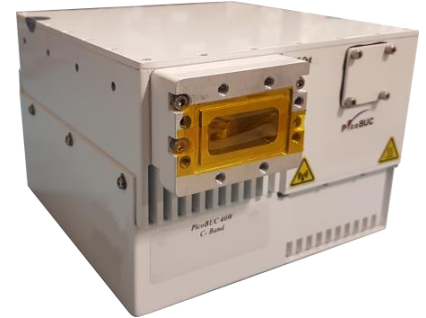


## Overview

C band PicoBUC® family from IRT Technologies is the breakthrough in satellite communication market due the unprecedented compact package, lightweight and superior performance.

High power PicoBUC® family provides up to 120W maximum output power in ultra-compact package powered by GaN technology. IRT PicoBUC® features best in class RF characteristics, embedded output isolator, extensive monitor and control capabilities, enabled via Ethernet, Serial and/or Analog Interfaces

Low power consumption and smart heat extraction technology lead to ultra-compact design and great cost reduction. PicoBUC® remarkably compact size and high thermal efficiency results in overall system size and cost reduction making it the ideal candidate for mobile DSNG and fixed medium earth station application



## Key Features

- **Ultra – compact design and light weight for up to 125W output power**
  - Lightweight design: 6 lbs. (2.7 kg)
  - Compact package: 6.5”x6.5”x4.5”
- **Superior RF performance**
  - Superior Phase Noise: 8 dB better than IESS308/309 recommendation
  - Spurious emission below -60 dBc
  - Wide range Gain Control
  - Highest Linearity at small back – off
- **Available in different frequency options**
  - Super-extended 5.85-6.725GHz
  - Palapa 6.425-6.725GHz
  - Insat 6.725-7.025GHz
- **Extensive M&C capability**
  - Serial: RS 232 & RS 485
  - 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**

## Options & Accessories

- **Internal 10 MHz Reference clock**
- **Autosense 10 MHz Reference clock**
- **Built in auto – ranging AC power supply (90 – 230 V AC)**
- **DC supply via IFL up to 40W**
- **ALC option**
- **Antenna Mounting kit**
- **1:1 and 1:2 Redundancy Kit**
- **Remote Control Panel**



PicoBUC®

# Ultra-Compact GaAs-GaN 20W – 120W C band Outdoor SSPA/SSPB Family

## 20W to 120W C-Band Outdoor SSPA/SSPB Technical Specification

20W to 120W C-Band Outdoor SSPA/SSPB Technical Specification							
<b>RF Parameters</b>							
Output Frequency Band, GHz	5.85-6.425GHz/5.85-6.725GHz; other options available						
Input L band Frequencies, MHz	950-1525MHz/950-1825MHz						
Conversion Gain, dB	75 minimum, 77 typical						
Gain Flatness, dB	+/-1 typical +/-1.5 maximum over full band +/-0.4 maximum over any 40MHz						
Gain Stability, dB	+/-1.5 maximum over full temperature range						
Gain Control, dB	20dB minimal dynamic range						
Linearity at Pout=Plin: 2 tone IMD Spectral Re-growth	-25dBc max -30dBc for QPSK at 1 x symbol rate						
Input Impedance, Ohm	50						
Input/Output VSWR	1.4 : 1 / 1.3 : 1						
Noise Power Density, dBm/Hz	-70 in Transmit Band, -145 in Receive Band (10.7 GHz – 12.8 GHz)						
Spurious Emission dBc; Non-signal related / Signal related(at Plin)	-60 / -55 max						
AM/PM conversion at Plinear, °/dB	1.0 maximum						
Group Delay	Ripple 1 nsec p-p max over any 40 MHz band						
<b>BUC Parameters</b>							
LO Frequency, MHz	4900						
Type of Conversion	Single conversion, non – inverting						
External 10 MHz Frequency	Over IF L band cable with multiplexing						
Phase Noise, dBc/Hz	-70 @ 100Hz; -80 @ 1kHz; -90 @ 10kHz; -95 @ 100kHz; -115 @ 1MHz						
<b>Power</b>							
48V DC Voltage Range	32-72VDC Isolated (other options available)						
AC Voltage Range	90 – 265V AC 50 – 60Hz auto – ranging; PFC						
<b>Mechanical &amp; Environment</b>							
Size	6.5"x6.5"x4.5" (152mm x 152 x 106mm)						
Weight	6 lbs. (2.7 kg)						
Cooling	Forced Air						
Operating temperature / Relative Humidity	-40°C to +55°C / Up to 100% condensing						
<b>Interfaces</b>							
IF Input Connector	N – type female						
RF Output Connector	CPR137 Grooved						
AC Power In	MS3112E12-3P						
RS485 – Ethernet – SNMP	MS3112E14-19S						
<b>IRT Part Number</b>	<b>Output Power (W)</b>	<b>Psat (dBm/W)</b>	<b>Prated (dBm/W)</b>	<b>Plinear (dBm/W)</b>	<b>P Cons at Prated</b>	<b>P Cons at Plin</b>	<b>GaAs/GaN</b>
TPB-CB00430-HMA X*	20W	44/25	43/20	40/10	140W	90W	GaAs **
TPB-CB00460-HMA X*	40W	47/50	46/40	43/20	220W	190W	GaAs **
TPB-CB00480-HMS X*	60W	48/60	48/60	45/30	350W	320W	GaN
TPB-CB00490-HMS X*	80W	49/80	49/80	46/40	390W	340W	GaN
TPB-CB00500-HMS X*	100W	50/100	50/100	47/50	320W	350W	GaN
TPB-CB00510-HMS X*	120W	51/120	51/120	48/60	450W	360W	GaN

\*\* This power level is also available in GaN

Specifications are subject to change without notice

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