QUICK START GUIDE

ENVIRONMENTAL MONITOR EMD32

March 2025

REGISTER

Thank you for purchasing the Opengear EMD32 Environmental Monitor. This Quick Start Guide covers basic installation and configuration of the EMD32.

When the EMD32 is connected and configured, you can use your Opengear console server to monitor the humidity and temperature of a remote location and receive alarms from environmental sensors and general purpose digital I/O at that site.

This Quick Start Guide covers basic installation and configuration of the EMD32.

Register your product: https://portal.opengear.com/s/

When you register, you will:

- Activate your warranty.

- Be notified when firmware updates are released: https://opengear.com/support/device-updates/

WHAT'S IN THE BOX

Kit Contents

Image: EMD32-01 or EMD32-02

Part Name	Part #	Description
1. EMD32-01 or EMD32-02	As part name	Environmental monitor
2. EMD32-01 adapter- RJ45-X1 plug to RJ45	449037	Cisco rolled X1 pinout - 2 alarm devices supported
3. EMD32-02 adapter- RJ45-X2 plug to RJ45	449029	Cisco straight X2 pinout - 2 alarm devices supported
4. Misc. items: RJ45 cable, Velcro, screw, zip tie	N/A	2m length

Accessories and External Sensors (optional)

Part Name	Part #	Description
1. Smoke detector/alarm	EMD5890-QA	Smoke detector/alarm (110V AC, NEMA 5-15)
2. Smoke detector/alarm	EMD5779-QA	Smoke detector/alarm (220V AC, IEC C-13)
3. Vibration sensor	EMD5782	Vibration sensor – 3′ Cable length
4. Door contact sensor	EMD5781-10	Door contact sensor – 10′ Cable length
5. Water leak detector cable	EMD5780	Water leak detector – 3′ Cable length

HARDWARE CONNECTION

The EMD32 can be used only with an Opengear console server and must not be connected to serial ports on other appliances. The EMD32 is powered over the serial connection and communicates using I2C protocol.

Connect the EMD32 to the Console Server

The EMD32 connects to a console server serial port via a special adapter comprising a standard RJ45 plug to RJ45 jack. The adapter is connected to the console server by the RJ45 UTP cable (supplied).

> **Note:** The EMD is not an RS232 device and should not be connected without the adapter.

1. Connect the male RJ45 plug on the EMD32 adapter to the RJ45 port of the EMD32.

2. Connect the RJ45 UTP cable to the EMD adapter and connect the other end of the cable to the console server serial port. The green EMD LED remains OFF until the EMD is configured on the Console Server (see).

> **Note:** If you require a longer cable than the 6-foot (2 meter) UTP cable provided with the EMD32 kit, you can use a standard Cat5 UTP cable up to 33 feet (10 meters) in length.

Connect External Sensors

The EMD32 supports up to two externally connected sensors, such as smoke detectors, water detectors, vibration sensors, open-door sensors, or general purpose open/close status sensors.

Connect the two bare wires of an external sensor into the two terminals labeled 1 & 2 or 3 & 4 (refer to the following connector/contact description table).

> **Note:** During connection, the green EMD LED [5] will remain OFF until the EMD is configured on the Console Server (see).

External sensor connection detail.

Image: EMD32 model

Connector #	Item Description
1	Contact 1 - Signal output
2	Contact 1 - Signal input
3	Contact 2 - Signal output
4	Contact 2 - Signal input
5	Device status LED

LED Status	Function
On	Power on (EMD must first be configured on the console server)
Off	Power off
Flashing	Data reading

CONFIGURE CONSOLE SERVER

The EMD32 has two types of sensor – the in-built environmental sensors (temperature and humidity) and externally connected alarm sensors (e.g., smoke detector, water detector, open-door sensor).

Configure Serial Port

1. On your appliance, log in, then go to the device dashboard.

2. Under **Serial & Network**, select **Serial Port**.

3. In the **Serial Port list**, locate the serial port to which the EMD is connected and click on **Edit**.

4. Under **Common Settings**, provide a unique identifier (label) for this EMD32 (this is optional), then complete the remaining common settings for this installation.

5. Under **Console Server Settings** complete the logging and access, and authentication settings required for this installation.

6. Under **Device Settings** select the device type. For the EMD32 setup this setting is **not optional** and must be set to **Environmental**.

Device Settings

Device Type	Environmental ⌄
	Specify the device type.
	After applying this setting, use the *Environmental* page to configure the attached environmental monitor.

7. Complete the remaining settings for **Terminal Server Settings**, **Serial Bridge Settings**, and **Syslog Settings** as required for this installation.

8. Click **Apply**.

Configure Environmental Device

1. Under **Serial & Network,** select **Environmental**. The **Environmental Monitors** list is displayed.

2. Click **Add**.

3. Input a name that will uniquely identify this EMD32 instance.

4. At **Connected Via** select the Serial Port to which the EMD32 is connected.

5. Complete the remaining settings on this page as required for this EMD installation, including logging status and rate.

6. Click **Apply** (the EMD green LED illuminates for about 1 second, then flash, then remain on).

Configure Environmental Sensor Alert Auto Responses

1. Under **Alerts and Logging**, select **Auto-Response**.

2. On the **Auto-Response** page, click **New Auto-Response** to display the **Auto-Response Settings**.

3. Complete the unique **Name**, **Timeout**, and **Trigger Action** settings for this Auto-Response instance.

4. Under **Check Conditions**, select **Environmental** to display the **Environmental Check** settings.

5. Complete all the **Environmental Check** conditions, then click **Save Auto-Response.**

Note: Set point values are in degrees Celsius for temperature and percentage for humidity alerts. Optionally, specify a hysteresis value to be used for the reset of a triggered alert. This value (degrees C for temperature, and percentage for humidity) specifies the change that is required to reset a triggered alert, above or below the alert set point.

6. Under **Trigger Actions**, select the required trigger action from the list on the left e.g., Send Email, Send SMS etc.

7. Click **Save New Action**. The saved trigger action is displayed under **Scheduled Trigger Actions**.

8. Repeat this procedure to add more **Auto-Response** instances.

9. When you have completed all required **Auto-Response**, click **Return to Auto-Response List**.

Note: After adding Alerts and Auto-Response settings, select

New Auto Response or **Modify** to configure automated alert responses,

Alerts & Logging: SMTP & SMS to configure email server settings,

Alerts & Logging: SNMP to configure SNMP server settings, or

System: Nagios to configure Nagios server settings.

These settings apply to all alerts. Refer to the online Opengear User Manual, Alerts, Auto-Response & Logging section for details on configuring these server settings.

MONITOR EMD STATUS

To monitor the current EMD status select **Status: Environmental Status**. This displays a summary of connected EMDs and externally connected sensors.

Click **View, Summary**, **Internal Environmental Sensor**, or **EMD32** tab to view detailed historical logs of the selected EMD.