

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

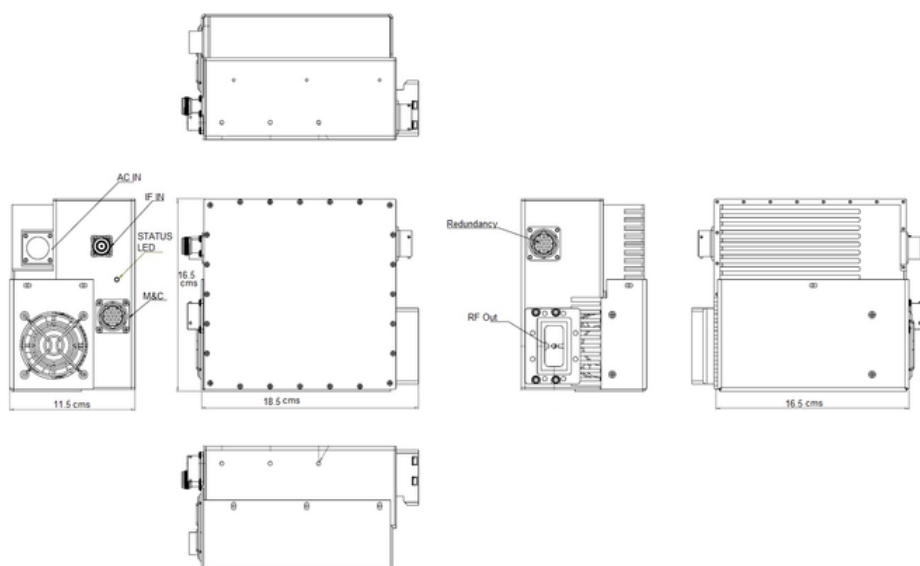
- Internal 10MHz Reference clock
- Antenna Mounting Kit
- Built in auto-ranging AC power supply



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
STS16XX1-OPTxx	16W	43 / 20	43 / 20	39 / 8	120W	100W	GaAs
STS20XX1-OPTxx	20W	44 / 25	43 / 20	40 / 10	130W	110W	GaN
STS25XX1-OPTxx	25W	45 / 31	44 / 25	41 / 12	140W	130W	GaN
STS40XX1-OPTxx	40W	46 / 40	46 / 40	43 / 20	190W	150W	GaN
STS50XX1-OPTxx	50W	47 / 50	47 / 50	44 / 25	240W	200W	GaN
STS80XX1-OPTxx	80W	49 / 80	49 / 80	46 / 40	320W	270W	GaN
STS100XX1-OPTxx	100W	50 / 100	50 / 100	47 / 50	340W	300W	GaN

* xx To be replaced by 2 digit code based on configuration

Specifications are subject to change without notice