

# VIVO-X8D8 / BIO-X8G

DIGITAL PROCESSORS & MATRIXES

EclerPLEX Matrix 8x8 Analogue 8x8 Dante®/AES67

EclerPLEX Expansion Interface 8x8 Analogue Audio 8x8 GPIO



## USER MANUAL



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## 1. PRECAUTIONS

### 1.1 Important Notice



**WARNING: SHOCK HAZARD - DO NOT OPEN**

**AVIS: RISQUE DE CHOC ÉLECTRIQUE - NE PAS OUVRIR**



The flashing light with an arrowhead symbol inside an equilateral triangle on it is intended to alert the user of the presence of non-insulated “dangerous voltage” within the enclosure, which might be of sufficient magnitude to pose a risk of electric shock to users.



The exclamation mark within an equilateral triangle is intended to alert the user of the requirement for important operating and maintenance (servicing), for which instructions may be found in the literature accompanying the appliance.

**WARNING (If applicable):** Terminals marked with symbol “” may be of sufficient magnitude to pose a risk of electric shock. The external wiring connected to terminals requires installation by a technician, or the use of ready-made leads or cords.

**WARNING:** To prevent fire or shock hazard, do not expose this equipment to rain or humidity.

**WARNING:** A device with Class I manufacturing ought to be connected to a mains socket outlet with a protective earthing connection.



**WARNING:** Ecler products have a long lifetime of more than 10 years. This product must never be discarded as unsorted urban waste, but must be taken to the nearest electrical and electronic waste treatment centre.



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## 1.2 Key Safety Directions

1. Read the following directions.
2. Keep the following directions.
3. Observe all warnings.
4. Follow all instructions.
5. Do not use this device in proximity to water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other devices (including amplifiers) that may release heat.
9. Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades, with one being wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, contact a qualified electrician for a replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched, particularly at the plugs, convenience receptacles, and at the point of exit from the device.
11. Only use attachments/accessories specified by the manufacturer.
12. Unplug the device during lightning storms or when unused for long periods.
13. Refer all servicing to qualified personnel. Servicing is required when the device has been damaged in any way, such as power supply cord or plug damage, liquid spillage or objects onto the device, the device has been exposed to rain or humidity, does not operate normally, or has been dropped.
14. Disconnecting from mains: When switching off the POWER switch, all the functions and light indicators of the unit will be stopped, but fully disconnecting the device from mains is done by unplugging the power cable from the mains input socket, therefore, it should always remain easily accessible
15. Equipment is connected to a socket-outlet with an earthing connection by means of a power cord.
16. The marking information is located at the top/rear of the unit.
17. The device shall not be exposed to dripping or splashing liquids, and no liquid-filled objects, such as a filled up glass, shall be placed on top of the device.

## 1.3 Cleaning Directions



**Clean the unit with a soft, dry clean cloth** or slightly wet with water and neutral liquid soap only, then dry it with a clean cloth. Be careful that water never gets into the unit through any hole. Never use alcohol, benzine, solvents or abrasive substances to clean this unit.

**NEEC AUDIO BARCELONA, S.L.** accepts no liability for any damage that may be caused to people, animal, or objects due to failure to comply with the warnings above.



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## 2. WARRANTY & ENVIRONMENT

**Thank you for choosing our Ecler VIVO-X8D8 / BIO-X8G!**

**We greatly value your trust.**

It is **VERY IMPORTANT** to carefully read this manual and to fully understand its **contents before any connecting takes place** in order to make the best use of this equipment, as well as to get the best performance from it.

To ensure optimal operation of this device, **we strongly recommend that its maintenance be carried out by our authorised Technical Services.**

**All ECLER products are covered by warranty**, please refer to [www.ecler.com](http://www.ecler.com) or the warranty card included with this product for the period of validity and conditions.



**Ecler is truly committed with the environment and planet sustainability, energy saving and CO<sub>2</sub> emission reduction.** Recycling materials and using non-contaminant components are also top priorities in our green crusade.

**Ecler has deeply evaluated and analyzed the environmental impacts of all the processes involved in the production of this product, including packaging, and has alleviated, reduced and/or compensated for them.**



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### 3. PACKAGE CONTENTS

• **VIVO-X8D8:**

- 1x VIVO-X8D8 unit.
- 1x EU Mains cord.
- 1x Multiplug Mains cord.
- 4x Washers.
- 4x Rubber feet.
- 17x Euroblock connectors (green colour).
- 16x Euroblock connectors (blue colour).
- 2x USB holders.
- 2x Screws.
- First Steps Guide.
- Warranty card.

• **BIO-X8G:**

- 1x BIO-X8G unit.
- 1x EU Mains cord.
- 1x Multiplug Mains cord.
- 4x Washers.
- 4x Rubber feet.
- 1x USB-C Ecler X-Link certified cable.
- 16x Euroblock connectors (green colour).
- 16x Euroblock connectors (blue colour).
- 1x USB holder.
- 1x Screw.
- First Steps Guide.
- Warranty card.

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## 4. DESCRIPTION & FEATURES

### 4.1 VIVO-X8D8

**VIVO-X8D8** is an EclerPLEX Host matrix with 8 analogue and 8 Dante/AES67 audio input ports,



8 analogue and 8 Dante/AES67 audio output ports, scalable thanks to two X-link ports. A BIO-X8 (or BIO-X8G) expansion unit can be connected to each X-link port. VIVO-X8D8, performing as a Host unit in an EclerPLEX deployment, can contain multiple projects running simultaneously and serve user control panels to end users.

#### 4.1.1 Main Features

- EclerPLEX ecosystem host matrix unit.
- 8 MIC / LINE analogue audio input ports (+48V Phantom selectable per port).
- 8 LINE analogue audio output ports.
- 8 Dante/AES67 digital input ports (4 flows).
- 8 Dante/AES67 digital output ports (4 flows).
- 8 GPI ports.
- 8 GPO ports.
- 1 microSD card slot (for the 4 players).
- 2 x X-link audio&control expansion ports (each port allows to locally connect an external BIO-X8 BIO-X8G expansion unit).
- Scalable up to a 32x32 audio matrix size, including:
  - 24x24 analogue audio ports (by adding 2x BIO-X8 or BIO-X8G units).
  - 24x24 GPIO ports (by adding 2x BIO-X8 or BIO-X8G units).
  - 8x8 digital audio ports (Dante/AES67).
- 2x Ethernet (NET1 control, NET2 Control + Dante/AES67).
- 1 x RS-232 control port.
- 1 x X" Colour TFT Display.
- Flexible processing structure (allows for custom-size matrix size matrices and custom-DSP power projects).
- Embedded EclerPLEX application that includes:
  - A Workspace, including multiple types of custom-size simultaneous projects running simultaneously, events, calendars, presets and more.
  - An editor, manager and server of User Control Panels
  - Scripting automation & control system.
  - 4 Internal SW audio players.
  - 2 Internal audio generators.
  - EclerCLOUD monitor and control native device.
  - Auto update feature.



## 4.2 BIO-X8G

**BIO-X8G** is an affordable expansion interface that can easily scale up an EclerPLEX



digital host matrix, adding to its default size 8 input and 8 output analogue audio ports, 8 GPI ports and 8 GPO ports. A maximum of 2 BIO-X8G units can be linked to the same EclerPLEX host matrix, reaching a maximum total matrix size of 24 analogue audio input ports, 24 analogue audio output ports and 24x24 GPIO control ports.

### 4.2.1 Main Features

- EclerPLEX audio I/O & control expansion unit, compatible with VIVO host units.
- Connection via X-link to the VIVO host unit (1m Ecler certified X-link cable included).
- Expansion features (added to the host VIVO unit ones):
  - 8 MIC / LINE analogue audio inputs ports (+48V Phantom selectable per port).
  - 8 LINE analogue audio output ports.
  - 8 GPI ports.
  - 8 GPO ports.
- A maximum of 2x BIO-X8G units can be connected to a single VIVO host unit, using its 2 x X-link expansion ports.

## 5. INSTALL & CONNECT

### 5.1 Location, Assembly and Ventilation

VIVO-X8D8 and BIO-X8G have been specially designed to be placed in 19" rack structure, occupying one unit.

**!** It is very important to ensure that the device is neither enclosed nor exposed to extreme temperatures, as it generates heat. Adequate airflow must be maintained through the ventilation holes in the chassis, with the ventilation system directing the airflow from front to back through the unit.

**!** If multiple devices are installed in the same rack or in a cabinet with closed doors, it is highly recommended to install fans at both the upper and lower ends to create a forced airflow from the bottom up. This upward air flow will help to dissipate the heat generated inside.

**!** Regular maintenance of dust removal is highly recommended to ensure optimal performance as dust can impede airflow and hinder heat dissipation.

### 5.2 Mains Connection

VIVO-X8D8 and BIO-X8G operate on alternating voltages ranging from 90 to 264V and 47 to 63hz. These devices feature an oversized power supply that can adapt to the mains voltage of any country in the world without requiring any adjustments.

Connect each device to the mains and press the ON/OFF button of the rear panel.



VIVO-X8D8



BIO-X8G

Each device is equipped with a front panel LED indicator that illuminates green when the unit is operational.



VIVO-X8D8



BIO-X8G



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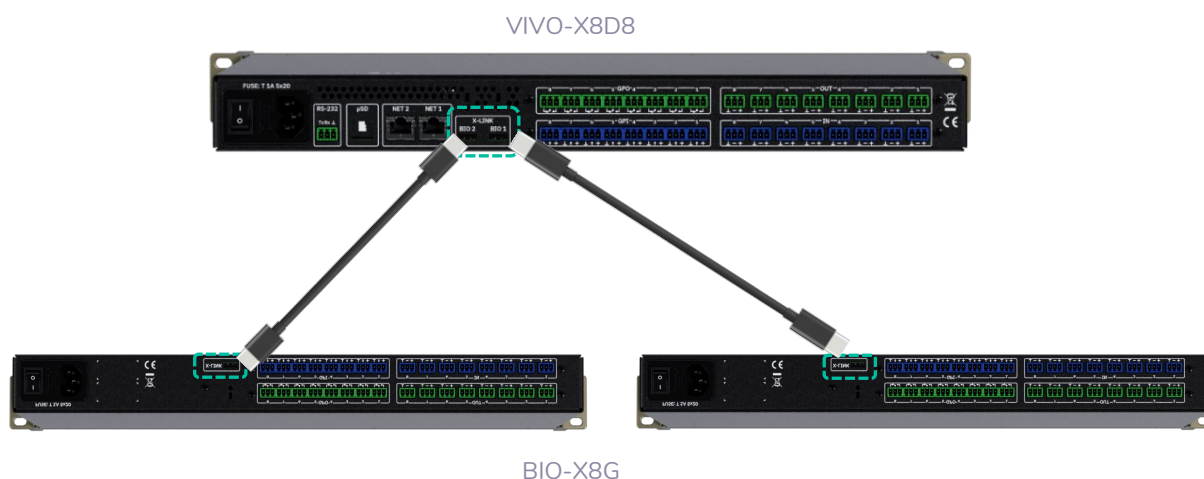
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### 5.3 VIVO-X8D8 and BIO-X8G interconnection

**!** The BIO-X8G device cannot work without a VIVO-X8D8 device as the VIVO-X8D8 is a primary/controller device and the BIO-X8G works as an expansion.

To connect a BIO-X8G to a VIVO-X8D8 device, use an Ecler certified USB-C to USB-C cable (supplied with each BIO unit) and connect it to the X-LINK connector located on the rear panel of both devices.



**💡** Each VIVO-X8D8 unit can support up to two BIO-X8G devices.

When the VIVO and BIO devices are interconnected, the X-LINK LED indicator on the front panel of the BIO-X8G will illuminate white. It will blink during the synchronization process and stay continuously lit once the sync is complete and stable.



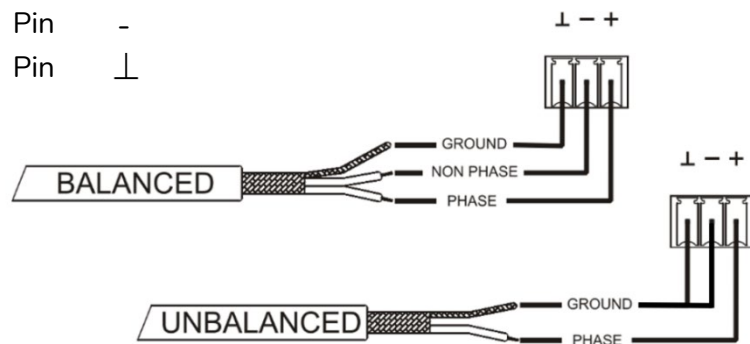
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## 5.4 Analogue Input Connections

VIVO-X8D8 and BIO-X8G feature 8 balanced analogue signal inputs (IN 1 to 8) on their rear panels, supporting both line and microphone levels. Signal management is handled through the EclerPLEX web interface.

Signal input connectors are Euroblock, type 3 position screw terminal block. The wiring is:

|                         |   |     |   |
|-------------------------|---|-----|---|
| Live or direct signal   | → | Pin | + |
| Cold or inverted signal | → | Pin | - |
| Ground                  | → | Pin | ⊥ |



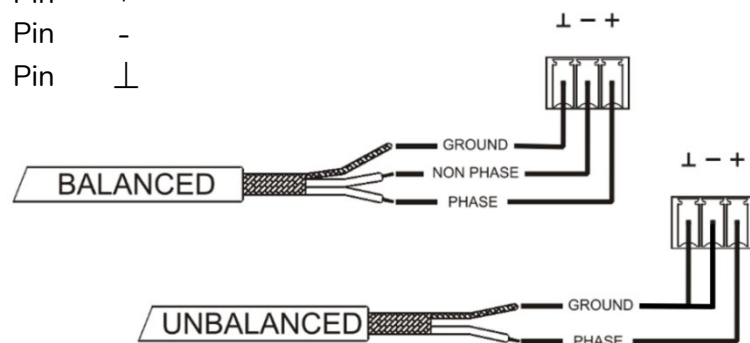
**!** For **unbalanced connection** short-circuit pin ⊥ to pin - as reported on the picture.

## 5.5 Analogue Output Connections

VIVO-X8D8 and BIO-X8G feature 8 balanced analogue signal outputs (OUT 1 to 8) with line level.

Signal output connectors are Euroblock, type 3 position screw terminal block. The wiring is:

|                         |   |     |   |
|-------------------------|---|-----|---|
| Live or direct signal   | → | Pin | + |
| Cold or inverted signal | → | Pin | - |
| Ground                  | → | Pin | ⊥ |



**!** For **unbalanced connection** short-circuit pin ⊥ to pin - as reported on the picture.



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## 5.6 Digital Audio Inputs and Outputs

**VIVO-X8D8 supports the reception and transmission of 8 channels of digital audio via Dante/AES67 over an Ethernet network**, which is compatible with the Dante/AES67 protocol for digital audio over IP.

The routing of digital audio signals via Dante/AES67 through the Ethernet network, along with the configuration of Dante/AES67 network ports (IP addresses, mask, etc.) for the VIVO-X8D8, is managed by the Dante Controller software application.

 For further details, please refer to the developer's documentation: [www.audinate.com/products/software/dante-controller](http://www.audinate.com/products/software/dante-controller).

## 5.7 Ethernet Ports

**VIVO-X8D8 features two RJ-45-type ETHERNET connectors on the rear panel**, named NET1 and NET2, which allow the equipment to be connected to an Ethernet network, or directly to a computer or other devices with an Ethernet interface, point-to-point.



VIVO-X8D8

- 1. NET1 (Control):** WebGUI, user control panels, third party control and other control packages are sent/received over NET1.
- 2. NET2 (Control + Dante/AES67):** control and Dante/AES67 Audio perform over the same network.

**This connection enables the following within a local network:**

- Global programming and management of the VIVO-X8D8 unit using the EclerPLEX embedded web application and a standard web browser running on a computer, tablet, etc.
- Connection to Internet for clock synchronization (calendar events), automatic firmware updates, EclerCLOUD platform and other tools.
- Reception of 8 channels of digital Dante/AES67 and sending of 8 channels of digital audio Dante/AES67.

## 5.8 Player and microSD card

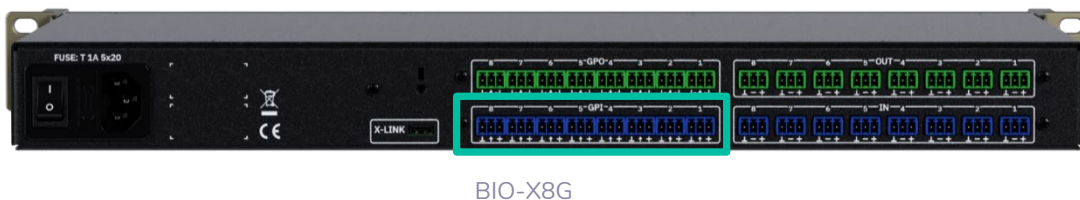
VIVO-X8D8 integrates a set of stereo audio players (SW embedded) capable of playing audio files from a local storage device (microSD card), suitable for background music or voice messages. It includes playlist management and integration with the device's calendar events for automation. Customizable user control panels are also available, and the system is fully configurable through the EclerPLEX web application.



 To insert the microSD card, push it into the slot until a click sound is heard. To extract it, push the microSD card inside the slot until a click sound is heard, and it will be released.

## 5.9 GPI Ports

VIVO-X8D8 and BIO-X8G rear panels feature eight 0-12VDC remote control ports, labelled “GPI 1-8”, to connect analogue devices such as the WPa / TOCA series wall panels. Using the EclerPLEX web application, functions can be assigned to each of these ports, allowing remote control of the volume of sources, outputs, and local and network groups, including general volume. Additionally, presets or playlists can be loaded.



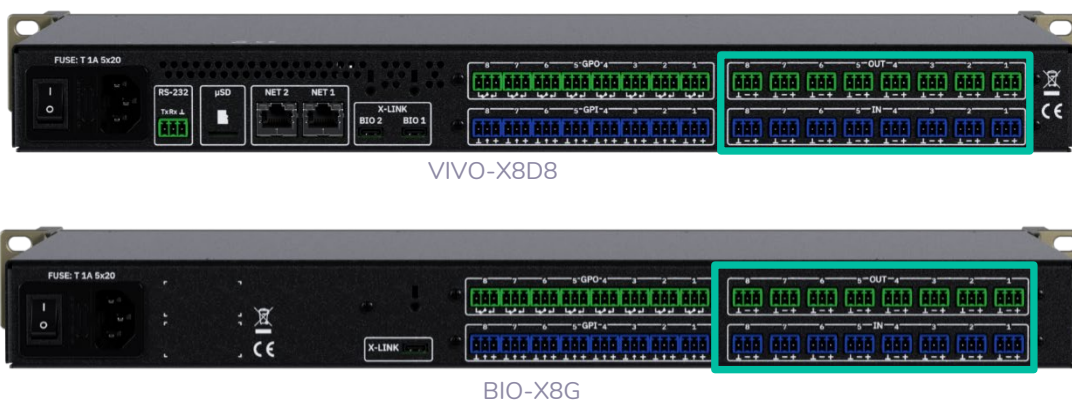
The GPI connectors are Euroblock type. The assignment of the connection is as follows:

|                            |   |     |   |
|----------------------------|---|-----|---|
| Positive, + 12 VDC         | → | Pin | + |
| Variable voltage, 0-12 VDC | → | Pin | ↑ |
| Ground                     | → | Pin | - |



## 5.10 GPO Ports

VIVO-X8D8 and BIO-X8G rear panel feature 8 relay outputs NO / NC (normally open / normally closed). Each output's status can be associated with user presets or events through the EclerPLEX web application, enabling functions such as calendar events or the touch of a key on a user panel. This allows interaction with external equipment, including motors for projection screens, movable partition walls, lights, sirens, and GPI inputs from other devices.



## 5.11 RS-232 Remote Control Port

The RS-232 port, with an Euroblock connector on the rear panel of the VIVO-X8D8, allows an external device to communicate with the unit via serial communication. This connection uses the syntax of the TP-NET protocol so that the external device can obtain the value of some of the parameters of the VIVO-X8D8 unit (by means of “GET” commands) and/or modify these values (“SET” commands).



The serial connection must comply with the following characteristics:

- Baud rate: 115200 (fixed, no auto negotiation)
- Data bits: 8
- Parity: None
- Stop bits: 1
- Flow control: None



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## 6. START-UP & OPERATION

### 6.1 Start Up

Connect each device to the AC mains and press the ON/OFF button of the rear panel.



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Each device features a front panel LED indicator that lights up when the unit is operational.



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## 6.2 First Steps and Operation

To access the EclerPLEX web application from an external device (computer, tablet, etc.) using a browser, first make sure both devices are physically connected to the same local network (LAN) and configured within the same network range.



DHCP is the default network configuration mode. If you have a router/switch with a DHCP server (see the specifications for your device), network configuration is automatic so there is no need to do any re-configuration.

There are two ways to connect to the embedded VIVO host unit web application.

### 6.2.1 Automatic Connection Using a Computer

1. Connect the VIVO-X8D8 device to the router/switch using a CAT5 or higher cable (NET1 or NET2 Ethernet port on the VIVO-X8D8 device).
2. Connect your browser equipped device (computer, tablet, etc.) to the same local network (router/switch). You can do this over a wired or WiFi connection, depending on your network device and computer/tablet.
3. Enter into your browser the web address shown on the top panel of the device or on the packaging (<http://vivo-x8-xxxx.local>). The last four digits of the web address correspond to the MAC address of the device.



### 6.2.2 Manual Connection

If you do not have a DHCP server, are unsure whether you have one, or just want to establish a point-to-point connection with a computer:

1. Connect the VIVO-X8D8 device to the computer using a CAT5 cable or higher (NET1 or NET2 Ethernet port on the VIVO-X8D8 device).
2. If the VIVO-X8D8 device cannot find a DHCP server, it will be able to connect to an automatic private IP addressing (APIPA) and subnet mask from NET1; the device will select its own IP address in the address range 169.254.1.0 to 169.254.254.255 and will also be reachable via the mDNS service.



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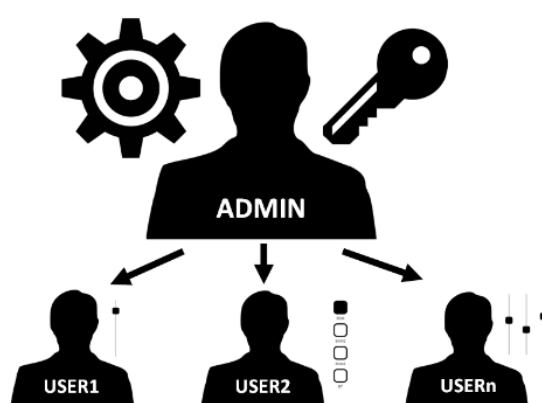
3. Otherwise, the device will also remain accessible via the auxiliary IP. Enter NET1 or NET2 IP address in the browser and configure:

- Using NET1:
  - IP: 192.168.0.100
  - Mask: 255.255.255.0
  - Gate: 192.168.0.1
  - UDP Port: 2210
- Or using NET2:
  - IP: 192.168.0.101
  - Mask: 255.255.255.0
  - Gate: 192.168.0.1
  - UDP Port: 2210

### 6.2.3 Login

There are two profiles that can access the app:

1. **Administrator:** An administrator has access to all functions of the VIVO-X8D8 device and can configure any matrix parameter, event, peripherals, etc. An administrator creates users and control panels for the EclerPLEX user app.
2. **User:** users (non-administrator users or end-users of the system) have limited access. The only functions available to normal users are controls (e.g. controlling the volume of an output) but no configuration functions.



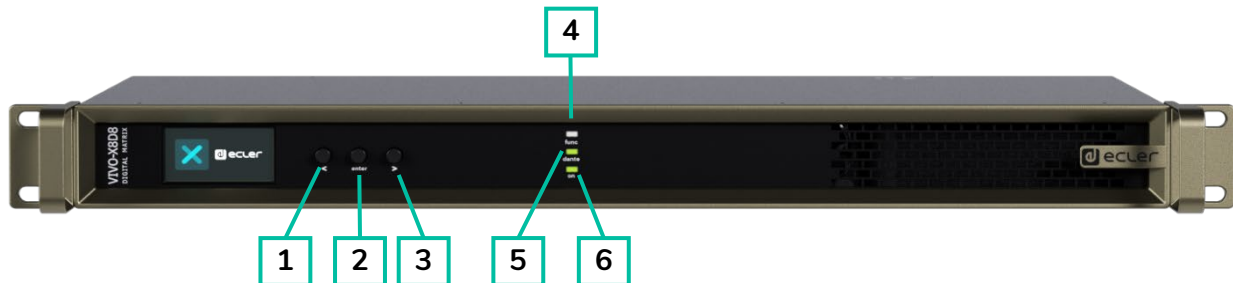
Administrator and user access are password-protected. The default administrator access credentials are:

- **Username:** admin
- **Password:** admin

## 7. PANEL FUNCTIONS

### 7.1 VIVO-X8D8

#### 7.1.1 Front Panel



1. **<:** This button allows moving through the display different screens.
2. **Enter:** Enter button.
3. **>:** This button allows moving around the display different screens.
4. **Func LED:** Programable LED. Can be programmed by the user via EclerPLEX.

5. **Dante LED:** Lights up when there is a connection with Dante, according following:

| LED colour       | Status                                 |
|------------------|----------------------------------------|
| Red              | PTP error / no PTP sync / PTP disabled |
| Orange           | PTP synchronization in progress.       |
| Green (solid)    | PTP follower , with PTP sync           |
| Green (flashing) | PTP leader                             |

6. **On LED:** Lights up in green if the unit is on.



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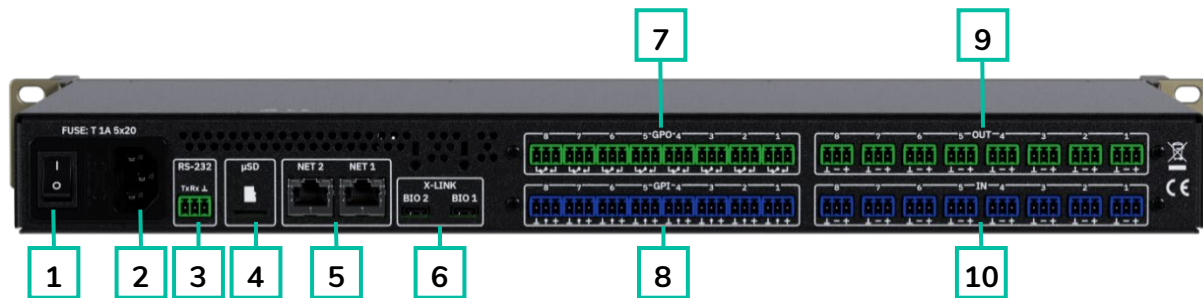
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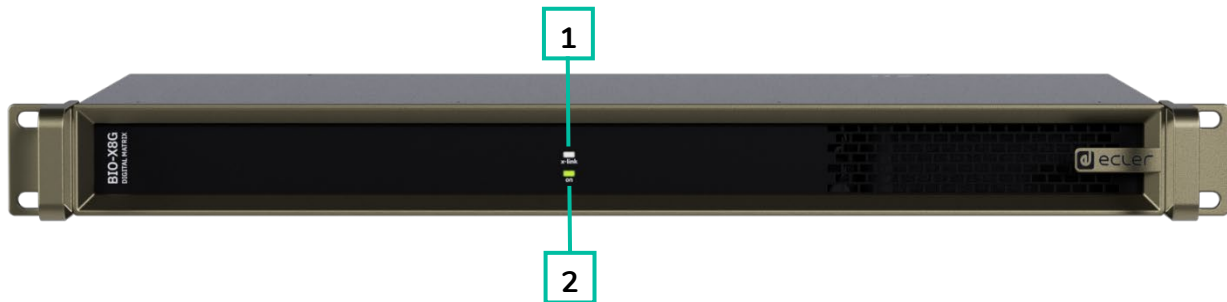
## 7.1.2 Rear Panel



- |                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> <li>1. <b>Power Switch:</b> Unit Power ON switch.</li> <li>2. <b>Mains socket</b> base.</li> <li>3. <b>RS-232:</b> Euroblock connector for remote control via TP-NET protocol, RS-232.</li> <li>4. <b>μSD:</b> microSD card slot.</li> <li>5. <b>NET1 / NET2:</b> RJ-45 ethernet network ports, NET1-2.</li> </ol> | <ol style="list-style-type: none"> <li>6. <b>X-LINK ports:</b> USB-C to USB-C connection to one BIO-X8G to each port.</li> <li>7. <b>GPO (8):</b> GPO ports 1-8.</li> <li>8. <b>GPI (8):</b> GPI ports 1-8.</li> <li>9. <b>OUT (8):</b> Analogue outputs 1-8, 3-pin Euroblock. Pitch: 3,5 mm.</li> <li>10. <b>IN (8):</b> Analogue inputs 1-8, 3-pin Euroblock. Pitch: 3,5 mm.</li> </ol> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

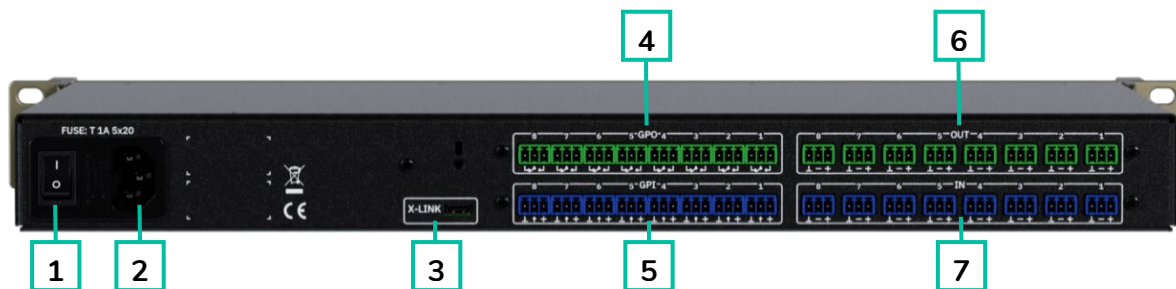
## 7.2 BIO-X8G

### 7.2.1 Front Panel



1. **X-LINK:** When this LED lights white, it indicates active connection with the VIVO-X8D8. It will blink during the synchronization process and stay continuously lit once the sync is complete and stable.
2. **On LED:** This LED lights up in green colour if the unit is on.

### 7.2.2 Rear Panel



1. **Power Switch:** Unit Power ON switch.
2. **Mains socket base.**
3. **X-LINK:** USB-C to USB-C connection to the VIVO-X8D8.
4. **GPI (8):** GPI ports 1-8.
5. **GPI (8):** GPI ports 1-8.
6. **OUT (8):** Analogue outputs 1-8, 3-pin Euroblock. Pitch: 3,5 mm.
7. **IN (8):** Analogue inputs 1-8, 3-pin Euroblock. Pitch: 3,5 mm.

## 8. TECHNICAL DATA

### 8.1 Technical Specifications

#### 8.1.1 VIVO-X8D8

##### VIVO-X8D8

|                                |                                                                                                                                                                                                  |
|--------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Digital Engine                 |                                                                                                                                                                                                  |
| Processor                      | Quad core 64bits 1,5GHz                                                                                                                                                                          |
| Audio Converters               |                                                                                                                                                                                                  |
| Sampling rate                  | 48 kHz                                                                                                                                                                                           |
| Resolution                     | 32 bit                                                                                                                                                                                           |
| Latency                        | <4ms                                                                                                                                                                                             |
| Frequency response             | 10Hz to 20kHz (-0,5 dB)                                                                                                                                                                          |
| Dynamic range                  | ADC:115dB, DAC: 115dB                                                                                                                                                                            |
| Analogue Audio Input Ports     |                                                                                                                                                                                                  |
| Number of input ports          | 8, MIC/LINE level                                                                                                                                                                                |
| Connection type                | Euroblock, 3-pin, balanced                                                                                                                                                                       |
| Input sensitivity              | -32,5 dBV to +18,5 dBV<br>-30,3 dBu to +20,7 dBu                                                                                                                                                 |
| Input impedance                | 8k $\Omega$ (balanced), 4k $\Omega$ (unbalanced)                                                                                                                                                 |
| Max input level                | 18,5 dBV / 20,7dBu                                                                                                                                                                               |
| Mic preamp EIN                 | <-129,5 dBV<br><-127,3 dBu                                                                                                                                                                       |
| Dynamic range                  | Gain 0 dB: >110,2 dB<br>Gain 21 dB: >109,5 dB<br>Gain 42 dB: >105,5 dB<br>Gain 51 dB: >99,5 dB                                                                                                   |
| THD + Noise                    | Gain 0 dB & Vin 0 dBV: 0,0025%<br>Gain 21 dB & Vin -21 dBV: 0,0026%<br>Gain 42 dB & Vin -42 dBV: 0,0044%<br>Gain 51 dB & Vin -51 dBV: 0,0085%                                                    |
| CMRR                           | Gain 0 dB & Vin +17 dBV: 0,0010%<br>Gain 21 dB & Vin -4 dBV: 0,0015%<br>Gain 42 dB & Vin -25 dBV: 0,0010%<br>Gain 51 dB & Vin -34 dBV: 0,0015%<br>>70dB typ (1kHz)<br>>60 dB typ (20 Hz - 20kHz) |
| Phantom power                  | +48VDC, 10mA per input max                                                                                                                                                                       |
| Analogue Audio Output Ports    |                                                                                                                                                                                                  |
| Number of output ports         | 8, LINE level                                                                                                                                                                                    |
| Connection type                | Euroblock, 3-pin, balanced                                                                                                                                                                       |
| Max output level               | 18,5dBV / 20,7dBu                                                                                                                                                                                |
| Output impedance               | 300 $\Omega$ (balanced), 150 $\Omega$ (unbalanced)                                                                                                                                               |
| Dynamic range                  | > 112,5 dB                                                                                                                                                                                       |
| Crosstalk                      | > 95dB                                                                                                                                                                                           |
| Audio Over IP                  |                                                                                                                                                                                                  |
| Protocols                      | Dante® / AES67 (4/4 flows)                                                                                                                                                                       |
| Number of digital input ports  | 8                                                                                                                                                                                                |
| Number of digital output ports | 8                                                                                                                                                                                                |
| Interfaces                     | 1 x RJ-45 - NET2                                                                                                                                                                                 |



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| Connectivity                |  |                                                                                                                                                                                   |
| Ethernet                    |  | 2, RJ-45 connector NET1 & NET2 (no switch capability)<br>Ethernet Base-Tx 10 /100Mb, 1Gb Auto X-Over                                                                              |
| Serial port                 |  | RS-232, Euroblock, 3-pin connector                                                                                                                                                |
| Programming and control     |  | EclerPLEX (Web application), TPNET (UDP/RS232), UCP control panels                                                                                                                |
| X-LINK                      |  | 2, X-LINK ports. USB-C connector                                                                                                                                                  |
| Remote Control Connections  |  |                                                                                                                                                                                   |
| GPIs                        |  | 8, 0 to 12VDC                                                                                                                                                                     |
| GPOs                        |  | 8, 3 poles isolated relay;<br>Contact rating: 2A, 30VDC; 0,5A, 125 VAC                                                                                                            |
| Real-Time Clock             |  |                                                                                                                                                                                   |
| Retention time              |  | > 5                                                                                                                                                                               |
| Accuracy                    |  | ±1 minute / month                                                                                                                                                                 |
| Local Storage               |  |                                                                                                                                                                                   |
| microSD                     |  | SDXC                                                                                                                                                                              |
| Capacity                    |  | Up to 2TB                                                                                                                                                                         |
| File system                 |  | FAT16, FAT 32, VFAT (read/write)<br>NTFS (read)<br>Multi-partition up to 1                                                                                                        |
| Playable audio files        |  | mp3, ogg, WAV, FLAC, AIFF                                                                                                                                                         |
| Files analysis              |  | 65354 playable folders<br>65354 playable folders within each folder<br>65354 playable files within each folder                                                                    |
| Folder hierarchy            |  | Up to 8 containing the root directory                                                                                                                                             |
| Sorting                     |  | UNICODE, in alphabetical order<br>Up to 100 folders / files by folder<br>Folders/files over 100 sorted in the FAT order                                                           |
| Electrical                  |  |                                                                                                                                                                                   |
| Power supply                |  | Internal.<br>Universal, regulated switching mode supply                                                                                                                           |
| AC mains requirement        |  | 90-264 VAC @ 47-63Hz                                                                                                                                                              |
| AC mains connector          |  | IEC C14 inlet                                                                                                                                                                     |
| Power consumption           |  | <19 W Typ, <23,5 W Max<br><36 VA, <41,5 VA Max                                                                                                                                    |
| Heat load                   |  | <65 BTU/h Typ, <80 BTU/h Max                                                                                                                                                      |
| Ventilation                 |  | FAN                                                                                                                                                                               |
| Physical                    |  |                                                                                                                                                                                   |
| Operating temperature       |  | Min: 0°C ; 32°F<br>Max: 50°C ; 122°F                                                                                                                                              |
| Operating humidity          |  | 5 - 85% RH, non-condensing                                                                                                                                                        |
| Storage temperature         |  | Min: 0°C ; 32°F<br>Max: 50°C ; 122°F                                                                                                                                              |
| Storage humidity            |  | 5 - 85% RH, non-condensing                                                                                                                                                        |
| Installation options        |  | Desktop, 19" racks (1RU)                                                                                                                                                          |
| Included accessories        |  | 1x EU Mains cord, 1x Multiplug Mains cord, 4x Washers, 4x Rubber feet, 17x Euroblock connectors (green colour), 16x Euroblock connectors (blue colour), 2 USB holders, 2x Screws. |
| Dimensions (WxHxD)          |  | 482.4 x 44 x 214 mm / 18.99 x 1.73 x 8.43 in.                                                                                                                                     |
| Weight                      |  | 3.2 kg / 7.05 lb                                                                                                                                                                  |
| Shipping dimensions (WxHxD) |  | 585 x 385 x 75 mm / 23.03 x 15.15 x 2.95 in.                                                                                                                                      |
| Shipping weight             |  | 4.65 kg/ 10.25 lb                                                                                                                                                                 |



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## 8.1.2 BIO-X8G

### BIO-X8G

|                             |                                                                                                                                                                                                  |  |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Audio Converters            |                                                                                                                                                                                                  |  |
| Sampling rate               | 48 kHz                                                                                                                                                                                           |  |
| Resolution                  | 32 bit                                                                                                                                                                                           |  |
| Latency                     | <4ms                                                                                                                                                                                             |  |
| Frequency response          | 10Hz to 20kHz (-0,5 dB)                                                                                                                                                                          |  |
| Dynamic range               | ADC:115dB, DAC: 115dB                                                                                                                                                                            |  |
| Analogue Audio Input Ports  |                                                                                                                                                                                                  |  |
| Number of input ports       | 8, MIC/LINE level                                                                                                                                                                                |  |
| Connection type             | Euroblock, 3-pin, balanced                                                                                                                                                                       |  |
| Input sensitivity           | -32,5 dBV to +18,5 dBV<br>-30,3 dBu to +20,7 dBu                                                                                                                                                 |  |
| Input impedance             | 8k $\Omega$ (balanced), 4k $\Omega$ (unbalanced)                                                                                                                                                 |  |
| Max input level             | 18,5 dBV / 20,7dBu                                                                                                                                                                               |  |
| Mic preamp EIN              | <-129,5 dBV<br><-127,3 dBu                                                                                                                                                                       |  |
| Dynamic range               | Gain 0 dB: >110,2 dB<br>Gain 21 dB: >109,5 dB<br>Gain 42 dB: >105,5 dB<br>Gain 51 dB: >99,5 dB                                                                                                   |  |
| THD + Noise                 | Gain 0 dB & Vin 0 dBV: 0,0025%<br>Gain 21 dB & Vin -21 dBV: 0,0026%<br>Gain 42 dB & Vin -42 dBV: 0,0044%<br>Gain 51 dB & Vin -51 dBV: 0,0085%                                                    |  |
| CMRR                        | Gain 0 dB & Vin +17 dBV: 0,0010%<br>Gain 21 dB & Vin -4 dBV: 0,0015%<br>Gain 42 dB & Vin -25 dBV: 0,0010%<br>Gain 51 dB & Vin -34 dBV: 0,0015%<br>>70dB typ (1kHz)<br>>60 dB typ (20 Hz - 20kHz) |  |
| Phantom power               | +48VDC, 10mA per input max                                                                                                                                                                       |  |
| Analogue Audio Output Ports |                                                                                                                                                                                                  |  |
| Number of output ports      | 8, LINE level                                                                                                                                                                                    |  |
| Connection type             | Euroblock, 3-pin, balanced                                                                                                                                                                       |  |
| Max output level            | 18,5dBV / 20,7dBu                                                                                                                                                                                |  |
| Output impedance            | 300 $\Omega$ (balanced), 150 $\Omega$ (unbalanced)                                                                                                                                               |  |
| Dynamic range               | > 112,5 dB                                                                                                                                                                                       |  |
| Crosstalk                   | > 95dB                                                                                                                                                                                           |  |
| Connectivity                |                                                                                                                                                                                                  |  |
| X-LINK                      | 1, X-LINK port. USB-C connector                                                                                                                                                                  |  |
| Remote Control Connections  |                                                                                                                                                                                                  |  |
| GPIs                        | 8, 0 to 12VDC                                                                                                                                                                                    |  |
| GPOs                        | 8, 3 poles isolated relay;<br>Contact rating: 2A, 30VDC; 0,5A, 125 VAC                                                                                                                           |  |
| Electrical                  |                                                                                                                                                                                                  |  |
| Power supply                | Internal.<br>Universal, regulated switching mode supply                                                                                                                                          |  |
| AC mains requirement        | 90-264 VAC @ 47-63Hz                                                                                                                                                                             |  |
| AC mains connector          | IEC C14 inlet                                                                                                                                                                                    |  |



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| Power consumption           | <16 W Typ, <20 W Max<br><30 VA, <36,3 VA Max                                                                                                                                                                            |
| Heat load                   | <54,6 BTU/h Typ, <68,2 BTU/h Max                                                                                                                                                                                        |
| Ventilation                 | FAN                                                                                                                                                                                                                     |
| Physical                    |                                                                                                                                                                                                                         |
| Operating temperature       | Min: 0°C ; 32°F<br>Max: 50°C ; 122°F                                                                                                                                                                                    |
| Operating humidity          | 5 - 85% RH, non-condensing                                                                                                                                                                                              |
| Storage temperature         | Min: 0°C ; 32°F<br>Max: 50°C ; 122°F                                                                                                                                                                                    |
| Storage humidity            | 5 - 85% RH, non-condensing                                                                                                                                                                                              |
| Installation options        | Desktop, 19" racks (1RU)                                                                                                                                                                                                |
| Included accessories        | 1x EU Mains cord, 1x Multiplug Mains cord, 4x Washers, 4x Rubber feet, 1x USB-C Ecler X-Link certified cable, 16x Euroblock connectors (green colour), 16x Euroblock connectors (blue colour), 1x USB holder, 1x Screw. |
| Dimensions (WxHxD)          | 482.4 x 44 x 214 mm / 18.99 x 1.73 x 8.43 in.                                                                                                                                                                           |
| Weight                      | 3.0 kg / 6.6 lb                                                                                                                                                                                                         |
| Shipping dimensions (WxHxD) | 585 x 75 x 385 mm / 23.03 x 2.95 x 15.15 x in.                                                                                                                                                                          |
| Shipping weight             | 4.45 kg/ 10.25 lb                                                                                                                                                                                                       |



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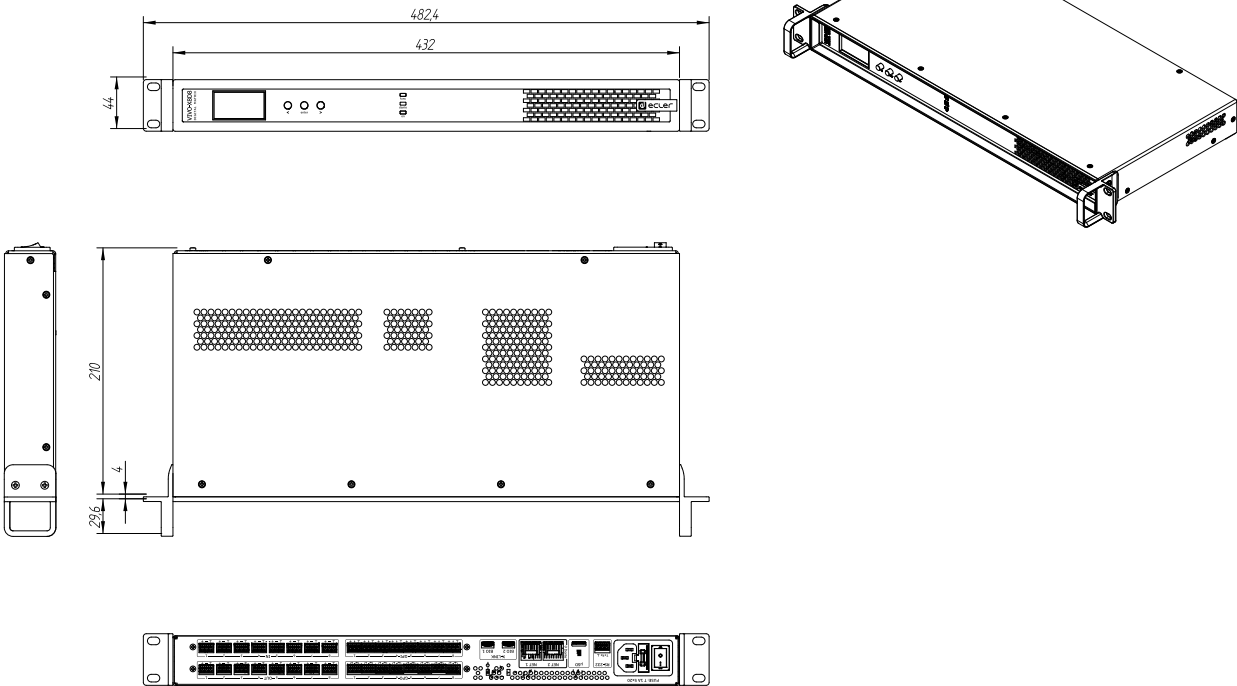
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8.2 Mechanical Diagram

8.2.1 VIVO-X8D8

All measurements are in mm.





6I-114I-0200

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Ecler VIVO-X8D8 Mechanical Diagram

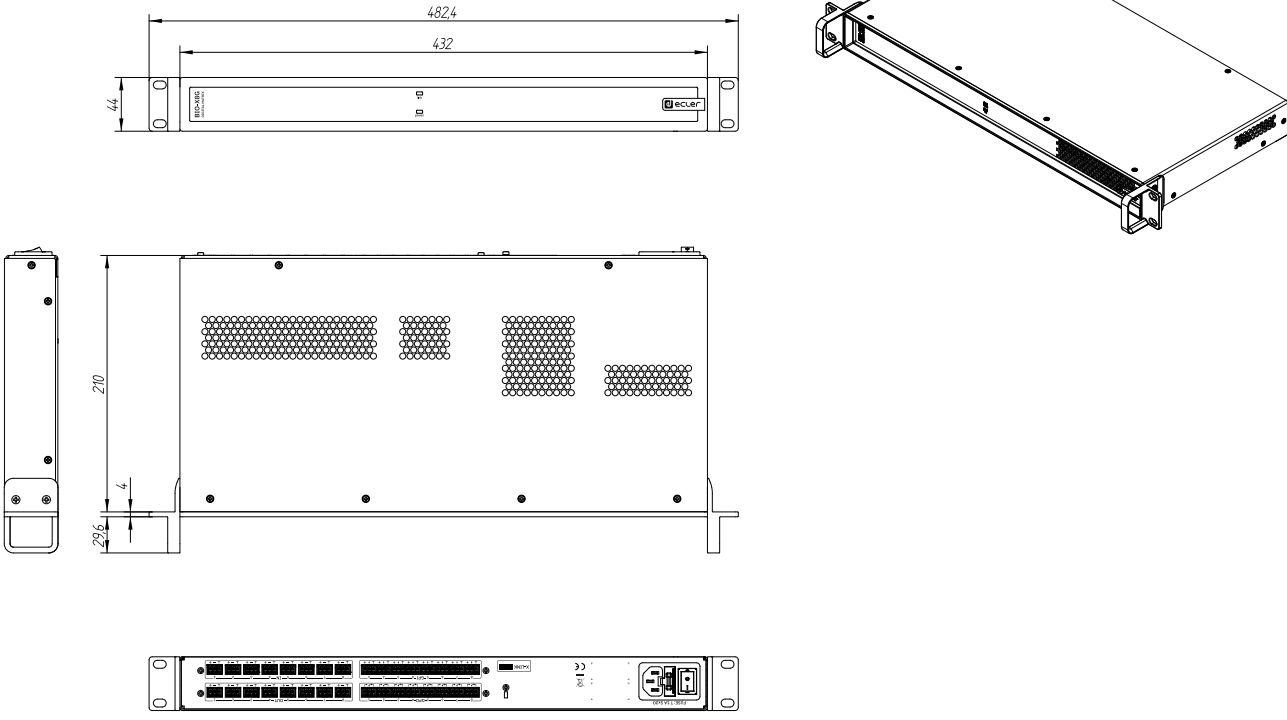
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8.2.2 BIO-X8G

All measurements are in mm.



*Ecler BIO-X8G Mechanical Diagram*



4824  
432  
44  
270  
4  
296

6I-1140-0200

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All the measurements are in mm

|                                                                                     |
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