



EO-LNA ultra low-noise pre-amplifiers family

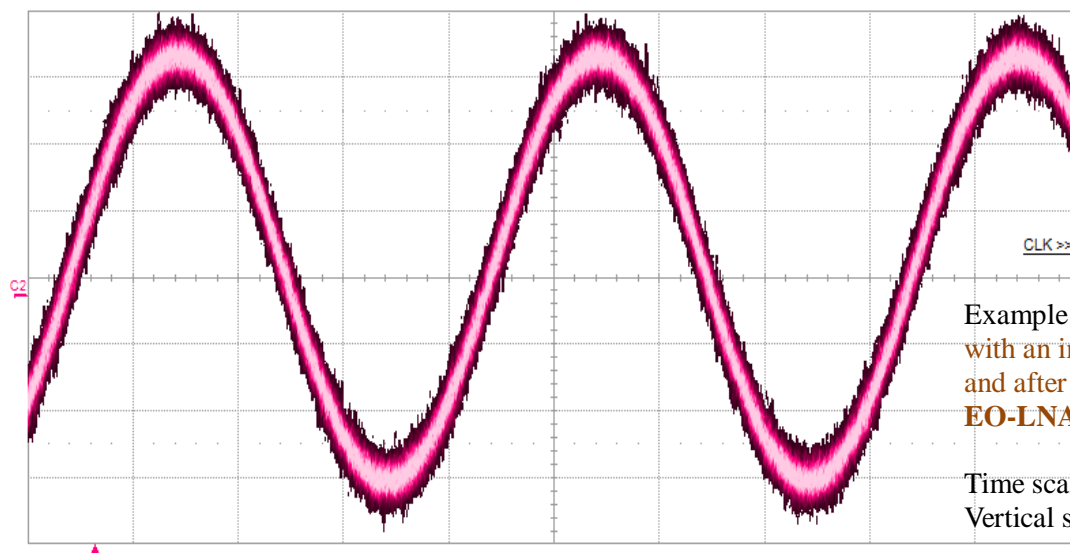
The CIPRIAN Model EO-LNA Pre-Amplifier amplifies - with a fixed gain - electronic small-amplitude signals. Its output is limited to +/- 3 V. Its input is protected against transient high voltages.

The gain is fixed at the factory and can be chosen between 20 dB (x10 in tension), 40 dB (x100 in tension), 60 dB (x1000 in tension) or 80 dB (x10,000 in tension).

The EO-LNA family is divided into low frequency units (from DC to 800 kHz) and high speed units (from 5 kHz to 20 MHz).

Features :

- Ultra low voltage noise : 0.6 nV/sqrt(Hz)
- Voltage gains up to 80 dB (x 10,000 amplification)
- Low frequency units : DC to 800 kHz
- High speed units : 5 kHz to 20 MHz
- Powered from USB or battery or main supply
- Universal power supply included
- compact and lightweight
- extended warranty of three years



Example of a 500 kHz sine wave with an initial amplitude of **150 μ V** and after amplification by a **EO-LNA of gain 100**.

Time scale = 500 ns/div
Vertical scale = 5 mV/div

Spécifications :



Input analog signal

input connector	BNC	
Input protected against over-voltage	up to ± 500 V and sustaining 250 mW average power	
Maximum Input voltage range in a normal continuous use	± 5 V	
	low frequency units:	high speed units:
Input impedance	10 gigaOhm	50 Ohm
Input coupling	DC	AC



Output

Output connector	BNC ground is floating with respect to the earth of the power supply line, but is connected to the ground of the input BNC	
Output protections	against overcurrent and short-circuit	
	low frequency units:	high speed units:
useful bandwidth	from DC to 800 kHz	from 5 kHz to 20 MHz
Maximum output voltage	+/- 12 V	+/- 3 V
Maximum output current	15 mA	100 mA
Voltage gain – fixed at the factory	10 or 100 (20dB or 40dB)	10, 100, 10^3 or 10^4 (20dB, 40dB, 60dB or 80dB)
Slew rate	1 V/ μ s	900 V/ μ s
output internal impedance	50 Ohm	50 Ohm
Total Harmonic distortion	xxx dB @ 100 kHz	-100 dB @ 1 MHz
Input referred voltage noise density	10 nV/sqrt(Hz) @ 1 kHz	0.6 nV/sqrt(Hz) @ 1 MHz
Input referred voltage noise	18 μ Vpp (1Hz to 800 kHz)	10 μ Vpp (1 kHz to 20 MHz)



General

Operating temperature range	10°C to 40°C	
Power supply	from 4.5 V to 9 V DC	
	low frequency units	high speed units
Dimensions	12 cm x 8 cm x 4 cm (length x depth x height)	12 cm x 8 cm x 4 cm (length x depth x height)
Power consumption (max)	700 mW	700 mW
Weight	200 g	185 g

 **Safety**

In compliance with European Standard IEC 61010-1.

 **Warranty**

3 years Part and Labor

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