



Alto series L-band Amplifier with local & remote control & monitoring, 8-38 dB variable gain & 0-8 dB variable slope

The Alto series of amplifiers provide excellent RF performance with a wide range of functionality, in a compact chassis. They are designed with hot swap amplifier modules to enhance resilience and flexibility.

Other options in the Alto range: The Alto amplifier range is also available with additional features such as LNB powering, 10MHz and DC pass, Auto Gain Control and Redundancy configurations up to 4+2.

Typical applications:

- Compensation for passive splitters/combiners and cable loss
- General satcoms – teleports, video head-ends, TVRO

Amplifier Module



L-band (850 - 2150MHz) operating frequency range



Variable gain & slope compensation to balance input signals

Chassis Options



Compact chassis options, which can house 4 to 16 amplifier modules



Local control & monitoring via front panel push buttons & display



Resilience from options with dual redundant hot-swap power supplies, hot-swap amplifier modules



Remote control & monitoring via RJ45 Ethernet port with SNMP & web browser interface & option with RS232 serial port



External DC Power option





Amplifier Module - RF Parameters

Amp Module Model Number	ALT-S-L1-002					
Frequency Range	850-2150 MHz (L-band)					
RF Connectors & impedance	50Ω SMA	50Ω N-type	50Ω BNC	75Ω BNC	75Ω F-type	
Flatness	850-2150MHz	±0.75 dB	±0.75 dB	±0.85 dB	±0.85 dB	±1 dB
	Any 36MHz	±0.25 dB	±0.25 dB	±0.25 dB	±0.25 dB	±0.35dB
Input Return Loss	Typical	18 dB	18 dB	18 dB	14 dB	14 dB
	Minimum	15 dB	15 dB	14 dB	10 dB	8 dB
Output Return Loss	Typical	18 dB	18 dB	18 dB	14 dB	14 dB
	Minimum	15 dB	15 dB	14 dB	10 dB	8 dB
Gain	Maximum	38 ± 1.5 dB	38 ± 1.5 dB	38 ± 1.5 dB	38 ± 1.5 dB	38 ± 2 dB
	Minimum	8 ± 1.5 dB	8 ± 1.5 dB	8 ± 1.5 dB	8 ± 1.5 dB	8 ± 2 dB
Gain Steps	0.5 ± 1 dB typical					
1dB Gain Compression	15 dBm					
Slope Range	0 to 8 dB					
Slope settings	1 ± 0.5 dB					
OIP3	> 25 dB 3rd order intercept point, output power					
OIP2	40 dB 2nd order intercept point, output power					
Isolation	> 60 dB 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	< - 40 dB typical					
Noise Figure	9 dB					
In band, signal related spuri	- 85 dBc typical, -70 dBc minimum					
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.					
MTBF	> 250,000 hours MTBF of each amp module. These are hot swap					

Chassis Options - Specification

Amp Chassis Model Numbers	ALT-C200-1U	ALT-C201-2U	ALT-C202-2U	ALT-C204-2U	ALT-C203-2U	ALT-C205-2U
Capacity	Up to 8 modules (up to 4 modules with N-type connectors)	Up to 16 modules (up to 8 modules with N-type connectors)	Up to 16 modules (up to 8 modules with N-type connectors)	Up to 16 modules (up to 8 modules with N-type connectors)	Up to 16 modules (up to 8 modules with N-type connectors)	Up to 16 modules (up to 8 modules with N-type connectors)
Dimensions	1U high x 350mm deep x 19" wide	2U high x 450mm deep x 19" wide	2U high x 450mm deep x 19" wide	2U high x 450mm deep x 19" wide	2U high x 450mm deep x 19" wide	2U high x 350mm deep x 19" wide
Local control & monitoring	Via front panel push buttons & display					
Remote control & monitoring	RJ45 Ethernet, 10BaseT/100BaseTx, ETL TCP/IP protocol, SNMP & Web Browser Interface					
	-	-	RS232/485 serial	-	-	-
AC Power	85-264Vac 50/60 Hz, Fused 2A					
PSU	Dual redundant, Diode OR	Dual redundant, Diode OR	Dual redundant, Diode OR	Dual redundant, Diode OR	External 18V DC	Dual redundant, Diode OR
Hot-swap PSU	No	No	Yes (from front)	Yes	-	No
Power Consumption	< 100W all channels, LNB off	< 100W all channels, LNB off	< 100W all channels, LNB off	< 100W all channels, LNB off	< 50W all channels	< 100W all channels, LNB off
Weight	6 kg Fully populated	8 kg Fully populated	8 kg Fully populated	8 kg Fully populated	8 kg Fully populated	8 kg Fully populated
Colour	White 00-E-55 semi-gloss					
Temperature	Operating: 0 to 55 °C / Storage: -20 to +75 °C					
Humidity / Location	20% to 90% non-condensing / Indoor use only					

