

EMD5000

Quick Start Guide

Thank you for purchasing the Opengear EMD5000 Environmental Monitor (EMD). Once connected you will be able to 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.

Step1 Check kit contents



EMD5000
Environmental Monitor



449026/29
EMD Adapter



UTP Cable



Quick
Start

Note: Check you have ordered the correct EMD version for your console server pinout:

EMD5000	Classic pinout	449026 EMD adapter
EMD5000-02	Cisco pinout	449029 EMD adapter

Step 2 Connect the EMD hardware

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

The EMD connects to your console server serial port via a special EMD Adapter and a standard CAT5 cable. It is not an RS232 device and should not be connected without the adapter.

- Plug the male RJ plug on the EMD Adapter into EMD and then connect to the console server serial port using the provided UTP cable – the green EMD LED will turn on

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



- The EMD5000 supports one (EMD5000-2) or two (EMD5000) externally connected sensors, such as smoke detectors, water detectors, vibration sensors, open-door sensors or general purpose open/close status sensors
- Screw the two bare wires of an external sensor into the two terminals labeled **1** or the two terminals labeled **2**

Step 3 Configure console server

Device Settings

Device Type Environmental ▼
Specify the device type.

Environmental page to configure the attached environmental monitor.

- Select **Serial & Network: Serial Port** – no particular Common Settings are required for the serial port that the EMD is attached to
- Select **Environmental** as the **Device Type** and click **Apply**. This will turn the green EMD LED off

opengear System Name: acm5003-m Model: ACM5003-M Firmware: 3.2.0p4
Uptime: 0 days, 2 hours, 10 mins, 54 secs Current User: root Backup Log Out

Serial & Network: Environmental

Serial & Network

- Serial Port
- Users & Groups
- Authentication
- Network Hosts
- Trusted Networks
- IPsec VPN
- OpenVPN
- Call Home
- Cascaded Ports
- UPS Connections
- RPC Connections
- Environmental
- Managed Devices

Alerts & Logging

- Port Log
- Alerts
- SMTP & SMS
- SNMP

System

- Administration
- SSL Certificates
- Configuration Backup
- Firmware
- IP
- Date & Time
- Dial
- Services
- Nagios
- Configure Dashboard
- I/O Ports

Status

- Port Access
- Active Users

Add Environmental Monitor

Name
A descriptive name for the environmental monitor.

Connected Via Serial - Port #3 (Port3) ▼
Specify the connection port for the environmental monitor.

Description
A brief description for the environmental monitor.

Temperature Offset
Fine tuning adjustment for the temperature sensor.

Humidity Offset
Fine tuning adjustment for the humidity sensor.

Temperature in Fahrenheit
Indicates if the temperature is reported in Fahrenheit rather than Celsius

Alarm #1 Label
A label for this alarm sensor, e.g. Door Open or Smoke Alarm.

Alarm #2 Label
A label for this alarm sensor, e.g. Door Open or Smoke Alarm.

Log Status
Periodically log environmental status.

Log Rate
Minutes between samples.

- Select **Serial & Network: Environmental** and click **Add**
- Enter a **Name** and **Description** for the EMD and select pre-configured serial port that the EMD will be **Connected Via**
- You may optionally calibrate the EMD with a Temperature Offset (+ or - °C) or Humidity Offset (+ or percent). Also if you check **Temperature in Fahrenheit** then the temperature will be reported in Fahrenheit. Otherwise it will be reported in degrees Celsius
- Name the **Labels** to be used for each of the two alarms

- If you wish the status from this EMD to be logged, check **Log Status** and specify the **Log Rate** (minutes between samples)
- Click **Apply**

Note: The LED on the EMD will turn on periodically as its status is monitored.

Step 4 Configure EMD alerts

The EMD5000 has two kinds of sensors – the in-built environmental sensors (temperature and humidity) and externally connected alarm sensors (e.g. smoke detector, water detector, open-door sensor). To add an alert:

- Select **Alerts & Logging: Alerts**, click **Add Alert**
- Enter a **Description** for the new alert

The screenshot shows the 'Add a New Alert' configuration page in the OpenGear web interface. The page has a blue header with the 'opengear' logo and system information: 'System Name: img4004-5', 'Model: IMG4004-5', 'Firmware: 2.6.0p2', 'Uptime: 0 days, 1 hours, 21 mins, 12 secs', and 'Current User: root'. The main title is 'Alerts & Logging: Alerts'. On the left, there are two navigation menus: 'Serial & Network' (with sub-items: Serial Port, Users & Groups, Authentication, Network Hosts, Trusted Networks, Cascaded Ports, UPS Connections, RPC Connections, Environmental) and 'Alerts & Logging' (with sub-items: Port Log, Alerts, SMTP & SMS, SNMP). The main content area contains a form with the following fields:

- Add a New Alert** (Section Header)
- Description**: A text input field with the description 'A brief description of this alert's purpose.'
- Email Recipient**: A text input field with the description 'The email address to send this alert to.'
- SMTP SMS Email Recipient**: A text input field with the description 'The SMTP SMS email address to send this alert to.'
- SNMP**: A checkbox with the description 'Use SNMP to notify of this alert.'
- Nagios (NSCA)**: A checkbox with the description 'Use Nagios to notify of this alert. *NSCA must be enabled under System: Nagios. Nagios must be enabled for each applicable host or port under Network Hosts or Serial Ports.*

- Nominate the email address for the **Email Recipient** and/or the **SMS Recipient** be notified of the alert, check **SNMP** to send an SNMP trap, check **Nagios** to send a Nagios notification

If you are adding an environmental sensor alert:

- Select the **Applicable Environmental Sensor(s)** to apply this alert to
- Scroll down and select **Environmental Sensor Alert**
- Select **Temperature** or **Humidity** for the **Sensor Type**
- Set the **High** and/or **Low Set Points** at which **Warning** and **Critical** alert notifications will be sent

Note: **Set Point** values are in degrees centigrade for **Temperature** and % (percentage) for **Humidity**.

- You may also specify a **Hysteresis** value used in resetting the alert – this number of degrees (for a **Temperature** alert) or percentage points (for a **Humidity** alert) the sensor reading must drop below a **High Set Point** or to rise above a **Low Set Point** before the alert is reset
- Click **Apply**

Environmental Sensor Alert

Environmental Sensor Alert An alert will be triggered at the value(s) below. *This alert type will only be applied to UPSes, RPCs and environmental monitor temperature and humidity sensors.*

Sensor Type
Specify which environmental sensor type to alert on.

Set Point (Low)	Low Warning	Low Critical
	<input type="text"/>	<input type="text"/>
	A warning alert will be triggered when the sensor reading falls to this value or lower.	A critical alert will be triggered when the sensor reading falls to this value or lower.

Set Point (High)	High Warning	High Critical
	<input type="text"/>	<input type="text"/>
	A warning alert will be triggered when the sensor reading rises to this value or higher.	A critical alert will be triggered when the sensor reading rises to this value or higher.

Hysteresis Value a sensor reading must drop below a high point or to rise above a low point before the alert is reset.

If you are adding an alarm sensor alert:

- Select the **Applicable Alarm Sensor(s)** to apply this alert to
- You may also specify the **Alarm Disable** periods, the alert is disabled during these time windows, and no notifications are sent – e.g. you may wish to disable a door open sensor alert during the working day
- Click **Apply**

Note: After adding alerts, select **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 *User Manual* for details on configuring these server settings.

Step 5 Monitor EMD status

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

System Name: mg4004-5 Model: IMG4004-5 Firmware: 2.6.0p2
Uptime: 0 days, 9 hours, 8 mins, 56 secs Current User: root

Status: Environmental Status

Serial & Network

- Serial Port
- Users & Groups
- Authentication
- Network Hosts
- Trusted Networks
- Cascaded Ports
- UPS Connections
- RPC Connections
- Environmental

Alerts & Logging

- Port Log
- Alerts
- SMTP & SMS
- SNMP

Environmental Status
Environmental Logs

		Environmental Status					
Name	Description	Sensor Status		Connected Via			
Comms room	Telco closet	Name	Type	Value	Status	Serial - Port 3	View Log
		Temperature	Temperature	-U			
		Humidity	Humidity				
		Fire warning	Dry Contact				
		Alarm #2	Dry Contact				

- Click **View Log** or the **Environmental Logs** tab to view detailed historical logs of the selected EMD