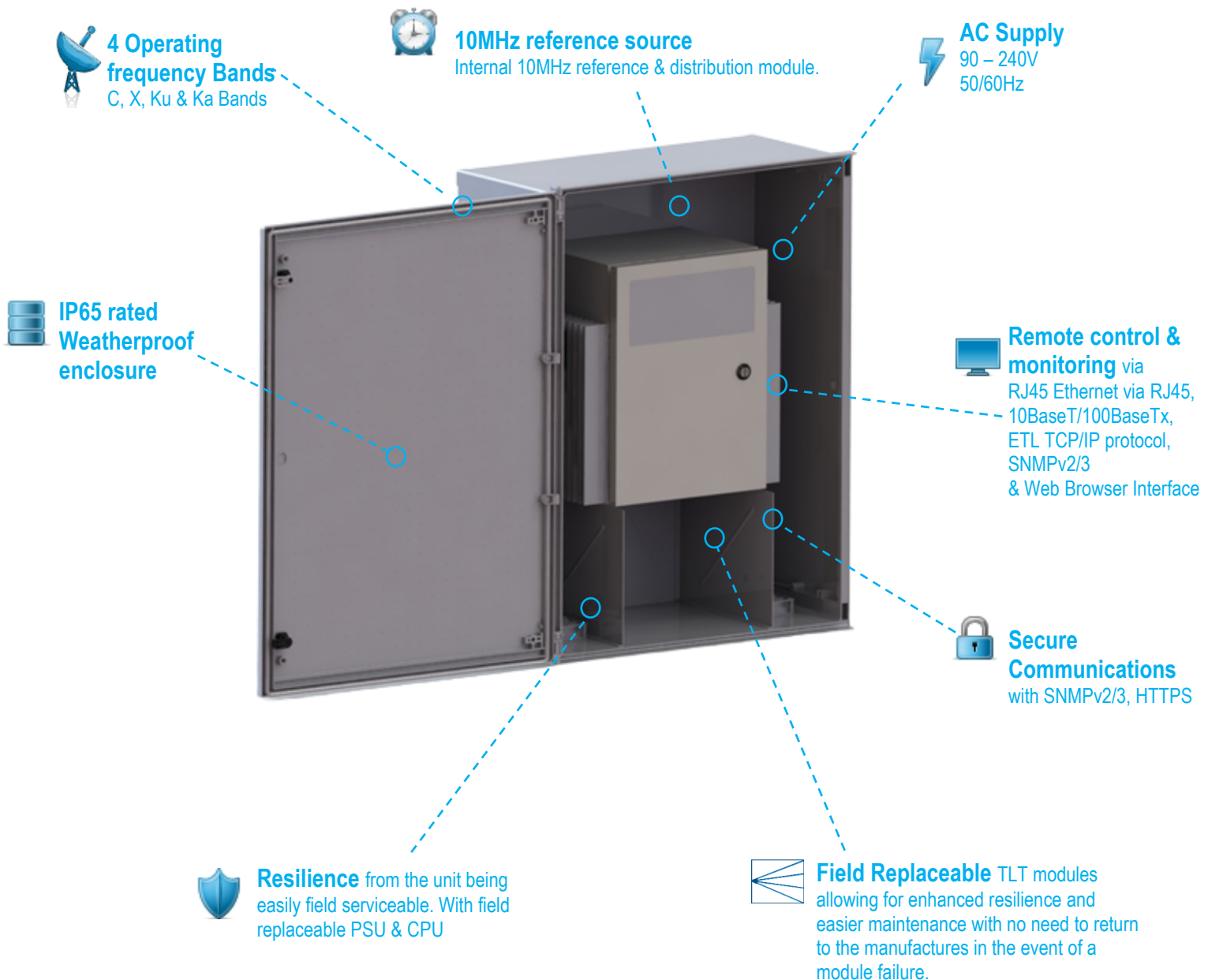


# Quad Band ODU Satellite Simulator System

The ODU Quad Band Satellite Simulator is based on the Genus platform and operates in C, X, Ku and Ka-Bands (note that only one band can be operational at a time). The unit is a robust weatherproof IP65 rated enclosure, and features field replaceable TLT & 10MHz reference modules, PSUs and CPUs. The unit also benefits from remote control and monitoring via an RJ45 port with Web Browser Interface & SNMP.

- Tests Ground Stations & terminals
- Covers C, X, Ku & Ka bands.
- Ethernet Control
- Easy and Quick Operation
- Other Frequency Bands and configurations also available
- 1 band active at a time.



### Preliminary Technical specifications and operating parameters

RF Parameters						
Frequency Band		C-Band	X-Band	Ku-Band	Ka-Band	
Input Frequency		5.85 – 6.425 GHz (Fixed Frequency)	7.90 – 8.40 GHz (Fixed Frequency)	13.25 – 14.50 GHz (Input frequency user configurable via software control in 1 MHz steps)	Mode 1: 27.50 – 28.50 GHz Mode 2: 28.50 – 29.50 GHz Mode 3: 29.50 – 30.50 GHz Mode 4: 30.00 – 31.00 GHz Frequency modes user configurable via software control	
Output Frequency		3.625 – 4.20 GHz (Fixed Frequency)	7.25 – 7.75 GHz (Fixed Frequency)	10.70 – 12.75 GHz (Output frequency user configurable via software control in 1 MHz steps)	Mode 1: 17.30 – 18.30 GHz Mode 2: 18.30 – 19.30 GHz Mode 3: 19.20 – 20.20 GHz Mode 4: 20.20 – 21.20 GHz Frequency modes user configurable via software control	
Instantaneous Bandwidth		575 MHz	500 MHz	1000 MHz	1000 MHz	
Conversion Gain (At minimum attenuation setting)		0 ± 3dB	0 ± 3dB	0 ± 3dB	0 ± 3dB	
Flatness	Full Band	±2.0	±2.0	±2.0	±2.0	
	Any 40MHz	±0.5	±0.5	±0.5	±0.5	
Tx Antenna	Gain (typ)	7 dBic	7 dBic	12 dBi *	15 dBic	
	Polarisation	RHC	RHC	Linear (H)	RHC	
	Beamwidth (typ)	65°	65°	50°	20°	
Rx Antenna	Gain (typ)	7 dBic	7 dBic	12 dBi *	14.5 dBic	
	Polarisation	LHC	LHC	Linear (V)	LHC	
	Beamwidth (typ)	65°	65°	45°	30°	
Attenuation Control Range		60 dB	60 dB	60 dB	60 dB	
Attenuation Control Steps		1 ± 0.20dB	1 ± 0.20dB	1 ± 0.20dB	1 ± 0.20dB	
Max I/P Power Level (Excl. Antenna)		0 dBm	0 dBm	0 dBm	0 dBm	
Absolute Max Input Power Level (For no damage)		+20 dBm	+20 dBm	+20 dBm	+20 dBm	
Spurs in-band <small>(Excl. Antenna. At 0dBm input, min attenuation. Non-harmonic)</small>	Non-carrier	< -60 dBm	< -60 dBm	< -60 dBm	< -60 dBm	
	Carrier Related (> 1MHz Offset)	< -50 dBc	< -50 dBc	< -50 dBc	< -50 dBc	
Spurs out-band <small>(Excl. Antenna. At 0dBm input, min attenuation. Non-harmonic)</small>	Non-carrier	< -70 dBm	< -70 dBm	< -70 dBm	< -70 dBm	
	Carrier Related	< -60 dBc	< -60 dBc	< -60 dBc	< -60 dBc	
Phase Noise	@100Hz	-75 dBc / Hz	-75 dBc / Hz	-75 dBc / Hz	-65 dBc / Hz	
	@1KHz	-85 dBc / Hz	-85 dBc / Hz	-85 dBc / Hz	-75 dBc / Hz	
	@10KHz	-90 dBc / Hz	-90 dBc / Hz	-90 dBc / Hz	-80 dBc / Hz	
	@100KHz	-95 dBc / Hz	-95 dBc / Hz	-95 dBc / Hz	-85 dBc / Hz	
	@1MHz	-105 dBc / Hz	-105 dBc / Hz	-105 dBc / Hz	-100 dBc / Hz	
Mute		80dB	80dB	80dB	80dB	
Spectral Inversion		Non-inverting	Non-inverting	Non-inverting	Non-inverting	

\*3dB polarisation loss if used with circular polarised antenna

**Technical specifications and operating parameters**

Interface	
Control Method	Remote Control & Monitoring Ethernet via RJ45, 10BaseT/100BaseTx ETL TCP/IP protocol SNMP v3 Built-in Web Server (HTTPS)
AC Input	85-264Vac 50/60Hz Fused (L+N) Use T 3.15 A, 250V Ceramic 5x20mm x2 Lightning protection suitable for local installation conditions should be provided
Reference	
Internal Reference Stability	$\pm 5 \times 10^{-8}$ (over 0 to 50°C )
External Reference	Input Freq. 10 MHz. Auto detection (External Reference Optional)
External Ref. Input Level	+3 dBm $\pm$ 3dB
Environmental Conditions	
Operating Temperature	-20 to 50°C
Storage Temperature	-20°C to +75°C
Location	Indoor and Outdoor (IP65)
Humidity	20 to 90% non-condensing
Altitude	10,000ft/3000m AMSL

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.