

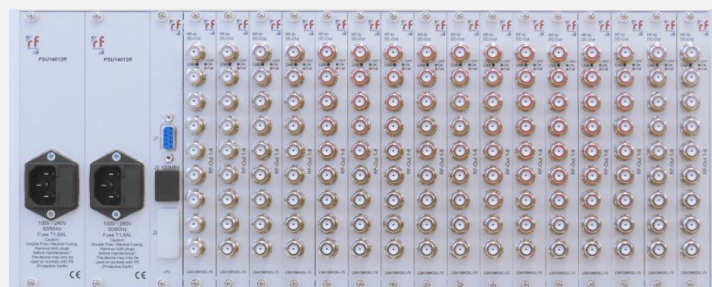
Modular Active L-Band Combiner (4-way, 8-way, 16-way)

The LCA series is a high quality and professional modular extended L-Band combiner system representing the MFC main chassis (MFC104R2, MFC316R2 and MFC416R2) and the corresponding LCA active combiner modules (4:1, 8:1, 16:1).

The combiner modules operate at the extended L-Band frequency range (850 – 2450MHz) ready for KA-Band and HTS applications and allow easy combining of max. 16 inputs to one output with zero loss. The corresponding MFC chassis with its maximum capacity of 16 slots can hold up to 16 combiner modules making it a very flexible and expandable solution.

The system supports switchable DC-supply and 1:1 redundant dual power supply (hot swappable). Optionally it can be equipped with a 10MHz external reference signal input port for feeding a 10MHz signal e.g. to a BUC. Colored status LED's display the health status of each combiner module, power supply and DC-supply while the unit is additionally equipped with a potential free alarm/error contact interface.

The LCA series combiner modules are available with 50Ohm SMA(f) or 75Ohm F(f) connectors and are a perfect fit for RF distribution infrastructures in Satellite Ground Stations, Teleports, Broadcasters or Cable/IPTV headend operations.



FEATURES & BENEFITS

- ▶ Flexible modular extended L-Band combiner system
- ▶ Extended L-Band frequency (850 – 2450MHz)
- ▶ Space saving rack mount design (max. 16 x 4:1 or 8:1 or 8 x 16:1 combiner modules per chassis)
- ▶ Internally amplified zero loss active combiner modules
- ▶ Professional PCB design assuring excellent RF performance, quality and reliability
- ▶ Switchable DC-supply 24VDC max. (ON/OFF), 400mA

- ▶ Hot-swappable combiner modules (easy expansion & replacement)
- ▶ 10MHz external reference signal input port (Option)
- ▶ Colored status LED's (status for combiner modules, power supply and DC-supply)
- ▶ Supports alarming via rear side potential free error contact RS232 DB9-female)
- ▶ 1:1 redundant dual power supply (hot-swappable)

TECHNICAL SPECIFICATIONS

Dimensions:	MFC316R2: 3RU/19" rack mount MFC416R2: 4RU/19" rack mount
MFC Chassis Module Slots:	MFC316R2: 16, MFC416R2: 16
Combiner Module Variants:	4:1, 8:1 or 16:1
Power Supply:	85 – 230V, 50/60Hz, 1:1 redundant
Power Consumption:	MFC316R2/MFC416R2: <40W (without DC-supply) / <60W (with DC-supply)
Frequency Range:	850 – 2450MHz (extended L-Band)
I/O Connectors:	50Ohm SMA(f) or 75Ohm F(f)

Input Return Loss:	14dB min
Output Return Loss:	14dB min
Noise Figure:	12dB 1:4, 16dB 1:8, 20dB 1:16
Isolation:	20dB min.
Insertion Loss:	0dB
Frequency Response:	50Ohm Type: $\pm 1.5\text{dB typ. } \pm 2.0\text{dB max, } \pm 0.25\text{dB @ any 36MHz}$ 75Ohm Type: $\pm 2.0\text{dB typ. } \pm 2.5\text{dB max, } \pm 0.3\text{dB @ any 36MHz}$
P1dB:	+11dBm
IMA3 @ -10dBm:	-60dBc
SFDR:	< - 80dBm
Switchable DC-Supply:	18VDC min, 21VDC typ., 24VDC max (ON/OFF), 400mA
Status LED's:	Combiner module, power supply, DC-supply status monitoring
Alarm Contact:	status monitoring/alarms PSU
Operating Temperature:	0°C to 50°C
Storage Temperature:	-20°C to 75°C
Humidity:	90%, non-condensing
RoHS:	Compliant

ORDER INFORMATION

Chassis Variants

Type	Type No.:	Short Description
MFC316R2	9000168	3RU/19" rack mount Main chassis for LSA splitter or LCA combiner modules, 16 slots rear side for max. 16 x 1:4 active splitter modules
MFC416R2	9000121	4RU/19" rack mount Main chassis for LSA splitter or LCA combiner modules, 16 slots rear side for max. 16 x 1:8 active splitter modules or 8 x 1:16 active splitter modules

Combiner Modules

Type	Type No.:	Short Description	I/O's
4:1 Combiner Modules			
LCA104R3EL-50S	9001049	Active 4:1 extended L-Band combiner module, 850 – 2450MHz, for MFC104R2 or MFC316R2 chassis	50Ohm SMA(f)
LCA104R3EL-75F	on request	Active 4:1 extended L-Band combiner module, 850 – 2450MHz, for MFC104R2 or MFC316R2 chassis	75Ohm F(f)

8:1 Combiner Modules

LCA108R4EL-50S	on request	Active 8:1 extended L-Band combiner module, 850 – 2450MHz, for MFC104R2 or MFC416R2 chassis	50Ohm SMA(f)
LCA108R4EL-75F	on request	Active 8:1 extended L-Band combiner module, 850 – 2450MHz, for MFC104R2 or MFC416R2 chassis	75Ohm F(f)

16:1 Combiner Modules

LCA116R4EL-50S	on request	Active 16:1 extended L-Band combiner module, 850 – 2450MHz, for MFC104R2 or MFC416R2 chassis	50Ohm SMA(f)
LCA116R4EL-75F	on request	Active 16:1 extended L-Band combiner module, 850 – 2450MHz, for MFC104R2 or MFC416R2 chassis	75Ohm F(f)

OPTIONS

Module Type		Short Description
Option 096	9000777	10MHz external reference signal port (via common port)