

...designed for perfect signals

Extended L-Band Active Combiners (4-way, 8-way, 16-way)

The LCEL EcoLine series represents cost effective active L-Band combiners in 1RU/19" rackmount design. The units are available as single combiners (4:1, 8:1, 16:1), dual combiners (2 x 4:1, 2 x 8:1 and 2 x 16:1) and quad combiners (4 x 4:1, 4 x 8:1).

The units operate within the extended L-Band frequency range (850 – 2450MHz) ready for KA-Band and HTS applications and allow easy combining of up to 16 input to one output with zero loss.

Additionally, the units feature switchable DC-supply (Option) while an external 10MHz reference port and 1:1 redundant dual power supply are also optionally available. Colored front side LED's display the health status of each power supply and DC-supply.

The LCEL EcoLine combiners are a perfect fit for Satellite-, Broadcast and Broadband RF distribution infrastructures such as at Teleports, Satellite Earth-Stations or Cable/IPTV operations.



FEATURES & BENEFITS

- ▶ Space saving 1RU/19" rack mount design
- ▶ Extended L-Band frequency range 850 – 2450MHz
- ▶ Single 4:1, 8:1 and 16:1 combiners
- ▶ Dual 4:1, 8:1 and 16:1 combiners
- ▶ Quad 4:1 and 8:1 combiners

- ▶ Various RF impedances & connectors
- ▶ Internally amplified zero loss active combiner units
- ▶ Switchable DC 24V or 48V (**Option DC24-EL/DC48-EL**)
- ▶ 10MHz external reference port (**Option 096**)
- ▶ 1:1 redundant power supply (**Option 097**)

TECHNICAL SPECIFICATIONS

Dimensions:	1RU/19" rackmount, only 150mm deep
Power Supply:	Single 85 – 230V, 50/60Hz & fuse 1A (1:1 Redundant PSU Option 097)
Power Consumption:	<10W (without DC-supply) / <20W (with DC-supply)
Frequency Range:	850 – 2450MHz (extended L-Band)
Input/Output Connectors:	50Ohm SMA(f), 75Ohm F(f), 50Ohm BNC(f)*, 75Ohm BNC(f)* *on request
Input RF Power:	+23dBm max.
Input/Output Return Loss:	14B min.



Noise Figure:	16dB typ.
Isolation:	20dB min.
Insertion Loss:	0dB typ., ±1.0dB max.
Frequency Response:	50Ohm Type: ±1.5dB typ. ±2.0dB max, ±0,25dB @ any 36MHz 75Ohm Type: ±2.0dB typ. ±2.5dB max, ±0,3dB @ any 36MHz
P1dB:	+11dBm typ.
IMA3 @ -10dBm:	-60dBc typ.
SFDR:	< - 80dBm
Switchable DC-Supply:	24VDC or 48VDC (Option DC24-EL/DC48-EL) at common port
10MHz Reference Port:	50Ohm SMA(f) rear-side (Option 096)
Status LED's:	Unit power supply, DC
Operating Temperature:	0°C to 50°C
Storage Temperature:	-20° to 75°C
Humidity:	90%, non-condensing
RoHS:	Compliant

ORDER INFORMATION

Type with 50Ohm SMA(f) Connectors

Type	Type No.	Short Description
LC104EL-50S	9001167	Active L-Band Combiner, 1 x 4:1, 50Ohm SMA(f), 1RU/19" rack mount
LC108EL-50S	9000808	Active L-Band Combiner, 1 x 8:1, 50Ohm SMA(f), 1RU/19" rack mount
LC116EL-50S	9001171	Active L-Band Combiner, 1 x 16:1, 50Ohm SMA(f), 1RU/19" rack mount
LC2104EL-50S	on request	Active Dual L-Band Combiner, 2 x 4:1, 50Ohm SMA(f), 1RU/19" rack mount
LC2108EL-50S	on request	Active Dual L-Band Combiner, 2 x 8:1, 50Ohm SMA(f), 1RU/19" rack mount
LC2116EL-50S	on request	Active Dual L-Band Combiner, 2 x 16:1, 50Ohm SMA(f), 1RU/19" rack mount
LC4104EL-50S	on request	Active Quad L-Band Combiner, 4 x 4:1, 50Ohm SMA(f), 1RU/19" rack mount
LC4108EL-50S	on request	Active Quad L-Band Combiner, 4 x 8:1, 50Ohm SMA(f), 1RU/19" rack mount

Type with 50Ohm BNC(f) Connectors

Type	Type No.	Short Description
LC104EL-50B	9000805	Active L-Band Combiner, 1 x 4:1, 50Ohm BNC(f), 1RU/19" rack mount
LC108EL-50B	9001169	Active L-Band Combiner, 1 x 8:1, 50Ohm BNC(f), 1RU/19" rack mount
LC116EL-50B	9000787	Active L-Band Combiner, 1 x 16:1, 50Ohm BNC(f), 1RU/19" rack mount
LC2104EL-50B	on request	Active Dual L-Band Combiner, 2 x 4:1, 50Ohm BNC(f), 1RU/19" rack mount
LC2108EL-50B	on request	Active Dual L-Band Combiner, 2 x 8:1, 50Ohm BNC(f), 1RU/19" rack mount
LC2116EL-50B	on request	Active Dual L-Band Combiner, 2 x 16:1, 50Ohm BNC(f), 1RU/19" rack mount
LC4104EL-50B	on request	Active Quad L-Band Combiner, 4 x 4:1, 50Ohm BNC(f), 1RU/19" rack mount
LC4108EL-50B	on request	Active Quad L-Band Combiner, 4 x 8:1, 50Ohm BNC(f), 1RU/19" rack mount

Type with 75Ohm F(f) Connectors

Type	Type No.	Short Description
LC104EL-75F	9000806	Active L-Band Combiner, 1 x 4:1, 75Ohm F(f), 1RU/19" rack mount
LC108EL-75F	9000810	Active L-Band Combiner, 1 x 8:1, 75Ohm F(f), 1RU/19" rack mount
LC116EL-75F	9001172	Active L-Band Combiner, 1 x 16:1, 75Ohm F(f), 1RU/19" rack mount
LC2104EL-75F	on request	Active Dual L-Band Combiner, 2 x 4:1, 75Ohm F(f), 1RU/19" rack mount
LC2108EL-75F	on request	Active Dual L-Band Combiner, 2 x 8:1, 75Ohm F(f), 1RU/19" rack mount
LC2116EL-75F	on request	Active Dual L-Band Combiner, 2 x 16:1, 75Ohm F(f), 1RU/19" rack mount
LC4104EL-75F	on request	Active Quad L-Band Combiner, 4 x 4:1, 75Ohm F(f), 1RU/19" rack mount
LC4108EL-75F	on request	Active Quad L-Band Combiner, 4 x 8:1, 75Ohm F(f), 1RU/19" rack mount

Type with 75Ohm BNC(f) Connectors

Type	Type No.	Short Description
LC104EL-75B	on request	Active L-Band Combiner, 1 x 4:1, 75Ohm BNC(f), 1RU/19" rack mount
LC108EL-75B	on request	Active L-Band Combiner, 1 x 8:1, 75Ohm BNC(f), 1RU/19" rack mount
LC116EL-75B	9000758	Active L-Band Combiner, 1 x 16:1, 75Ohm BNC(f), 1RU/19" rack mount
LC2104EL-75B	on request	Active Dual L-Band Combiner, 2 x 4:1, 75Ohm BNC(f), 1RU/19" rack mount
LC2108EL-75B	on request	Active Dual L-Band Combiner, 2 x 8:1, 75Ohm BNC(f), 1RU/19" rack mount
LC2116EL-75B	on request	Active Dual L-Band Combiner, 2 x 16:1, 75Ohm BNC(f), 1RU/19" rack mount
LC4104EL-75B	on request	Active Quad L-Band Combiner, 4 x 4:1, 75Ohm BNC(f), 1RU/19" rack mount
LC4108EL-75B	on request	Active Quad L-Band Combiner, 4 x 8:1, 75Ohm BNC(f), 1RU/19" rack mount

OPTIONS

Type	Type No.	Short Description
Option 096	9000777	10MHz external reference signal port (via common port)
Option 097	9001165	Redundant Power Supply for EcoLine Splitter and Combiner Single and Dual Version
Option DC24-EL	9001173	DC Supply 24V DC
Option DC48-EL	9001174	DC Supply 48V DC