

# POWERSTREAM 160W KA-WIDEBAND BLOCK UPCONVERTER

ANB160G03A



## FIELD-PROVEN PERFORMANCE

Wavestream's PowerStream 160W Ka Wideband Block Upconverter leads the industry in linear power for a feedmount-ready package, ensuring the maximum available power at the feed flange for multiple carrier inputs.

This Wideband BUC has the ability to instantaneously cover multiple frequency bands, and a tuneable upconverter in an industry-leading small, rugged, outdoor package. The Ka Wideband Block Upconverter offers forward power monitoring, 25 dB of hitless step attenuation, serial RS-232, RS-485, or Ethernet control interface, and AC input power.

## FEATURES

- State of the art GaN Technology
- Ka-band BUC providing > 65W multicarrier linear power
- Ruggedized package weighing less than 42 lbs (19 kg)
- Covers All Commercial Ka Frequency Bands

## 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 products are optimized for Linear operation, drawing less power when backed off to help save valuable energy resources. They generate less heat, and have superior heat sinking ensuring a higher Mean Time Between Failures (MTBF) for greater reliability and lower lifecycle maintenance costs.

## BENEFITS

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



## TECHNICAL SPECIFICATIONS

### RF SPECIFICATIONS

**Transmit Frequency:**

27.5 GHz - 30.0 GHz

**IF Frequency Bands:**

950 - 3100 MHz

(Specific frequency plan to meet customer's needs)

**Reference Frequency:**

10 MHz muxed on IF, or separate connector

**Small Signal Gain:**

60 dB (Nominal)

**Gain Adjustment:**

25 dB in 0.25 dB linear steps (nominal)

**Gain Variation:**

- Over full band at fixed temp: <4.5 dB
- Over temp and fixed frequency: 4 dB p-p over operating range

**Peak Envelope Power:**

52 dBm (160W)

**Linear Output Power**

48.2 dBm (65W) @-19 dB NPR (nominal)

- Linear Output Power defined by NPR Measurement Room Temperature

**AM/PM Conversion:**

<2 deg/dB @ Linear Output Power

**Phase Noise:**

- 10 Hz: -35 dBc/Hz
- 100 Hz: -65 dBc/Hz
- 1 kHz: -75 dBc/Hz
- 10 kHz: -85 dBc/Hz
- 100 kHz: -97 dBc/Hz
- 1 MHz: -115 dBc/Hz
- 10 MHz: -120 dBc/Hz

**Noise Power Density****In Tx Band:**

-80 dBm/Hz

(at Linear Output Power)

**All Output Spurious and Products:**

< 60 dBc

### PHYSICAL

**Envelope Size:**

16.4" L x 10.4" W x 8.2" H (42 L x 27 W x 21 H cm)

**Weight:** <42 lbs (19 kg)

**Operating Temperature**

(Ambient Air):

-40°C to + 55°C

(-40°F to + 131°F)

**Relative Humidity:**

Up to 100%

**Shock & Vibration:**

IEC 60068-2

**Altitude:**

10,000 ft above sea level

(operating)

### INTERFACES

**Input Connector:**

Type N Female

**IF Input Impedance:** 50 Ohms

**IF Input VSWR:** 1.3:1

**RF Output Connector:**

WR-34 (WR-28 Option)

**RF Output VSWR:**

1.3:1 maximum

### AC Connector and M&C

**Connector:**

MIL Circular

**M&C Protocol:** Serial RS-485 (SA-bus) or Ethernet (Software field upgradeable w/Ethernet)

**M&C Protocol Ethernet:**

Optional: For RS-232, RS-485

### POWER

**AC Power:** 90 to 265 VAC

**AC Power Draw:**

- <700W (typical) (at Linear Output Power)
- Power Factor: > 96%

### BASE MODEL

ANB160G03A

## ABOUT WAVESTREAM

Wavestream sets the standard in the design and manufacture of next generation high power solid state amplifiers. Wavestream's Family of Ka, Ku and X-band Solid State Power Amplifiers (SSPAs), Block Upconverters (BUCs) and transceivers provide systems integrators with field-proven, high performance solutions designed for ground mobile and fixed, gateway and airborne satellite communication systems worldwide.

These items are subject to the Export Administration Regulations (EAR), 15 C.F.R. Parts 730-774, and may not be exported or transferred to any non-U.S. person, except as authorized by the U. S. Department of Commerce.

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