

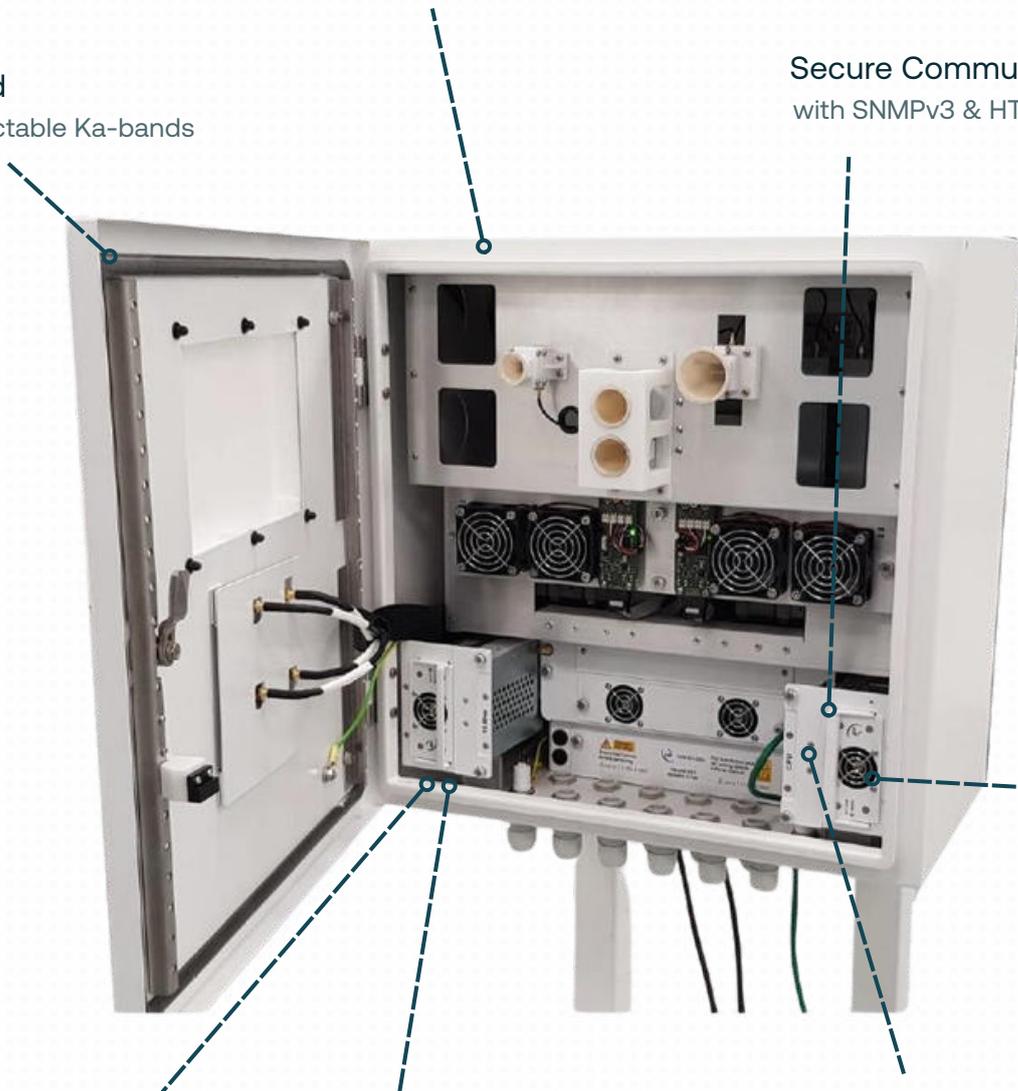
# Ka-band ODU Satellite Simulator

The ODU Ka-band Satellite Simulator is based on the Genus platform, in a robust weatherproof IP65 rated enclosure, and features field replaceable 10MHz reference modules, PSUs and CPUs. The unit also benefits from remote control and monitoring via an RJ45 port with Web Browser Interface & SNMP.

IP65 rated Weatherproof enclosure

**Ka-band**  
User selectable Ka-bands

**Secure Communications**  
with SNMPv3 & HTTPS



**AC Supply**  
85 – 264V  
50/60Hz

**10MHz reference source**  
Internal 10MHz reference & distribution module.  
Also EXT 10MHz input

**Resilience**  
from the unit being easily field serviceable. With field replaceable PSU & CPU

**Remote control & monitoring**  
via RJ45 Ethernet via RJ45, 10BaseT/100BaseTx, ETL TCP/IP protocol, SNMPv2/3 & Web Browser Interface

| RF Parameters                                  |                                    |  |
|--|------------------------------------|--|
| Frequency Band                                 |                                    | Ka-band  |
| Input Frequency                                |                                    | Mode 1: 27.50 – 28.50 GHz<br>Mode 2: 28.50 – 29.50 GHz<br>Mode 3: 29.50 – 30.50 GHz<br>User selectable mode transfers to respective output frequency mode, i.e. Mode 1 input to Mode 1 output. |
| Output Frequency                               |                                    | Mode 1: 17.20 – 18.20 GHz<br>Mode 2: 18.20 – 19.20 GHz<br>Mode 3: 19.20 – 20.20 GHz  |
| Instantaneous Bandwidth                        |                                    | 1000 MHz   |
| Conversion Gain                                |                                    | 0 ± 3dB (At minimum attenuation setting)   |
| Gain Flatness<br>(excl. Antennas)              | Full Band                          | ±2.0 dB  |
|  | Any 40MHz                          | ±0.5 dB  |
| Tx Antenna                                     | Gain (typ)                         | 15 dBic  |
|  | Polarisation                       | RHC  |
|  | Beamwidth (typ)                    | 20°  |
| Rx Antenna                                     | Gain (typ)                         | 14.5 dBic  |
|  | Polarisation                       | LHC  |
|  | Beamwidth (typ)                    | 30°  |
| Attenuation Control Range                      |                                    | 60 dB  |
| Attenuation Control Steps                      |                                    | 1 ± 0.20dB   |
| Max Input Power Level (Excl. Antenna )         |                                    | 0 dBm  |
| Absolute Max Input Power Level (For no damage) |                                    | +20 dBm  |
| Spurs in-band <sup>2</sup>                     | Non-carrier                        | < -60 dBm  |
|  | Carrier Related<br>(> 1MHz Offset) | < -50 dBc (At 0dBm input, min attenuation. Non-harmonic)   |
| Spurs out-band <sup>1</sup>                    | Non-carrier                        | < -70 dBm  |
|  | Carrier Related                    | < -60 dBc (At 0dBm input, min attenuation. Non-harmonic)   |
| Phase Noise                                    | @100Hz                             | -65 dBc / Hz   |
|  | @1KHz                              | -75 dBc / Hz   |
|  | @10KHz                             | -80 dBc / Hz   |
|  | @100KHz                            | -85 dBc / Hz   |
|  | @1MHz                              | -100 dBc / Hz  |
| Mute   |                                    | 80dB   |
| Spectral Inversion                             |                                    | Non-inverting  |



| Interface, Monitoring & Alarms |  |
|--------------------------------|--|
| Control Method                 | Remote Control & Monitoring<br>Ethernet via RJ45, 10BaseT/100BaseTx<br>ETL TCP/IP protocol<br>SNMP v3<br>Built-in Web Server (HTTPS)                           |
| AC Input                       | 85-264Vac 50/60Hz<br>Fused (L+N)<br>Use T 3.15 A, 250V Ceramic 5x20mm x2<br>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         |   |
|-----------------------|---|
| Operating Temperature | -20 to 50°C                                 |
| Storage Temperature   | -20°C to +75°C                              |
| Location              | Indoor and Outdoor (IP65)                   |
| Humidity              | 20 to 90% non-condensing, relative humidity |
| Altitude              | 10,000ft / 3,000m above mean sea level      |

| Physical Dimensions & Parameters |                                      |
|----------------------------------|--------------------------------------|
| Dimensions                       | 500mm high x 500mm wide x 300mm deep |
| Weight                           | 40 kg                                |

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.