world's best RF subsystems.
SATELLITE COMMUNICATIONS

CODAN

Ku-Band Block Up Converter 7900 series (25/40 W RBUCs)

↗ FEATURES AT A GLANCE

- Ideally suited to rapid deploy or offshore applications
- Includes entire feature set of existing LBUC and MBUC families
- Uniquely designed cooling system
- DC power via separate connector
- Separate power supplies available for AC power applications
- Available in single thread and 1+1 redundant configurations

Codan's new Ku-Band RBUC is purpose-built for satcom-on-the-move customers, while also offering benefits for fixed site and offshore applications.

Ku-Band Block Up Converter 7900 series

Rugged & Reliable

- Design MTBF exceeds 100,000 hours
- IP67 rating that provides protection under water or in a dust storm
- 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 <500 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
- RF Power Meter
- 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 with a machined, lighter casing
- Highly efficient cooling fins in "sandwich" design
- Huge increase in thermal efficiency

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Specifications

RF Power Rating	25 W		40 W
Platform	DC-powered		
Model numbers	7925-W/S-48/EX (Std Band) 7925-W/E-48/EX (Ext Band)		7940-W/S-48/EX (Std Band) 7940-W/E-48/EX (*Extended Band Coming Soon*)
RF output connector	WR75, PBR120 flange		
RF output VSWR	1.5:1 max		
RF output frequency range	Standard Band 14.0 to 14.5 GHz	Extended Band 13.75 to 14.5 GHz	Standard Band 14.0 to 14.5 GHz
RF output power @ 1 dB GCP	+43.4 dBm min	+43.0 dBm min	+46.0 dBm min
LO frequency	13.05 GHz	12.8 GHz	13.05 GHz
Gain	74 dB nominal		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 when frequency set	±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		
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		
Output power meter range	10 dB		N/A
Output power meter absolute accuracy when compensation frequency set	±1.0 dB max		N/A
Output power meter absolute accuracy when compensation frequency not set	±2.0 dB max		N/A
Output power meter relative accuracy when compensation frequency set	±0.5 dB max		N/A
Output power meter relative accuracy when compensation frequency not set	±1.0 dB max		N/A
Power meter modes	CW and burst with adjustable threshold		N/A
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	300 W max		500 W max

Specifications

RF Power Rating	25 W		40 W
Input frequency range	950 to 1450 MHz	950 to 1700 MHz	950 to 1450 MHz
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		
RF output IMD ratio with 2 carriers each at 9 dB OPBO	–31 dBc min		
Spurious/Harmonic 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		
Phase noise (SSB) of BUC with frequency reference defined above*:			
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)	$0.00025\ nsec/MHz^2{}_{pp}$ 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	–8 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		
Volume (for waveguide output BUCs)	317 mm L x 182 mm W x 150 mm H	360 mm L x 182 mm W x 150 mm H	
Weight	7.0 kg max		
Operating temperature range	–40 to +55°C		
Relative humidity	100%		
Weatherproofing	Sealed to 34 kPa		

Values noted are typical. Equipment descriptions and specifications are subject to change without notice or obligation.

Ku-Band Block Up Converter 7900 series (25/40 W RBUCs)

Configuration Options

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

Complementary Range of Ku-Band BUCs

- Also available 4 W, 8 W, 16 W and 25 W Ku-Band BUCs
- Identical mounting and accessories

Best Lead Times

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

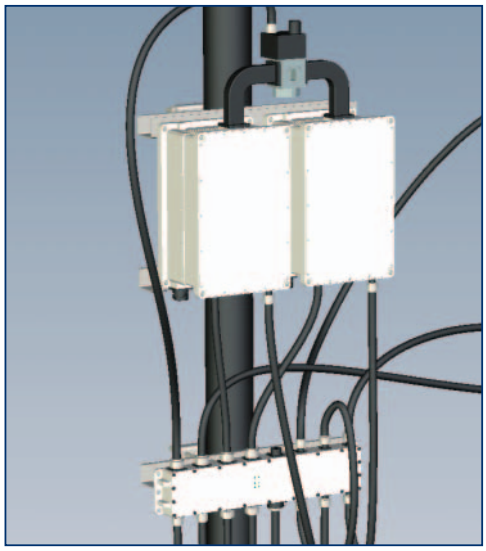
Best Support

- 24x7 Customer Support line
- Worldwide technical support team

Boom-mounted RBUC

6582 Transformer Power Supply Unit

From Back Left to Front: 7940 RBUC, 7580 Switch Mode Power Supply & 7586 Redundancy Controller



Pole-mounted 7586 Redundancy System (Coming Soon)

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