



Alto series L-band Amplifier Module

Local control only, with 0-30 dB variable gain

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 AGC (automatic gain control), LNB powering, 10MHz and DC pass 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

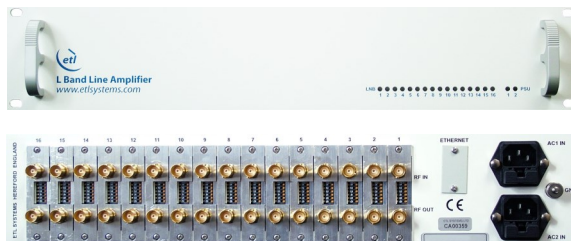


Variable gain 0-30 dB

Chassis Options



Chassis Model ALT-C100-1U



Chassis Model ALT-C101-2U



Compact chassis options, which can house 8 to 16 amplifier modules



Local control & monitoring via module DIP switches & front panel LEDs



Resilience from dual redundant power supplies, hot swap amplifier modules





Amplifier Module Specifications

RF Parameters							Environmental	
Frequency Range	850-2150 MHz (L-band)						Operating temperature	0 to 45°C
RF Connectors	50Ω SMA	50Ω N-type	50Ω BNC	75Ω BNC	75Ω F-type		Location	Indoor use only
Flatness	850-2150MHz	±0.75 dB	±0.75 dB	±0.85 dB	±0.85 dB	±1 dB	Storage temperature	-20°C to +75°C
	Any 36MHz	±0.25 dB	±0.25 dB	±0.25 dB	±0.25 dB	±0.35 dB	Humidity	20 to 90% non-condensing
Input Return Loss	Typical	18 dB	18 dB	18 dB	14 dB	14 dB		
	Minimum	12 dB	12 dB	12 dB	10 dB	8 dB		
Output Return Loss	Typical	18 dB	18 dB	18 dB	14 dB	14 dB		
	Minimum	12 dB	12 dB	12 dB	10 dB	8 dB		
Gain	Maximum	30 ± 1.5 dB	30 ± 1.5 dB	30 ± 1.5 dB	30 ± 1.5 dB	30 ± 2 dB		
	Minimum	0 ± 1.5 dB	0 ± 1.5 dB	0 ± 1.5 dB	0 ± 1.5 dB	0 ± 2 dB		
Gain Steps	1 ± 0.15 dB							
1dB Gain Compression	15 dBm 25dB Gain							
OIP3	> 25 dBm 25dB Gain 3rd 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	Typical	7.5 dB (25 dB gain)						
	Maximum	9 dB (25 dB gain)						
In band, signal related spuri	- 85 dBc typical, -70 dBc minimum							
In band, signal independent spuri	- 80 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							
Maximum input level	+20 dBm Absolute maximum							

System Control	
Local Control	Via DIL switches on the module

Power	
LNB Power	None

Options	
Please add the relevant suffix to the model number to indicate your required connectors: BNC 50 Ω - B5B5 BNC 75 Ω - B7B7 F-type 75 Ω - F7F7 SMA 50 Ω - S5S5	
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

Chassis Specifications		
Model Numbers	ALT-C100-1U	ALT-C101-2U
Dimensions	1U high x 350mm deep x 19" wide	2U high x 450mm deep x 19" wide
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)
Weight	6 kg Fully populated	8 kg Fully populated
Colour	White 00-E-55 semi-gloss	
AC Power	85-264Vac 50/60 Hz, Fused 2A	
PSU	Dual redundant, Diode OR. Monitored via front panel LEDs	
Hot-swap PSU	No	
Power Consumption	< 100W all channels	