for 5.850 to 6.425 GHz
- Enter "E" for 5.850 to 6.725 GHz

Box 8: Internal reference

- Enter "R" only if internal reference option is selected
- LEAVE BLANK if internal reference option is not selected



Examples: 4720L-W/S-DC/EX-CE-R indicates a 20 W BUC with the LAN option, a frequency range of 5.850 to 6.425 GHz and internal reference.  
 4710L-W/E-DC/EX-CE indicates a 10 W BUC with a frequency range of 5.850 to 6.725 GHz, with LAN but no internal reference.

Notes: Box 3 indicates a waveguide RF output connection. Box 5 indicates that this product is DC powered. Box 6 indicates that power is fed via an external connector. Box 7 indicates that this product is CE marked.