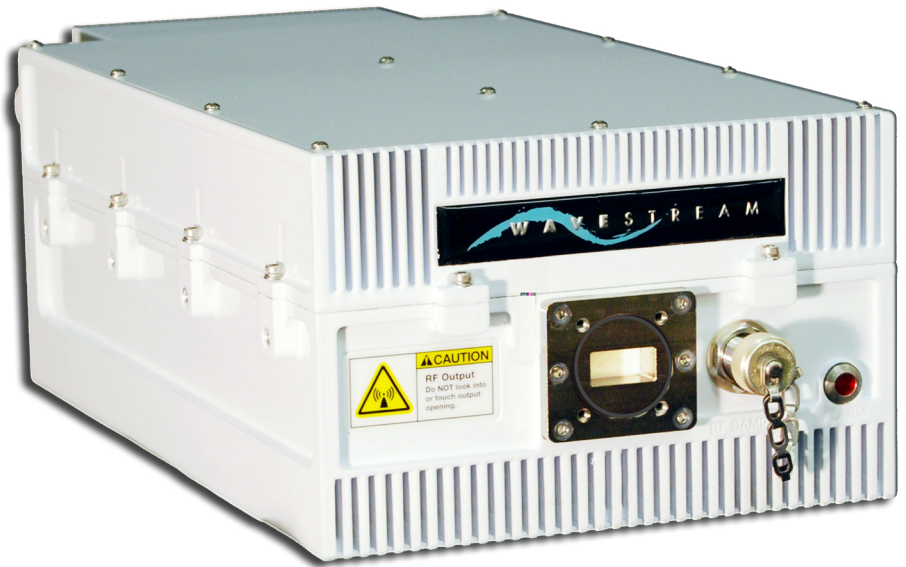


## FEATURES

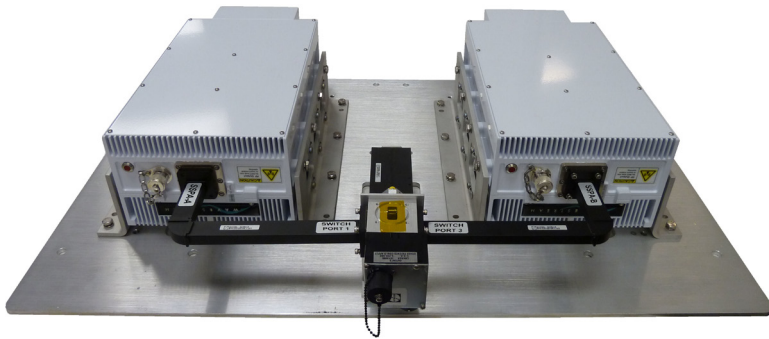
- ▶ Compact, Lightweight Package
- ▶ Industry-leading Efficiency
- ▶ Flexible Power Source
- ▶ Instant On, No Warm Up Time
- ▶ 1:1 Redundancy Kits Available



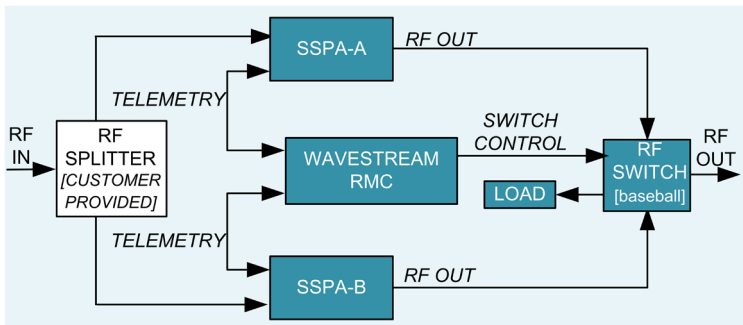
# Ku-Band PowerStream Block Upconverter

## The Wavestream Advantage:

- Higher output power with less energy usage.
- Compact product footprint to meet critical space and weight limitations.
- Proven reliability and efficiency.
- Reduced lifecycle maintenance costs.



1:1 Redundant Configuration (optional)



The PowerStream® 100W Ku-band Block Upconverter (BUC) offers high linear power in a compact, lightweight “pack and go” package suitable for clamshell mobile antennas, high definition Satellite News Gathering (SNG) vehicles and small broadcast service hubs. The 100W Ku-band BUC can be mounted directly onto the feed arm of medium aperture antennas, maximizing the power into the feed and enhancing system-level efficiency. With an Instant On feature, there is no warm up time, ensuring communications are up and running immediately.

Designed for reliability and high output power in extreme environments, the 100W Ku-band BUC includes a choice of frequency band, L-band to Ku-band upconversion, serial or Ethernet monitor and control, adjustable attenuation, and output power monitoring.

Optional 1:1 Redundancy Kits are available to provide an integrated solution for uninterrupted, reliable satellite transmissions. The 1:1 Redundancy Kit integrates the waveguide, switch and mounting hardware, and offers ease of installation and subsequent maintenance to accommodate outdoor mounts.

## RF Specifications

<b>Transmit Frequency</b> - Standard - Extended Band Option	14.0 - 14.5 GHz 13.75 - 14.5 GHz
<b>IF Frequency</b> - Standard - Extended Band Option	950 - 1450 MHz 950 - 1700 MHz
<b>Frequency Reference</b> (10 MHz on IF)	0 dBm $\pm$ 5 dB
<b>Small Signal Gain</b>	70 dB nominal
<b>Gain Adjustment</b>	-20 dB, 2 dB steps nominal
<b>Gain Variation</b> (over frequency at fixed temperature)	0.5 dB over 36 MHz 3 dB over 500 MHz
<b>Gain Variation</b> (over temperature at fixed frequency)	3 dB p-p over operating range
<b>Saturated Output Power</b>	50 dBm
<b>P<sub>1</sub> dB Output Power *</b>	>49 dBm
<b>Rated Output Power *</b>	49 dBm
<b>Intermodulation *</b> (Third order intermodulation product relative to combined power of two carriers at 3 dB total power back-off from Rated Output Power)	-25 dBc
<b>Spectral Regrowth</b> (For QPSK at 1.5x and for OQPSK at 1.0x symbol rate offset or 2 dB back-off from Rated Output Power)	-30 dBc
<b>Phase Noise</b>	Meets IESS-308
<b>AM/PM Conversion</b> (up to 2 dB below Rated Output Power)	2 deg/dB
<b>Noise Power Density - Transmit</b>	-70 dBW/4 kHz (maximum)
<b>Noise Power Density - Receive</b>	-150 dBW/4 kHz (maximum)
<b>Output Spurious</b>	-55 dBc

## Power

<b>AC Power</b>	90-264 VAC, 50-60 Hz
<b>AC Power Draw</b> (at Rated Output Power)	625W
<b>AC Power Draw</b> (at 3dB Back-off from Rated Output Power)	550W

\* Guaranteed over temperature and frequency

## Interfaces

IF Input Connector	Type N Female
IF Input Impedance	50 ohms
IF Input VSWR	2:1 maximum
RF Output Connector	Type N Female
RF Output VSWR	1.25:1 maximum
RF Sample Port Connector	WR-75
RF Sample Port	-46 dBc (typical)
AC Connector	4-Pin Connector, Male Amphenol C016 20C003 100 12
Monitor & Control Connector	19-Pin Military Circular, Male MS3112E14-19P
Monitor & Control	Serial RS-485 (SA-bus), Forward Power Monitor, Step Attenuator, Ethernet with SNMP Support
LED Indicator	Summary Fault, Loss of Lock, Inhibit

## Physical

Size	15"L x 8"W x 5"H
Weight	22lbs
Operating Temperature (Ambient Air)	-40°C to +60°C
Relative Humidity	100% Condensing
Shock & Vibration	Designed to withstand 20G at 11 ms 1/2 sine wave non-operating conditions, and MIL-STD-810E, method 514-4 transportation vibration
Altitude	10,000 ft above sea level (operating)

## Options

### 28 VDC Power Option

**1:1 Redundancy Kit** - to include waveguide, switch, cable connectors, and mounting hardware

**Rack Mount Controller** - 1U rack mount chassis to control any Wavestream amplifier in a 1:1 configuration with LCD display and key status LEDs

**Indoor to outdoor cable assemblies** - available in 25', 50' or 100' lengths

## Base Model Number

POB-KUS100

POB-KUE100



EMC Directive compliance through certified independent laboratory testing.



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Wavestream's next generation Ka, Ku, X and C-band solid state power amplifiers and block upconverters meet the growing demand for higher performance and significant lifecycle cost reductions for mission-critical satellite communications systems worldwide.

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