

# 60-80W C-BAND ONE-BOX-DESIGN BUC



## SATELLITE COMMUNICATIONS

### EVEN MORE POWER FOR YOUR BUC

The new generation of Mitec VSAT Block Up-Converters comes with an integrated BUC/Booster package and designed for high efficiency resulting in an optimal compact form factor and lightweight with high performance and reliability. With the advanced customer interface and HTTP embedded web page, the operator is able to monitor and control the BUC and the System redundancy from a web browser.

Firmware version: 216142-001  
Revision: 01

BLOCK UP CONVERTERS AND REDUNDANT SYSTEMS

HOME CONFIG HELP

Main Alarm Log

Uplink  
Downlink  
**BUC Standalone**  
BUC A  
BUC B

Status	
Output power	46.2 dBm
Temperature	52.5 °C
Input voltage	47.8 VDC
Gain	72 dB
Mute	Unmuted
Summary alarm	OK

Controls

Mute  Mute  Unmute

Gain  dB

Alarm Details	
Out of lock	OK
Temperature	OK
Input voltage	OK
Power supply	OK

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### KEY FEATURES

- Compact size and light weight
- Offered in 5 C-Bands
  - Band 1: Standard 5.850-6.425 GHz
  - Band 2: Super Extended 5.850-6.725 GHz
  - Band 3: Low Extended 5.725-6.425 GHz
  - Band 4 INSAT: 6.725-7.025 GHz
  - Band 5: Palapa: 6.425-6725 GHz
- Best in Class efficiency with less than 420W draw for 60W RF Output and 460W draw for 80W RF Output
- Easy to install
- High thermal dissipation efficiency resulting in "Best in Class" Mean Time Before Failure (MTBF)
- Superior phase noise, 5 dB better than IESS 308 /309
- 1:1 switching logic built into the BUC eliminating expensive external controller
- Built-in facilities for critical parameters such as: RF power detection, mute control, over temperature shutdown, summary alarm
- HTTP Hosting
- SNMP
- TELNET through TCP/IP
- RS485, RS232, Ethernet and Dry-Contacts M&C interface

# 60-80W C-BAND BUC

## TRANSMIT CHARACTERISTICS

	60 W	80 W
Output Frequency Range	Band 1: 5.850-6.425 MHz; Band 2: 5.850-6.725 GHz; Band 3: 5.725-6.425 GHz; Band 4: 6.725-7.025 GHz; Band 5: 6.425-6.725 GHz	
Input Frequency Range	Band 1: 950-1525 MHz; Band 2: 950-1825 MHz; Band 3: 975-1675 MHz; Band 4: 1275-1575 MHz; Band 5: 975-1275 MHz	
LO Frequency	Bands 1 & 2: 4.9 GHz; Band 3: 4.75 GHz; Bands 4 & 5: 5.45 GHz	
Conversion Type	Single stage, Non-inverting	
RF Output at 1 dB GCP	48 dBm min.	49 dBm min. (See note 1)
Small Signal Gain	75 dB min.	
User Adjustable Gain	20 dB in 0.1 steps	
Gain Stability over temperature range	Bands 1, 4 & 5: $\pm 1.5$ dB max.; Bands 2 & 3: $\pm 2.0$ dB max.	
Gain Variation at fixed temperature	Over full band: Bands 1, 4 & 5: $\pm 2.0$ dB ; Band 2: $\pm 2.50$ dB; Band 3: $\pm 2.25$ dB Over 40 MHz: $\pm 0.5$ dB for all bands	
Intermodulation	-26 dBc max. @ 3 dB Back-Off from P1 dB	
10 MHz Reference (via IF connector)	0 dBm $\pm 5$ dB (internal reference optional)	
L.O. Phase Noise	-35 dBc/Hz max @ 10 Hz; -65 dBc/Hz max @ 100 Hz; -75 dBc/Hz max @ 1 KHz; -85 dBc/Hz max @ 10 KHz; -95 dBc/Hz max @ 100 KHz; -105 dBc/Hz max @ 1 MHz	
Output Spurious	Bands 1, 3, 4 & 5: -60 dBc; Band 2: -45 dBc	
Receive Noise Power Density	-150 dBm/Hz	
Input IF Impedance	50 Ohms	
Power Requirements	90-265 VAC, + or - 48 VDC	
Power Consumption (at rated power)	420W	460W

## INTERFACE

Output Interface	Waveguide, WR137-G (Grooved)
Input Interface	N-type, female, 50 Ohms, (IF/10 MHz)
AC or DC Power Connector	MS Connector
M&C (RS485/RS2432/Ethernet)	MS Connector
RF Sample Port	N-type, Female

## MECHANICAL

Cooling	Forced Air
Dimensions (L x W x H)	12.0 x 7.7 x 7.0 inches (304.8x 195.58 x 177.80 mm)
Weight	27.5 lbs (12.5 kg)

## ENVIRONMENTAL

Temperature Range (ambient)	-40° to +55°C (operating), -40° to +75°C (storage)
Humidity	0 to 100% (condensing)
Altitude	10000 ft. ASL

**Note 1:** RF Power at 1dB GCP for Bands 2 & 3 is 49 dBm min. from 5.850 to 6.425 GHz and 48.5 dBm min. for the rest of the Band.

## ORDERING INFORMATION\*

Band 1 Block Upconverter	MTX-596448-75-ES-XX	MTX-596449-75-ES-XX
Band 2 Block Upconverter	MTX-596748-75-ES-XX	MTX-596749-75-ES-XX
Band 3 Block Upconverter	MTX-576448-75-ES-XX	MTX-576449-75-ES-XX
Band 4 Block Upconverter	MTX-677048-75-ES-XX	MTX-677049-75-ES-XX
Band 5 Block Upconverter	MTX-646748-75-ES-XX	MTX-646749-75-ES-XX

\*When ordering, replace "-XX" by one of the following options:

- 50: External Reference, AC Power
- 57: Internal Reference, AC Power
- 40: External Reference, DC Power
- 47: Internal Reference, DC Power

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