



LCEL EcoLine Series

Extended L-Band Combiners Active (4-way, 8-way, 16-way, 32-way)

Made in Germany

GENERAL

The LCEL EcoLine series represents cost effective active L-Band combiners available as single combiners (4:1, 8:1, 16:1 and 32:1) or dual combiners (2 x 4:1, 2 x 8:1 or 2 x 16:1) each housed into a compact and space saving 1RU/19" rack-mount chassis

This 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 32 input signals to 1 output with zero loss. The units feature DC-supply e.g. to feed a BUC (switchable ON/OFF) and 1:1 dual power supply redundancy. Optionally the units can be equipped with a 10MHz external reference signal input port for feeding a 10MHz signal e.g. to BUC's. Front side colored status LED's display the health status of each power-supply and status of DC-supply while the unit is additionally equipped with a potential free alarm/error contact interface.

The LCEL EcoLine series combiners are available with 50Ohm SMA(f) or BNC(f) as well as 75Ohm F(f) or BNC(f) connectors and a perfect fit for Satellite-, Broadcast and Broadband RF distribution infrastructures such as for Teleports, Earth-Station or Cable/IPTV headend operations.



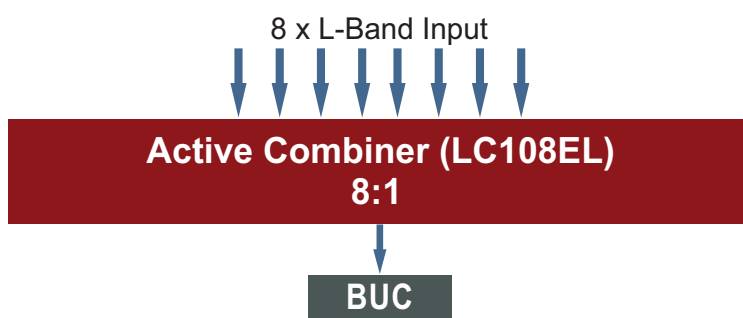
FEATURES

- Space saving 1RU/19" rack mount design
- Excellent price-performance ratio
- Extended L-Band frequency (850...2450MHz) also suitable for Ka-Band and HTS applications
- Available as single 4:1, 8:1, 16:1 and 32:1 or dual 4:1, 8:1 and 16:1 (2 x 4:1, 2 x 8:1 or 2 x 16:1) active combiners
- Coming with 50Ohm SMA(f)/BNC(f) or 75Ohm F(f)/BNC(f) connectors (mixed input/output connectors possible upon request)
- Internally amplified zero loss active combiner units
- Professional PCB design assuring excellent RF performance, quality and reliability
- Supports switchable DC-supply 18VDC (ON/OFF), 400mA e.g. to feed BUC
- 10MHz external reference signal input (Option)
- Colored LED's displaying power-supply & status
- Potential free alarm/error contact (DB9-female)
- 1:1 redundant dual power-supply

TECHNICAL SPECIFICATIONS

- **Dimensions:** 1RU/19" rack-mount
- **Power supply:** 85...230V, 50/60Hz (1:1 redundant)
- **Power consumption:** < 10W
- **Combiner variants:** 4:1, 8:1, 16:1, 32:1
Dual 4:1, 8:1, 16:1
- **Frequency range:** 850...2.450MHz (Extended L-Band)
- **Connectors:** 50Ohm SMA(f)/BNC(f) or 75Ohm F(f)/BNC(f)
- **Input RF power**
@ 4:1, 8:1, 16:1: +20dBm max.
@ 32:1: +23dBm max.
- **In-/Output Return loss:** 16dB typ., ≥ 14dB min.
- **Noise figure**
@ 4:1 (50/75Ohm): 10dB typ. / 11dB typ.
@ 8:1 (50/75Ohm): 13dB typ. / 14dB typ.
@ 16:1 & 32:1 (50/75Ohm): 16dB typ / 17dB typ.
- **Isolation:** 20dB typ
- **Insertion loss:** 0dB ±1dB max.
- **Frequency response:** ±1dB max
- **1dB Compression**
@ 4:1: +13dBm
@ 8:1: +17dBm
@ 16:1 & 32:1: +21dBm
- **IMA3 @ -10dBm:** < -50dBc
- **DC-supply:** 18VDC (ON/OFF), 400mA current monitoring protection
- **10MHz reference port:** 50Ohm SMA(f), (Option)
- **Status LED's:** Power-supply / DC supply
- **Potential free alarm contact:** DB9-female (rear side)
- **Operating temperature:** 0...50°C
- **Storage temperature:** - 20°C...75°C
- **Humidity:** 90% non-condensing
- **RoHS:** compliant

APPLICATION EXAMPLE





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ORDER INFORMATION

In-/Output: 50Ohm SMA(f) connectors

- **LC104EL-50S:** Active L-Band Combiner, 1 x 4:1, DC-supply, 50Ohm SMA(f), 1RU/19" rack mount, EcoLine
- **LC108EL-50S:** Active L-Band Combiner, 1 x 8:1, DC-supply, 50Ohm SMA(f), 1RU/19" rack mount, EcoLine
- **LC116EL-50S:** Active L-Band Combiner, 1 x 16:1, DC-supply, 50Ohm SMA(f), 1RU/19" rack mount, EcoLine
- **LC132EL-50S:** Active L-Band Combiner, 1 x 32:1, DC-supply, 50Ohm SMA(f), 1RU/19" rack mount, EcoLine
- **LC2104EL-50S:** Active **Dual** L-Band Combiner, 2 x 4:1, DC-supply, 50Ohm SMA(f), 1RU/19" rack mount, EcoLine
- **LC2108EL-50S:** Active **Dual** L-Band Combiner, 2 x 8:1, DC-supply, 50Ohm SMA(f), 1RU/19" rack mount, EcoLine
- **LC2116EL-50S:** Active **Dual** L-Band Combiner, 2 x 16:1, DC-supply, 50Ohm SMA(f), 1RU/19" rack mount, EcoLine

In-/Output: 50Ohm BNC(f) connectors

- **LC104EL-50B:** Active L-Band Combiner 1 x 4:1, DC-supply, 50Ohm BNC(f), 1RU/19" rack mount, EcoLine
- **LC108EL-50B:** Active L-Band Combiner 1 x 8:1, DC-supply, 50Ohm BNC(f), 1RU/19" rack mount, EcoLine
- **LC116EL-50B:** Active L-Band Combiner 1 x 16:1, DC-supply, 50Ohm BNC(f), 1RU/19" rack mount, EcoLine
- **LC132EL-50B:** Active L-Band Combiner, 1 x 32:1, DC-supply, 50Ohm BNC(f), 1RU/19" rack mount, EcoLine
- **LC2104EL-50B:** Active **Dual** L-Band Combiner, 2 x 4:1, DC-supply, 50Ohm BNC(f), 1RU/19" rack mount, EcoLine
- **LC2108EL-50B:** Active **Dual** L-Band Combiner, 2 x 8:1, DC-supply, 50Ohm BNC(f), 1RU/19" rack mount, EcoLine
- **LC2116EL-50B:** Active **Dual** L-Band Combiner, 2 x 16:1, DC-supply, 50Ohm BNC(f), 1RU/19" rack mount, EcoLine

In-/Output: 75Ohm F(f) connectors

- **LC104EL-75F:** Active L-Band Combiner, 1 x 4:1, DC-supply, 75Ohm F(f), 1RU/19" rack mount, EcoLine
- **LC108EL-75F:** Active L-Band Combiner, 1 x 8:1, DC-supply, 75Ohm F(f), 1RU/19" rack mount, EcoLine
- **LC116EL-75F:** Active L-Band Combiner, 1 x 16:1, DC-supply, 75Ohm F(f), 1RU/19" rack mount, EcoLine
- **LC132EL-75F:** Active L-Band Combiner, 1 x 32:1, DC-supply, 75Ohm F(f), 1RU/19" rack mount, EcoLine
- **LC2104EL-75F:** Active **Dual** L-Band Combiner, 2 x 4:1, DC-supply, 75Ohm F(f), 1RU/19" rack mount, EcoLine
- **LC2108EL-75F:** Active **Dual** L-Band Combiner, 2 x 8:1, DC-supply, 75Ohm F(f), 1RU/19" rack mount, EcoLine
- **LC2116EL-75F:** Active **Dual** L-Band Combiner, 2 x 16:1, DC-supply, 75Ohm F(f), 1RU/19" rack mount, EcoLine

In-/Output: 75Ohm BNC(f) connectors

- **LC104EL-75B:** Active L-Band Combiner, 1 x 4:1, DC-supply, 75Ohm BNC(f), 1RU/19" rack mount, EcoLine
- **LC108EL-75B:** Active L-Band Combiner, 1 x 8:1, DC-supply, 75Ohm BNC(f), 1RU/19" rack mount, EcoLine
- **LC116EL-75B:** Active L-Band Combiner, 1 x 16:1, DC-supply, 75Ohm BNC(f), 1RU/19" rack mount, EcoLine
- **LC132EL-75B:** Active L-Band Combiner, 1 x 32:1, DC-supply, 75Ohm BNC(f), 1RU/19" rack mount, EcoLine
- **LC2104EL-75B:** Active **Dual** L-Band Combiner, 2 x 4:1, DC-supply, 75Ohm BNC(f), 1RU/19" rack mount, EcoLine
- **LC2108EL-75B:** Active **Dual** L-Band Combiner, 2 x 8:1, DC-supply, 75Ohm BNC(f), 1RU/19" rack mount, EcoLine
- **LC2116EL-75B:** Active **Dual** L-Band Combiner, 2 x 16:1, DC-supply, 75Ohm BNC(f), 1RU/19" rack mount, EcoLine

OPTIONS

- Option 096: 10MHz external reference signal port (via common port)

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