

# 60 Watt Linear Ka-Band Outdoor High Power SSPA Single-Band Block Upconverter



## FEATURES

- 27.5 - 30.0 GHz
- Delivers 60W of Linear Power
- Complete Digital M&C Interface
- Includes Single-Band BUC
- Ethernet with SNMP

The **XTSLIN-60KaL-B1** High Power Solid State Block Upconverters (BUC) are a series of compact fully integrated, rugged antenna mount units designed for low cost operation and longevity. The single-band input interfaces to standard modems operating in the 1250 - 3750 MHz range.

Forced air cooling is implemented in the package to allow reliable operation over extended temperature ranges. The monitor and control (M&C) interface provides a component system status.

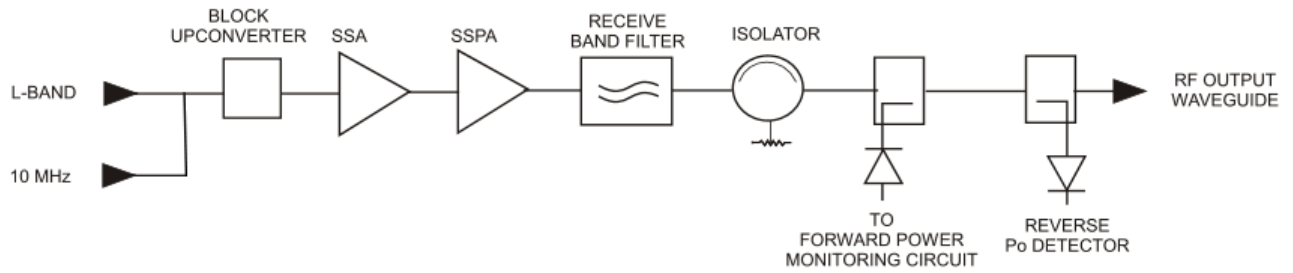
The L-Band transmit signal and 10 MHz reference frequency are brought to the unit over a single coaxial line.



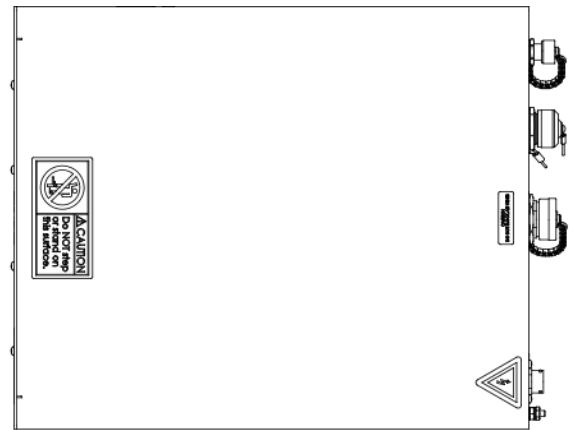
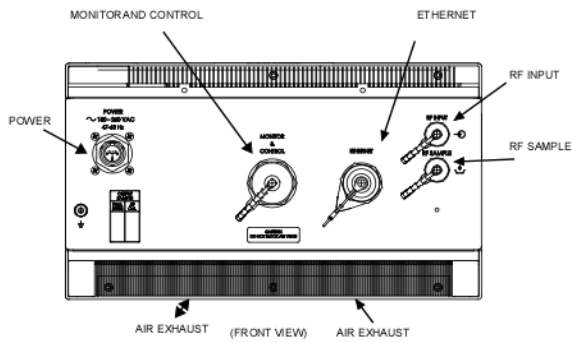
# PERFORMANCE SPECIFICATION

Parameters	XTSLIN-60KaL-B1	
<b>FREQUENCY RANGE</b>		
Output	27.5 to 30.0 GHz	
Input	1250 to 3750 MHz	
LO Frequency	26.25 GHz	
Input Level, w/o damage (maximum)	10 dBm	
Reference Signal Frequency	external 10 MHz	
10 MHz Power Level	0 dBm $\pm$ 5 dB	
Reference Input Impedance	50 Ohms	
<b>OUTPUT POWER</b>		
Saturated Power (minimum)	115W (50.6 dBm)	
Linear Power	60W (47.78 dBm)	
<b>GAIN</b>		
Small Signal (typical)	70 dB	
Maximum SSG Variation Over		
Any Narrow Band	$\pm$ .3 dB per 36 MHz	
Full Band	$\pm$ 1.5 dB	
Stability, 24 hr. (maximum)	$\pm$ .5 dB	
Stability, Temperature (maximum)	$\pm$ 1.0 dB over temperature range at any frequency	
Gain Adjustment	30 dB, 0.1 dB steps	
<b>NOISE POWER RATIO</b>	-19 dBc @ linear power	
<b>HARMONIC OUTPUT (maximum)</b>	-60 dBc	
<b>SPECTRAL REGROWTH (1.0 symbol rate from carrier), OQSPK, 12 MSPS carrier</b>	-30 dBc @ linear power	
<b>AM/PM Conversion (maximum)</b>	$\leq$ 2.0 deg/dB @ linear power	
<b>NOISE POWER (maximum)</b>		
Transmit Band	-75 dBW/4 KHz	
Receive Band	-150 dBW/4 KHz	
<b>SPURIOUS (In band)</b>	-60 dBc	
<b>PHASE NOISE (maximum)</b>		
	100 Hz	-62 dBc/Hz
	1 kHz	-72 dBc/Hz
	10 kHz	-82 dBc/Hz
	100 kHz	-92 dBc/Hz
	1 MHz	-102 dBc/Hz
<b>10 MHz Reference Phase Noise (maximum)</b>		
	100 Hz	-128 dBc/Hz
	1 kHz	-157 dBc/Hz
	10 kHz	-160 dBc/Hz
	100 kHz	-165 dBc/Hz
	1 MHz	-165 dBc/Hz
<b>VSWR</b>		
Input (maximum)	1.5:1	
Output (maximum)	1.3:1	

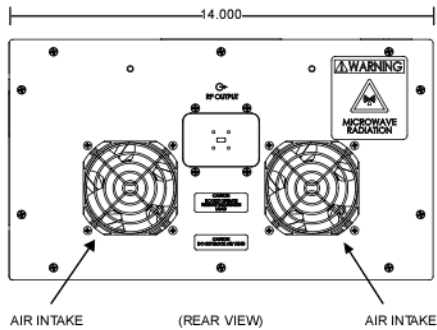
# BLOCK DIAGRAM



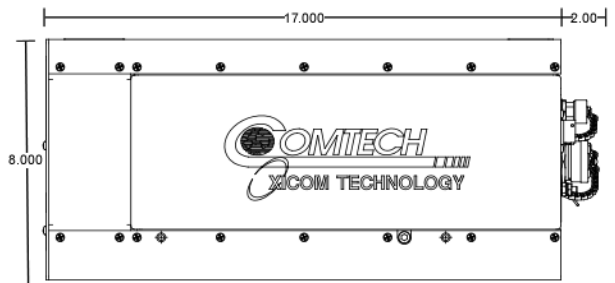
# OUTLINE DRAWING



(TOP VIEW)



(REAR VIEW)



(LEFT SIDE VIEW)

DIMENSIONS (max)		
	INCHES	CENTIMETERS
L	19	48.26
H	6.8	17.27
W	14	35.56

WEIGHT (Typical): 37.48 lb., 17 kg.  
Output Waveguide: WR-34 or WR-28

## PRIME POWER

Line Frequency 47 to 63 Hz  
Linear Power (Voltage) Typical with 220 VAC  
900 Watts AC at P<sub>LINEAR</sub>



## ENVIRONMENT

NONOPERATING TEMPERATURE RANGE	-50°C to +70°C
OPERATING TEMPERATURE RANGE	-40°C to +60°C (2°C/1000 Feet Derating)
HUMIDITY	Up to 100% Condensing
ALTITUDE	12,000 Feet MSL Maximum
SHOCK AND VIBRATION	Normal Transporting
COOLING	Forced Air

## INTERFACE

Type	Function	
REMOTE CONTROL	Transmit ON/OFF	Fault Reset
	RF Inhibit	Band Select
REMOTE STATUS	Transmit ON/OFF	Summary Fault
	Temperature (°C)	Fault Identification
	RF Inhibit (ON/OFF)	Lock Detect
	Forward Power	Over Temperature
XICOM COMMAND SET	ASCII Commands	

## OPTIONS

- Input Diplexer (combining IF and 10 MHz reference)
- Detected RF Transmit Power
- Dual-Band or Tri-Band operation
- Output Waveguide

## Headquarters

Comtech Xicom Technology, Inc.  
3550 Bassett Street  
Santa Clara, CA 95054  
USA

Phone: +1-408-213-3000

Fax: +1-408-213-3001

email: [sales@xicomtech.com](mailto:sales@xicomtech.com)

Web: [www.xicomtech.com](http://www.xicomtech.com)

## Europe Sales Office

Comtech Xicom Technology Europe, LTD  
4 Portland Business Center  
Manor House Lane  
Datchet  
Berkshire SL3 9EG  
United Kingdom

Phone: +011 44 (0) 1753 549 999

Fax: +011 44 (0) 1753 549 997

email: [sales@xicomeurope.com](mailto:sales@xicomeurope.com)

Web: [www.xicomtech.com](http://www.xicomtech.com)

## Asia Sales Office

Comtech Xicom Technology  
150 Cecil Street  
#08-02  
Singapore 069543

Phone: +011 65 6325 1953

Fax: +011 65 6325 1950

email: [asiasales@xicomtech.com](mailto:asiasales@xicomtech.com)

Web: [www.xicomtech.com](http://www.xicomtech.com)