



The **ACMTR-X family** of BUCs is designed for the most challenging X-band **professional & military** satellite communication systems (ground, SOTP, SOTM, maritime, etc.). Latest technology is applied to obtain the best linearity, phase noise, gain stability and linear power according to **MIL-STD-188-164C**. The ACMTR-X family is a **high reliability** solution designed for **harsh environmental conditions**, with every single production unit **fully tested** in an environmental chamber and delivered with a complete factory acceptance test report.

#### TRANSMITTER SPECIFICATIONS

Input frequency .....	950 to 1450 MHz
Input L-Band VSWR (50 Ω) .....	< 1.5:1
Output frequency .....	7.9 to 8.4 GHz
Output X-band VSWR (50 Ω) .....	< 1.3:1 (external waveguide isolator)
Spectrum inversion .....	None
Max. input level without damage .....	+10 dBm
P1dB (min) .....	50.0 dBm
Gain .....	74 dB min
Gain flatness .....	±1.5 dB over whole BW ±0.5 dB over 40 MHz
Gain stability (24 hours) .....	±0.25 dB @ const. temp.
Gain variation over temperature .....	±1.5 dB (±2.0 dB option MP3)
Attenuation adjustment range .....	20 dB with 0.5 dB steps
Mute .....	> 50 dB
Noise figure .....	≤ 15 dB @ max. gain
Output noise power density.....	< -80 dBm/Hz (7.25-7.75 GHz)
Spurious @ P1dB .....	< -60 dBc
Harmonics @ P1dB .....	< -50 dBc
Mains related spurious .....	< -35 dBc
SSB added spurious .....	< -41 dBc
TOI @ P1dB - 3 dB .....	< -25 dBc (2 tones Δf=5 MHz)
Sample port .....	-40 dBc ± 2 dB

#### RECEIVER SPECIFICATIONS

Input frequency .....	7.25 to 7.75 GHz
Input X-Band VSWR (50 Ω) .....	< 1.5:1
Output frequency .....	950 to 1450 MHz
Output L-band VSWR (50 Ω) .....	< 1.5:1
P1dB (min) .....	+5 dBm
Gain .....	40 dB min
Gain flatness .....	±1.5 dB over whole BW ±0.5 dB over 40 MHz
Gain stability (24 hours) .....	±0.25 dB @ const. temp.
Gain variation over temperature .....	±1.5 dB (±2.0 dB option MP3)
Attenuation adjustment range .....	20 dB with 0.5 dB steps
Noise figure .....	≤ 15 dB @ max. gain
Dependent spurious .....	< -60 dBc @ P <sub>OUT</sub> = 0 dBm
Independent spurious .....	< -60 dBm
LNA power supply .....	+15 V <sub>DC</sub> (500 mA max.)
LNA alarm .....	Current sensing

#### LOCAL OSCILLATOR

Output phase noise (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
External reference .....	10 MHz (0 dBm ± 3 dB)

#### POWER SUPPLY

AC input voltage .....	85-265 V <sub>AC</sub> (47-63 Hz)
Consumption .....	650 W @ P1dB

#### MECHANICAL SPECIFICATIONS

Size (LxWxH) .....	320 x 207 x 145 mm	12.6 x 8.1 x 5.7 in
Weight .....	10.5 kg	23.1 lbs
Finish .....	RAL 9003 (White)	

#### ENVIRONMENTAL SPECIFICATIONS

Storage temperature .....	-40 °C to +85 °C
Operating temperature .....	-20 °C to +60 °C
Relative humidity .....	up to 95%
Operating altitude .....	up to 3000 m

#### INTERFACES

*All mating connectors provided*

TX input (L-Band + Ext. Ref.) .....	Type N(F) 50 Ω
TX output (X-Band) .....	WR112 CPRG flange
TX output sample (X-Band) .....	Type N(F) 50 Ω
RX input (X-Band) .....	Type N(F) 50 Ω
RX output (L-Band) .....	Type N(F) 50 Ω
M&C (RS232/485) .....	62IN12E12-14S-4-622
M&C (Ethernet/SNMP) .....	62IN12E12-8S-4-622 (as option)
Power supply .....	62IN12E12-3P-4-622
LNA Power supply .....	62IN12E8-4S-4-622

#### OPTIONS

X-band	L-band	LO freq.	Standard freq. option
7.90 to 8.40 GHz	950 to 1450 MHz	6.950 GHz	ACMTR-X100W-E1-V2
7.25 to 7.75 GHz	950 to 1450 MHz	6.300 GHz	

MP1 .....	48 V <sub>DC</sub>
MP2 .....	Internal reference (Auto external on presence)
MP3 .....	Operating temperature -40 °C to +60 °C
MP4 .....	Ethernet interface (TCP/IP)
MP5 .....	SNMP Agent