ETL Systems

Excelling in RF Engineering

Model Number:
ALT-G1S-S6-110-XXXX

Alto S-band Smart Amplifier Module with low noise, high linearity, variable gain and slope control

Typical applications:

- Teleports & Earth Stations
- Satellite Operations
- Government & Defence applications
- Telemetry, Tracking & Command
- High Resilience applications

The S-band smart low noise amplifier module is designed to work in the Genus 1U chassis series, operating over 850-3150 MHz. The module has low noise, high linearity, +42 to 0dB gain range with variable gain and slope control. The chassis has the capacity 16 amplifier modules.

Amplifier Module

Amplifier Module
Compact form factor allowing multiple modules to be housed in the Genus chassis. Each module occupies 1 slot in the chassis.

Hot Swap & replaceable RF Amplifier module

Variable Gain & Slope
For balancing input signals.

S-Band 850-3150 MHz operating frequency range

Low Noise
For prime signal quality

High Linearity
Ensures overall RF gain signal performance is optimised

Chassis Options

Local control & monitoring via HMI high resolution touchscreen

Resilience from dual redundant hot -swap power supplies & field replaceable CPU & HMI

Compact indoor & outdoor chassis options, which can be part populated

Secure protocols with SNMPv3 and HTTPS

Flexible Module Configurations choose from a mixture of amplifier modules with different operating frequencies.

Remote control & monitoring via RJ45 Ethernet port with SNMP & web browser interface

Field replaceable Internal 10MHz reference source and external reference inject port with auto detection (optional)

Indoor Chassis

Outdoor Unit

ETL Systems
New technologies
in RF distribution

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Smart Amplifier Module - RF Parameters		
Model Numbers		ALT-G1S-S6-110
Frequency Range		850-3150 MHz
RF Connectors		50Ω SMA
Gain (dB)	Max.	42±2
	Min.	0±2
Gain Flatness (dB)	850 to 3150 MHz	±2.0
	Any 36MHz	±0.2
Gain Steps (dB)		0.25±0.15
Slope Control Range (dB)		0 to 10. Pivot point at 3150 MHz
Slope Control Steps (dB)		1±0.25
Input Return Loss		16 dB typ. 14 dB min
Output Return Loss		16 dB typ. 12 dB min
Isolation (dB)	Typ.	60. With amplifiers set at the same gain level. Worst case isolation is between adjacent amps, isolation degrades dB-to-dB for different gain levels.
	Min.	50 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 (dB)		< -60 Typical
Noise Figure (dB)	Typ.	2.5 At max gain setting
	Min.	3.0 At max gain setting
1dB GCP (dBm)	Typ.	23 At max gain setting
	Min.	20 At max gain setting
OIP3 (dBm)	Typ.	35 At max gain setting
	Min.	32 At max gain setting
OIP2 (dBm	Typ.	45
	Min.	41
In band, signal independent spurii		<-85dBm max. Very low level spuria from CPU clock, switch mode PSU and other control electronics inside the chassis
MTBF		>150,000 hrs. MTBF of each amp module. These are hot-swap
Maximum Input Level		+20dBm. For no damage. None operational.
Module Weight		0.35kg
Spec Version		0.2

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.
Note 3: All specs are for 50 Ohm connectors unless detailed otherwise.

ETL SYSTEMS LIMITED
Coldwell Radio Station
Madley
Hereford
England HR2 9NE

TELEPHONE
+44 (0)1981 259020

EMAIL
info@etlsystems.com

WEB
www.etlsystems.com

RoHS COMPLIANT
Pb-Free
nqa ISO 9001 QUALITY MANAGEMENT
UKAS MANAGEMENT SYSTEMS 015