

Galileo GALAXY AVB Extreme Switch Configuration



*Keep these important instructions.  
Check [www.meyersound.com](http://www.meyersound.com) for updates.*

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GALAXY AVB EXTREME SWITCH CONFIG USER GUIDE, PN 05.230.105.01 B

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## CONTENTS

<b>Chapter 1: Introduction</b>	<b>4</b>
How to Use This Guide	4
<b>Chapter 2: Extreme Networks AVB Feature Pack</b>	<b>5</b>
Extreme Networks Switch Quickstart	6
Enabling the AVB Feature Pack	8
Configuring the AVB Feature Pack	9
Resetting the AVB Switch	11
Resetting the Switch from a Terminal Window	11

## CHAPTER 1: INTRODUCTION

When building an AVB network with one or more Meyer Sound AVB products, use an AVB-compliant device, preferably one certified by the Avnu Alliance. Click the following link to see the Avnu-certified Extreme Networks Summit Family switches: <http://www.extremenetworks.com/>



**NOTE:** Meyer Sound cannot guarantee the performance of switches not certified by the Avnu Alliance.

To determine the exact number of switches required to meet your application requirements, contact Meyer Sound Technical Support (see next page).

The procedures in this guide use a web browser and require a second-generation Extreme Networks Summit Family switch. To make sure you have the latest firmware in your switch, click the link below and follow the instructions:

[https://gtacknowledge.extremenetworks.com/articles/How\\_To/How-to-upgrade-EXOS-on-a-Summit-Stack](https://gtacknowledge.extremenetworks.com/articles/How_To/How-to-upgrade-EXOS-on-a-Summit-Stack)

### HOW TO USE THIS GUIDE

You will encounter the following icons for notes, tips, and cautions:



**NOTE:** A note identifies an important or useful piece of information relating to the topic under discussion.



**TIP:** A tip offers a helpful tip relevant to the topic at hand.



**CAUTION:** A caution gives notice that an action may have serious consequences and could cause harm to equipment or personnel, or could cause delays or other problems.

Information and specifications are subject to change. Updates and supplementary information are available at [www.meyersound.com](http://www.meyersound.com).

Meyer Sound Technical Support

Meyer Sound Technical Support is available at:

- **Tel:** +1 510 486.1166
- **Tel:** +1 510 486.0657 (after hours support)
- **Web:** [www.meyersound.com/contact](http://www.meyersound.com/contact)

## CHAPTER 2: EXTREME NETWORKS AVB FEATURE PACK

Extreme Networks switches do not perform AVB functions out-of-the-box. First purchase and install an Extreme Networks Audio Video Bridging Feature Pack. The AVB Feature Pack includes a voucher that will generate an AVB license key when redeemed. The license key enables AVB functionality in the switch. This task need only be performed once.

To purchase and activate an Extreme Networks AVB Feature Pack:

1. Purchase the Extreme Networks Audio Video Bridging Feature Pack from a third-party retailer.
2. Click the following link to register for an Extreme Networks Support Portal account:

<https://extremeportal.force.com/ExtrSupportHome>

When you submit the form, you will receive an activation link via email.

3. To activate your account, click the link below and login to the Support Portal using your email address and the password you just created.

<https://extremeportal.force.com/ExtrLogin?startURL=%2FExtrLicenseLanding>

4. Locate the serial number of your switch.

You will use this in conjunction with your voucher to generate a license.

5. Click the Generate License button and follow instructions.

The voucher ID will be added as a link in a list at the bottom of the page.

6. Click the link and copy the AVB license key.

## EXTREME NETWORKS SWITCH QUICKSTART

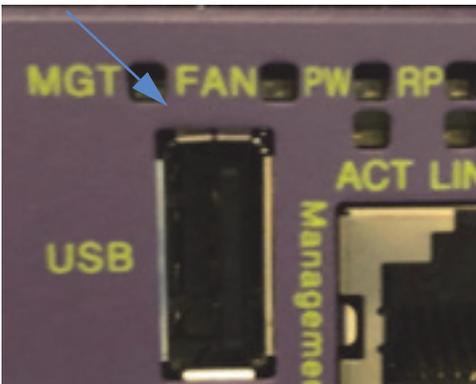
The network ports on the G2 Extreme Networks switches do not have an associated IPv4 address.

 **NOTE:** This method may not work if a switch has already been configured. If that is the case, program the Management VLAN with the same IPv4 address and subnet as the default VLAN.

 **NOTE:** If you cannot access the switch via a web browser, you may need to reset your switch from a terminal window. To do so, follow the steps in “Resetting the Switch from a Terminal Window” on page 11.

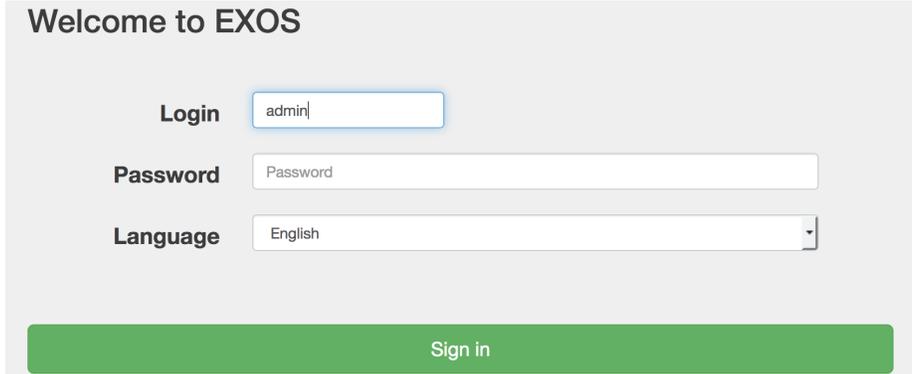
This procedure sets an IPv4 address by connecting to the Management port:

1. Disable WiFi on your computer.
2. Set your computer's wired network interface controller to DHCP.
3. Connect your computer to the Management port on the Extreme Networks switch with a network cable.



4. Locate the last four digits of your switch's MAC address (printed on a label on the switch).
5. Open a web browser and type the following URL into the address bar:  
**http://0xa9fe** followed by the last four digits of the MAC address (e.g., **http://0xa9fedx17**).
6. When prompted to log in, type  
**admin**  
as the user name; leave the password field blank. Click **Sign in**

The next steps will let you to get started quickly but do not enact Security features. Evaluate your network and enact the features you deem necessary.



Welcome to EXOS

Login

Password

Language

Sign in

7. From the Dashboard, click the **Next** button to continue unless you wish to create custom login settings. In that case, click **Configure>Quick Setup Account**, update your login settings, then click the **Next** button.

8. In the Device section, enter a *name for your switch*, and click the **Next** button.



**TIP:** Use a name that makes sense for your configuration, such as “Right, Secondary,” or “Left, Primary.”

9. In the IP Address section, enter an *IPv4 address* for your switch in the Default VLAN field.



**TIP:** It is very helpful to label the switch with the IP address for later reference.

10. Enter a *Default Gateway* and click the **Next** button.



**NOTE:** Do not change the Management VLAN or Management Gateway fields unless a switch has already been configured. If that is the case, it is sometimes helpful to program the Management VLAN with the same IPv4 address and subnet as the default VLAN.

11. In the Security section, you do not need to change the default settings; click the **Next** button.

12. In the Summary section, click **Apply**.

13. From the Dashboard, select the **System Text** box, and click **Reboot Switch** at the bottom-right. Respond **Yes** to the confirmation dialog and your switch will restart.

## ENABLING THE AVB FEATURE PACK

1. If not already logged in, connect to a network port, and set the user IP to a compatible subnet of the switch.
2. When prompted to log in, type

**admin**

for the user Login, leave the Password field blank, and click **Sign in** (or press **Enter**).

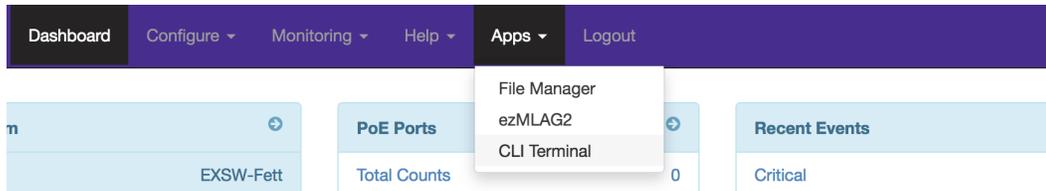
Welcome to EXOS

Login

Password

Language

3. From the Dashboard, select **Apps>CLI Terminal**.



4. You will be asked several questions about Security settings. We recommend accepting the standard settings (indicated by the capital letter).

For example, for these options [y/N/q], type **N** for no.

To accept all standard settings without seeing additional questions, type **q**. This can be done for the first or any subsequent question.

5. Type enable license followed by your AVB license key, and press **Enter**.

For example:

**enable license 3632-1463-ae05-c780-f57f**

6. To verify that your license is enabled, type

**show license**

and press **Enter**.

The AVB Feature Pack just licensed will display.

## CONFIGURING THE AVB FEATURE PACK

1. If not already logged in, connect to a network port, and set the user IP to a compatible subnet of the switch.

2. When prompted to log in, type

**admin**

for the user Login, leave the Password field blank, and click **Sign in** (or press **Enter**).

3. From Dashboard, select Apps>CLI Terminal.

4. Type

**enable avb**

and press **Enter**.

5. Type

**enable avb ports all**

and press **Enter**.

This action enables gPTP, MSRP, and MVRP across all configurable switch ports. These protocols are critical to AVB performance.

6. To verify that all ports are enabled, type

**show avb**

and press **Enter**.

All AVB-enabled ports on your switch will display (see Figure 1).

```
* X440G2-24t-10G4.3 # enable avb ports all
* X440G2-24t-10G4.4 # show avb
gPTP status      : Enabled
gPTP enabled ports : 1d   2d   3d   4d   5d
                   6d   7d   8d   9d  10d
                   11d  12d  13d  14d  15d
                   16d  17d  18d  19d  20d
                   21d  22d  23d  24d  25d
                   26d  27d  28d

MSRP status      : Enabled
MSRP enabled ports : 1     2     3     4     5
                   6     7     8     9    10
                   11    12    13    14    15
                   16    17    18    19    20
                   21    22    23    24    25
                   26    27    28

MVRP status      : Enabled
MVRP enabled ports : 1     2     3     4     5
                   6     7     8     9    10
                   11    12    13    14    15
                   16    17    18    19    20
                   21    22    23    24    25
                   26    27    28

Flags:          (*) Active,                (!) Administratively disabled,
                (a) SR Class A allowed,    (b) SR Class B allowed,
                (d) Disabled gPTP port role, (g) Load sharing port,
                (G) Multi-switch LAG Group port,
                (m) Master gPTP port role,  (p) Passive gPTP port role,
                (s) Slave gPTP port role
```

Figure 1: Enabling AVB ports and displaying status

7. Type the following commands in the order listed:

```
enable snmp access
configure snmp add community readonly public
configure vlan "Default" ipaddress ipv6-link-local
configure lldp ports all advertise all-tlvs
enable lldp ports all
enable telnet
```

8. To write this configuration file to the switch, type

```
save configuration MSLI-AVB-GALAXY
```

and press **Enter**.

The result of the last 2 steps is shown in Figure 2.

```
* X440G2-24t-G4.5 # enable snmp access
* X440G2-24t-G4.6 # configure snmp add community readonly public
* X440G2-24t-G4.7 # configure vlan "Default" ipaddress ipv6-link-local
* X440G2-24t-G4.8 # configure lldp ports all advertise all-tlvs
* X440G2-24t-G4.9 # enable lldp ports all
* X440G2-24t-G4.10 # enable telnet
* X440G2-24t-G4.11 # save configuration MSLI-AVB-GALAXY
```

Figure 2: Configuring and enabling ports

- When prompted to overwrite the file MSLI-AVB-GALAXY, type **Y** for yes, and press **Enter**.

To rename the file, type **N** for no, type a *new name*, and press **Enter**.

- When prompted to make this the default database, type **Y** for yes, **N** for no, then press **Enter**.



**CAUTION:** For Meyer Sound devices that support MILAN redundancy, Rapid Spanning Tree Protocol, RSTP, is not recommended. RSTP execution can result in unexpected changes in the network topology that could affect clock and signal propagation and therefore could cause audio dropouts.

## RESETTING THE AVB SWITCH

In some circumstances, you may want to reset the switch to factory default settings. The following procedure removes the User settings from the switch, including the IPv4 address, but does not remove the AVB license.

To reset the AVB switch:

- If not already logged in, connect to a network port, and set the user IP to a compatible subnet of the switch.
- When prompted to log in, type

**admin**

for the user Login, leave the Password field blank, and click **Sign in** (or press **Enter**).

- From the Dashboard select Apps>CLI Terminal.
- Type the command

**unconfigure switch all**

You will be asked to confirm. Type **y** for yes, **N** for no, then press **Enter**.

```
EXSW-VenusLabDesk.1 # unconfigure switch all
Restore all factory defaults and reboot? (y/N) Yes
█
```

Figure 3: Rebooting with factory defaults

- When the switch reboot is complete, you must login again to reconnect to the switch.
- You will be asked several questions about Security settings. We recommend accepting the standard settings (indicated by the capital letter).

For example, for these options [y/N/q], type **N** for no.

To accept all standard settings without seeing additional questions, type **q**. This can be done for the first or any subsequent question.

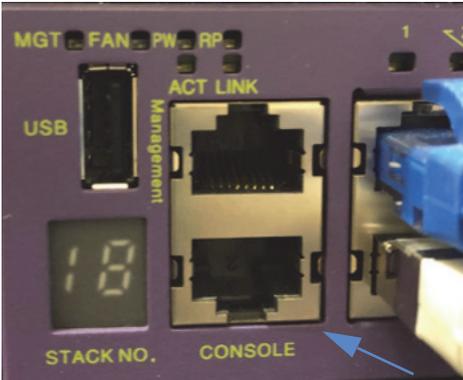
## RESETTING THE SWITCH FROM A TERMINAL WINDOW

In some cases, you may need to reset the switch from a terminal window. In order to do so, you will need:

- USB to serial adapter
- Serial to RJ45 adapter (this should come with your Extreme switch)
- serial cable

To reset the switch from its console port, do the following:

1. Connect the USB to serial adapter to your computer.
2. Insert the serial to RJ45 adapter into the console port of the switch.



3. Use the serial cable to connect both adapters.
4. Login in to the switch via a terminal window.

 **NOTE:** The default username is “**admin**” and the default password is empty.

5. Press **Enter** twice.
6. When connected, type the command:  
**unconfigure switch all**  
and press **Enter**.

These steps will reset the switch and restore it to factory defaults. After which you should be able to configure the switch via the steps outlined in “Extreme Networks Switch Quickstart” on page 6.

 **NOTE:** For additional information, see the following resources available from the Extreme Portal:

- [How Do I Console to An EXOS Switch From MacOS](#)
- [How to console into Extreme Network switches](#)





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