



cnMatrix EX3K
Fiber Aggregation Switch
Basic Configuration Guide



Thank you for choosing the cnMatrix switch, a Cambium Networks communications device. Before you begin installing the switch, **verify** you have all the package contents available, and a PC with SSH client, such as PuTTY or OpenSSH SSH Client.

Package Contents

Rack mount ears (2x) with screws (8x). Rack mount ears are included with the EX3012F and EX3024F models.
Spare rack mount ears: ()



cnMatrix EX3K Fiber Aggregation Switch

EX3012F model:





EX3024F model:



Product Overview

The cnMatrix EX3K switch SKUs:

Model Name / Part Number	Number of Ports	Power over Ethernet	Throughput	Switch
cnMatrix EX3012F MXEX3012xFxA00	12	N/A	240 Gbps	
cnMatrix EX3024F MXEX3024xFxA00	24	N/A	480 Gbps	

Powering Up

Connect the power cord to the power inlet, and then plug the power cord into a wall socket.

The EX3012F has a single internal power supply – with a single AC inlet.

The EX3024F has 2 internal power supplies – thus 2 AC inlet ports. Only one AC inlet is required to power the switch – the 2nd inlet is purely for redundancy to energize the second power supply.

EX3012F:



EX3024F:



When the switch is booting up, the illuminated Cambium Networks logo will be blinking blue. When the switch is fully up and running, the illuminated Cambium Networks logo is solid blue.

Default Configuration

IP address 192.168.0.1 is automatically configured on the Out-Of-Band Management Port (MGMT). There is no default IP address on the In-Band Network Ports.



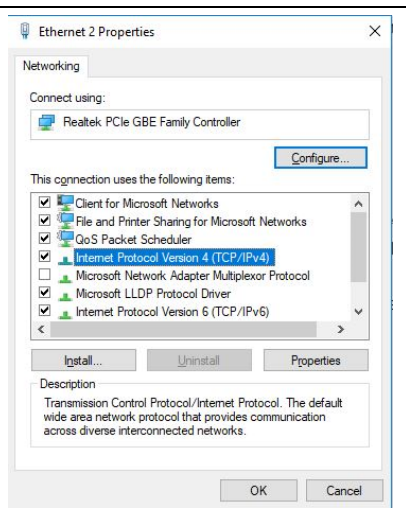
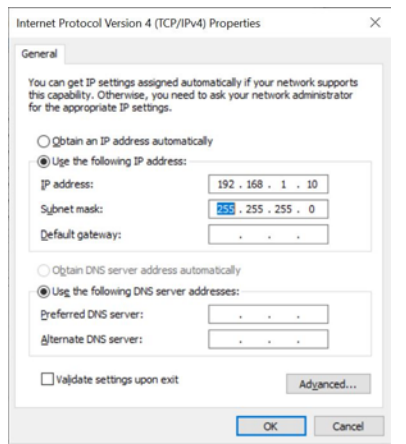
Note: DHCP is enabled by default on In Band Ports (VLAN1).

Default login information:

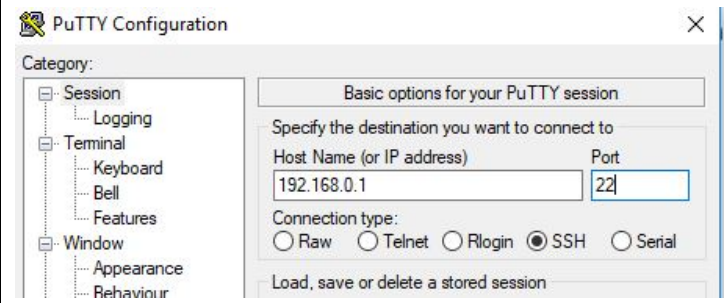
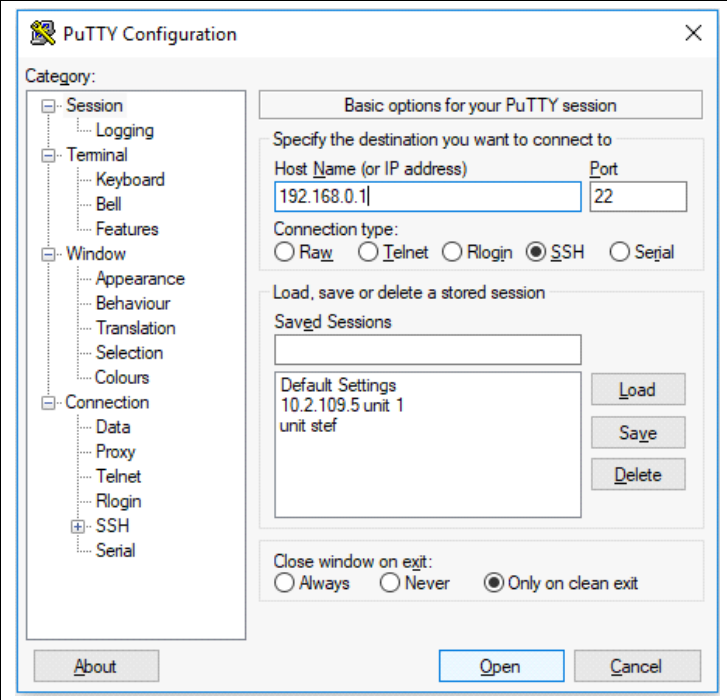
Username: **admin**

Password: **admin**

Configure Management PC

1	For Windows operating system, open the Control Panel window.	
2	In the Control Panel window, select the View network status and tasks option. The Network and Sharing Center window is displayed.	
3	Click the Change adapter settings option. The Network Connections window is displayed.	
4	Double-click the interface connected to the switch. The interface Properties window is displayed.	
5	Double click on the Internet Protocol Version 4 (TCP/IPv4) option.	
6	The Internet Protocol Version 4 (TCP/IPv4) Properties is displayed. Select Use the following IP address. Set The IP address of the interface to 192.168.1.10 and the Subnet mask to 255.255.255.0	

Logging in to the switch

1	Use PuTTY SSH client.	 <p>The screenshot shows the PuTTY Configuration dialog box. The 'Category' list on the left includes Session, Logging, Terminal, Keyboard, Bell, Features, Window, Appearance, and Behaviour. The 'Basic options for your PuTTY session' section is active, showing 'Host Name (or IP address)' set to 192.168.0.1 and 'Port' set to 22. The 'Connection type' is set to SSH.</p>
2	On the PuTTY Configuration window, in the Host Name field, enter 192.168.0.1 IP address and in the Port field, enter the 22 value.	
3	Click Open. The login prompt is displayed.	 <p>The screenshot shows the PuTTY Configuration dialog box with the 'Open' button highlighted in blue. The 'Host Name (or IP address)' field now contains '192.168.0.1 ' and the 'Port' field contains '22'. The 'Connection type' is still SSH. The 'Saved Sessions' list is empty, and the 'Close window on exit' option is set to 'Only on clean exit'.</p>
4	In the cnMatrix login prompt enter the default username: admin	
5	In the Password prompt enter the default login password: admin	

Hardware Overview

Power LED

cnMatrix Logo (Power) LED is continuously blue – the switch is operational.

cnMatrix Logo (Power) LED is blinking blue – the switch is initializing.

Console

RJ45 connection for console access.

USB

File management and/or storage.

Management Port

Used for Managing the switch. It provides out of band network connectivity for management of the switch.



cnMaestro LED

Blinking blue: Connecting to cnMaestro.
Solid blue: Connected to cnMaestro.

Reset button

Simple reboot: Press and release within 10 seconds.

Factory default: Press and hold for > 10 seconds

Fiber Ports

1 Gig/10 Gig fiber ports (SFP+).

Specifications

cnMatrix Models	EX3012F	EX3024F
MTBF (hours)	1,054,242	928,678
Max Switch Power (with traffic)	47 W	75 W
Power Supply	AC/Internal	Dual AC/Internal (Redundant)
Weight	1.5 kg (3.3 lb)	3 kg (6.6 lb)
Dimensions	44 x 4.4 x 28 cm (17.3 x 1.73 x 11.02 in)	44 x 4.4 x 39.4 cm (17.3 x 1.73 x 15.51 in)
LEDs per port	Link/Activity	Link/Activity
Rack mountable	Yes 1U	Yes 1U
Operating Temperature	0°C to +50°C (32°F to +122°F)	0°C to +50°C (32°F to +122°F)
Operating humidity	+55° at 95% RH	+55° at 95% RH
Storage temperature	-40°C to +70°C (-40°F to +158°F)	-40°C to +70°C (-40°F to +158°F)

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@version 3.0 (December 2000)

Optimised ANSI C code for the Rijndael cipher (now AES)

@author Vincent Rijmen <vincent.rijmen@esat.kuleuven.ac.be>
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Version 2.1, February 1999

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Ty Coon, President of Vice
That's all there is to it!

Hardware Warranty

Cambium provides standard warranty as per Cambium's standard warranty policy for applicable warranty period for each product type. For details, regarding Cambium's warranty policy, warranty terms and conditions and applicable warranty periods, please click <https://www.cambiumnetworks.com/support/standard-warranty/>.

Electrical Safety Information

This switch is designed with a power inlet with an integrated ground. A power cord from the switch shall be connected to a power outlet with ground a connection.



Caution: Please ensure to disconnect all power cords to the switch before servicing. The EX3024F is designed with dual AC inlets. If using more than one AC inlet for redundancy, please ensure to disconnect both power cords to avoid shock hazard.



To prevent loss of life or physical injury, observe the following safety guidelines. In no event shall Cambium Networks be liable for any injury or damage caused during the installation of the switch.

The equipment is designed for indoor installation and not intended to be connected to exposed (outside) networks.

Equipment intended for installation in Information Technology Equipment Rooms. "Suitable for installation in Information Technology Rooms in accordance with Article 645 of the National Electrical Code and NFPA 75."

To avoid a shock hazard:

- Do not connect or disconnect any cables or perform installation, maintenance, or reconfiguration of this product during an electrical storm.
- Connect power cord to a properly wired and grounded electrical outlet.
- Connect the grounding lug, located on the rear of the switch, with a minimum 14 AWG wire. Ground wire color will be dictated by local requirements.
- Connect to properly wired outlets any equipment that will be attached to this product.
- When possible, use one hand only to connect or disconnect signal cables.
- Never turn on any equipment when there is evidence of fire, water, or structural damage.

There are no serviceable parts inside this equipment. Service should be provided only by a qualified service technician.

Le switch est conçu avec une prise de courant possédant une connexion à la terre. Un cordon d'alimentation devra être connecté à la prise de courant possédant une connexion à la terre.

L'équipement est prévu pour des installations en intérieur et n'est pas prévu pour être installé à l'extérieur.

ATTENTION: Unité est alimentée par des cordons d'alimentation multiples. Pour déconnecter toutes les sources d'alimentation de l'unité, débranchez tous les cordons d'alimentation

CAUTION: The SFP/SFP+ ports should use UL listed Optical Transceiver product, Rated Laser Class 1, 3.3Vdc.

Si le transceiver optique n'est pas livré avec l'appareil, le manuel d'utilisation doit comporter la description ci-dessous ou son équivalent : « Ce produit est destiné à être utilisé avec un transceiver optique homologué UL, tension DC3.3V, classe laser I.

FCC Compliance

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if it is not installed and used in accordance with the instruction manual, it may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Modifications: Any modifications made to this device that are not approved by Sun Microsystems, Inc. may void the authority granted to the user by the FCC to operate this equipment.

この装置は、クラスA機器です。この装置を住宅環境で使用すると電波妨害を引き起こすことがあります。この場合には使用者が適切な対策を講ずるよう要求されることがあります。

VCCI - A

RoHS/WEEE Compliance

Caring for the Environment: RoHS/WEEE

European Directive 2002/96/EC requires that the equipment bearing this symbol on the product and/or its packaging must not be disposed of with unsorted municipal waste. The symbol indicates that this product should be disposed of separately from regular household waste streams. It is your responsibility to dispose of this and other electric and electronic equipment via designated collection facilities appointed by the government or local authorities. Correct disposal and recycling will help prevent potential negative consequences to the environment and human health. For more detailed information about the disposal of your old equipment, please contact your local authorities, waste disposal service, or the shop where you purchased the product.

Europe- EU Declaration of Conformity

Hereby, CAMBIUM NETWORKS, Inc. declares that the equipment type [EX30xx] is in compliance with Directive 2014/30/EU. The full text of the EU declaration of conformity is available at the following internet address: <https://www.cambiumnetworks.com/>

Online Resources

User Guides: <https://www.cambiumnetworks.com/guides>

Technical Training: <https://learning.cambiumnetworks.com>

Cambium Networks Support Centre: <https://support.cambiumnetworks.com>

Contact us: <https://www.cambiumnetworks.com/support/contact-support/>