

# 200 Watt Linear Ku-Band Outdoor High Power SSPA Block Upconverter



## FEATURES

- *200W linear output power*
- *High efficiency GaN design*
- *Compact, rugged 49 lb. package for mobile applications*
- *Operates over -40°C to +60°C environment*

The **XTSLIN-200K-B1** High Power Solid State Block Upconverters (BUC) are a series of compact fully integrated antenna mount units designed for low cost operation and longevity. This unit generates over 200W of linear power, providing the most linear output power available in a package this size. By using the latest in high efficiency GaN technology this linear power can be achieved with a prime power consumption of only 1500 VA.

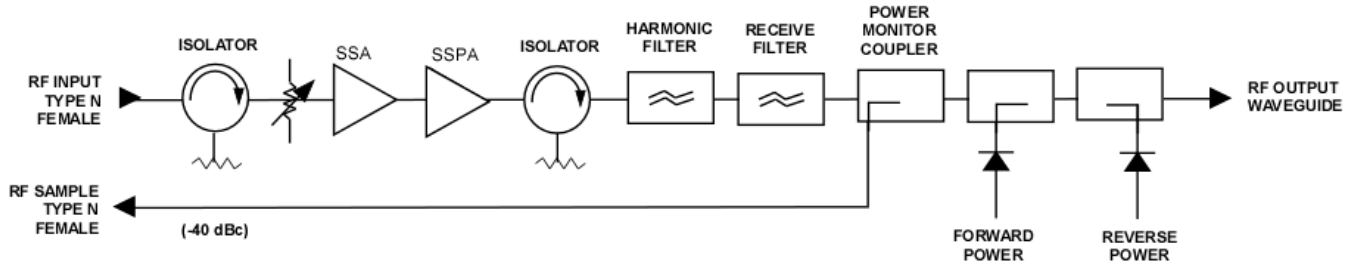
Intended for outdoor operation in challenging environments, the **XTSLIN-200K-B1** weighs only 49 lbs. Forced air cooling is implemented in the package to allow reliable operation over extended temperature ranges. The monitor and control (M&C) interface provides a component system status via Ethernet or RS-485 and RS-232.



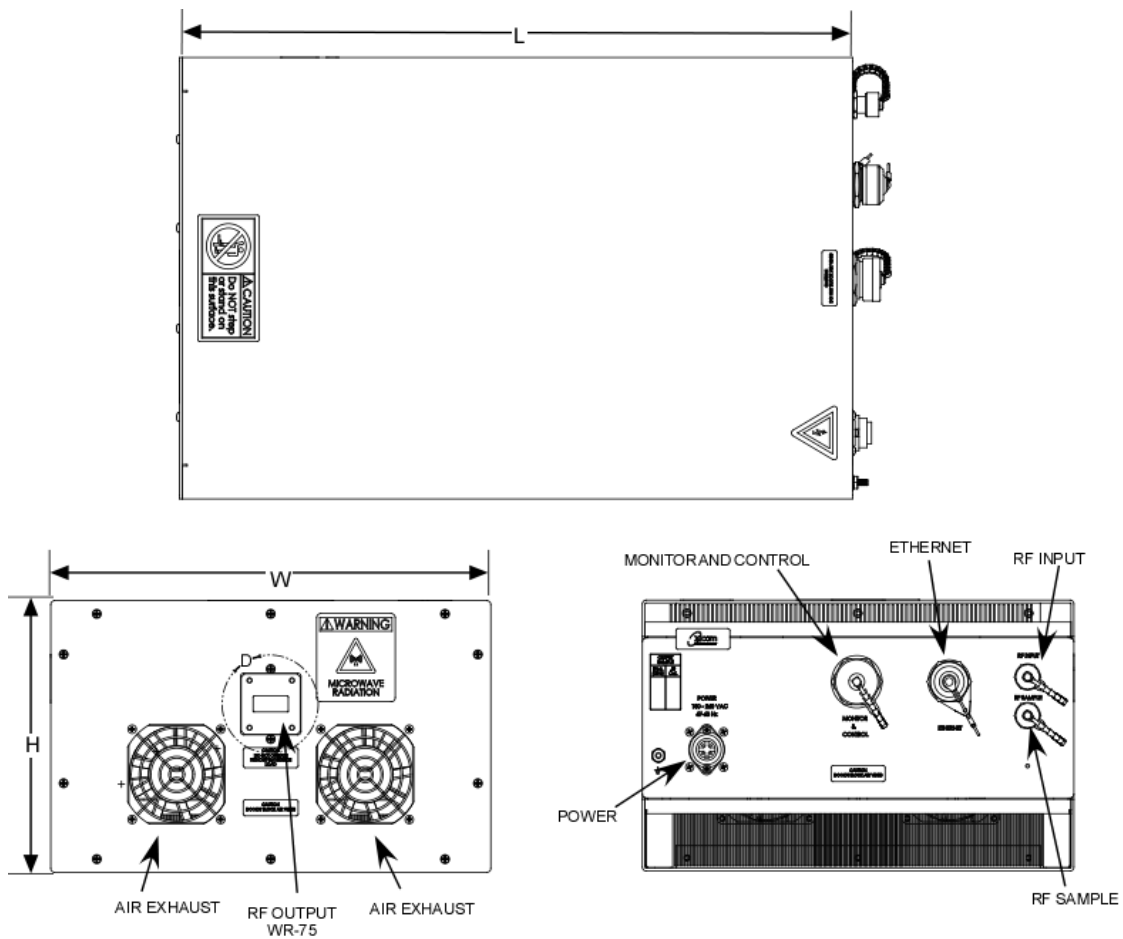
# PERFORMANCE SPECIFICATION

Parameters	XTSLIN-200K-B1	
<b>FREQUENCY RANGE</b>		
Output	13.75 to 14.5 GHz	
Input	950 to 1700 MHz	
LO Frequency	12.8 GHz	
Input Level, w/o damage (maximum)	10 dBm	
Reference Signal Frequency	external 10 MHz	
10 MHz Power Level	0 dBm $\pm$ 5 dB	
IF/Reference Input Impedance	50 Ohms	
<b>OUTPUT POWER</b>		
Linear Power (minimum)	53.0 dBm	
<b>GAIN</b>		
Factory configurable small-signal gain	65 dB to 70 dB	
Field-user adjustable attenuation range	25 dB min, 0.1 dB steps	
Maximum SSG Variation Over		
Any Narrow Band	$\pm$ 0.5 dB Pk-Pk/40 MHz	
Full Band	3.0 dB Pk-Pk	
Slope (maximum)	0.05 dB/MHz	
Stability, 24 hr. (maximum)	$\pm$ 0.25 dB	
Stability, Temperature (maximum)	$\pm$ 2.0 dB over temperature range at any frequency	
INTERMODULATION (maximum) with two equal carriers @ Linear Power	-25 dBc	
SPECTRAL REGROWTH @ Linear Power	-30 dBc, 1 SR, OQPSK	
HARMONIC OUTPUT (maximum)	-60 dBc	
AM/PM CONVERSION (maximum)	2.0 deg/dB at Linear Power	
<b>NOISE POWER (maximum)</b>		
Transmit Band	-75 dBW/4 kHz	
Receive Band	-150 dBW/4 kHz	
<b>IN-BAND DISCRETE SPURIOUS</b>		
AC Power Line	Sum of fundamental and harmonic < -30 dBc	
Single Sideband	Sum of all other spurs < -36 dBc	
OUTPUT SPURIOUS @ P <sub>LIN</sub>	-60 dBc	
<b>PHASE NOISE (maximum)</b>		
	10 Hz	-33 dBc/Hz
	100 Hz	-63 dBc/Hz
	1 kHz	-73 dBc/Hz
	10 kHz	-83 dBc/Hz
	100 kHz	-93 dBc/Hz
	1 MHz	-103 dBc/Hz
	10 MHz	-113 dBc/Hz
	100 MHz	-113 dBc/Hz
10 MHz REFERENCE PHASE NOISE (maximum)	10 kHz	-160 dBc/Hz
<b>VSWR</b>		
Input (maximum)	1.5:1	
Output (maximum)	1.3:1	

# BLOCK DIAGRAM



# DIMENSIONS



DIMENSIONS		
	Inches	Centimeters
H	8.0	20.32
W	14.0	36.56
L	19.0	48.26
WEIGHT = 59 lbs typical (26.76 kg)		

## PRIME POWER

180 to 260 VAC  
47 to 63 Hz, Single Phase  
1500 VA Typical @ P<sub>LN</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 Max.
SHOCK AND VIBRATION	Normal Transportation
COOLING	Forced Air

## INTERFACE

Type	Function	
REMOTE CONTROL	Transmit ON/OFF	RF Inhibit
	RF Attenuation	Fault Reset
	Summary Fault	
REMOTE STATUS	Transmit ON	Temperature
	RF Output Power	Fault Identification
	Reflected Power	
Solid State Relay	Summary Fault	
COMPUTER	Hardware Interface:	2 Ports: RS-232 & RS-422/485 Ethernet
SERIAL PORT	Xicom Command Set	ASCII Commands
RF MONITOR PORT	-40 dB Coupling Value (Nominal)	

## OPTIONS

- SNMP

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