

This compact yet powerful 100W outdoor Gen III GaNBUC harnesses advanced technology, delivering exceptional broadband RF performance, high efficiency, and outstanding linearity and reliability for applications such as broadcast contribution and CBH

Key Features

- Built-in 1:1 Redundancy, no External Redundancy Controller required
- High Linearity, efficiency and MTBF
- Built-in High Precision true RMS Output Power Meter
- Built-in 110/220 VAC power supply
- Web Interface, SNMP support
- Output Overdrive Protection
- Output VSWR Protection
- Thermal shutdown

Options

- Standard (CS, 5.850-6.425 GHz), Extended (CX, 5.850-6.725 GHz) and Insat (CI, 6.725-7.025 GHz) bands
- Internal High-stability 10 MHz Reference
- 1U Rack mountable RCP (Remote Control Panel) for 1:1 redundancy
- 48 VDC power feed



In addition to its exceptional performance and reliability, this device boasts a comprehensive suite of monitoring and control capabilities, easily accessible via Ethernet, serial RS232, RS485 interfaces, or dry contacts. It is the premier choice for demanding mobile and fixed applications, specifically designed for outdoor installations, and offers the advanced capability to utilize high MODCOD (up to 256 APSK) for broadcast contribution, as well as for Cellular Backhaul (CBH) and high-capacity data transmission for VSAT and SCPC User Terminals

With an IP67 ingress protection rating, the device can be mounted outdoor under the direct sun rays on an antenna post/kingpost, on the platform behind the antenna, or inside the antenna hub, effectively eliminating the W/G RF loss commonly associated with indoor units. Additionally, it does not require air-conditioning, resulting in significant reductions in ongoing electrical costs and maintenance expenses, while eliminating the need for nearby shelter construction

MODELS			
RF CHARACTERISTICS	SBB0100CS	SBB0100CX	SBB0100CI
RF Frequency range	5.850-6.425 GHz	5.850-6.725 GHz	6.725-7.025 GHz
IF Frequency range	950-1525 MHz	950-1825 MHz	975-1275 MHz
LO Frequency	4.9 GHz	4.9 GHz	5.750 GHz
RF CHARACTERISTICS			
P_{sat} , Saturated Output Power	50 dBm / 100 W min		
P_{LinC} , Linear Power as defined by MIL-STD-188-164C, 1 carrier	48 dBm / 63 W min		
P_{Lin2C} , Linear Power as defined by MIL-STD-188-164C, 2 carriers	47 dBm / 50W min		
Small Signal Gain	70 dB typ		
Gain Flatness over full frequency range	± 1.5 dB max		
Gain Flatness over any 40 MHz	± 0.4 dB max		
Gain Control	20 dB min dynamic range, 0.1 dB steps		
Gain Stability over full Temperature and Frequency ranges	± 1.5 dB max		
Gain stability over 24h at constant drive and temperature	± 0.5 dB		
Linearity: IMD3, measured with 2 equal tones 5 MHz apart	-25 dBc at total power @ P_{Lin2C}		
External Reference Frequency	10 MHz, sinusoidal, multiplexed with L-band (IF In)		
External Reference Level	0 dBm, ± 5 dB		
External Reference SSB Phase Noise, max	-110 dBc/Hz @ 10 Hz; -125 dBc/Hz @ 100 Hz; -140 dBc/Hz @ 1 kHz; -155 dBc/Hz @ 10 kHz; -165 dBc/Hz @ 100 kHz; -165 dBc/Hz @ 1 MHz;		
Up-Converter SSB Phase Noise, max (not present if SSPA)	-54 dBc/Hz @ 10 Hz; -72 dBc/Hz @ 100 Hz; -80 dBc/Hz @ 1 kHz; -90 dBc/Hz @ 10 kHz; -100 dBc/Hz @ 100 kHz; -115 dBc/Hz @ 1 MHz		
Integrated Phase Noise	1° RMS max		
Output Spurious: In-band	< -13 dBm		
Out-of-band	Complies with ETSI EN 301 428/430 and MIL-STD188-164C		
Harmonics at P_{Lin2C}	< -60 dBc		
AM/PM Conversion	2.0°/dB max at P_{LinC}		
Noise Power Density	Tx < - 80 dBm/Hz Rx < - 145 dBm/Hz		
Output RF Power Monitor	-40 dB, 1dB peak-to-peak flatness over frequency range, calibration chart provided		
INTERFACES		ENVIRONMENTAL	
IF Input connector	50 Ohms N-type (F)	Cooling systems	Forced Air
Input VSWR	1.5:1 max	Temperature	-40 °C to +55 °C
RF Output Connector	CPR137 grooved	Operating Storage	-55 °C to +85 °C
Output VSWR	1.3:1 max	Relative Humidity	100%, up to 4" of rain precipitation/hour
RF Sample	50 Ohms N-type (F)	Altitude	10,000 ft (3,000 m) AMSL
AC Power In/DC Power In*	MS3102R14S-7P/MS3102R14S-9P	Adiabatic Derating (Altitude	
M&C Interfaces: Ethernet,	MS3112E14-19P	Temperature Derating	5° C/1000 m
Serial RS-232 & RS-485		Factor)	
Redundancy	MS3112E14-19S	Environmental	IP67 Rating
M&C	RS-232, RS-485, Ethernet (Web, SNMP)		
POWER		MECHANICAL	
AC Voltage Range	90-265 VAC	Dimensions (LxWxH)	9" x 5" x 6.5"
Frequency Range	47-63 Hz		229 x 127 x 165 mm
DC Voltage Range*	36 – 72 VDC	Weight	10 lb (4.5 kg)
Power Consumption at P_{Sat}	500 W		
Power Consumption at P_{Lin2C}	430 W		

* When DC power option is ordered, AC power is not available