



Alto series S-band Amplifier Module

Low noise, high linearity amplifier with variable gain and 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 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



S-band (850 - 3150MHz) operating frequency range



Variable gain
0-50dB variable gain at full band

Chassis Options



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



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



Local control & monitoring via front panel push buttons & display



External DC Power option

Model ALT-C200-1U



Model ALT-C204-2U



Model ALT-C201-2U



Model ALT-C205-2U



Model ALT-C202-2U





Amplifier Module - RF Parameters		
Amp Module Model Number	ALT-S-S6-091	
Frequency Range	850-3150 MHz (S-band)	
RF Connectors	50Ω SMA 50Ω N-type	
Gain	Max. 50±.2, Min 0±.2	
Gain Flatness	850-3150 MHz	±.1.75 dB
	Any 36MHz	±0.20 dB
Gain Steps	0.5±0.25 dB	
Slope Control Range	N/A	
Slope Control Steps	N/A	
Input Return Loss	850-2150 MHz	20 dB Typical, 16 dB Minimum
	2150-3150 MHz	18 dB Typical, 14 dB Minimum
Output Return Loss	850-2150 MHz	20 dB Typical, 16 dB Minimum
	2150-3150 MHz	16 dB Typical, 12 dB Minimum
Isolation	60 dB Typical, 50 dB Minimum (with amplifiers set at the same gain level)	
Reverse Gain	< -60 dB Typical	
Noise Figure	2.0 dB Typical, 3.0 dB Maximum	
1dB Gain Compression	25 dBm Typical, 22 Min (at max gain setting)	
OIP3	38 dBm Typical, 33 dBm Minimum (at max gain setting)	
OIP2	43 dBm Typical, 38 dBm Minimum (at max gain setting)	
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	
Maximum Input level	+20 dBm. For no damage. None operational	
Control method	Via chassis. Local and remote as provided by selected chassis.	
LNB Power	None. See alternative amplifier modules if LNB power is required.	

Chassis Options - Specification					
Amp Chassis Model Numbers	ALT-C200-1U	ALT-C201-2U	ALT-C202-2U	ALT-C204-2U	ALT-C205-2U
Capacity	Up to 8 modules (4 modules with N-type connectors)	Up to 16 modules (8 modules with N-type connectors)	Up to 16 modules (8 modules with N-type connectors)	Up to 16 modules (8 modules with N-type connectors)	Up to 16 modules (8 modules with N-type connectors)
Dimensions	1U high x 350mm deep x 19" wide	2U high x 350mm deep x 19" wide	2U high x 450mm deep x 19" wide	2U high x 350mm 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	-	-
Temperature Monitoring	Each amplifier module, CPU board & equipment chassis. As provided by the module.				
PSU Status	Each PSU individually monitored & reported				
Fan Status	-	-	Taco equipped fans, speed monitored	-	-
LNB Power	18VDC at 500mA switchable— with suitable module	None	None	None	
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	Dual redundant, Diode OR
Hot-swap PSU	No	No	Yes (from front)	Yes	No
Power Consumption	< 100W all channels, LNB off < 200W all channels LNB on	< 100W all channels, LNB off	< 100W all channels, LNB off	< 100W all channels, LNB off	
Weight / Colour	6 kg / RAL9003 – White	10 kg / RAL9003 – White	8 kg / RAL9003 – White	8 kg / RAL9003 – White	8 kg / RAL9003 – White
Temperature	Operating: 0 to 50 °C / Storage: -20 to +75 °C				
Humidity / Location	20% to 90% non-condensing / Indoor use only				

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

