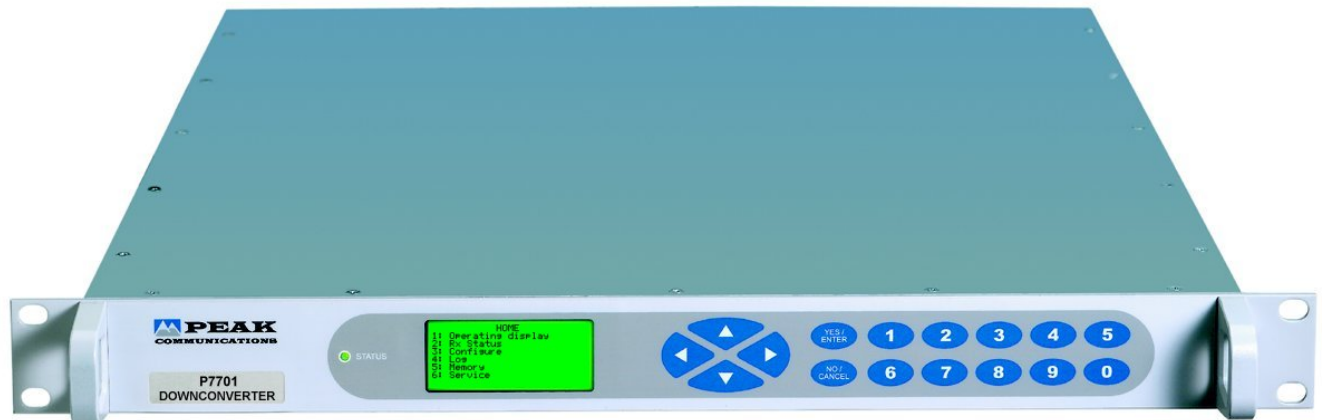


## P7701

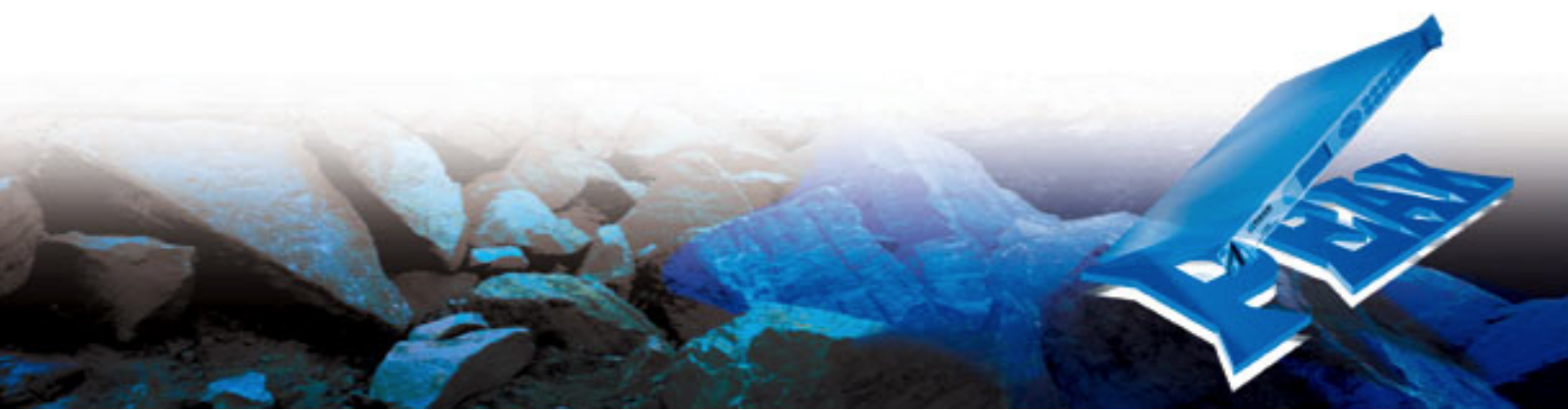
### UHF to L-Band DownConverter



The 19 inch 1U rack mounted **P7701** Block DownConverter unit from Peak Communications is designed to take the incoming UHF Band signal and produce an output at L-Band that is suitable for further conversion typically by a **P7000** converter.

The **P7701** 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 **P7701** 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.



## P7701 Specification

Input	1200MHz $\pm$ 250MHz, 50 $\Omega$ N-Type
Output	750MHz $\pm$ 250MHz, BNC
Conversion gain	+30dB
Attenuation	0 to 30dB, stepped 0.1dB
Output phase noise (NB. 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 temperature
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
Impedance	50 $\Omega$
Return Loss	>11dB
Max. Input Power	-15dBm
3 <sup>rd</sup> 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 <sup>9</sup> /day
Damage Level	+10dBm
Spurious Signals (Discrete);	
In-band 'Carrier' Related	-65dBc
In-band 'non carrier' Related	-45dBm
Out of Band	-65dBc
	(limit of specification 400-1900MHz, O/P 1000-1200MHz harmonic exclusion)

### General

Output -P1dB	$\geq$ 0dBm
Noise figure	<25dB
Alarms	UHF 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 <sup>-6</sup>
Power Level	0dBm
Mechanical	1U high, standard 19" rack-mount chassis, 534mm deep
Weight	8kg. nom., Stainless steel chassis.
Environmental	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

