

FEATURES

- ▶ Rugged, Compact 34 lb Package
- ▶ Feed Arm Mount for Easy Integration
- ▶ Optional Integrated Filter and Feed Assemblies



X-Band Solid State 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.

The X-band Block Upconverter (BUC) provides high linear power output packaged in a compact, rugged unit to support mission-critical mobile and fixed satellite communications systems located in the most extreme environments.

The X-band BUC incorporates Wavestream's next generation Spatial Power Advantage™ technology, providing solid state reliability to eliminate downtime, improve efficiency, reduce energy usage, and significantly lower maintenance costs over the lifecycle of the system. The X-band BUC's smaller, lighter weight package facilitates mounting directly onto the feed arm of medium aperture antennas, maximizing the power into the feed.

The X-band BUC uses less energy, helping conserve critical power resources while maintaining system efficiency and performance. The X-band BUC also includes an Instant On feature to keep systems "mission-ready" and eliminating the warm-up and down time often encountered with more traditional TWTA solutions.

RF Specifications

Transmit Frequency	7.9 - 8.4 GHz
IF Frequency	950 - 1450 MHz
Frequency Reference (10 MHz on IF)	0 dBm \pm 5 dB
Small Signal Gain	65 dB nominal
Gain Adjustment	30 dB in 0.25 dB Steps
Gain Variation (over frequency at fixed temperature)	3 dB over 500 MHz
Gain Variation (over temperature at fixed frequency)	3 dB p-p over operating range
Saturated Output Power	53 dB
Linear Output Power	50 dBm
Intermodulation * (Third order intermodulation product relative to combined power of two carriers at Linear Output Power)	-25 dBc
Spectral Regrowth (For QPSK at 1.5x and OQPSK at 1.0x symbol rate offset at Linear Output Power)	-30 dBc
Phase Noise	-32 dBc at 10 Hz offset -62 dBc at 100 Hz offset -72 dBc at 1 kHz offset -82 dBc at 10 kHz offset -92 dBc at 100 kHz offset -102 dBc at 1 MHz offset -112 dBc at >10 MHz offset
AM/PM Conversion (at Linear Output Power)	2 deg/dB
Noise Power Density - Transmit	-76 dBm/Hz
Output Spurious	-60 dBc

Power

AC Power	90-264 VAC, 50-60 Hz
AC Prime Power (typical) (at Linear Power)	1050 W

*Guaranteed over temperature and frequency

Interfaces

IF Input Connector	Type N Female
IF Input Impedance	50 ohms
IF Input VSWR	1.5:1
RF Output Connector	CPR-112, Grooved
RF Output VSWR	1.25:1
RF Sample Port Connector	Type N Female
RF Sample Port	-40 dBc typical
AC Connector	4-Pin Circular
Monitor & Control Connector	19-Pin Military Circular, Male MS3112E14-19P; Amphenol #360011
Monitor & Control	Serial RS-485 (SA-bus), Forward Power Monitor, Step Attenuator, Ethernet with SNMP Support

Physical

Size	15.75"L x 8"W x 8"H
Weight	34 lbs
Operating Temperature (Ambient Air)	-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

Integrated Filter and Feed Assemblies

Base Model Number

MBB-XDS200-HE01



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