

# Model ASC 501LE 70MHz to L-Band Up Converter



*Quality Products @ Reasonable Prices*

### Functional Description:

The Model **ASC501LE Up Converter** is a high performance unit that is designed to up convert a 70 MHz (52 to 88 MHz) base band input signal to the output frequency band of 950 to 1750 MHz. The output signal then may be interfaced to the final power stage of a satellite RF transmitter (SSPA or BUC). The system performance makes the **ASC501LE** ideal for low data rate applications. The LE Series half-rack width permits mounting either two of the same units or a combination of our **ASC501LE Up Converter** and our **ASC401LE Down Converter (Model ASC902LE)** side by side in one rack mount unit.

### Systems Specifications:

Output Frequency ..... 950 to 1750 MHz  
 Spectrum ..... Non-inverted  
 Output Bandwidth ..... 36 MHz  
 Output Level ..... -15 dBm Max @ -25dBm Input  
 Output Mute ..... < - 50 dBc on frequency change  
 Input Frequency ..... 52 to 88 MHz  
 Input Level ..... -15 to - 35 dBm, -25 dBm, Typical  
 Frequency Tuning ..... 125 kHz Steps  
 Frequency Adjust ..... Front Panel or Remotely  
 Input Impedance ..... 50 Ohm  
 Input Connector ..... BNC, Female  
 Output Impedance ..... 50 Ohm  
 System Level Gain ..... 10 dB Max, Typical  
 Output Connector ..... Type-N, Female  
 System Level Attenuation ..... 0 to 25 dB, 1 dB Steps  
 Frequency Stability .....  $\pm 0.5$  ppm  
 Input & Output Return Loss ..... 15 db  
 Spurious Response ..... - 55dBc modulated  
 ..... (carrier related)  
 ..... 65 dBm un-modulated (non carrier)  
 Signal Phase Noise .....  $\leq - 80$  dBc/Hz, 1 kHz from Carrier  
 (Meets IESS308/309)  
 Alarms ..... Unit Lock  
 Alarm Relay ..... Form-A  
 Front Panel Display ..... LCD with backlight  
 M&C ..... RS-232 or RS-422  
 ..... Switchable on rear panel  
 M&C Connector ..... DB-9, Female

### Physical Characteristics:

Size ..... 1.75"H X 16.00"D X 8.50"W  
 Weight ..... 4 lb. (1.82 kg)  
 Primary Power ..... 85 - 264 VAC 50-60Hz, 2.7 A  
 ..... Auto-Sensing

### Environmental Specifications:

Operating Temperature ..... 0<sup>o</sup>c to +50<sup>o</sup> c  
 Storage Temperature ..... -40<sup>o</sup> c to +70<sup>o</sup> c  
 Humidity ..... 95% RH@ 40<sup>o</sup> c

### Options:

- A. External Freq. Ref. (Multiplexed on Output Center Conductor)**  
 Frequency ..... 10 MHz  
 Level ..... +4 dBm, Typical  
 Phase Noise ..... 10 Hz, -90dBc/Hz  
 Stability .....  $\pm 1 \times 10^{-8}$  ppm
- B. BUC Power (Multiplexed Output Center Conductor)**  
 Voltage ..... + 24 VDC  
 Power ..... 65 W, max
- C. 10 MHz Ref. Input**  
 Input Level ..... +10 to -10 dBm  
 Input connector ..... BNC, 50 Ohm Female  
 Auto Switched ..... Internal/External  
 External Stability .....  $\pm 100$  Hz ( $\pm 10$  ppm)

The 10 MHz reference is auto switched to internal when no external reference is available or less than -10 dBm.

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