



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

# 16-way L-band Active Combiner

with dual redundant amplifiers, 10 MHz source & Ethernet Monitoring



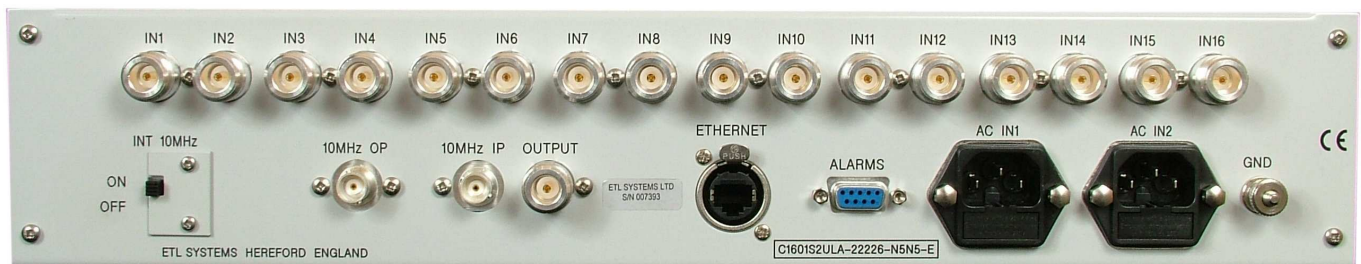
This single L-band active combiner benefits from automatic, cold standby and dual redundant amplifiers on the input providing unity gain, and dual redundant power supplies for reliability in service.

Front View of Model C1601S1ULA-22226-N5N5-E

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.

An Ethernet Monitoring port is also provided on the rear panel for power supply and amplifier status.

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



Rear View of Model C1601S1ULA-22226-N5N5-E

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 without Ethernet monitoring (see Model C1601S1ULA-22226-N5N5)





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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
1dB 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	<b>U-link on rear panel to select internal/external.</b> The 10MHz reference is injected onto the common L-band Port	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
Monitor port	RJ45 Ethernet Port on rear panel for PSU & Amplifier status

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

Physical	
Connectors	N-type
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	
Ethernet Monitoring Port	
Alarm contacts for external monitoring	

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