

Release Notes for Cambium Networks cnMatrix Release 3.2-r4

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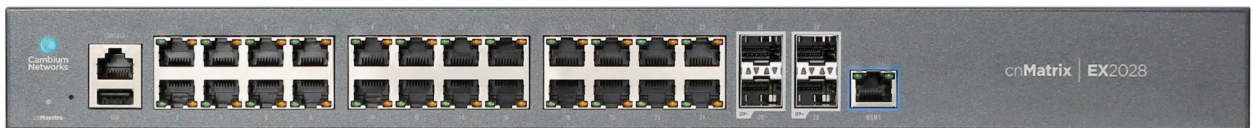
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Introduction

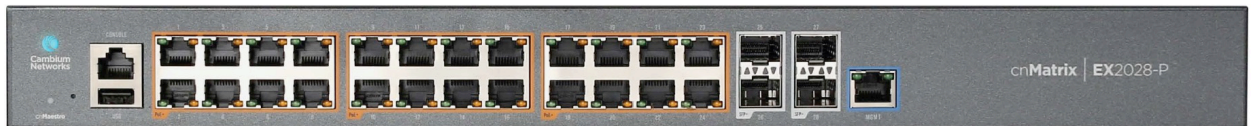
This document provides information for the Cambium Networks cnMatrix switch release 3.2-r4. The recommendations, technical data, configurations and statements in this document are believed to be reliable and accurate but are presented without implied or express warranty. Users must take full responsibility for their applications of any product specified in this document. The information in this document is proprietary to Cambium Networks Ltd.

Supported Platforms

- cnMatrix EX2028



- cnMatrix EX2028-P



- cnMatrix EX2010



- cnMatrix EX2010-P



- cnMatrix EX2016M-P



- cnMatrix EX2052-P and EX2052R-P



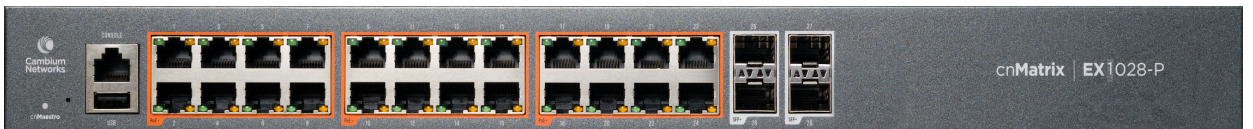
- cnMatrix EX2052



- cnMatrix EX1028



- cnMatrix EX1028-P



- cnMatrix EX1010



- cnMatrix EX1010-P



Attention: Certain features may not be available on this product line and will be called out explicitly where not applicable. The new EX1010 and EX1010-P SKUs do not support running 2.0.x, 2.1.x, 3.0.x or 3.1.x software. Downloading unsupported software is prohibited by 3.2-r4 agent.

Cambium Networks products and support

Product information: <https://www.cambiumnetworks.com/products/software/>

Log in to XMS-Cloud: <https://login.xirrus.com>

Log in to cnMaestro: <https://cloud.cambiumnetworks.com>

For more information: salesdev@cambiumnetworks.com

What's New in 3.2-r4

Support for XMS-Cloud configuration

Starting with 3.2-r4, cnMatrix switches can be managed from the Cambium Networks XMS-Cloud interface.



Attention: If your cnMatrix switches are running agent version 2.0.x, 2.1.x, 3.0.x or 3.1.x you **must** upgrade to 3.2-r4 in order to successfully connect to the XMS-Cloud.

The following features can be configured from XMS-Cloud.

ACL IP

- IP ACL per switch
- Source IP
- Destination IP
- Source IP Port Range
- Destination IP Port Range

Policy Based Automation

- Dynamic settings display
- Policy create
- Policy delete
- Policy modify
- Rule create
- Rule delete
- Rule modify
- Action create
- Action delete
- Action modify

Power over Ethernet (PoE)

- PoE enable/disable
- PoE priority

VLAN

- VLAN port membership
- VLAN Name
- Port tagging
- Port PVID
- Port access mode

Quality of Service (QoS)

- QoS Trust
- QoS Default Priority

Port Management

- Operational shutdown/no shutdown actions
- Speed and Duplex configuration
- MTU
- 802.1X Access Security

LLDP Interface label display

Management features

- Radius client configuration
- SNMP client configuration
- User account management
- DNS client configuration
- Hostname configuration

Support for new models

| Part Number | Number of Ports | Power over Ethernet |
|-------------------|-----------------|---------------------|
| cnMatrix EX1010 | 10 | No |
| cnMatrix EX1010-P | 10 | Yes |

Feature limitations on new EX1010 and EX1010-P SKUs

- Dynamic Routing is not supported on EX1010 and EX1010-P SKUs. RIP and OSPF features are disabled on these models.
- The EX1010 and EX1010-P models only support SFP transceivers.
- EX1010 and EX1010-P SKUs do not have a physical Out of Band port. Out of Band management is not supported on these SKUs.
- EX1010-P has a PoE budget of 75W.

Feature Enhancements

- Implement CLI support to copy running-config to/from TFTP Server

```
copy running-config tftp://<server IP address>/<filename>
copy tftp://<server IP address>/<filename> running-config
```

- Improve usability for **username** command

- A password is required when creating a new user. Default password usage is no longer supported.
- A role option is presented that can be used instead of specifying a privilege. This maps the role type to a privilege.

```
username <user> password <pass> [ role { guest | tech | admin } |
                                privilege <1-15> ]
```

- Implement new `show management` and `management` commands.

```
EX2052-EC9BA0# show management
```

```
Remote Management
```

```
Config           : Enabled
Status           : Not Connected
Certificate Validation : Cloud-Only
Account ID       :
Last Action      :
Last Sync        : Never
```

```
GUI
```

```
HTTP             : Enabled
HTTPS            : Enabled
```

```
Command Line
```

```
Telnet          : Disabled
SSH             : Enabled
```

```
EX2052-EC9BA0(config)# management cambium-remote ?
```

```
<CR>                Enables the remote management interface
url                 Specify static remote management interface
                    URL
validate-cert       Enable cloud certificate validation
```


- New condensed device neighbor display
 - Displays summary LLDP and MAC address data for device neighbors

```
show interfaces neighbor { gigabitethernet 0/x | all }
```
- Introduced multiple row update capabilities for port-based Web pages
 - Allows the settings for all ports or multiple ports on a device to be updated in a single request.
- Enhanced PBA options
 - Default policy support
 - Allows a default PBA policy to be defined that applies to any port with a connected device. Default policy is applied only when no other policies are applicable to the port.
 - New PBA Protected Port action
 - Used to dynamically transition a port to protected mode.
 - Port reset option
 - Allows a port to be bounced (administratively disabled/enabled) when the port native VLAN (PVID) is being updated when a PBA policy is applied.
 - Auto-VLAN support
 - Facilitates dynamic PBA policy creation when connected to a cnPilot device (release 4.1 or later). cnPilot passes authenticated VLAN data to cnMatrix that is used for dynamic PBA policy generation.
 - Global uplink definition
 - Provides PBA uplink data when it is not specified through a PBA Action.



Note on using Network monitoring tools as PRTG, Zabbix, pfSense or other.

If you are using a Network monitoring tool to scan and monitor cnMatrix switches, it is strongly advised to upgrade to cnMatrix 3.2-r4.

Supported Features in cnMatrix 3.2-r4

The below list is a high-level summary of cnMatrix 3.2-r4 supported features. For more detailed information regarding cnMatrix supported features, please access cnMatrix [User Guide](#).

| Feature | Release 3.0.1-r4 | Release 3.1.1-r3 | Release 3.2-r4 | cnMaestro configurable | XMS-Cloud configurable |
|--|-------------------------|-------------------------|-----------------------|-------------------------------|-------------------------------|
| Industry-standard Command Line Interface (CLI) | Yes | Yes | Yes | Yes | No |
| Web Management | Yes | Yes | Yes | Yes | No |
| cnMaestro Cloud-based Management | Yes | Yes | Yes | Yes | No |
| Zero-touch Remote Provisioning | Yes | Yes | Yes | Yes | No |
| SNMPv1/v2c/v3 | Yes | Yes | Yes | No | No |
| Telnet Client/Server | Yes | Yes | Yes | Server | No |
| Out-Of-Band Ethernet Management | Yes | Yes | Yes | No | No |
| SSH/SSH v2 | Yes | Yes | Yes | No | No |
| DHCP Client | Yes | Yes | Yes | Yes | No |
| DHCP Server | Yes | Yes | Yes | No | No |
| Local/Remote Syslog | Yes | Yes | Yes | No | No |
| System Resource Monitoring | Yes | Yes | Yes | Yes | No |
| 802.1Q VLAN and Trunking Support | Yes | Yes | Yes | Yes | Yes |
| 802.1d STP, 802.1w RSTP | Yes | Yes | Yes | Yes | Yes |
| 802.1s MSTP | Yes | Yes | Yes | No | No |
| PVRST (Per VLAN RSTP) | Yes | Yes | Yes | Yes | No |
| 802.1p Quality of Service | Yes | Yes | Yes | No | Partially |
| ACL QoS: Mapping/Marking | Yes | Yes | Yes | Partially | Partially |

| | | | | | |
|--|-----|-----|-----|------------|-----------|
| ToS/DSCP, 802.1p, Priority Queue | | | | | |
| Inbound Traffic Policing, and Outbound Traffic Shaping | Yes | Yes | Yes | No | No |
| Storm Control | Yes | Yes | Yes | Yes | No |
| Flow Control Per Port | Yes | Yes | Yes | No | No |
| 802.1ab Link Layer Discovery Protocol (LLDP) | Yes | Yes | Yes | No | Partially |
| 802.3ad Link Aggregation | Yes | Yes | Yes | Yes | No |
| Policy-Based Automation with Dynamic Configuration | Yes | Yes | Yes | Yes | Yes |
| IGMP Snooping v1/v2 | Yes | Yes | Yes | Yes | No |
| IGMP Snooping Proxy | Yes | Yes | Yes | No | No |
| Private VLAN Edge | Yes | Yes | Yes | Yes | No |
| 802.3af/at | Yes | Yes | Yes | Yes | Yes |
| Port Mirroring: Port-based, ACL-based | Yes | Yes | Yes | No | No |
| SNTP | Yes | Yes | Yes | Yes | Yes |
| Port Statistics | Yes | Yes | Yes | Yes | No |
| RMON | Yes | Yes | Yes | No | No |
| Routing Between Directly Connected Subnets | Yes | Yes | Yes | No | No |
| Routed Interfaces | Yes | Yes | Yes | No | No |
| IPv4 static routes | Yes | Yes | Yes | Yes | No |
| Host routes | Yes | Yes | Yes | No | No |
| DHCP Relay | Yes | Yes | Yes | No | No |
| 802.1x Authentication | Yes | Yes | Yes | Multi-host | Yes |
| Radius/TACACS+ | Yes | Yes | Yes | Radius | Yes |
| DHCP Snooping | Yes | Yes | Yes | Yes | No |

| | | | | | |
|---------------------------------------|-----|-----|-----|-----|-----|
| Static MAC | Yes | Yes | Yes | No | No |
| IGMP Filtering | Yes | Yes | Yes | No | No |
| Locally Managed Username and Password | Yes | Yes | Yes | Yes | Yes |
| cnMaestro on-premise | Yes | Yes | Yes | No | No |
| RIPv1/v2 | Yes | Yes | Yes | No | No |
| OSPFv2 | Yes | Yes | Yes | No | No |
| USB support | Yes | Yes | Yes | No | No |
| Reset button | Yes | Yes | Yes | Yes | No |
| Dynamic ARP Inspection | Yes | Yes | Yes | Yes | No |
| LLDP-MED | Yes | Yes | Yes | No | No |
| CLI 'do' command | Yes | Yes | Yes | No | No |
| cnMaestro configuration | Yes | Yes | Yes | Yes | No |
| XMS-Cloud Configuration | No | No | Yes | N/A | Yes |

Known Issues (Release 3.2-r4)

| Tracking | Product | Description | Workaround |
|----------|---------|--|---|
| 388 | All | DHCP Relay: The switch doesn't relay all DHCP Release and Renew packets if there are more than 360 DHCP clients connected to the switch. | Use cnMatrix switch to relay DHCP packets for less than 360 DHCP clients. |
| 460 | All | LLDP port-id-subtype setting and DHCP server host hardware-type 3 setting are lost after boot. | Reconfigure the settings if they are lost after reboot. |
| 519 | All | UP7 traffic not equally serviced if received from 2 different ports - SP scheduler | N/A |
| 554 | All | 802.1x Single Host : Mac-addresses are not learned in mac-address table after the clients are authenticated in single-host mode while in multi-host are learned properly | N/A |
| 695 | All | Ping doesn't work between 1/10 Gb interfaces or 1/10 Gb port-channels when STP mode is PVRST and more than 9 VLANs are created. | N/A |

| Tracking | Product | Description | Workaround |
|----------|---------------|--|---|
| 838 | All | DHCP Snooping: When disabling DHCP Snooping globally, the DHCP Snooping VLAN configuration is cleared. | Reconfigure DHCP Snooping per VLAN. |
| 848 | All | Auto Attach: For phone detection it is advisable not to use rules with LLDP-CAP "phone" as matching criteria. | Phones can be identified using other data LLDP data, such as System Description, System Name or Chassis ID. |
| 946 | All | Routing is not working on routed port when static ARP is used | Use static ARPs only for VLAN interfaces. |
| 985 | All | Exec-timeout setting is lost after reboot. | Reconfigure this setting after unit reboot. |
| 1056 | All | Physical ports that are part of a port-channel are returning to VLAN 1 after remote peer is performing a boot default. 1) When port-channel is deleted, links are not restored to original VLANs 2) When link member is not part of the bundle, it is assigned to VLAN 1 | N/A |
| 1555 | All | When downloading agent using SFTP from SSH/telnet session, the download progress is displayed on the console interface, not in the current session. | N/A |
| 1828 | All | Establishing a SSH session between two cnMatrix devices running software version 3.0 is not working. | N/A |
| 1879 | All CnMaestro | Support for User Defined Overrides Is missing | CLI Templates might be used from CnMaestro Access and Backhaul menu taking in consideration that it's mutual exclusive with Object Based Configuration |
| 1879 | All CnMaestro | MSTP mode is not supported in cnMaestro | MSTP mode may be configured from cnMaestro only from CLI Templates menu in Access and Backhaul |
| 2103 | All CnMaestro | Router Port configuration from CLI Templates will result in faulty port performance tracking | N/A |
| 2122 | All | RIPv1/RIPv1 compatible updates are not sent to the RIP neighbors (3.0.1-r4 does not work with RIPv1 RIP router) | Only connect cnMatrix 3.0.1-r4 to RIPv2 neighbors, and set the RIP send update to RIPv2 mode |
| 2802 | All | Automatic configuration save is not working | Auto-save is not working as expected with the 3.1 release. Configured settings are not correctly restored after a reset. Following an upgrade to 3.2, a manual configuration save ('write startup') must be performed before auto-save will work as expected. |

Feature Notes

- If you remove the default IP address from mgmt0 interface and save the running-config the default IP address is restored after boot.
- DHCP Client is enabled by default on In-Band Ports from VLAN 1.
 - On EX1028 and EX1028P, VLAN 1 has the default IP address 192.168.1.1
- The Out-of-Band port has the following default IP address: 192.168.0.1.

Limitations

- 265 - Flow control counters displayed by the command show interface flow control are not incremented on Extreme Ethernet interfaces (10GB).
- 437 – SNMP Authentication is not supported for broadcast and multicast modes.
- 1879 – CLI Templates are mutual exclusive with object configuration, as user overrides are not yet available
- 1879 – MSTP mode may be configured only from CLI Templates menu in Access and Backhaul
- 2103 – Router Port configuration from CLI Templates will result in faulty port performance tracking
 - Configuring a router port from a template can lead to unexpected monitoring behavior. The setting is not recommended while using cnMaestro.
- 2603 If a static IP is set on L3 interface from CLI/Web, the out-of-sync condition is not triggered by cnMaestro.

Workaround: trigger an out-of-sync condition e.g. bounce an interface from CLI/Web

- 2603 - When the hostname is changed from CLI/web, cnMaestro enters in an erroneous out-of-sync condition. Workaround: This condition may be ignored or a new push config may be issued
- 2609 To preserve switch config finalized before switch on-boarding, the user needs to pre configure manually the switch from cnMaestro.