



4-way Single L-Band Active Combiner

with dual redundant amplifiers and internal/external 10 MHz reference source

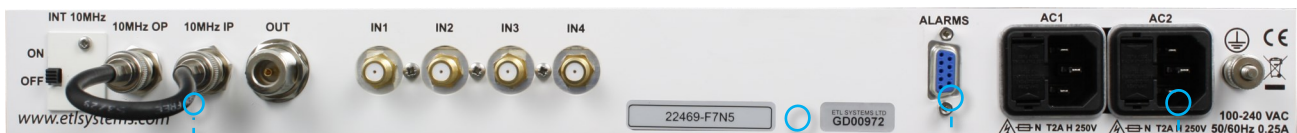
Typical applications:

- Satellite operators, VSAT, teleports & broadcasters
- High resilience RF distribution & optimum satellite signal quality

Compact 1 x 4-way combiner housed in a 1U high chassis

850 - 2150 MHz operating frequency range

Local Monitoring via front panel status LEDs for amplifier & PSU



10 MHz Reference either via an internal source, switchable on/off or via an external source

Dry contact alarm port for power supply status

Resilience from dual redundant power supplies





Technical specifications and operating parameters

RF Parameters							
Capacity	4 - way Combiner						
Frequency	850 to 2150 MHz (L-band)						
Connector & impedances	50Ω BNC	50Ω SMA	50Ω N-Type	75Ω BNC	75Ω F-Type		
Nominal Gain	1±2 dB Mean across band						
Gain flatness	Full band	±1.0 dB	±1.0 dB	±1.0 dB	±1.2 dB	±1.4 dB	
	Any 36MHz	±0.5 dB	±0.5 dB	±0.5 dB	±0.6 dB	±0.7 dB	
Input Return Loss	Typical	16 dB	16 dB	16 dB	14 dB	14 dB	
	Minimum	12 dB	12 dB	12 dB	8 dB	8 dB	
Output Return Loss	Typical	18 dB	18 dB	18 dB	16 dB	16 dB	
	Minimum	11 dB	12 dB	12 dB	8 dB	8 dB	
Group Delay Variation	Full band	2 ns maximum				Pk to pk across band	
	Any 36 MHz	1 ns maximum				Pk to pk across band	
Amplification	Dual redundant amplifier, cold standby, 1:1 redundancy with auto switch-over based on amplifier current monitoring						
Isolation	Typical	28 dB			Minimum between 2 o/p ports		
	Minimum	21 dB			Minimum between 2 o/p ports		
Noise Figure	21 dB						
Output 1dB GCP	8 dBm						
Input RF Power	16 dBm			Absolute maximum			
10 MHz							
Internal Reference	10 MHz Sine Wave			Ovenised Crystal Oscillator			
10 MHz Output Level	+ 10 dBm ± 2 dB						
Frequency Stability Over Temperature	± 1 x 10 ⁻⁸			0 to + 55° C			
Reference Source Ageing	± 5 x 10 ⁻⁸ /year ± 5 x 10 ⁻¹⁰ /day						
Reference Source Phase Noise	@ 1 Hz	< -85 dBc/Hz					
	@ 10 MHz	< -115 dBc/Hz					
	@ 100 MHz	< -140 dBc/Hz					
	@ 1000 MHz	< -150 dBc/Hz					
	@ 10,000 MHz	< -155 dBc/Hz					
Warm up Time	< 2 minutes			At 25° C to within < ± 1 x 10 ⁻⁷			
	U-link on rear panel to select internal/ external. The 10 MHz reference is injected onto the common L-Band port.			Two 50 ohm BNC's on rear panel for 10 MHz external IN and internal OUT, with a U-link supplied. There is no 10 MHz injection if the U-link is removed and the port is terminated (i.e. no external source supplied)			
External 10 MHz Insertion Loss	< 0.5 dB						

Environmental	
Operating temperature	0 to 50° C
Location	Indoor use only
Storage temperature	-20° C to +75° C
Humidity	85% non-condensing. Relative Humidity.
Altitude	10,000 feet AMSL (above mean sea level)

Power		
PSU Power	85-264Vac 50/60Hz	Fused 2A
BUC Power	None	
PSU Redundancy	Dual redundant with dual IEC inlets.	Diode OR. Not hot-swap
AC Consumption	<10 W	At steady state

System Control & Alarms	
Alarms	Dry contact, change-over via 9-way D-type. Available alarms are: PSU supply.
Display	Tri coloured LED's to indicate amplifier status, LEDs for PSU status and power on.

Physical	
Dimensions	1U high x 350mm deep x 19" wide
Weight	3.65 kg
Colour	RAL9003- White (Semi-Matte)

Preliminary Specifications

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.