

# Terrastream 60W Ku-band BUC

WBUE-060G03

## Field-Proven Performance

Gilat Wavestream's Terrastream Ku-band GaN Block Upconverter (BUC) offers unmatched efficiency and performance suitable for mobile SATCOM, flyaway and VSAT systems.

The Ku-band BUC incorporates Gilat Wavestream's next generation Spatial advantEdge™ technology to provide higher output power in smaller, lighter weight packages that are more reliable and use less energy. Every unit is thoroughly tested to guarantee performance over the full frequency band and over the full temperature range.

## Features

- Small, Lightweight Package
- State Of the Art GaN Technology
- Low Power Draw, High MTBF
- Flexible, Modular Feed-Mount Design
- Holds Specs Over Temperature and Frequency
- 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 for generation of higher output power in more efficient, and more compact product packages that 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



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## Technical Specifications

### RF Specifications

**Transmit Frequency:**

13.75 GHz – 14.5 GHz

**IF Frequency:**

950 MHz – 1700 MHz

**Frequency Reference**

(10 MHz on IF): 0 dBm  $\pm$  5 dB

**Small Signal Gain:**

70 dB (nominal)

**Gain Adjustment:**

30 dB in 0.25 dB steps (nominal)

**Gain Variation:**

- Over frequency at fixed temp:  
3 dB p-p over 500 MHz
- Over temp at fixed frequency:  
3 dB p-p over operating range
- 36 MHz Variation over temp: 1 dB max

**Peak Envelope Power:**

47.8 dBm (nominal)

**Linear Output Power:** 45 dBm**Linear Output Power, defined as:**

- Intermodulation (Third order intermodulation product relative to combined power of two carriers):  
< -25 dBc

- Spectral Regrowth (For QPSK at 1.5x and OQPSK at 1.0x rate offset): < -30 dBc

- AM/PM Conversion:  
< 2 deg/dB

**Phase Noise:** Meets IESS-308**Noise Power Density Transmit:**

-69 dBW/4 kHz (maximum)

**Noise Power Density Receive:**

-150 dBW/4 kHz (maximum)

**Output Spurious:** < -60 dBc

### Interfaces

**IF Input Connector:**

Type N Female

**IF Input Impedance:** 50 Ohms**IF Input VSWR:**

1.5:1 maximum

**RF Output Connector:** WR-75**RF Output VSWR:**

1.5:1 maximum

**DC Connector and M&C****Connector:**

12-Pin MIL Circular

**M&C:**

Ethernet (TCP/IP, WebGUI, SNMP), Serial RS-485 /RS-232 (SA-bus), Forward Power Monitor, Step Attenuator, Input power detector, RF soft start

### Power

**DC Power:** 22V to 32V**DC Power Draw (at Linear**

**Power):** 245W (typical)

### Physical

**Size:**

12.7" L x 5.6" W x 3.23" H (32.3 x 14.3 x 8.2 cm)

**Weight:** 6.6 lbs (3 kg)**Operating Temperature****(Ambient Air):**

-40°F to +140°F  
(-40°C to +60°C)

**Relative Humidity:**

100% Condensing

**Shock & Vibration:**

MIL-STD-810G CNI & Method 514.7 & Method 516.7

**Altitude:**

10,000 ft above sea level  
(operating)

**Electromagnetic compatibility:**

MIL-STD-461

### Options

**M&C:**

Serial (RS-232, RS-485)

**Colors:**

White (RAL9003)

Sand (FS33303)

Tan (FS33446)

### Base Model

WBUE-060G03

## About Gilat Wavestream

Gilat 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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