

## FEATURES

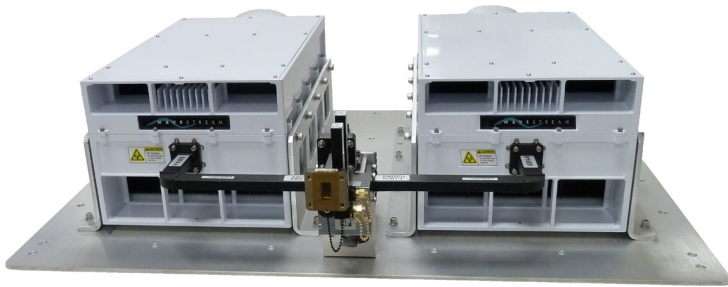
- ▶ Outdoor SSPA with Integrated BUC
- ▶ Compact, Lightweight Package
- ▶ Industry Leading Efficiency
- ▶ Flexible Power Source
- ▶ Zero Warm Up Time
- ▶ 1:1 Redundancy Kits Available



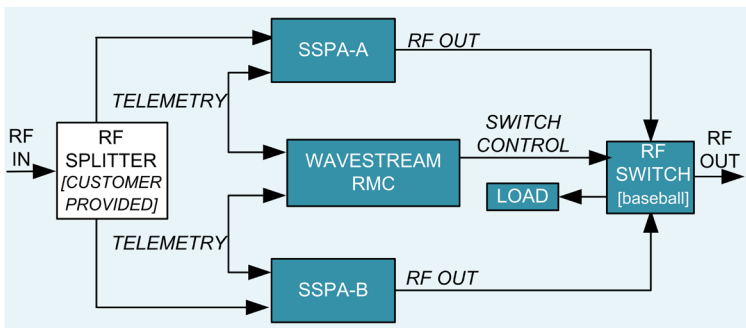
# Ku-Band PowerStream Block Upconverter

## 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® 200W Ku-band amplifier is a rugged, compact solid state power amplifier (SSPA) with integrated block upconverter (BUC) suitable for fixed and mobile satellite communications with high data rate or multicarrier requirements. The PowerStream 200W Ku-band amplifier is an outdoor, environmentally sealed product that can be mounted close to the antenna feed to reduce waveguide loss. As with all Wavestream products, the PowerStream 200W Ku-band amplifier is fully tested over the entire operating temperature range and frequency band to guarantee in-spec performance under all operating conditions.

Optional 1:1 Redundancy Kits are available to provide an integrated solution for uninterrupted, reliable broadcast 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 minimum
<b>Gain Adjustment</b>	20 dB, 0.25 dB steps nominal
<b>Gain Variation</b> (over frequency at fixed temperature)	3 dB over 500 MHz 0.6 dB over 36 MHz
<b>Gain Variation</b> (over temperature at fixed frequency)	3 dB p-p over operating range
<b>Saturated Output Power</b>	53 dBm (nominal)
<b>P<sub>1</sub> dB Output Power *</b>	>+51.8 dBm
<b>Rated Output Power *</b>	+51.8 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 at 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
<b>Output Spurious</b>	-55 dBc

## Power

<b>AC Power</b>	90-264 VAC, 50-60 Hz
<b>AC Power Draw</b> (typical) (at Rated Output Power)	1300W
<b>AC Power Draw</b> (at 3dB Back-off from Rated Output Power)	1100W

\*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	WR-75
RF Output VSWR	1.25:1 maximum
RF Sample Port Connector	Type N Female (nominally -45 dBc)
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	20.75"L x 10.25"W x 7.85"H
Weight	42lbs
Operating Temperature (Ambient Air)	-40°C to +60°C
Relative Humidity	100% Condensing
Shock & Vibration	Designed to withstand 20G at 11 ms $\frac{1}{2}$ sine wave non-operating conditions, and MIL-STD-810E, method 514-4 transportation vibration
Altitude	10,000 ft above sea level (operating)

## Options

**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-KUS200

POB-KUE200



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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