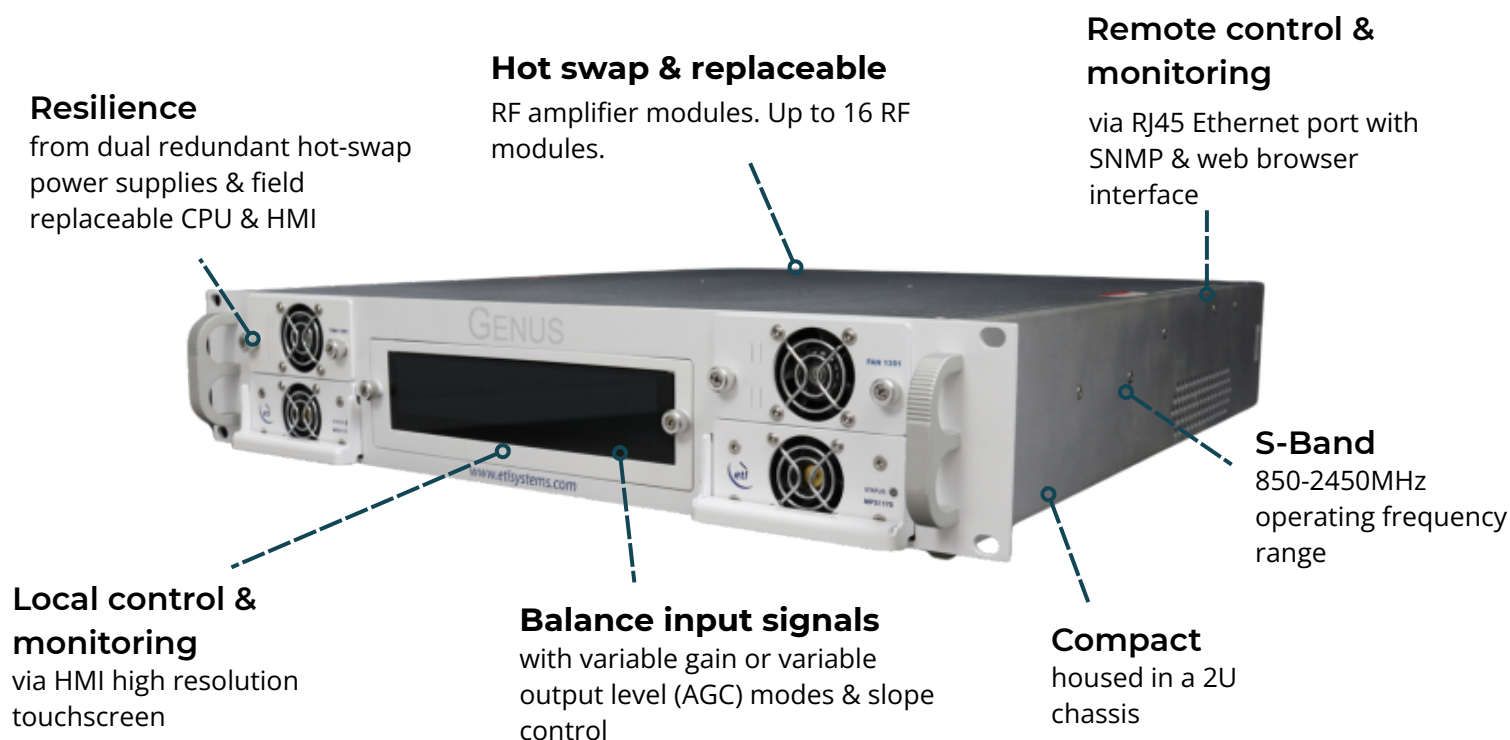


Alto S-band Smart Amplifier Module

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

The S-Band, hot swap, low noise & high linearity amplifier is designed to work in the Genus 1U 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-G2S-S3-128	
Frequency Range	850 - 2450 MHz	
Size	1 slot wide	
MTBF	>150,000 hours	
RF Connectors	50Ω SMA/BNC	
Gain	44 ± 2.0 dB max. 0 ± 2.0 dB min.	@ 2 dB slope setting and 2150MHz
Gain Ripple @ 2dB slope setting. Removing linear content of frequency slope.	850 - 2450MHz	±0.75 dB
	Any 36MHz	±0.2 dB
Gain Steps	0.25 ± 0.15 dB in manual gain mode	
Slope Control Range	0 to 8 dB	Pivot point is at 2450MHz. Standing slope 2dB, controllable range 0-7dB in addition to this
Slope Control Steps	1 ± 0.25 dB	
Input Return Loss	18 dB typ. 14 dB min.	
Output Return Loss	18 dB typ. 14 dB min.	
Isolation	60 dB typ. 50 dB min.	With amplifiers set at the same gain level.
Reverse Gain	< -60 dB typ.	
Noise Figure	3 dB typ. 4 dB max.	At max. gain
1db GCP	21 dB typ. 18 dB 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 Range	-5 dBm max. -55 dBm min.	
RF Output Detector Range	+10 dBm max. -40 dBm min.	
RF Output Power Trip response time	≤ 1 ms	
RF Output Limiting Settling time	≤ 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	No	
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.

*Measured values taken at room temperature