

# PicoBUC®

## SUPER COMPACT 20W / 40W C-BAND BUC/SSPB



The IRT Technologies C-Band PicoBUC® series are revolutionary in size and weight - PicoBUC® offers superior performance in an extremely compact package that can fit in your palm! Weighing at only 6lbs, the new PicoBUC® is the most powerful and feature rich for its size: Up to 50W Psat. Built in AC power supply provides the customer with the simplest and least expensive plug-into-the wall solution. IRT PicoBUC® features best in class RF characteristics, embedded output isolator, extensive monitor and control capabilities enabled via Ethernet, Serial and/or Analog Interfaces. PicoBUC® remarkably small size and low power consumption results in better heat extraction that leads to overall system size and cost reduction. Its small size and weight allows direct feed horn mounting, which makes it a most economical solution for fixed VSAT applications.

### KEY FEATURES

- Up to 40W P1dB / 50W Psat in this super-compact and light weight package 6.5" x 6.5" x 4.5" only!
- Ideal for feed horn mounting
- Superior RF performance:
  - ✓ Phase noise 10dB better than IESS308/309
  - ✓ P1dB of 46dBm min
  - ✓ Spurious below -60dBc
  - ✓ Wide dynamic range of Gain Control
- Integrated L-Band to C-Band up converter
- Available also in Super-Extended, Palapa and Insat C-Band frequency options
- Internal 10 MHz Reference clock optional
- Low power consumption
- Built In Output Isolator provides full output VSWR Protection
- Output power measurement - True RMS detector
- Configuration via RS-232 serial console, packet protocol RS-485 - User friendly HTTP based GUI and SNMP optional.
- 48VDC isolated power supply
- Built in auto-ranging AC power supply optional
- Field upgradable software
- Status LED
- Antenna Mounting kit optional
- Redundant ready with no need of external controller

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## 20W / 40W L- to C-Band Block-Up-Converter Specification

Parameter	20W	40W
<b>RF Performance</b>		
RF Frequency Range-Available in/switched	5.85-6.425GHz / 5.850-6.725 GHz	
IF Frequency Range	950-1525MHz / 950-1825 MHz	
LO Frequency	4.9 GHz	
Conversion	Single Conversion; non-inverting	
Output Power at 1dB compression point	43dBm min	46dBm min
Saturated Power	44dBm typ	47dBm typ
Conversion Gain	72dB min, 75dB typ	
Gain Flatness	+/-1dB typ +/-1.5dB max over full band; +/-0.5dB max over any 40MHz	
Gain Stability	+/-1.5dB over full temperature range	
Gain Control	20dB min dynamic range	
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
Up-Converter Phase Noise	-70dBc/Hz @ 100Hz; -80dBc/Hz @ 1kHz; -90dBc/Hz @ 10kHz -95dBc/Hz @ 100kHz -115dBc/Hz @ 1MHz	
Linearity: 2 tone IMD Spectral Re-growth	-26dBc at 3dB total power back off from P1dB -30dBc for QPSK at 1.5 x symbol rate at 2dB back off from P1dB	
Output Spurious: Non-signal related	-60dBc	
Signal related	-55dBc	
<b>Power</b>		
48V DC Voltage Range	32-72VDC Isolated	
AC Voltage Range (Optional)	90-265VAC 50-60Hz auto-ranging	
Power Consumption DC Power In/AC Power In	140W/150W	220W/230W
<b>Mechanical</b>		
Size	6.5"x6.5"x4.5"	
Weight	6lbs	
Cooling	Forced Air	
Operating temperature	-40°C to +60°C	
Relative Humidity	Up to 100% condensing	
<b>Interfaces</b>		
IF Input Connector	N-type female	
RF Output Connector	CPR137 Grooved	
AC Power In	MS3112E12-3P	
RS485-RS232-Ethernet-SNMP	MS3112E14-19S	
<b>Part Numbering Information</b>		
Power Supply Option	20W	40W
DC Isolated	TPB-CB00430-HMA1	TPB-CB00460-HMA1
AC Auto-ranging	TPB-CB00430-HMA0	TPB-CB00460-HMA0

\*Contact us for detailed ordering information at [sales@irttechnologies.com](mailto:sales@irttechnologies.com)

\*\*Specifications are subject to change without prior notice

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