



Alto series L-band Amplifier Module

with 8-38 dB slope compensation, LNB powering, local & remote control & monitoring

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 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 8 to 38 dB allows system optimisation and equalisation



LNB Powering 18V powering (switchable on/off)

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-L1-004				
Frequency Range		50-2150 MHz (L-band)				
RF Connectors & impedance		50Ω SMA	50Ω N-type	50Ω BNC	75Ω BNC	75Ω F-type
Flatness	Full Band	±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	±0.35 dB
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 ± 0.1 dB (worst case 0.5 ± 0.25 dB)				
1dB Gain Compression		15 dB				
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 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 (dBm)		+ 20 for no damage, not operational.				
MTBF		> 250,000 hours MTBF of each amp module. These are hot swap				

Interface, Monitoring & Alarms		
Control Method	Via Chassis	Local and remote as provided by selected chassis
LNB Power	18VDC at 500mA switchable LNB power	

Environmental Conditions	
Operating Temperature	0 to 55
Storage Temperature	-20 to +75
Location	Indoor use only
Humidity	20 to 90% non-condensing Relative Humidity
Altitude	10,000ft / 300m AMSL

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.

Chassis Options - Specification			
Amp Chassis Model Numbers	ALT-C200-1U	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)	
Dimensions	1U high x 350mm deep x 19" wide	2U high x 450mm 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		
AC Power	85-264Vac 50/60 Hz, Fused 2A		
PSU	Dual redundant, Diode OR	External 18 V DC	Dual redundant, Diode OR
Hot-swap PSU	No		
Power Consumption	< 100W all channels, LNB off < 200W all channels, LNB on	< 50W all channels, LNB off < 200W all channels, LNB on	-
Weight	6 kg fully populated	8 kg fully populated	
Colour	White 00-E-55 semi-gloss		

