

# 200W Ku-Band PowerStream™ BUC

WAVESTREAM POB-KUS200 / POB-KUE200

## Field-Proven Performance

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

## Features

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

## Wavestream Advantages

What sets Wavestream products apart from traditional amplifier solutions is the innovative Spatial advantEdge™ technology. This unique patented technology allows generation of higher output power in lighter, more compact product packages that use less energy and are more reliable. Wavestream's powerful solutions are designed to replace aging, less efficient amplifiers, helping system integrators get the performance they need — while reducing energy and maintenance costs over the lifecycle of the system.



## Benefits

- 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

## Technical Specifications

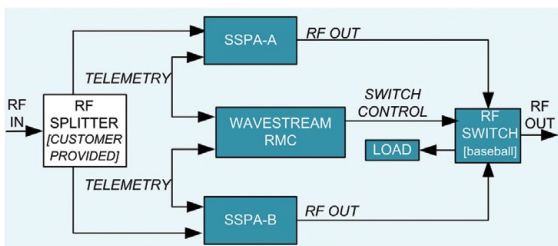
### RF Specifications

- **Transmit Frequency:**  
Standard: 14.0 - 14.5 GHz  
Extended Band Option: 13.75 - 14.5 GHz
- **IF Frequency:**  
Standard: 950 - 1450 MHz  
Extended Band Option: 950 - 1700 MHz
- **Frequency Reference** (10 MHz on IF): 0 dBm  $\pm$  5 dB
- **Small Signal Gain:** 70 dB minimum
- **Gain Adjustment:** 20 dB, 0.25 dB steps nominal
- **Gain Variation:**
  - **Over frequency at fixed temp:**  
3 dB over 500 MHz  
0.6 dB over 36 MHz
  - **Over temp at fixed frequency:**  
3 dB p-p over operating range
- **Saturated Output Power:** 53 dBm (nominal)
- **P1dB Output Power\*:** >+51.8 dBm
- **Rated Output Power\*:** +51.8 dBm
- **Intermodulation\*** (Third order intermodulation product relative to combined power of two carriers at 3 dB total power back-off from Rated Output Power): -25 dBc
- **Spectral Regrowth** (For QPSK at 1.5x and for OQPSK at 1.0x symbol rate offset at 2 dB back-off from Rated Output Power): -30dBc
- **Phase Noise:** Meets IESS-308
- **AM/PM Conversion** (up to 2 dB below Rated Output Power): 2 deg/dB
- **Noise Power Density - Transmit:** -70 dBW/4 kHz (maximum)
- **Noise Power Density - Receive:** -150 dBW/4 kHz (maximum)
- **Output Spurious:** -55 dBc

### Power

- **AC Power:** 90-264 VAC, 50-60 Hz
- **AC Power Draw (typical) (at Rated Output Power):** 1300W
- **AC Power Draw (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

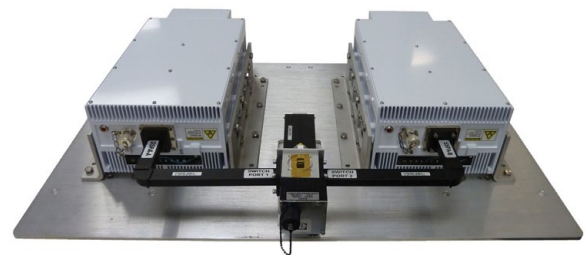
- **Size:** 20.75" L x 10.25" W x 7.85" H (52.7 x 26.03 x 12.7 cm)
- **Weight:** 42 lbs (19.05 kg)
- **Operating Temperature (Ambient Air):** -40°F to +140°F (-40°C to +60°C)
- **Relative Humidity:** 100% Condensing
- **Shock & Vibration:** Designed to withstand 20G at 11 ms ½ sine wave non-operating 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

- **POB-KUS200**
- **POB-KUE200**



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