



# X-BAND UP CONVERTER

Model No: US/UC/70-X/A



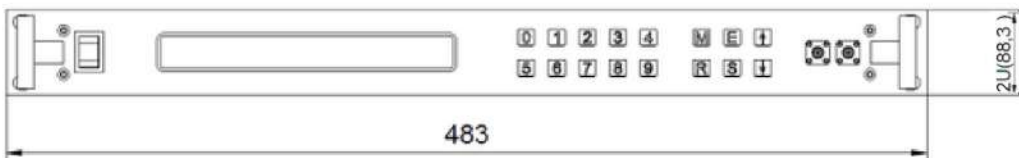
## Specifications

70 MHz to X-Band Up Converter	
Input Frequency	70 MHz $\pm$ 4 MHz
Input Level (Dynamic range required for I/P IF Signal to get desired RF O/P level)	0 to -30 dBm
Type of Conversion	Double Conversion without Inversion
Frequency Sense	No Inversion
Frequency selection step size	1 KHz
Maximum IF input level	+5 dBm
Output Frequency Range	7145 - 7235 MHz
RF O/p Level	-7 to +13 dBm range, adjustable in 1 / 0.5 dB step (20 dB attenuation range)
Maximum O/P level at P1 dB point	+13 dBm
3-dB Bandwidth ( for IF O/P)	20 MHz
Number of O/P	2 (for Monitoring)
I/P or O/P Impedance	50 ohms
I/P & O/P VSWR	$\leq$ 1.4:1 max.
LO Leakage	- 70 dBm max.
Gain Range	0 to 20 dB max in 1 / 0.5 dB step
Gain flatness	$\pm$ 0.5 dB over any 20 MHz band
Gain Slope	0.1 dB/MHz max.
Noise Figure	$\leq$ 14 dB at max. gain $\leq$ 16 dB at 10 dB lower gain
Group Delay Stability with temperature	$\leq$ 2 ns for temperature range 22 $\pm$ 3 deg C
Phase delay stability with temperature	$\leq$ 5 deg in temperature range 22 $\pm$ 3 deg C
Group delay variation	for temperature range 22 deg $\pm$ 3 deg C Linear $\leq$ 0.5 ns / MHz Parabolic $\leq$ 0.1 ns / MHz <sup>2</sup> Ripple $\leq$ 1 ns p-p within $\pm$ 10 MHz of center frequency
Spurious Outputs	Signal Related: - 60 dBc max. (In Band) Signal Independent: - 75 dBm max.(Outside RF Band) -100 dBm max in the Rx Freq. band (8.4-8.5 GHz) including the LO Leakage, Spurious & Harmonics

70 MHz to X-Band Up Converter	
LO Frequency step	1 KHz
Phase Noise	100 Hz away: -77 dBc / Hz 1 KHz away: -89 dBc / Hz 10 KHz away: -98 dBc / Hz
Internal Reference Stability	1 x 10 <sup>-8</sup> over temperature range
External Reference Input	5 / 10 MHz, -3 to +5 dBm, 50 ohms Internal/ External auto selection
Local & Remote Functions	Frequency selection & display LO lock indication IP address selection & display Reference Int./ext. Failures / Alarms Local / Remote
M & C Interface	TCP/IP-LAN (100 Mbps) at rear panel, RJ45 connector
RF / IF Connectors	SMA / N-type, Rear Panel
LO Monitor	SMA Front Panel
Input Power	230 V , 50 Hz ± 10%
Operating ambient temperature	5 to 45 deg C
Humidity	Up to 95 %
MTBF	> 50,000 Hours
MTTR	< 1 hour
Mechanical	19" Rack Mountable ( 2U Unit)
Colour	Light Grey (RAL 7035)

Online Drawings

front view



rear view

