

# X-BAND MINI BLOCK UP CONVERTER (MBUC)

ACMB-X Medium Power Series (80/100W)



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**ACMB-X Series consists of integrated RF Block Up Converters (BUCs), designed for X-band satellite communication systems. All products in this series have been tested and calibrated between -20°C and +60°C, so they assure very good gain stability with temperature.**

**ACMB-X Series also includes a temperature alarm and power supply shutdown to protect the amplifier from permanent damages in high temperature conditions. Moreover, ACMB-X could be configured with AC or DC power supply, easy to change in field without tools. This MBUC allows communication via serial port (RS232/RS485), but TCP/IP, SNMP and FSK could be selected as options.**

## TRANSMITTER SPECIFICATIONS

Input frequency.....	950 - 1450 MHz
Input impedance.....	50 Ω
Input L-band VSWR.....	< 1.5:1
Output frequency.....	7.9 - 8.4 GHz
Output impedance.....	50 Ω
Output X-band VSWR.....	< 1.3:1
Spectrum inversion.....	None

Transmit Characteristics @ 25°C	P1dB (min)	Gain	Power Consumption	Size (LxWxH)	Weight
ACMB-X80W-E1-V2	49.0 dBm	74 dB min	600 W	320 x 207 x 145 mm	10.0 kg
ACMB-X100W-E1-V2	50.0 dBm	74 dB min	650 W	12.6 x 8.1 x 5.7 inches	22.0 lbs

Gain flatness over 500 MHz.....	± 1.5 dB
Gain flatness over 40 MHz.....	± 0.5 dB
Gain stability over 24h.....	≤ 0.5 dB @ constant temp.
Gain variation over temperature.....	± 1.5 dB
Attenuation range.....	20 dB with 0.5 dB step
Mute.....	> 50 dB
Noise figure.....	≤ 15 dB @ maximum gain
Output noise.....	≤ -80 dBm/Hz (7.25-7.75 GHz)
Spurious.....	< -60 dBc @ Pout = P1dB
Intermodulation products.....	< -25 dBc 2 tones Δf=5MHz for Pout=P1dB-3 dB

## LOCAL OSCILLATOR

Local oscillator frequency.....	6.950 GHz
Output phase noise minimum (IESS-308/309 – 8 dB):	
100 Hz .....	-70 dBc/Hz
1 kHz.....	-78 dBc/Hz
10 kHz.....	-88 dBc/Hz
100 kHz.....	-110 dBc/Hz
Reference frequency.....	10 MHz
Reference mode .....	External
Reference level.....	0 ± 3 dBm (multiplexed on L-band)

## POWER SUPPLY

AC input .....	85-264 V <sub>AC</sub> (47-63 Hz)	(48 V <sub>DC</sub> as option)
Power consumption .....	600 / 650 W	@ P1dB

## ENVIRONMENTAL SPECIFICATIONS

Storage temperature.....	-40 to +85°C	
Operating temperature.....	-20 to +60°C	(-40 to +60°C as option)
Relative humidity .....	Up to 95%	
Operating altitude.....	Up to 3500 m	

## MECHANICAL SPECIFICATIONS

Interfaces:		
Input (L-band+Ext.Ref.): .....	Type N(f)	
Output (X-band): .....	WR112 CPRG flange	
M&C (RS232/485): .....	62IN12E12-14S-4-622	(mating connector provided)
M&C (IP/SNMP): .....	62IN12E12-8S-4-622	(mating connector provided)
Supply .....	62IN12E12-3P-4-622	(mating connector provided)
Dimensions (excluding isolator) .....	320 x 207 x 145 mm / 12.6 x 8.1 x 5.7 inches	
Weight .....	10.0 kg / 22.0 lbs	
Cooling system.....	Forced-air integrated	

## OPTIONS

MP1: .....	48 V <sub>DC</sub> power supply
MP2: .....	Internal reference (with automatic external selection on presence)
MP3: .....	Operating temperature -40 to +60°C
MP4: .....	Ethernet interface (TCP/IP)
MP5: .....	SNMP Agent
MP6: .....	FSK communication multiplexed on L-band
MPC: .....	Custom design