



Model Number: H0104D1ULA-22430-xxxx

RF Engineering  
and Custom Build

# Hybrid 4-way L-band Active Dextra Series Splitter & Combiner

With dual redundant amplifiers (OPT-R version), switchable LNB powering on Splitter



The **Dextra** splitter range has been designed for high resilience RF distribution, and optimum satellite signal quality. The splitters benefit from excellent RF performance and compact form factor as well as advanced functionality.

### Typical applications:

- Satellite operators, VSAT, teleports, and broadcasters
- High resilience RF distribution, and optimum satellite signal quality
- 850-2450 MHz to cover **Ka-band and HTS applications**

### Benefits & features:

- Highly resilient solution minimising the risk of expensive downtime for the satcoms user
- Dual redundant power supplies
- LNB current monitoring
- Dual redundant amplifiers (option)

### Advanced functionality:

- 0/13/18V LNB powering ( $\pm 22$  KHz tone) on Splitter
- LNB current monitoring
- Customer settable alarm thresholds for LNB current
- Dual redundant amplifiers (option)
- -20 dB monitor ports on the front panel
- Web browser access (and SNMP) for control and monitoring
- Compact 1RU 19" chassis

### RF performance:

- Specified to **ensure optimum signal quality** with high throughput / high bandwidth satcoms.
- 850-2450 MHz operating range
- Excellent Gain flatness (frequency response)
- High return loss
- High linearity
- Low noise figure

**Options:** Dextra splitters can be specified with single amplifier or hot/cold-standby dual-redundant amplifier options. Please specify OPT-R for redundant amplifier option. This is remote configurable. The range covers 4-way and 8-way splitters and combiners in both single and dual configurations. 16-way splitters and combiners are available as single units. All these are supplied in a 1RU case for space efficient rack mounting.





## Hybrid 4-way L-band Active Dextra Series Splitter & Combiner

### Technical specifications and operating parameters

#### RF Parameters

Capacity		4-way Splitter and Combiner			
Frequency Range		850-2450 MHz (Extended L-band)			
Connector & impedances		50Ω BNC	50Ω SMA	75Ω F-Type	75Ω BNC
Isolation 850-2250MHz	Typical	28 dB	28 dB	28 dB	28 dB
	Minimum	24 dB	24 dB	24 dB	24 dB
Isolation 2250-2450MHz	Typical	28 dB	28 dB	24 dB	24 dB
	Minimum	24 dB	24 dB	22 dB	22 dB
Gain flatness	Full Band	±0.8 dB	±0.8 dB	±1.0 dB	±1.0 dB
	Any 36MHz	±0.25 dB	±0.25 dB	±0.3 dB	±0.3 dB
Group Delay Variation	Full Band	2 ns Maximum	2 ns Maximum	2 ns Maximum	2 ns Maximum
	Any 36MHz	1 ns Maximum	1 ns Maximum	1 ns Maximum	1 ns Maximum
Amplification		Single path amplifier			
Amplifier Redundancy (Option OPT-R)		Dual redundant, selectable hot or cold standby, 1:1 redundancy with auto switch-over based on amplifier current monitoring			
In band spurious		<-80dBm			
Gain		0±1.0dB			
<b>Splitter</b>					
Input Return Loss	Typical	20 dB	20 dB	20 dB	20 dB
	Minimum	16 dB	16 dB	16 dB	16 dB
Output Return Loss	Typical	21 dB	21 dB	21 dB	21 dB
	Minimum	16 dB	16 dB	16 dB	16 dB
Output 1dB Compression		0 dBm			
Noise Figure dB	50Ω	10 dB			
	75Ω	12 dB			
OIP3		+10 dBm			
OIP2		+30 dBm			
3rd Order intermodulation level		-40 dBc	With 2 equi-magnitude -13dBm carriers. Total power -10dBm.		
<b>Combiner</b>					
Connector & impedances		50Ω BNC	50Ω SMA	75Ω F-Type	75Ω BNC
Input Return Loss	Typical	21 dB	21 dB	21 dB	21 dB
	Minimum	16 dB	16 dB	16 dB	16 dB
Output Return Loss	Typical	20 dB	20 dB	20 dB	20 dB
	Minimum	16 dB	16 dB	16 dB	16 dB
Output 1dB Compression		+10 dBm			
Noise Figure	50Ω	22 dB			
OIP3		+20 dBm			
OIP2		+30 dBm			
3rd Order intermodulation level		-40 dBc	With 2 equi-magnitude -13dBm carriers. Total power -10dBm.		

#### Environmental

Operating temp.	0 to 50°C
Location	Indoor use only
Storage temp.	-20°C to +75°C
Humidity	85% non-condensing
Altitude	10,000 feet AMSL

#### Physical

Weight	3.05Kg
Dimensions	1U high x 350mm deep x 19" wide
Colour	White 00-E-55 semi-gloss

#### System Control

Display	Front panel LED's for PSU, LNB Power & amp condition
Monitoring & Remote Control 9-way D-type	Redundant amplifiers, LNB current and power supplies monitored via RJ45 port with 10baseT/100baseTX Ethernet offering web browser access, SNMP and ETL proprietary TCP protocol
Alarms	Dry contact alarm port on rear panel for PSU & LNB supply. Full status and alarms are also available via the Ethernet interface.

#### Power

AC Consumption	<35W	At steady state with max rated LNB current supplied
AC Power	85-264Vac 50/60Hz . Fused 2A	Dual mains inlet
LNB Power (RX) - Splitter Only	0/13V/18Vdc, 500mA max via common (RF in) port, over current protected at 800mA typical. 22kHz tone on/off enabled/disabled through comms. Monitored, alarms and status available through comms. Thresholds settable by user through comms.	
Input RF power	16dBm	Absolute Maximum
PSU	Dual redundant with dual IEC inlets	Not hot swap

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