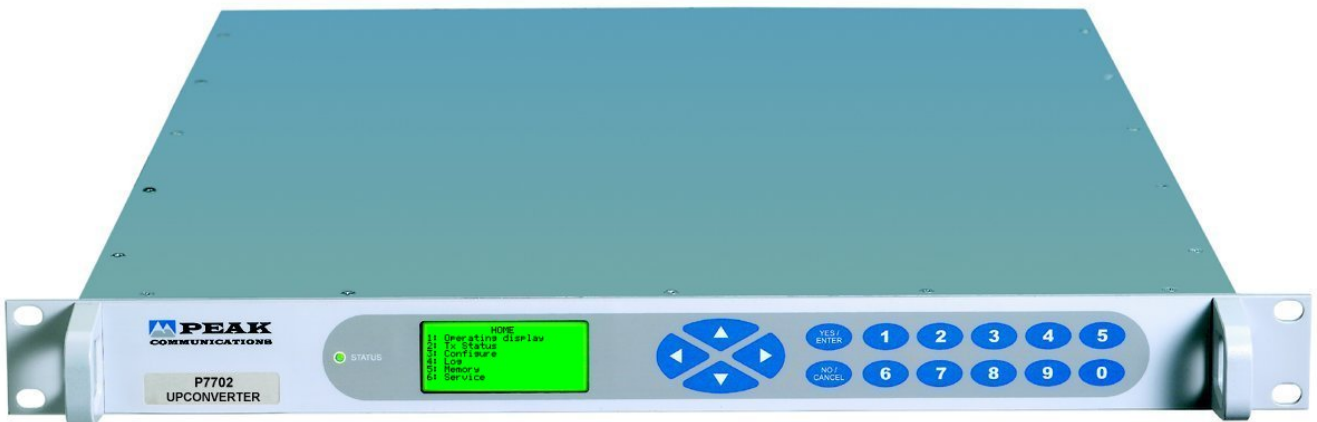


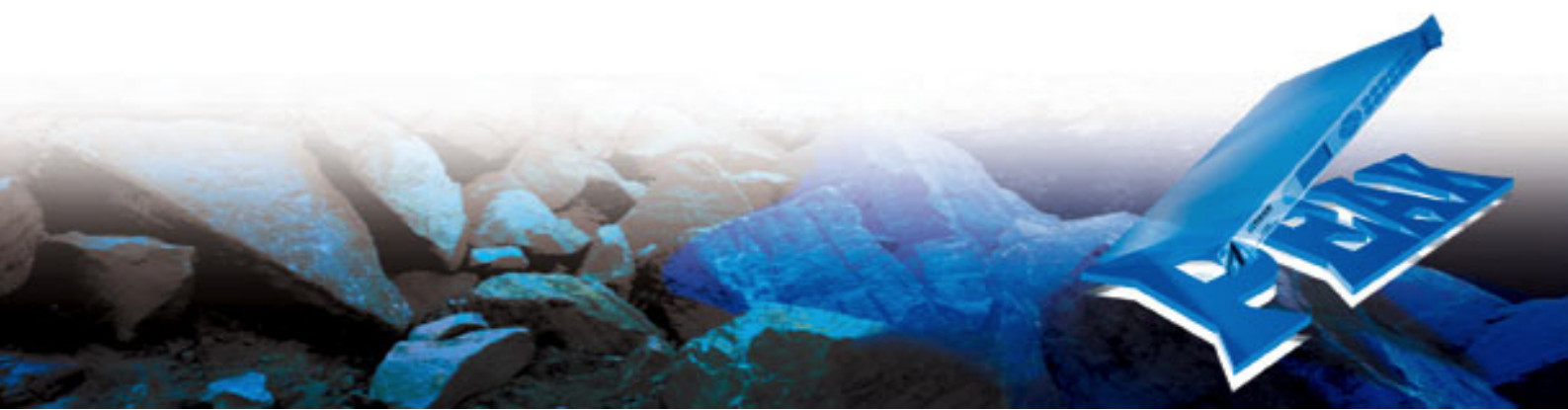
P7702

L-Band to UHF UpConverter



The 19 inch 1U rack mounted **P7702** Block UpConverter unit from Peak Communications is designed to take the output of an UpConverter or modem at L-band and provide the frequency conversion to UHF. The **P7702** unit is designed to meet the phase noise, spurious level and frequency stability requirements of Intelsat IBS/Eutelsat SMS specifications. The excellent group delay response makes the product suitable for high rate data and both digital and analogue TV signals.

The **P7702** unit is mains powered and is constructed of high-grade components to give the ultimate in performance. These components include a high grade crystal oscillator to give the highest performance of stability and phase noise, a well proven externally phase locked DRO, a high grade waveguide bandpass filter to give minimum insertion loss and flatness across the band, a high performance low noise amplifier, high grade mixers and isolators between each section to ensure correct matching.



P7702 Specification

Input	750MHz \pm 250MHz, 50 Ω BNC
Output	1200MHz \pm 250MHz, 50 Ω N-type
Conversion gain	+30dB
Attenuation	0 to 30dB, stepped 0.1dB
Output -1dB GCP	+0dBm at L-band output
Gain flatness	\pm 1.3dB maximum variation over the band 950 to 1450MHz
Gain Slope	1.0dB Max variation across any 40MHz band within input frequency range
Output Phase Noise (n.b. Ext. Ref. will affect Close in phase noise).	-50dBc @ 10Hz (extrapolated) -80dBc @ 100Hz -90dBc @ 1kHz -97dBc @ 10kHz -100dBc @ 100kHz; -110dBc @ 1MHz >-110dBc @ >1MHz (extrapolated)
Gain Stability	\pm 1.0dB max from -20 to 55 $^{\circ}$ C \pm 0.1dB per week constant temp
Impedance	50 Ω
Return Loss	>11dB
Max. Input Power	-15dBm
3 rd order Intermodulation	-40dBc (with two equal carriers, total -10dBm output)
AM to PM Conversion	0.5 $^{\circ}$ /dB
Group Delay(relative)	15ns
Ripple	1ns pk to pk
Internal Frequency Reference	10MHz
Accuracy	0.02ppm (at time of delivery)
Stability	1 part in 10 ⁹ /day
Damage Level	+10dBm
Spurious Signals (Discrete);	
In-band 'Carrier' Related	-65dBc
In-band 'non carrier' Related	-55dBm
Out of Band	-65dBc
	(limit of specification 400-1900MHz, O/P 1000-1200MHz harmonic exclusion)

General

Noise figure	\leq 25dB
Alarms	UHF LO fail alarms Form C dry contact closure
External Reference Input	5/10MHz factory selectable. Automatically uses internal reference if external absent.
Acquisition Range of Ext. Ref.	1x10 ⁻⁶
Power Level	0dBm \pm 3dB
Mechanical	1U high, standard 19" rack-mount chassis, 534mm deep
Weight	8kg nominal. Stainless Steel chassis.
Out of Band Spurious Outputs	-50dBm Max from 500MHz to 3.0GHz, excluding the band 950 to 1450MHz, the LO Leakage frequency and harmonics of the output signal.
Environmental	Guaranteed operating temperature range -10 to 50 $^{\circ}$ C
EMC	EN 55022 part B and EN 50082-1
Safety	EN 60950
Power supply	85-132/170-265VAC, auto-select
Remote Control	RS 232/ RS 485 port

