



**Model Number: C1601S2ULA-22226-N5N5**

# 16-way L-band Active Combiner

with dual redundant amplifiers & 10 MHz source

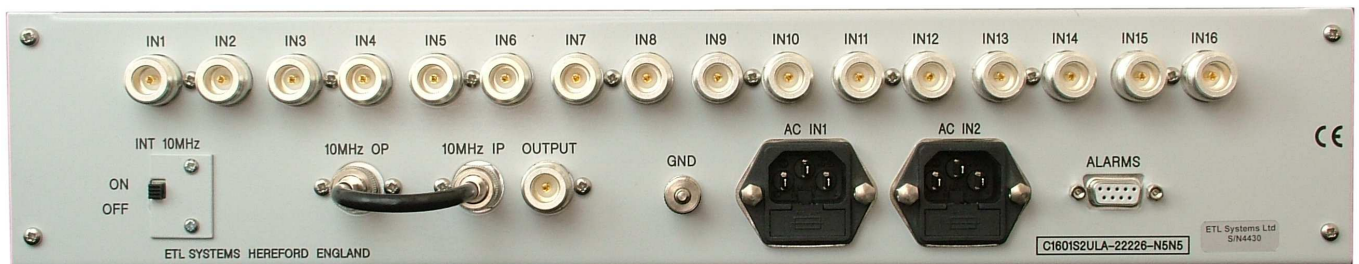


This single L-band active combiner benefits from automatic, cold standby and dual redundant amplifiers on the input providing unity gain, and dual redundant power supplies for reliability in service.

Front View of Model C1601S2ULA-22226-N5N5

Front panel LED's offer a visual status of the amplifiers and power supplies and a dry contact alarm port is provided on the rear panel for external monitoring.

The unit also features 10MHz injection, either from an internal 10MHz reference source or via an external supply.



Rear View of Model C1601S2ULA-22226-N5N5

This particular unit has 50 ohm N-type connectors, but other impedances and connector types are available (model numbers will vary).

This unit is also available with Ethernet monitoring (see Model C1601S2ULA-22226-N5N5-E)





# Model Number: C1601S2ULA-22226-N5N5

16-way L-band Active Combiner with dual redundant amplifiers & 10 MHz source

RF Engineering  
and Custom Build

## Technical specifications and operating parameters

RF Parameters		
Capacity	16-way	
Frequency Range	850-2150 MHz (L-band)	
Gain	0 dB $\pm$ 2 dB nominal, mean across band	
Flatness	850-2150MHz	$\pm$ 1.5 dB
	Over any 36MHz	$\pm$ 0.5 dB
1 dB Compression	12 dBm	
Noise Figure	10 dB	
Input Return Loss	18 dB typical	
Output Return Loss	15 dB typical	
Amp Redundancy	1-to-1 redundant	Cold redundancy & current sensing
Internal Reference	10MHz Sine Wave	Ovenised Crystal Oscillator
10MHz Output Level	+10 dBm $\pm$ 2 dB	
Frequency Stability over temperature	$\pm$ 1 x 10 <sup>-8</sup>	0 to +55°C
	Reference Source Ageing	
		$\pm$ 5 x 10 <sup>-8</sup> / year
		$\pm$ 5 x 10 <sup>-10</sup> / year
Reference Source Phase Noise	<-85 dBc / Hz @ 1Hz	
	<-115 dBc / Hz @ 10Hz	
	<-140 dBc / Hz @ 100Hz	
	<-150 dBc / Hz @ 1000Hz	
	<-155 dBc / Hz @ 10000Hz	
Warm up time	<2 minutes	At 25°C to within $\leq$ 1 x 10 <sup>-7</sup>
	10MHz Ref Source	Two 50 ohm BNC's on rear panel for 10MHz external IN and internal OUT, with a U-Link supplied. There is no 10MHz injection if the U-Link is removed and the port is terminated (i.e. no external source supplied)

Power	
AC Power	85-264Vac 50/60Hz
LNB Power	None
PSU	Dual redundant
Hot-swap PSU	No

System Control	
Display	Front panel LED's for PSU & Amplifier status
Alarms	Dry contact alarm port on ear panel for PSU failure

Environmental	
Operating temperature	0 to 45°C
Location	Indoor use only
Storage temperature	-20°C to +75°C
Humidity	85% non-condensing

Physical	
Input Connector	N-type
Input Impedance	50Ω
Output Connector	N-type
Output Impedance	50Ω
Dimensions	2U high x 350mm deep x 19" wide
Weight	8 kg
Colour	White 00-E-55 semi-gloss

Key Features	
Dual redundant amplifiers	
10MHz reference source	
Dual redundant power supplies	
Alarm contacts for external monitoring	

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

