

## IRT Rack Mount 400-600W C-Band GaN Powered BUC / SSPA

The IRT Intelligent Power Block-Up Converter Series is smaller, lighter and more powerful 400W/600W C-Band Rack Mount BUC. This series allows significant size and weight reduction and at the same time substantially improves thermal efficiency, which leads to higher reliability and longer MTBF.

Using patent pending Z-combining method and advanced GaN technology, this series has truly outstanding power density - up to 600W Psat in 5RU light compact package.

The IRT 400W/600W C-Band Rack Mount BUC features 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. Redundant truly hot swappable power supply gives even higher overall reliability.

### Options

- Input and Output RF sample ports
- Automatic Level Control (ALC)
- Available in different frequency options



### Features

- Up to 600W PSAT Output Power in 19" Rack-mount 5RU only!
- Superior RF performance:
  - o High Linearity
  - o PSAT up to 58 dBm
  - o Wide dynamic range of Gain Control
- RF Overdrive Protection
- Field upgradable software
- Redundant Hot Swappable Power Supply
- Configuration via RS-232 serial console, packet protocol RS-485- User friendly HTTP based GUI and SNMP
- User friendly front panel with menu driven display
- Redundant Ready - No external redundancy controller required
- Built-in power metering
- Full VSWR protection

RF Parameters		
RF Frequency Range		5.85-6.425GHz (other frequency options available)
VSWR		1.3:1
Gain		75dB min, 77dB typ
Group Delay		Linear: $\pm 0.03\text{ns/MHz}$ Parabolic: $\pm 0.003\text{ns/MHz}^2$ max Ripple: 1.0ns peak to peak max
Gain Flatness		+/-1dB typ +/-1.5dB max over full band; +/-0.5dB max over any 40MHz
Gain Stability over temperature		+/-1.5dB over full temperature range
Gain Control		20dB min dynamic range with 0.1dB step
AM/PM Conversion		1°/dB max. @ PLinear
Linearity:	2 tone IMD	-25dBc max at PLinear
	Spectral Re-growth	-30dBc for QPSK at 1.5 x symbol rate at PLinear
Noise Power Density:	Transmit Band	-70dBm/Hz max
	Receive Band	-145dBm/Hz max
Output Spurious:	Non-signal related	-65dBc
	Signal related	-60dBc
Harmonic Output		$\leq -55\text{dBc}$ (at Plin)

Power & Mechanical	
AC Voltage Range	90-265VAC 50-60Hz auto-ranging PFC
Cooling	Forced Air
Operating Temperature / Relative Humidity	0°C to +55°C / Up to 99% non-condensing

Interfaces	
IF Input Connector	N-type female rear panel
RF Output Connector	CPR137 grooved rear panel
RF Sample	N-type female front panel
AC Power In	NEMA Connector rear panel
M&C Interface-Serial, Analog, Ethernet	DSUB Connectors. RJ45 rear panel

Part Number	Prated (dBm / W)	Plinear (dBm / W)	P Cons at Prated	P Cons at Plin	RU
<b>C-Band</b>					
STSR 400C	56 / 400	53 / 200	2000W	1800W	5RU
STSR 500C	57 / 500	54 / 250	2500W	2200W	5RU
STSR 600C	58 / 600	55 / 300	3000W	2800W	5RU