

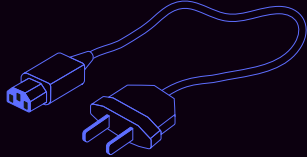
CAIXA 104

Quick guide

Thank you for choosing CAIXA 104.

Powering up

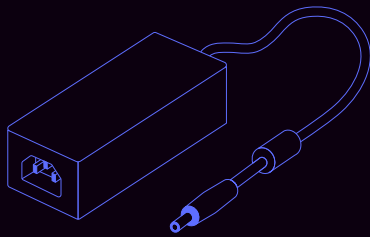
① Power Cable



CAIXA 104 is shipped with 3 different power cables in order to match the socket available in your location:

EU Plug / USA Plug / UK Plug

② Power Brick



CAIXA 104 uses a 60W center-pin-positive adapter to convert the voltage from your socket to a regulated 15V which is used to power the entire system.

③ Power Input Connector



DC IN



ON | OFF

Located in the upper side of CAIXA104, next to the handle.

• Procedure

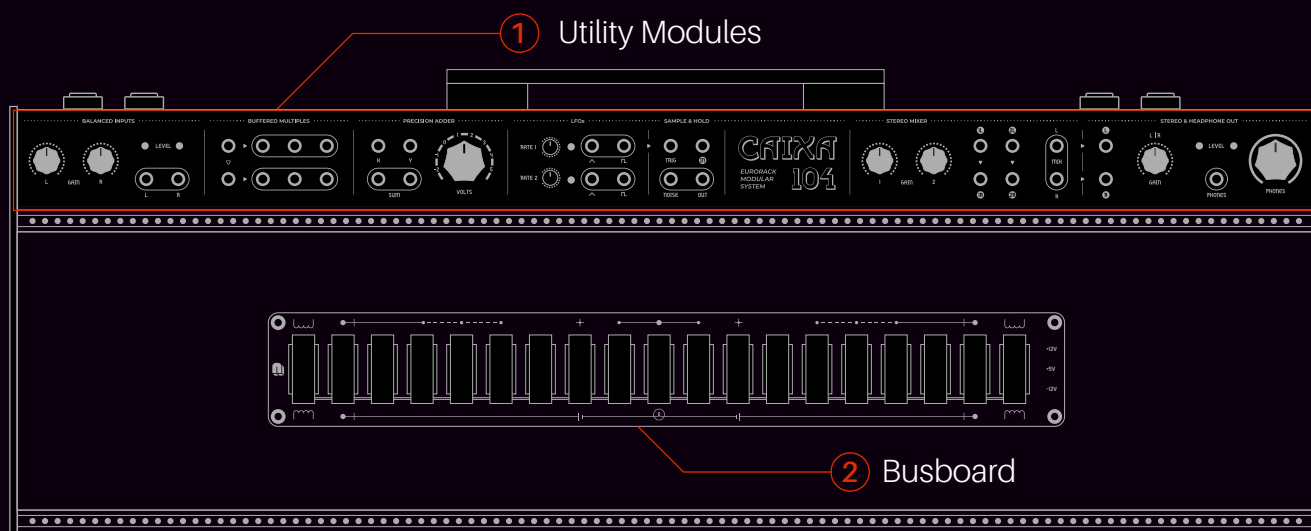
- ① Insert the Power Cable to the power brick.
- ② Then the Power Brick jack output to the Power Input in the Connectors section.
- ③ Switch the power ON and see if the busboard LEDs are lighting up. If not, please check your connections and try it another time.

If the problem continues, please contact us and we will provide further assistance.

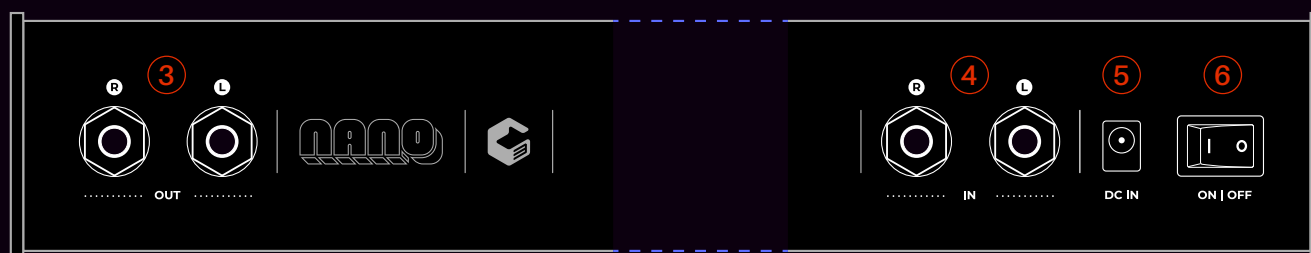
1 Layout

CAIXA 104 is an advanced fully portable 104HP Eurorack modular case, with a wide range of utilities fully integrated on it. Connect up to 18 modules and carry it anywhere you go thanks to its handle.

• Front View



• Top View



3 Outputs L/R

Impedance balanced audio outputs which connect to the Stereo & Headphone Out utility module on the front of CAIXA.

Inputs L/R

- 4 Balanced audio inputs which connect to the Balanced Inputs utility module on the front of the CAIXA.

5 DC IN

CAIXA power input. Always connect the included power supply, it only works with 15V 4A center positive adapters.

6 ON/OFF Switch

Turn your CAIXA ON and OFF easily with this switch.

2 Utility modules

• Balanced Inputs

Connect any audio source to CAIXA's balanced audio inputs. With **20dB of amplification**, you have enough range to connect whatever you want to use in your modular system (another synthesizer, a drum machine...)

The **LEVEL LEDs** will show the signal volume, and the **CLIP LEDs** will indicate if the input signal is saturating (over-amplifying).

The **L & R** outputs available on the front panel are the module outputs, with the signal ready to be used in your modular system.

• Buffered Multiples

It allows the division of an incoming signal without voltage drop. CAIXA has **2 multiples in 1 to 3 configuration**. You can use them independently or normalized. The input of the second row is **normalized** to the input of the first row.

• Precision Adder

The **X and Y inputs** are summed to the switch voltage [-2 to +5V], both outputs receive the sum.

It is a very **versatile utility** that can do a lot of different tasks, for example:

Transpose the octaves of the VCOs, change the CV offset, precisely sum the CV.... Just find out the best use you can make of it.

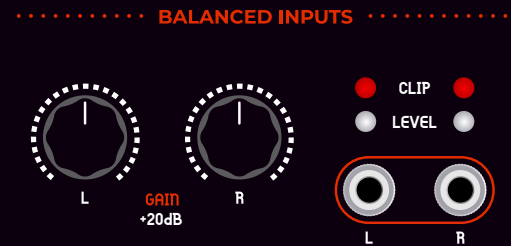


Fig.1 Detail of Balanced Inputs Utility Module

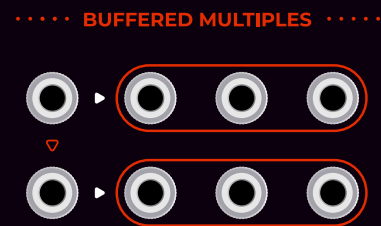


Fig.2 Detail of Buffered Multiples Utility Module



Fig.3 Detail of Precision Adder Utility Module

• 2 LFOs

Two basic low-frequency oscillators with a frequency adjustment knob and outputs for triangular and square waves.

The square output of LFO1 is normalized to the S&H trigger input.

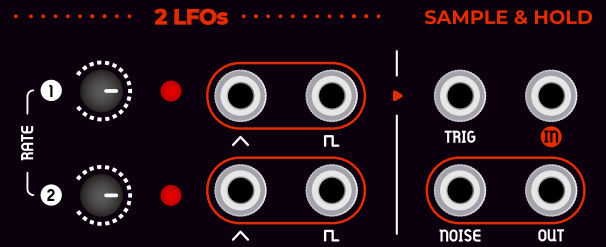


Fig.4 Detail of 2LFOs and Sample & Hold Utility Modules

• Sample & Hold

On each trigger, the output voltage **takes the value of the input voltage** and holds this voltage at the output.

There is also a **white noise output** that you can patch wherever you want.

TRIG. Input trigger, normalized to the square output of LFO1.

IN. Input signal, the one to be "sliced". NOISE is normalized to this input.

NOISE. White noise output. It can be used outside the S&H circuit.

OUT. Output of the sample & hold circuit.

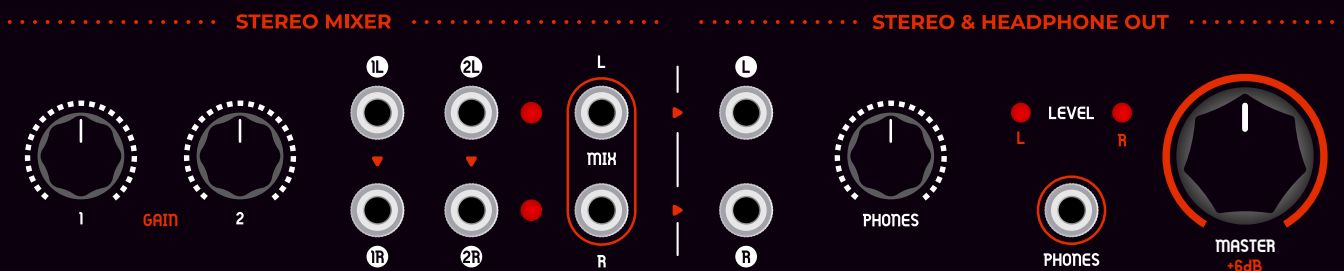


Fig.5 Detail of Stereo Mixer and Stereo & Headphone Out Utility Modules

• Stereo Mixer

CAIXA has a 2 channel stereo mixer with **2x gain**. This means you can push your signals to higher voltage levels if you need to.

1L, 2L. Channel 1/2 Left signal, normalized to the right signal.

1R,2R. Channel 1/2, right signal.

MIX L. Output channel L

MIX R. Output channel R

• Stereo & Headphone Out

Send a stereo signal into the **L&R jacks** and you will have it available on phones and impedance balanced outputs. It has a **gain adjustment (+6dB)** for each output.

The Stereo Mixer outputs are **normalized** to the Stereo & Headphone Output's inputs, which means you **don't need to use additional cables** if you want to connect them.

Compliance

This device complies to the **EU guidelines** and is manufactured **RoHS** conforming without use of lead, mercury, cadmium and chrome. Nevertheless, this device is special waste and disposal in household waste is not recommended.

This device meets the requirements of the following standards and directives:

- **EMC: 2014/30/EU**
- **EN 55032.** Electromagnetic compatibility of multimedia equipment.
- **EN 55103-2.** Electromagnetic compatibility - Product family standard for audio, video, audio-visual and entertainment lighting control apparatus for professional use.
- **EN 61000-3-2.** Limits for harmonic current emissions.
- **EN 61000-3-3.** Limitation of voltage changes, voltage fluctuations and flicker in public low-voltage supply systems.
- **EN 62311.** Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields.
- **RoHS2: 2011/65/EU**
- **WEEE: 2012/19/EU**



Guarantee

This product is covered by **2 years of guarantee** on purchased goods, which begins when you receive your package.

- **This guarantee covers**

Any defect in the manufacturing of this product.
Replacement or repair, as decided by NANO Modules.

- **This guarantee does not cover**

Any damage or malfunction caused by incorrect use , such as, but not limited to:

- Power cables connected backwards.
- Excessive voltage levels.
- Unauthorized mods.
- Exposure to extreme temperature or moisture levels.

Please contact our customer service - jorge@nanomodul.es - for a return authorization before sending the module. The cost of sending a module back for servicing is paid for by the customer.

Technical Specifications

- **Power Specs**

30.7W Integrated switching power supply with Meanwell 60W power brick.

- +12V output at 1.25A
- 12V output at 1.1A
- +5V output at 0.5A

- **Construction**

Dimensions 535 x 200 x 86 mm

Materials Anodized aluminum

Aluminum extruded rails with steel threaded inserts

Rubber feet to protect your desktop.

Contact

Bravo!

You have learned the basic fundamentals of your CAIXA 104.

If you have any doubts, please feel free to contact us.

nano-modules.com/contact

3 Busboard

- 1 The leftmost slot is connected to the power supply.
- 2 Connect your modules in the remaining 18 slots.

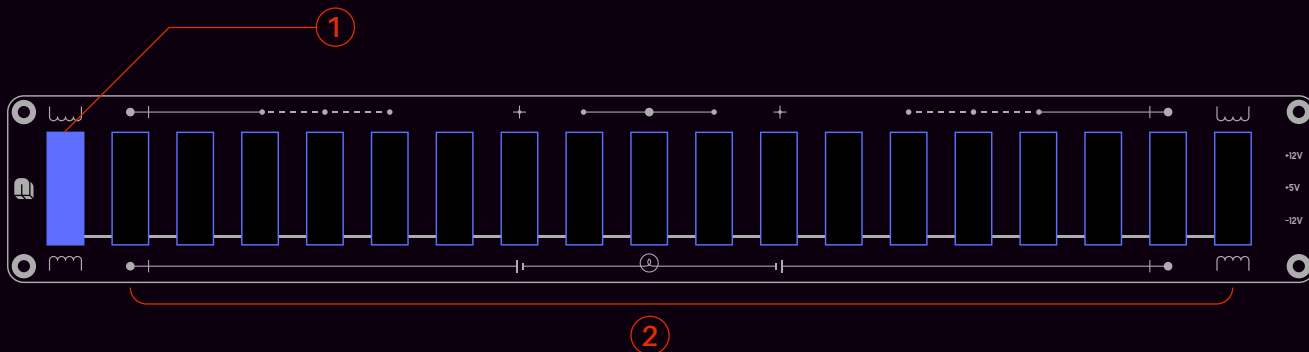


Fig.6 CAIXA 104 Busboard Scheme

4 Module Depth

The **maximum module depth** above the busboard connectors is **47mm**, but you can place modules up to **60mm outside of the busboard space**.

That should be sufficient to fit the vast majority of modules out there.

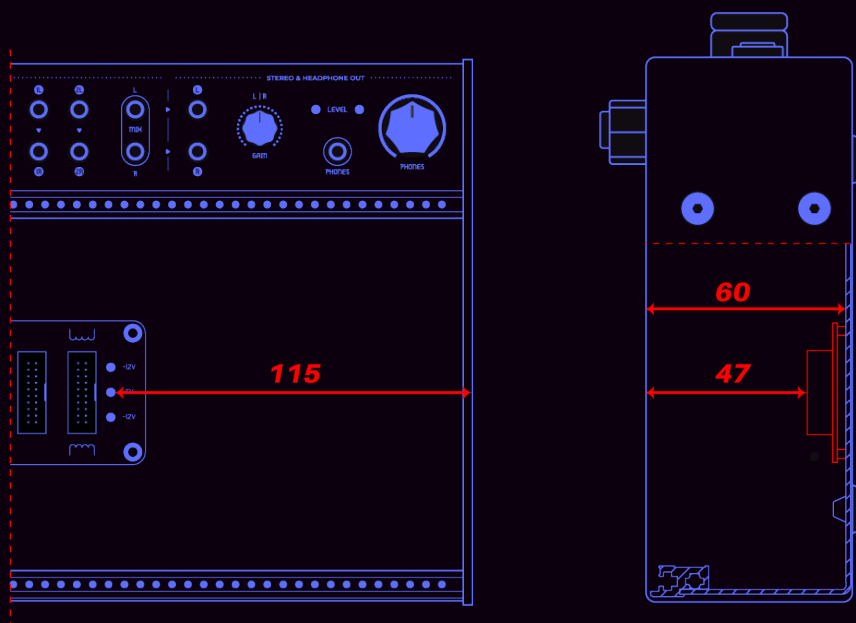


Fig.7 CAIXA 104 Module Depth representation