



Model Number: **ALT-S-L1-005**

RF Engineering
and Custom Build

Alto series L-band Amplifier Module

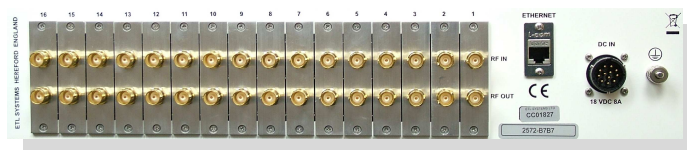
Local & Remote Control & Monitoring, 0-20dB variable gain & 0-8dB slope compensation



Model ALT-C200-1U



Model ALT-C201-2U



Model ALT-C203-2U



Model ALT-C204-2U



Model ALT-C202-2U

Connectors: A comprehensive range of connectors and impedances are available, making the Alto series easy to fit into new or existing systems.

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. ALT-S-L1-005 amplifier module provides variable gain and variable slope compensation with local and Ethernet remote control and monitoring.

Benefits & features:

- Cost effective alternative to bullet in-line amplifiers
- Variable gain (0 to 20 dB) allows system optimisation and equalisation
- Enhanced satcoms signal quality thanks to excellent RF performance (especially low noise figure, excellent gain flatness and high linearity)
- High resilience from hot swap amplifier modules
- Compact chassis options

Typical applications:

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

Other options in the Alto range include:

- Remote control & monitoring
- LNB Powering
- Slope Compensation
- Auto Gain Control





Model Number: ALT-S-L1-005

Alto series L-band Amplifier Module with local & remote control, 0-20 dB variable gain, 0-8 dB variable slope compensation & LNB powering

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Technical specifications and operating parameters

- Module Specifications -

RF Parameters						
Frequency Range		850-2150 MHz (L-band)				
RF Connectors		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	14 dB	14 dB	14 dB	12 dB	12 dB
	Minimum	9.5 dB	9.5 dB	9 dB	9 dB	9 dB
Gain	Maximum	20± 2 dB	20± 2 dB	20± 2 dB	20± 2 dB	20± 2 dB
	Minimum	0± 2 dB	0± 2 dB	0± 2 dB	0± 2 dB	0± 2 dB
Gain Steps	0.5 ± 1 dB typical					
1dB Gain Compression	19 dBm min at max Gain, 17 dBm min at min Gain					
Slope Range	0 to 8 dB					
Slope settings	1 ± 0.5 dB					
OIP3	30 dBm at max Gain					
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	10 dB at Max Gain & 0dB Slope setting , 28 dB at min Gain & 0dB Slope setting					
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	> 150,000 hours MTBF of each amp module. These are hot swap					

Environmental	
Operating temperature	0 to 55°C
Location	Indoor use only
Storage temperature	-20°C to +75°C
Humidity	20 to 90% non-condensing
Altitude	10,000ft AMSL

Chassis Options	
Up to 8 modules	ALT-C200-1U
Up to 16 modules	ALT-C201-2U
Up to 16 modules	ALT-C202-2U
Up to 16 modules	ALT-C203-2U
Up to 16 modules	ALT-C204-2U

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	

- Chassis Specifications -

Model Numbers	ALT-C200-1U	ALT-C201-2U	ALT-C202-2U	ALT-C204-2U	ALT-C203-2U
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	Via front panel push buttons & display				
Remote Control	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				External 18V DC
Hot-swap PSU	No	No	Yes	Yes	-
Power Consumption	< 100W all channels, LNB off				< 50W all channels
Weight	6 kg Fully populated		8 kg Fully populated		
Colour	White 00-E-55 semi-gloss				

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

TELEPHONE
+44 (0)1981 259020

EMAIL
info@etlsystems.com

FACSIMILE
+44 (0)1981 259021

WEB
www.etlsystems.com

