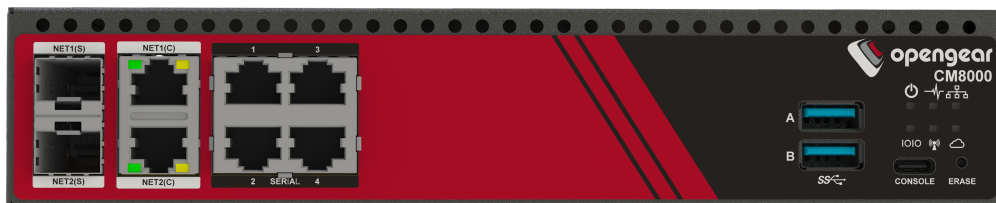


CONSOLE MANAGER 8000

QUICK START GUIDE

Includes: CM8000 Family of Console Managers



REGISTER

This Quick Start Guide covers basic installation and configuration of the CM8000.

For detailed:

- guidance, consult the Console Manager User Guide: <https://opengear.com/support/documentation/>.
- information about the variants available for this model, see the product selector: <https://opengear.com/product-selector/>.

Register your product at: <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

CM8000

Note: The number of serial ports depends on the model. The CM8004 has four ports, and the CM8008 has eight ports. Images in this document use the CM8004.



1.6GHz Quad-Core ARM Cortex-A53
4GB LPDDR4 Memory, 32GB
Storage



API based Firmware
Supports Python, Docker



Embedded TPM 2.0
HW level security

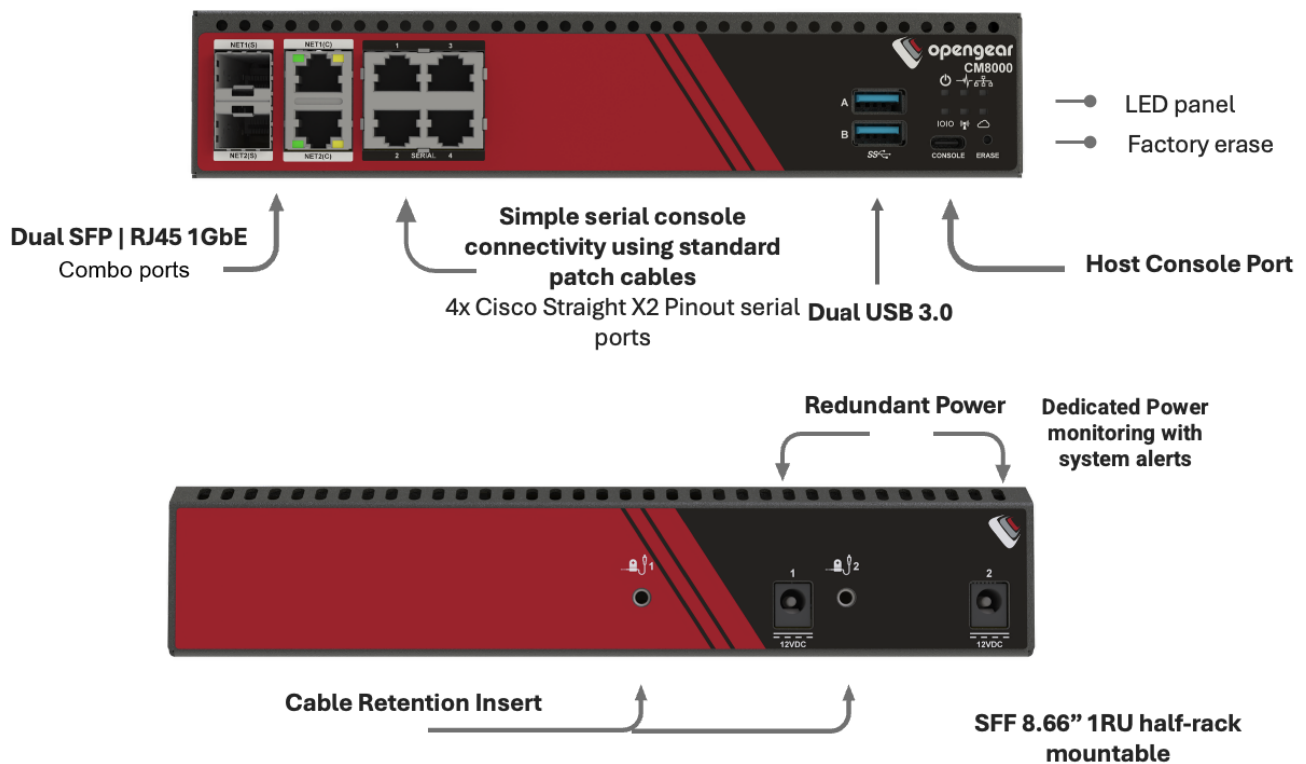


Figure: CM8004 model

Kit Contents



- Notes:**
- Contents may be different from those pictured due to region or supplier.
 - The power cord is useable only with the device. Do not use it for any other purpose.

Label	Item	Quantity	Notes
	CM8000 device	1	
1	Rack Mount Kit	1	Part number 590054
2	C14 Power Cable	1	Part number 440055
3	A/C Power Brick	1	Part number 450048

HARDWARE INSTALLATION

Step 1. Connect Network Interfaces

Connect the device to a local network using any of the available physical network interfaces. All interfaces are configured by default to receive IPv4 addresses via DHCP and IPv6 addresses via SLAAC.

Additionally, the device can be accessed from a computer or local network via NET1 or NET2 with a static IPv4 address as shown in [Table: Default static interface connection](#).

Model	Interface	Static Address
1Gb Ethernet	NET1	192.168.0.1/24

Table: Default static interface connection

Firewall Zone	Network Interfaces
WAN	NET1
LAN	NET2

Table: Default firewall zones for interfaces

Step 2. Connect Serial Devices

Connect managed devices to the serial interfaces on the front of the unit.

Step 3. Connect USB Devices

USB serial devices can be connected to the USB 3 slots of the unit if required.

Step 4. Connect The Power

Connect the power cable to the rear of the unit.

For optional redundancy, dual power inputs are supported but only one external AC adapter is supplied with the device.



LED Power Status Indicator



Figure: Power supply has redundancy



Figure: Power supply does not have redundancy

ACCESS THE DEVICE

Step 1. Log in via the Web UI

Using a computer on the same subnet as the static network interface shown in "Hardware Installation" on page 1, access the web UI with your web browser at <https://192.168.0.1/>.

Note: The device has a self-signed SSL certificate. Your browser will display an "Untrusted connection" warning. Click through the warning to access the login page.

To log in for the first time, enter the username **root** and password **default** and click **Submit**.

Note: The factory default password automatically expires after a factory reset and users must choose a new password. This policy is applied through the WebUI, Config Shell, and CLI.

Step 2. Change the Root Password

When logging in to the device for the first time you will be prompted to change the root password immediately.

The following password complexity settings are selected by default for factory reset devices and upgrades:

- Minimum password length of eight characters.
- Passwords must contain an uppercase letter.
- Passwords must contain a numeric character.
- Disallow usernames in passwords.


Note: Users are prevented from using the word "default" as their password.

Enter the current password followed by the new password and click **Log in**.

The **ACCESS > Serial Ports** page appears displaying a list of connected serial devices and links to a Web Terminal or SSH connection for each.

CONFIGURE SERIAL PORTS

To change settings for individual serial ports:

1. Navigate to **CONFIGURE > Serial Ports**.
2. Click the **Edit** button  next to the port you wish to modify.
3. Change port settings, logging settings or configure IP aliases.
4. Click **Apply** to save changes.

Field	Value
Mode	ConsoleServer
Pinout	X2
Baud Rate	9600
Data Bits	8
Parity	None
Stop Bits	1



Table: Default configuration for serial ports

CONFIGURE LOCAL CONSOLE

CONFIGURE > Local Management Consoles

Console Manager CM8000 units have:

- one RJ45 serial console.
- one dedicated USB-C serial console for local management

LOCAL MANAGEMENT CONSOLES		
Management Console	Parameters	Actions
USB-C Serial Console	9600-8N1 VT102	 

To configure local console ports:

1. Navigate to **CONFIGURE > Local Management Consoles**.
2. Click the **Edit** button next to the local console you want to modify.
3. Change port settings.
4. Click **Apply** to save changes.



Field	Value
Baud Rate	9600
Data Bits	8
Parity	None
Stop Bits	1
Emulation	VT102



Table: Default serial port configuration for local console access

CONFIGURE NETWORK


[CONFIGURE](#) > [Network Connections](#) > [Network Interfaces](#)

Click to expand any row to display status information about the interface and its connections.

NETWORK INTERFACES		
 NET1 - 1G Copper/SFP	2 IPv4 connections	1 IPv6 connections
	1 Automatic 1 Static	1 Automatic 0 Static
 NET2 - 1G Copper/SFP	1 IPv4 connections	1 IPv6 connections
	1 Automatic 0 Static	1 Automatic 0 Static

NETWORK INTERFACES		
 NET1 - 1G Copper/SFP	2 IPv4 connections	1 IPv6 connections
	1 Automatic 1 Static	1 Automatic 0 Static
 NET2 - 1G Copper/SFP	1 IPv4 connections	1 IPv6 connections
	1 Automatic 0 Static	1 Automatic 0 Static


Configure Physical Interfaces

On the Network Interfaces page, click the drop-down arrow on the right side of the target network interface then, click the **Edit** button  to configure media and MTU for any of the physical interfaces.

 **NET1 - 1G Copper/SFP**

Enabled

Disabled

 Enabled Automatic

 **NET1 - 1G Copper/SFP**

Enabled

Disabled


 Edit

Modify Default IPv4 Static Interface

1. Click the **"IPv4 Static"** label under NET1 (1G) to open the edit connection page.
2. Enter the IPv4 address.
3. Enter the network mask.
4. Click **Apply** to save changes.

CREATE NEW ADMINISTRATIVE USER

Note: You should create a new administrative user rather than continuing as the root user.

1. Navigate to **CONFIGURE > User Management > Local Users**.
2. Click the **Add User** button  at the top-right of the page.
3. Click the **User Enabled** checkbox.
4. Enter **Username** and **Password**.
5. Assign the **admin** group to the user to provide full access privileges.
6. Click **Save User** to create the new user account.
7. Log out and log back in as this user for all administrative functions.

Group Memberships

<input type="checkbox"/>	Group Name	Description
<input checked="" type="checkbox"/>	admin	Provides users with unlimited configuration and management privileges
<input type="checkbox"/>	netgrp	Group for users created automatically via network authentication

1 / 2 Groups Selected


For more details about Users and Groups configuration, consult the Console Manager User Guide:

<https://opengear.com/support/documentation/>.

ACCESS DEVICE CONSOLES

After you have attached managed devices and configured serial ports by following "[Configure Serial Ports](#)" on page 8, you can now access the console of your managed devices on your network.

Web UI

1. Navigate to **ACCESS > Serial Ports** to view the list of serial ports on the device.
2. Click the **Web Terminal** button  to the right of any serial port in Console Server mode to access it via the web terminal.

 Port-1
Port-1, 9600-8-N-1-X2

 Console Server  No sessions  

Console

For administrator users logged in to the device via console or SSH:

1. Type *pmshell* to view the list of available managed devices.
2. Enter the **port number** to access the desired device and press **Enter**.

SSH

The managed devices connected to the Console Manager can be accessed directly with an SSH command to connect to the device.

- To view the list of managed devices: *ssh <username>+serial@<device address>*
- To connect to a specific device by port: *ssh <username>+port<number>@<device address>*
- To connect to a specific device by name: *ssh <username>+<port label>@<device address>*

Note: The SSH delimiter can be modified via the Web UI at **CONFIGURE > Services > SSH**.


Telnet

Telnet access to managed devices is not supported at this time.

LIGHTHOUSE CENTRALIZED MANAGEMENT

Note: Lighthouse is a powerful tool that simplifies the way you manage your out-of-band network through a single pane of glass. Better control and visibility provides 24/7 resilient access to your connected IT infrastructure. For more information, visit <https://opengear.com/products/lighthouse/>.

To enroll your device:

1. Navigate to **CONFIGURE > Lighthouse Enrollment**.
2. Click the **Add Lighthouse Enrollment** button  at the top-right of the page.
3. Enter the Lighthouse Address, Enrollment Token, optional port and optional Enrollment Bundle.
4. Click Apply to begin the enrollment process.

Note: Enrollment of an Opengear device can also be performed from Lighthouse using **Add Node** functionality.

Automatic Enrollment By Lighthouse Service Portal (LSP)

Lighthouse Service Portal (LSP) is an Opengear solution that enables to perform a zero touch call home and automatic enrollment into a customers Lighthouse instance of choice.

Note: LSP is not configurable and cannot be added in-field.

No user setup is required for LSP. LSP should begin working upon boot or factory reset.


LSP Service Initialisation

When the node is initially powered-up or rebooted, ZTP begins to run and sees that device is LSP enabled and ZTP exits before applying any configuration. `Systemd` triggers the LSP.

The node connects to internet and adds an NTP server to ensure crypto is working. It then pulls an updated docker container which it runs, and waits while the docker container writes out the appropriate lighthouse bundle associated with the serial number, then exits.

Identity is verified by a TPM attestation key with the serial number encoded and signed by the attestation key and a CA running in AWS. An accompanying certificate is stored the secure Trusted Platform Module (TPM).

If there are no connectivity issues the LSP status LED state changes progressively from amber flashing (lsp is running), green flashing (Lighthouse is connecting) and green solid (lighthouse connected successfully).

OM Devices Cloud / Internet 	LSP is disabled and there are no existing Lighthouse enrollments.	LSP is currently running on the device.	An error occurred while running LSP.	The device can reach the light-house instance and is attempting to enroll. If a light-house is unreachable the LED will not start.	The device is enrolled and connected to a lighthouse. There will be a short delay between the UI status reported and the LED changing to solid green.
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