

IRT Super Compact 16W - 100W X-Band BUC / SSPA

The STS16/20/25/40/50/80/100X series is one of the smallest, lightweight efficient units available today.

With best in class RF characteristics, embedded output isolator, extensive monitor and control capabilities enabled via Ethernet, Serial and/or Analogue interfaces.

Designed for portable, mobile and VSAT on the move applications. Its small size and weight allows direct feed horn mounting, which makes it a most economical solution for fixed VSAT applications.

Options

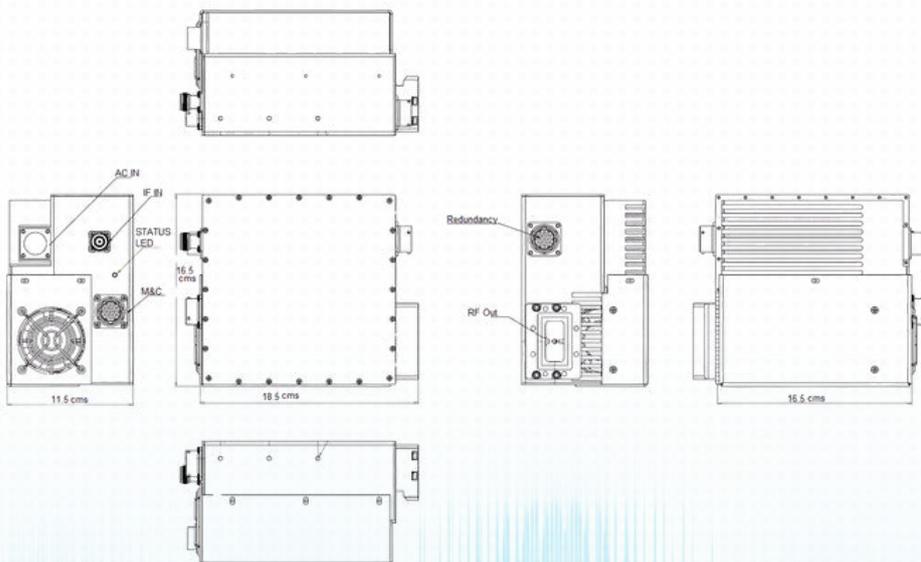
- Internal 10MHz Reference clock
- Antenna Mounting Kit
- Built in auto-ranging AC power supply



Features

- Up to 100W Psat in this super compact lightweight package 2.5Kg 16.5 x 18.5 x 11.5 cms.
- Ideal for feed horn mounting
- Low power consumption
- Superior RF performance:
 - o Phase noise 10dB better than IESS308/309
 - o P1dB of 46dBm min
 - o Spurious below -60dBc
 - o Wide dynamic range of Gain control
 - Output power measurement - True RMS detector
- Integrated L-Band to X-Band up-converter
- Built-in Output Isolator provides full output VSWR protection
- Configuration via RS-232 serial console, packet protocol RS-485 - User friendly HTTP based GUI and SNMP optional
- 48VDC isolated power supply
- Redundant ready with no external controller
- Field upgradeable software
- Status LED

Outline





RF Parameters		
RF Frequency Range-Available in/switched	7.9-8.4GHz	
IF Frequency Range	950-1525MHz	
LO Frequency (Switchable)	6.95GHz Single Conversion; non-inverting	
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 @ 100kHz	
Up-Converter Phase Noise	70dBc/Hz@ 100Hz -80dBc/Hz @ 1kHz -90dBc/Hz @ 10kHz -95dBc/Hz @ 100kHz -115dBc/Hz @ 1MHz	
Linearity:	2 tone IMD	26dBc at 3dB total power back off from rated power
	Spectral Re-growth	-30dBc for QPSK at 1.5 x symbol rate at 3dB back off from rated power
Output Spurious:	Non-signal related	-60dBc
	Signal related	-55dBc

Power & Mechanical	
48V DC Voltage Range	36-72VDC Isolated
AC Voltage Range (optional)	90-265VAC 50-60Hz Auto-Ranging
Size	16.5 x 16.5 x 11.5 cms
Weight	2.5KG
Cooling	Forced Air
Operating Temperature / Relative Humidity	-40°C to +60°C / Up to 100% condensing



Interfaces	
IF Input Connector	N-type Female
RF Output Connector	CPR137 Grooved
DC Power In	MS3112E12-3P
RS485 – Ethernet – SNMPv3	MS3112E14-19S

Part Number	Output Power (W)	Psat (dBm / W)	Prated (dBm / W)	Plinear (dBm / W)	P Cons at Prated	P Cons at Plin	GaAs / GaN
TPA-XB00430-HMA X*	16W	43 / 20	43 / 20	39 / 8	120W	100W	GaAs
TPA-XB00430-HMS X*	20W	44 / 25	43 / 20	40 / 10	130W	110W	GaN
TPA-XB00440-HMS X*	25W	45 / 31	44 / 25	41 / 12	140W	130W	GaN
TPA-XB00460-HMS X*	40W	46 / 40	46 / 40	43 / 20	190W	150W	GaN
TPA-XB00470-HMS X*	50W	47 / 50	47 / 50	44 / 25	240W	200W	GaN
TPA-XB00490-HMS X*	80W	49 / 80	49 / 80	46 / 40	320W	270W	GaN
TPA-XB00500-HMS X*	100W	50 / 100	50 / 100	47 / 50	340W	300W	GaN

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.