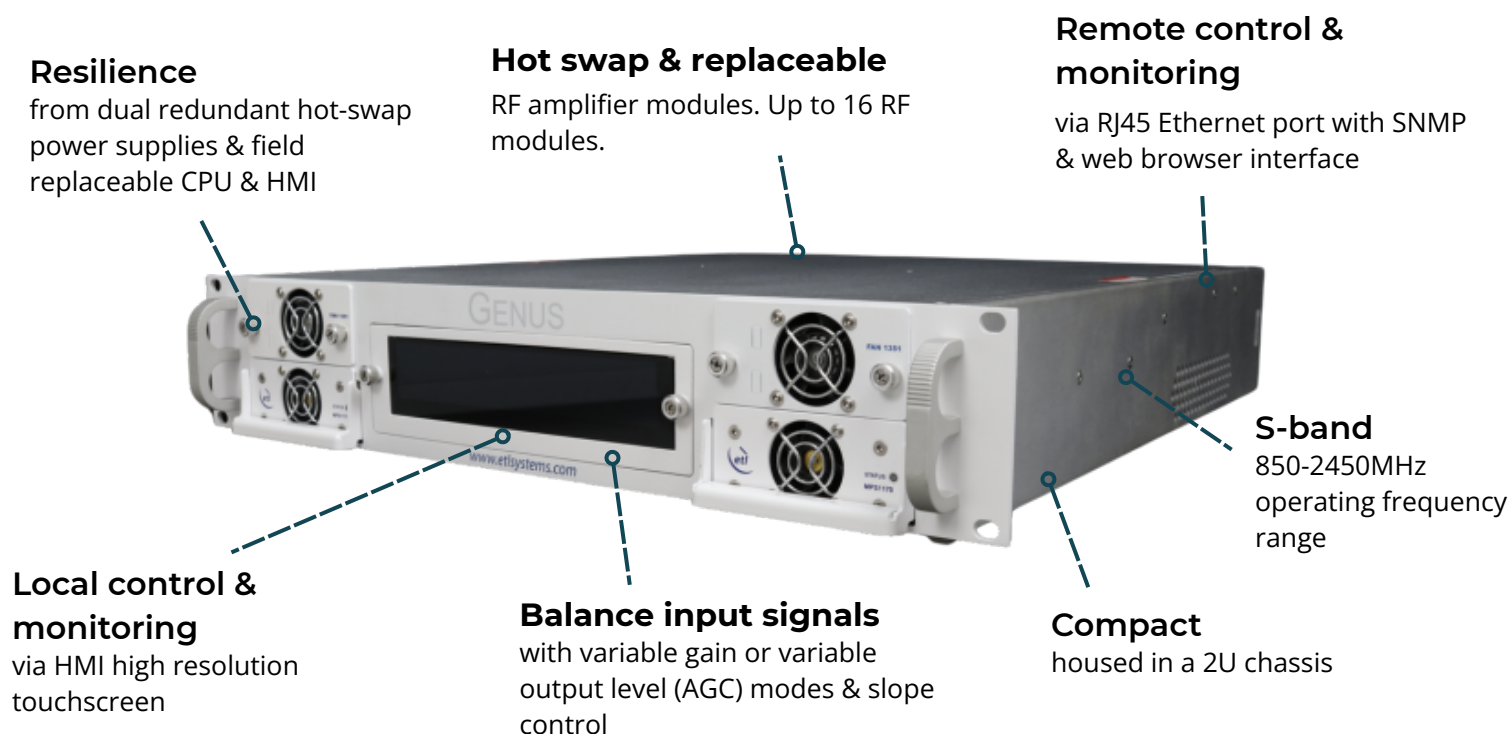


Alto S-band Redundant Amplifier Module

with low noise, high linearity, variable gain and slope control

The S-Band, hot swap, low noise & high linearity redundant amplifier is designed to work in the Genus 2U chassis series, operating over 850 to 2450MHz. The module has 0 to 44dB of variable gain range and slope control, RF detect . The chassis has the capacity 16 amplifier modules. Other modules types are also available, these can be mixed and housed in the Genus chassis.



Chassis Specification	
Dimensions/Weight/Colour	2U high x 550mm deep x 19" wide / <10kg / RAL9003 - white (semi-matte)
Capacity	17 module slots. Note: Actual modules may require >1 slot. Refer to required module spec table.
Temperature	Operating: 0°C to +45°C / Storage: -20°C to +75°C
Location/Humidity/Altitude	Indoor use only / 20 to 90% non-condensing / 2,000m AMSL (Operational) 8,000m AMSL (Storage) Above Mean Sea Level
Control & Monitoring	Local: HMI, capacitive touch screen Remote: Ethernet via RJ45, 10BaseT/100 BaseTx. ETL TCP/IP, SNMPv2/3, HTTPS & built-in web server. HMI and CPU field replaceable.
MTTR	20 minutes (15 minutes to retrieve spare part and 5 mins to replace). Applies to LRUs only and assumed in-house stock.
AC Input/Consumption	85-264Vac 50/60Hz / 275W max. consumption at steady state
PSU Redundancy	Dual redundant and alarmed. Diode OR. Hot swappable.
Input & Output Ports	Dependant upon module fitted



Smart Amplifier Module

Compact form factor allows multiple modules to be housed in the 2U GENUS chassis. Each module occupies 1 slot in the chassis.

RF Parameters		
Model Numbers		ALT-G2R-S3-129
Frequency Range		850 - 2450 MHz
Size		1 slot wide
MTBF		>150,000 hours
Gain		44 ± 2.0 dB max. 0 ± 2.0 dB min.
Gain Flatness When set to 0dB slope. In manual gain control mode, not AGC.	850 - 2150MHz	±0.75
	Any 36MHz	±0.2
Gain Steps		0.25 ± 0.15 in manual gain mode
Slope Control Range		0 to 8 dB Pivot point is at 2450MHz. This is the point of max gain when positive slope is set to a value other than 0dB.
Slope Control Steps		1 ± 0.25
Input Return Loss		18 dB typ. 14 dB min.
Output Return Loss		18 dB typ. 14 dB min.
Isolation		60dB typ. 50dB min. With amplifiers set at the same gain level. Worst case isolation is between adjacent amps, isolation degrades dB to dB for different gain levels.
Reverse Gain		< -60 dB typ.
Noise Figure		3 dB typ. @ max gain setting 4 dB max. @ max gain setting
1db GCP		21 dBm typ. 18 dBm min. At max. gain
OIP3		35 dBm typ. 32 dBm min. At max. gain
OIP2		45 dBm typ. 41 dBm min. At max. gain
RF Input Detector (dBm)		-55 min. -5 max.
RF Output Detector (dBm)		-40 min. +10 max.
RF Output Trip Limit (dBm)		(-30 to +10) ±0.5 Software Configurable Specified at 1500MHz and ambient temperature
RF Output Power Trip response time (ms)		≤ 1 ms
RF Output Limiting Settling time (ms)		≤ 75 ms
In band, signal independent spuri		<-85 dBm max. Very low level spuri from CPU clock, switch mode PSU and other control electronics inside the chassis.
Maximum Input Level		+20 dBm For no damage. Non-operational.

Interface, Monitoring & Alarms		
Control Method	Local and remote as provided by selected chassis	
LNB Power	None	
Environmental		
Operating Temperature	-0°C to +50°C	Up to 8 modules in a chassis.
	-0°C to +45°C	Up to 16 modules in a chassis.
Storage Temperature	-20°C to +75°C	
Location	Indoor use only, within parent GENUS chassis	
Humidity	20 to 90% non-condensing, relative humidity	
Altitude	10,000ft / 3,000m above mean sea level	
Physical Dimensions & Parameters		
Weight	<0.35kg typ.	

The performance quoted above is for a standalone amplifier. For in-chassis performance, see relevant spec. tables.

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.