

C-Band 7700 Series RBUCs

Features at a Glance

- Ideally suited to rapid deploy or offshore applications
- Includes entire feature set of existing BUC families
- Uniquely designed cooling system
- AC and DC powered versions
- Suitable 48 VDC power supplies available as options
- Available in single thread and 1+1 redundant configurations



Product photo is representative; actual product sold may vary slightly from this product photo.

Rugged

Design MTBF exceeds 100,000 hours. IP66 rating against water and dust storms. Dual cooling fans for redundancy. Sealed to 34 kPa (5 psi)

Most Comprehensive M&C

Ethernet (HTTP web server, Telnet and SNMP). RS232, RS422/485 serial interface, FSK, dry contact closure, RF power meter. Large selection of management protocols also included.

Global Applications

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

Worldwide Support

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

7700 Series

100 W and 200 W BUCs for maritime, VSAT and SOTM satellite uplink applications

OPTIONS

- 1:1 redundant switching
- One-stop shop for complete satellite system (refer to BUC accessories data sheet)
- LAN Interface
- FSK to USB interface
- Reference Source
- Handheld Controller
- Remote Controller
- LNBS
- Waveguide Components



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100 and 200 W C-band RBUCs

Model Number	7710H	7720H	
RF Power Rating	100 watts	200 watts	
Platform	AC powered		
RF Input Connector	N-type		
RF Output Connector	WR-137, CPR-137G flange		
VSWR (max.)	1.7:1 output, 1.5:1 input		
RF Output Frequency Range (GHz)	5.850 - 6.725	5.850 - 6.425	5.850 - 6.725
RF Input Frequency Range (MHz)	950 - 1825	950 - 1525	950 - 1825
LO Frequency (MHz)	7300, 7375, 7600 & 7675	7300 & 7375	7300, 7375, 7600 & 7675
Transmit Attenuator Steps	0 dB to 15 dB in 1 dB steps		
IF Input Impedance	50 Ω		
IF Input Power @1 dB GCP, CW and max. gain	-31 dBm nominal		
RF Output Power @1 dB GCP, CW (min)	49.5 dBm	53.0 dBm	52.5 dBm
Gain @0 dB Attenuation	84 dB nom.	87 dB nom.	
Gain Flatness	± 0.75 dB max. over any 40 MHz band; ± 1.50 dB max. over full band		
Gain Stability Over any 50°C Temperature Range	± 1.50 dB max. when frequency set		
Gain Stability Over Full Temperature Range (freq. set)	± 2.0 dB max.		
Gain Stability Over Full Temperature Range (freq. not set)	± 3.0 dB max.	± 3.0 dB max.	
Intermodulation	-25 dBc with respect to each of two carriers @6 dB OBO		
Spurious/Harmonic Output	-50 dBc max. @ 3 dB OBO		
AM/PM Conversion	2.0°/dB max @ 2 dB OPBO		
Reference Frequency (external)	10 MHz		
Ref. Frequency Input (external)	Multiplexed on N-type transmit IF input		
Reference Frequency Level	-10 to +5 dBm		
Reference Frequency Connector	Via N-type transmit IF input		
Frequency Conversion	Inverting		
Maximum Phase Noise (SSB) of Reference Frequency	-135 dBc/Hz at 100 Hz -145 dBc/Hz at 1 kHz -155 dBc/Hz at 10 kHz -155 dBc/Hz at 100 kHz		
Phase noise (SSB) of BUC with reference frequency defined above	-63 dBc/Hz at 100 Hz -73 dBc/Hz at 1 kHz -83 dBc/Hz at 10 kHz -93 dBc/Hz at 100 kHz		
Output Power Meter Range	15 dB		
Output Power Meter Absolute Accuracy	± 1.0 dB max. when compensation frequency set; ± 2.0 dB max. when compensation frequency not set		
Output Power Meter Relative Accuracy	± 0.5 dB max. when compensation frequency set; ± 1.0 dB max. when compensation frequency not set		
Power Meter Modes	CW and burst (>100 μ s) with adjustable threshold		
Power Supply Voltage	95 to 275 VAC via Amphenol T 3110 000	176 to 275 VAC via Amphenol T 3110 000	

100 and 200 W C-band RBUCs

Model Number	7710H	7720H
Power Supply Minimum Turn On Voltage	N/A	
Monitor and Control		
Ethernet Interface	TCP/IP Protocol, 10/100 BaseT via 8 pin 62IN-16J-10-8S-622 connector to RJ45 Embedded HTTP Web server, Telnet, and SNMP	
Digital data format RS232	9600 bps, 8 bits, no parity, 1 stop bit, ASCII protocol	
Digital data format RS485	User selectable protocols	
Digital connector	MIL-C-26482 12-14S socket	
FSK data format	User selectable protocols	
FSK data transmitter frequency	650 kHz $\pm 1\%$	
FSK data transmitter deviation	± 60 kHz $\pm 1\%$	
FSK data transmitter sense	+60 kHz=mark; -60 kHz=space	
FSK output level	-8 dB nominal	
FSK start tone time	10 ms min	
FSK data receiver		
nominal frequency	650 kHz	
FSK data receiver locking range	± 30 kHz	
FSK data receiver input sensitivity	-15 dBm min	
Temperature Range	-40 to +55°C operating, -40 to +70°C non-operating	
Relative Humidity	100% condensing	
Weatherproofing	Sealed to 34 kPa	
Power Supply Consumption	560 W typ, 700 W max.	1000 W typ, 1200 W max.
Volume (L x W x H)	402 x 198 x 170 mm (15.8" x 7.8" x 6.7")	490 x 220 x 220 mm (19.3" x 8.7" x 8.7")
Weight	13 kg (28.7 lbs)	23 kg (50.7 lbs)

100 and 200 W C-band RBUCs

Configure your 7700 Series RBUC

Configuring your RBUC is easy. Much of the configuration is already predetermined. All you need to determine is output power level, and if you are configuring the 200 W version, which frequency range you require.

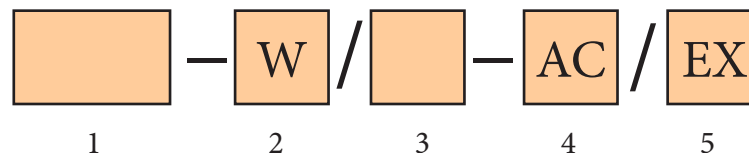
Box 1: Output Power Level/Model Number

- Enter "7710H" for 100 W model
- Enter "7720H" for 200 W model

Box 3: Output frequency range

- Enter "S" for 5.850 to 6.425 GHz (**not available on 100 W version**)
- Enter "E" for 5.850 to 6.725 GHz

C-Band



Examples: 7710H-W/E-AC/EX indicates a 100 W C-band RBUC operating in the 5.850 to 6.725 GHz frequency range. 7720-W/S-AC/EX indicates a 200 W C-band RBUC operating in the 5.850 to 6.425 GHz frequency range.

Notes: Box 2 indicates a waveguide RF output connection. Box 4 indicates that this product requires AC prime power. Box 5 indicates that power is fed via an external connector. As of March 2019, the Ku-band RBUC, and the 100 W C-band 5.850 to 6.425 GHz RBUC, are no longer available.