ETL Systems
Excelling in RF Engineering

Model Number module: ALT-M-C1-007
Model Number chassis options:
ALT-C100-1U / ALT-C101-2U

Alto series C-band Amplifier

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. The 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

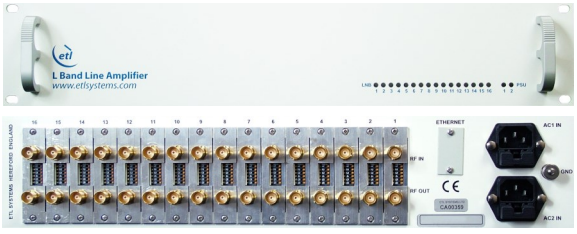
Amplifier Module

3000 - 4200 MHz operating C-Band frequency range

0 - 30 dB Variable gain to balance input signals

Chassis Options

Chassis Model ALT-C100-1U



Chassis Model ALT-C101-2U

Compact chassis options, which can house 8 to16 amplifier modules

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

Resilience from dual redundant power supplies & hot swap amplifier modules

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Model Number: ALT-M-C1-007 module

Amplifier Module Specifications

RF Parameters			
Frequency Range		3000 to 4200MHz (C-band)	
RF Connectors		50Ω SMA	50Ω N-type
Gain	Maximum	30 ± 1.5 dB	30 ± 1.5 dB
	Minimum	0 ± 1.5 dB	0 ± 1.5 dB
Flatness	Full band	±0.80 dB	±0.80 dB
	Any 36MHz	±0.25 dB	±0.25 dB
Gain Steps		1 ± 0.2 dB	
Input Return Loss	Typical	15 dB	15 dB
	Minimum	12 dB	12 dB
Output Return Loss	Typical	15 dB	15 dB
	Minimum	12 dB	12 dB
1dB Gain Compression		11 dBm	
OIP3		> 22 dBm Max gain, 3rd order interception point, output power	
OIP2		40 dBm, Max gain, 2nd order interception point, output power	
Isolation		> 60 dB (With amplifiers sat 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	6.5 dB	
	Maximum	8 dB	
In band, signal related spurii		-85 dBm max (Very low level spurii from CPU clock, switch mode PSU and other electronics inside the chassis)	
MTBF		> 250,000 hours (MTBF of each amplifier module)	
Maximum input level		+20dBm Absolute maximum	

Environmental	
Operating temperature	0 to 45˚C
Location	Indoor use only
Storage temperature	-20˚C to +75˚C
Humidity	20 to 90% non-condensing

System Control	
Local Control	Via DIL switches on the module

Power	
LNB Power	None

RF connector & impedance 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	
LNB Power	N/A	N/A
Monitoring	Via front panel LEDs for power supplies & amplifier modules	

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