

Genus 2U Chassis

With Internal 10 MHz reference source.

The Genus is a new generation of equipment for the ground segment to meet today's and future ground segment V/HTS requirements.

The 2U Genus chassis accommodates up to 17 RF modules. These can be inserted whilst the shelf is in service giving excellent levels of flexibility and resilience.

Typical applications:

- Teleports, ground stations, maritime high resilience applications and unmanned sites.
- High resilience RF distribution where single points of failure can be minimised.
- Redundancy applications for remote satellite teleports.
- V/HTS gateways
- Signal distribution Amplifiers, BUC/LNB Power Supply's, Frequency Converters, Matrices, RF over Fibre, Redundancy Switches, Test Loop Translators are available.





Compact & flexible 2U chassis holding up to 17 RF modules, which can be mixed.



Local control & monitoring via front panel capacitive HMI touchscreen.



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





Secure Communications with SNMPv3. HTTPS



Flexible Signal Distribution

Frequency converters, Redundancy Switches (N+1), RF Over Fibre, Matrices and Power Supply Modules are available.



10MHz reference source User replaceable internal 10MHz reference & distribution module. External 10MHz input card also available.

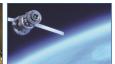


Resilience from dual redundant hot -swap power supplies & field serviceable RF modules, HMI & CPU



V 1.3 E&OE













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Technical specifications and operating parameters

General Specifications				
Capacity	Up to 17 RF modules			
Dimensions	2U high x 550mm deep x 19" wide			
Weight	<10 kg			
Colour	RAL9003 White (Semi-Matte)			
AC Power	85-264V AC (50/60Hz)			
AC Consumption	275W Max. consumption at steady state			
PSU	Dual redundant & alarmed, Diode OR, Hot-swap			
RF Modules	Single, field replaceable			

Reliability			
MTTR		20 minutes 15 minutes to retrieve spare part and 5 mins to replace. Applies to LRUs only and assumed in house stock.	
MTBF	Chassis	>250,000	
	CPU	>250,000	
Field ser		RF modules, CPU & HMI	
Hot-swap components		Dual redundant power supplies	

Environmental			
Operating temperature		0 to 45°C	
Location		Indoor use only	
Storage temperature		-20°C to +75°C Not Powered	
Humidity		20% - 90% non-condensing Relative Humidity	
Altitude	Operational	2,000m AMSL (Above Mean Sea Level)	
	Storage	8,000m AMSL (Above Mean Sea Level)	

Control & Monitoring		
Local Control	HMI, capacitive touchscreen	
Remote Control & Monitoring	Ethernet via RJ45, 10BaseT/100BaseTx ETL TCP/IP protocol SNMP Built-in Web Server	

Internal 10MHz reference and distribution module for 2U Genus chassis. The integrated 10MHz card has full control and monitoring via the parent chassis HMI or RJ45. The 10MHz reference source is switchable between this on-board ovenised 10MHz oscillator or the customer supplied external reference, connected to slot 17 EXT input module (if fitted). See separate datasheet for external 10MHz reference source inject card options.

Internal 10MHz —	High Stability Oveni	sed Oscillator	
Frequency Setting	10±0.000001 MHz		
Output Type	Sinewave		
Output Power Range	-10dBm to +10dBm	±2dBm	
Output Power Steps	1dB ±0.5		
Harmonic Rejection 2nd 3rd 4th 5th	>40dBc >50dBc >60dBc >60dBc	At 0dBm power out.	
SSB Phase Noise dBc/Hz	0dBm 10MHz src		
10 Hz 100 Hz 1000 Hz 10 000 Hz 10 000 Hz	<-124 <-143 <-147 <-149 <-152	Typical	
Frequency Stability: Over operating temperature Short-term (per second) Load change(±5%) Power supply variations(±5%)	$\frac{5 \times 10^{-12}}{4 \times 10^{-10}}$		
Frequency Aging Per Day Per Year			
Alarms	10MHz source RF power level. Card operational status.	User settable auto switchover for reference source (Int/Ext)	
Hot-Swap	Field replaceable by user.		

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.

RF Module Options						
Amplifier	BUC/LNB Power Supply	Frequency Converter	Matrices	Redundancy Switch	RF Over Fibre	Test Loop Translator (TLT)

Custom RF modules may be available - If you have a requirement which isn't listed in the RF module options table please contact us.

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