



KEY FEATURES

Configuration options

- Standalone
- Redundant 1+1
- Optional AC Power Supply

Complimentary Range of BUCs

- 4 W, 8 W, 16 W and 25 W BUCs also available
- Identical mounting and accessories

Best lead times

- Typical availability under 2 weeks
- Ability to rapidly ramp up for larger requirements

Best support

- 24x7 Customer Support line
- Worldwide technical support team



Ku-Band Low power Block Up Converter

Rapid deploy Block Up Converter 7900 series

Codan's new Rapid deploy Block Up Converter (RBUC) is purpose-built for *satcom-on-the-move* customers, while also offering benefits for fixed site and offshore applications.

KEY FEATURES

IDEALLY SUITED TO RAPID DEPLOYMENT OR OFFSHORE APPLICATIONS

INCLUDES ENTIRE FEATURE SET OF EXISTING LBUC FAMILY

UNIQUELY DESIGNED COOLING SYSTEM

DC POWER VIA SEPARATE CONNECTOR

SEPARATE POWER SUPPLY AVAILABLE FOR AC POWER APPLICATIONS

AVAILABLE IN SINGLE THREAD & 1+1 REDUNDANT CONFIGURATIONS

Rugged & reliable

- Design MTBF exceeds 100,000 hours
- IP67 rating that provides protection under water or in a dust storm
- Unique thermal design
- Machined, lighter casing
- Dual cooling fans for redundant operation
- Sealed to 34 kPa (5 Psi)

Best RF power efficiency

- 40 W of power at P1dB for under 7 kg (15 lb)
- 40 W of RF power for 450 W of consumption

Specifically designed

- Military applications
- Broadcast applications
- Size-limited applications
- Highly-mobile ground systems
- Remote area, install-and-forget applications
- Harsh environment operation

Guaranteed specifications

Guaranteed operation to specifications throughout the environmental operating range:

- Temperature (-40°C to +55°C)
- Humidity (100%)

Most comprehensive Monitor & Control

- RS232
- RS422/485
- FSK
- Dry-contact closure
- Ethernet (*Coming Soon*)

A large choice of management protocols are also built into the RBUC.

Standards compliance

- Designed for compliance to all type-approval standards including CE, RoHS, and WEEE

Unique thermal design

Unique billet aluminium casing that offers:

- Reduced weight
- Highly efficient cooling fins in "sandwich" design
- Huge increase in thermal efficiency



Rapid deploy Block Up Converter

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SPECIFICATIONS

Power rating	40 W	
Platform	DC-powered	
Model numbers	7940-W/S-48/EX	7940-W/E-48/EX
RF output frequency range	14000 to 14500 MHz	13750 to 14500 MHz
RF output connector	WR75, PBR120 flange with 4.2 mm through holes	
RF output VSWR	1.5:1 max	
RF output power @ 1 dB GCP	+46.0 dBm min	+45.5 dBm min
RF output IMD ratio with 2 carriers each at 9 dB OPBO	-24 dBc min (+47.0 dBm typical)	-31 dBc min
LO frequency	13050 MHz	12800 MHz
Reference frequency	10 MHz	
Reference frequency input	Multiplexed on transmit IF input	
Reference frequency level	-10 to +5 dBm	
Reference frequency connector	Via transmit IF input	
Frequency conversion	Spectrum non-inverting	
Gain	77 dB nominal	
Gain flatness over any 40 MHz band	±1.50 dB max	
Gain flatness over full band	±2.50 dB max	
Gain stability over any 50°C temperature range	±1.50 dB max	
Gain stability over entire temperature range when frequency set	±2.0 dB max	
Gain stability over entire temperature range when frequency not set	±3.0 dB max	
Input frequency range	950 to 1450 MHz	950 to 1700 MHz
Output power meter range	15 dB	
Output power meter absolute accuracy when compensation frequency set	±1.0 dB max	
Output power meter absolute accuracy when compensation frequency not set	±2.0 dB max	
Output power meter relative accuracy when compensation frequency set	±0.5 dB max	
Output power meter relative accuracy when compensation frequency not set	±1.0 dB max	
Power meter modes	CW and burst with adjustable threshold	
Power supply voltage @ 48 V	+36 V to +72 V DC via external DC connector	

Power supply minimum turn-on voltage @ 48 V	+41 V
Power supply consumption	500 W max
Volume (for waveguide output BUCs)	335 mm L x 182 mm W x 180 mm H
Weight	7.0 kg max
IF input connector	N-type
IF input impedance	50 Ω
IF input VSWR	1.7:1 max
Transmit attenuator steps	0 dB to 15 dB in 1 dB steps
Spurious output @ 3 dB OPBO	-50 dBc max
* Maximum phase noise (SSB) of reference frequency:	
100 Hz	-135 dBc/Hz
1 kHz	-145 dBc/Hz
10 kHz	-155 dBc/Hz
100 kHz	-155 dBc/Hz
Maximum phase noise (SSB) of BUC:	
100 Hz	-63 dBc/Hz
1 kHz	-73 dBc/Hz
10 kHz	-83 dBc/Hz
100 kHz	-93 dBc/Hz
Group Delay	
Linear (over any 10 MHz band)	2 nsec _{pp} max
Parabolic (over any 80 MHz band)	0.00025 nsec/MHz ² max
Ripple (over full band)	1 nsec _{pp} max
AM/PM conversion	2.0°/dB max @ 2 dB OPBO
Monitor & Control	
FSK data format	User selectable
FSK data transmitter frequency	650 kHz ±1%
FSK data transmitter deviation	±60 kHz ±1%
FSK data transmitter sense	+60 kHz=mark; -60 kHz=space
FSK output level	-3 dB nominal
FSK start tone time	10 ms minimum
FSK data receiver nominal frequency	650 kHz
FSK data receiver locking range	±30 kHz
FSK data receiver input sensitivity	-15 dBm minimum
Digital data format RS232	9600 bps, 8 bits, no parity, 1 stop bit, ASCII protocol
Digital data format RS485	User selectable
Digital connector	MIL-C-26482 12-14S socket
Operating temperature range	-40 to +55°C
Relative humidity	100%
Weatherproofing	Sealed to 34 kPa