

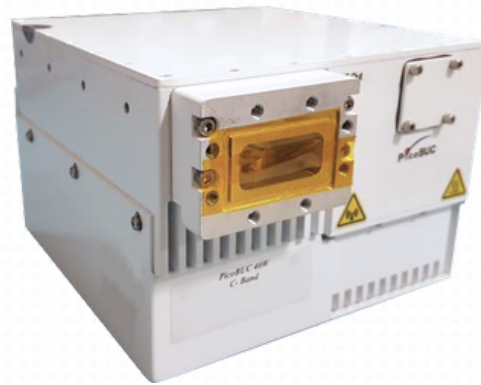
Super Compact 20-100W X-Band BUC / SSPA

Powered by GaN technology, the 20W-100W X-Band PicoBUC series are very compact, light and extremely powerful. Weighing only 6lbs at 100W output power, this X-band PicoBUC product family is the most powerful and feature rich for its size.

Featuring best in class RF characteristics, RF sample port, true RMS power measurements, extensive monitor and control capabilities enabled via Ethernet, Serial and/or Analog Interfaces. PicoBUC's remarkably compact size and high thermal efficiency results in overall system size and cost reduction making it the ideal candidate for mobile and fixed applications.

Options

- ALC option
- RX Reject Filter
- Antenna Mounting kit
- 1:1 and 1:2 Redundancy Kit
- Remote Control Panel
- SSPA Option Available



Features

- Up to 100W Psat in this super compact lightweight package 6lbs (2.7Kg) - 16.5 x 18.5 x 11.5 cms.
- Superior RF performance:
 - o Highest Linearity at small back – off
 - o Spurious emission below -60 dBc
 - o Wide range Gain Control
 - RF Overdrive Protection
 - Extensive M&C capability:
 - o Serial: RS 232 & RS 485
 - o Ethernet: embedded Web browser (HTTP) & SNMPv3 support
- Built In Output Isolator provides full output VSWR Protection
- Input and output True RMS power detection
- Field upgradable software
- Redundancy ready with no need of external controller
- Status LED
- Analogue Interface



RF Parameters	
RF Frequency Range-Available in/switched	7.9-8.4GHz
IF Frequency Range	950-1525MHz
Gain	75dB min, 77dB typ
Gain Flatness	+/-1dB typ +/-1.5dB max over full band; +/-0.4dB max over any 40MHz
Gain Stability	+/-1.5dB over full temperature range
Gain Control	20dB min dynamic range
Linearity at Pout=Plin	2 tone IMD: -25dBc max at Spectral Re-growth: -30dBc for QPSK at 1 x symbol rate
Input/Output VSWR	1.3 : 1
Spurious Emission	Non-signal related: -60 dBc max Signal related (at Plin): -55 dBc max
AM/PM conversion at Plinear, °/dB	1.0deg/dB maximum
Group Delay	Ripple 1 nsec p-p max over any 40 MHz band
RF Monitor Coupling	-50dB typ
BUC Parameters	
LO Frequency	6.95 GHz
Type of Conversion	Single conversion, non – inverting
External Reference Frequency	10MHz multiplexed with IF In
External Reference Required Phase Noise	-130dBc/Hz @ 100Hz; -140dBc/Hz @ 1kHz -150dBc/Hz @ 10kHz; -155dBc/Hz @ 100 kHz
Power & Mechanical	
48V DC Voltage Range	36-72VDC Isolated (other options available)
AC Voltage Range (optional)	90-265V AC 50-60Hz auto-ranging; PFC
Size	6.5"x6.5"x4.5" (16.5 x 16.5 x 11.5 cms)
Weight	6lbs (2.7kg)
Cooling	Forced Air
Operating Temperature / Relative Humidity	-40°C to +55°C / Up to 100% condensing



Interfaces	
RF Input Connector	Precision N –female
RF Output Connector	CPR112 Grooved
RF Monitor	Precision N –female
AC Power In	3 pin MS style
RS485 – Ethernet – SNMPv3	MS3112E14-19S

Part Number	Output Power (W)	Prated (dBm / W)	Plinear (dBm / W)	P Cons at Prated	P Cons at Plin
TPB-XB00430-HMS X*	20W	43 / 20	40 / 10	310W	280W
TPB-XB00460-HMS X*	40W	46 / 40	43 / 20	330W	300W
TPA-XB00470-HMS X*	50W	47 / 50	44 / 25	350W	320W
TPA-XB00490-HMS X*	80W	49 / 80	46 / 40	390W	340W
TPA-XB00500-HMS X*	100W	50 / 100	47 / 50	420W	350W

Note 1: The specification is subject to regular reviews and will be updated from time to time as part of our continuing product development and improved spec accuracy.

Note 2: Operation beyond the quoted limits stated above may cause instantaneous and permanent damage.