

Configuring Energy Usage Settings on the SG550XG and SG350XG

Objective

The objective of this document is to show you how to configure energy efficiency settings on the SG350XG and SG550XG.

Introduction

The SG350XG and SG550XG switches are compatible with IEEE 802.3az EEE (Energy Efficient Ethernet) and Green Ethernet. These features are a series of modifications that will cause the switch to use less power, making it more energy efficient and cost-friendly. For example, you can disable ports when they are not transmitting or receiving data, yet still have the switch consider them administratively active. If data needs to be moved, the port will awaken quickly, with no packet loss.

Applicable Devices

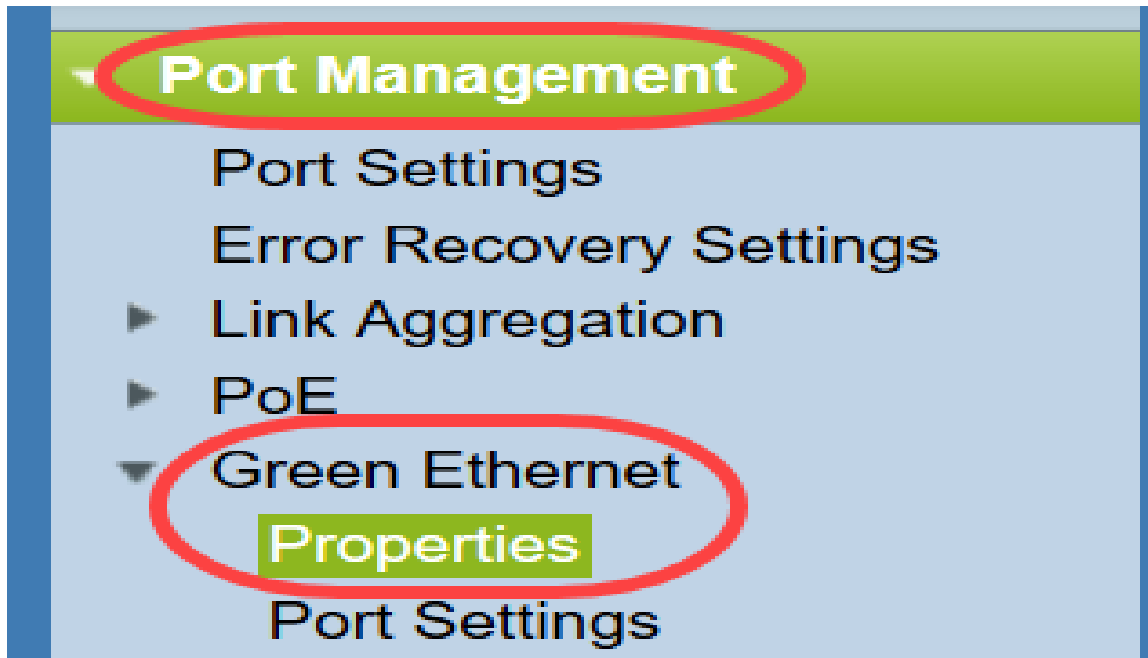
- SG350XG
- SG550XG

Software Version

- v2.0.0.73

Configuring Global Energy Properties

Step 1. Log in to the web configuration utility and choose **Port Management > Green Ethernet > Properties**.



The *Properties* page opens.

Properties

For the functions and/or parameters configured on this page to become effective, you may have to configure the corresponding port based parameters on [Port Settings](#) page.

Energy Detect Mode:	Enabled
Short Reach:	Enabled
Port LEDs:	<input checked="" type="checkbox"/> Enable
Power Savings:	64 %
Cumulative Energy Saved:	1730 Watt Hour

802.3 Energy Efficient Ethernet (EEE): Enable

Note: In order for the settings on this page to become effective, you may have to configure individual ports. To do this, click the **Port Settings** link at the top of the page to go to the *Port Settings* page. This is described in the [following section](#).

Step 2. (Optional) In the *Port LEDs* field, uncheck the **Enable** checkbox to turn off all port LEDs on the switch. It is checked by default.

Properties

For the functions and/or parameters configured on this page to become effective, you may have to configure the corresponding port based parameters on [Port Settings](#) page.

Energy Detect Mode:	Enabled
Short Reach:	Enabled
Port LEDs:	<input checked="" type="checkbox"/> Enable
Power Savings:	64 %
Cumulative Energy Saved:	1730 Watt Hour

802.3 Energy Efficient Ethernet (EEE): Enable

Apply

Cancel

Reset Energy Saving Counter

In addition, the following fields have more information:

- *Energy Detect Mode* – This field shows whether energy detect mode is *Enabled* or *Disabled*. It is enabled by default. This feature allows inactive ports to move to a low power state, while still being administratively up. Recovery from this state is fast, transparent, and results in no packet loss. GE and FE ports support this mode.
- *Short Reach* – This field shows whether short reach mode is *Enabled* or *Disabled*. It is enabled by default. This feature reduces power consumption for a port if it detects a short cable. This mode is only supported on RJ45 GE ports; it does not apply to Combo ports.
- *Power Savings* – Displays the percentage of power saved by using Green Ethernet and Short Reach. It does not display information about power saved by EEE.
- *Cumulative Energy Saved* – Displays the amount of energy saved since the last device reboot.

Note: To reset the *Cumulative Energy Saved* field, click the **Reset Energy Saving Counter** button.

Step 3. (Optional) In the *802.3 Energy Efficient Ethernet (EEE)* field, the **Enable** checkbox is checked by default. This globally enables EEE, and is distinct from Green Ethernet. The EEE standards were created by IEEE to reduce power consumption during periods of low activity. You can disable EEE by unchecking this checkbox.

Properties

For the functions and/or parameters configured on this page to become effective, you may have to configure the corresponding port based parameters on [Port Settings](#) page.

Energy Detect Mode:	Enabled
Short Reach:	Enabled
Port LEDs:	<input checked="" type="checkbox"/> Enable
Power Savings:	64 %
Cumulative Energy Saved:	1730 Watt Hour

802.3 Energy Efficient Ethernet (EEE): Enable

Apply

Cancel

Reset Energy Saving Counter

Step 4. Click **Apply**. Your power settings are applied immediately.

Properties

For the functions and/or parameters configured on this page to become effective, you may have to configure the corresponding port based parameters on [Port Settings](#) page.

Energy Detect Mode:	Enabled
Short Reach:	Enabled
Port LEDs:	<input checked="" type="checkbox"/> Enable
Power Savings:	64 %
Cumulative Energy Saved:	1730 Watt Hour

802.3 Energy Efficient Ethernet (EEE): Enable

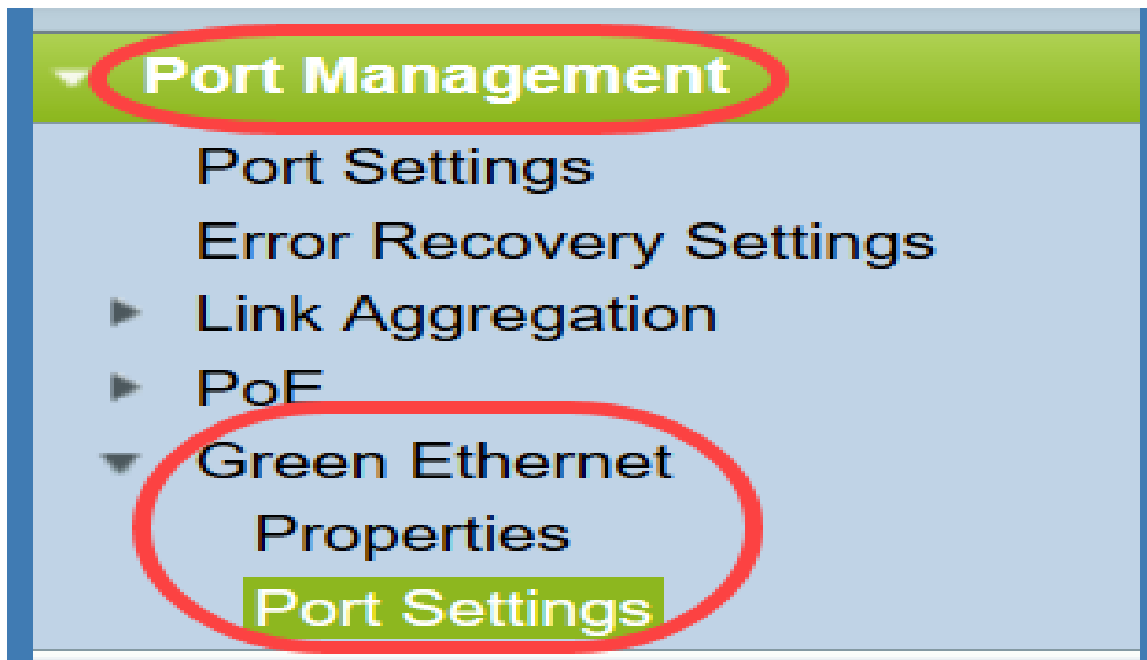
Apply

Cancel

Reset Energy Saving Counter

Configuring Individual Port Properties

Step 1. Log in to the web configuration utility and choose **Port Management > Green Ethernet > Port Settings**.



The *Port Settings* page opens.

Port Settings

For the functions and/or parameters configured on this page to become effective, you may have to configure the corresponding global parameters on the [Properties](#) page.

Global Parameter Status

802.3 Energy Efficient Ethernet (EEE) Mode: Enabled

Port Setting Table Showing 1-10 of 48 per page

	Entry No.	Port	802.3 Energy Efficient Ethernet (EEE)				
			Administrative	Operational	LLDP Administrative	LLDP Operational	EEE Support on Remote
<input type="radio"/>	1	XG1	Enabled	Disabled	Enabled	Disabled	No
<input type="radio"/>	2	XG2	Enabled	Disabled	Enabled	Disabled	No
<input type="radio"/>	3	XG3	Enabled	Disabled	Enabled	Disabled	No
<input type="radio"/>	4	XG4	Enabled	Disabled	Enabled	Disabled	No
<input type="radio"/>	5	XG5	Enabled	Disabled	Enabled	Disabled	No
<input type="radio"/>	6	XG6	Enabled	Disabled	Enabled	Disabled	No
<input type="radio"/>	7	XG7	Enabled	Disabled	Enabled	Disabled	No
<input type="radio"/>	8	XG8	Enabled	Disabled	Enabled	Disabled	No
<input type="radio"/>	9	XG9	Enabled	Disabled	Enabled	Disabled	No
<input type="radio"/>	10	XG10	Enabled	Disabled	Enabled	Disabled	No

Copy Settings... Edit... [\[1-10\]](#) [\[11-20\]](#) [\[21-30\]](#) [\[31-40\]](#) [\[41-48\]](#)

Note: The screenshot is displaying 10 ports per page, but the default is to display all of the ports on the same page. This setting can be adjusted with the drop-down list in the top right corner of the *Port Setting Table*.

In order for the settings on this page to become effective, you may have to configure global settings. To do this, click the **Properties** link at the top of the page to go to the *Properties* page. This is described in the [previous section](#).

Step 2. Select a port's radio button in the *Port Setting Table*, then click **Edit...** to edit its energy settings in the *Edit Port Setting* window.

Port Settings

For the functions and/or parameters configured on this page to become effective, you may have to configure the corresponding global parameters on the [Properties](#) page.

Global Parameter Status

802.3 Energy Efficient Ethernet (EEE) Mode: Enabled

Port Setting Table Showing 1-10 of 48 per page

Entry No.	Port	802.3 Energy Efficient Ethernet (EEE)					EEE Support on Remote
		Administrative	Operational	LLDP Administrative	LLDP Operational		
<input checked="" type="radio"/>	1 XG1	Enabled	Disabled	Enabled	Disabled	No	
<input type="radio"/>	2 XG2	Enabled	Disabled	Enabled	Disabled	No	
<input type="radio"/>	3 XG3	Enabled	Disabled	Enabled	Disabled	No	
<input type="radio"/>	4 XG4	Enabled	Disabled	Enabled	Disabled	No	
<input type="radio"/>	5 XG5	Enabled	Disabled	Enabled	Disabled	No	
<input type="radio"/>	6 XG6	Enabled	Disabled	Enabled	Disabled	No	
<input type="radio"/>	7 XG7	Enabled	Disabled	Enabled	Disabled	No	
<input type="radio"/>	8 XG8	Enabled	Disabled	Enabled	Disabled	No	
<input type="radio"/>	9 XG9	Enabled	Disabled	Enabled	Disabled	No	
<input type="radio"/>	10 XG10	Enabled	Disabled	Enabled	Disabled	No	

Copy Settings... [\[1-10\]](#) [\[11-20\]](#) [\[21-30\]](#) [\[31-40\]](#) [\[41-48\]](#)

Step 3. In the *Interface* field, use the *Unit* and *Port* drop-downs to select a port on a switch to configure. This field automatically shows the port selected from the *Port Setting Table*, and is mainly used to switch between different ports without returning to the previous page.

Interface: Unit Port

802.3 Energy Efficient Ethernet (EEE): Enable

802.3 Energy Efficient Ethernet (EEE) LLDP: Enable

Step 4. In the *802.3 Energy Efficient Ethernet (EEE)* field, check the **Enable** checkbox to enable EEE for the specific port. It is checked by default.

Interface: Unit Port

802.3 Energy Efficient Ethernet (EEE): **Enable**

802.3 Energy Efficient Ethernet (EEE) LLDP: Enable

Step 5. In the *802.3 Energy Efficient Ethernet (EEE) LLDP* field, check the **Enable** checkbox to have the port advertise its EEE capabilities through LLDP (Link Layer Discovery Protocol). It is checked by default.

Interface: Unit Port

802.3 Energy Efficient Ethernet (EEE): Enable

802.3 Energy Efficient Ethernet (EEE) LLDP: Enable

Step 6. Click **Apply**. Your port settings are immediately updated. You can then click **Close** to return to the *Port Settings* page, or choose another port to configure in the *Interface* field.

Interface: Unit Port

802.3 Energy Efficient Ethernet (EEE): Enable

802.3 Energy Efficient Ethernet (EEE) LLDP: Enable

Step 7. If you want to quickly copy a port's settings to another port or group of ports, select its radio button in the *Port Setting Table* and click the **Copy Settings...** button.

Port Settings

For the functions and/or parameters configured on this page to become effective, you may have to configure the corresponding global parameters on the [Properties](#) page.

Global Parameter Status

802.3 Energy Efficient Ethernet (EEE) Mode: Enabled

Port Setting Table Showing 1-10 of 48 per page

Entry No.	Port	802.3 Energy Efficient Ethernet (EEE)					EEE Support on Remote
		Administrative	Operational	LLDP Administrative	LLDP Operational		
<input checked="" type="radio"/>	1 XG1	Enabled	Disabled	Enabled	Disabled	No	
<input type="radio"/>	2 XG2	Enabled	Disabled	Enabled	Disabled	No	
<input type="radio"/>	3 XG3	Enabled	Disabled	Enabled	Disabled	No	
<input type="radio"/>	4 XG4	Enabled	Disabled	Enabled	Disabled	No	
<input type="radio"/>	5 XG5	Enabled	Disabled	Enabled	Disabled	No	
<input type="radio"/>	6 XG6	Enabled	Disabled	Enabled	Disabled	No	
<input type="radio"/>	7 XG7	Enabled	Disabled	Enabled	Disabled	No	
<input type="radio"/>	8 XG8	Enabled	Disabled	Enabled	Disabled	No	
<input type="radio"/>	9 XG9	Enabled	Disabled	Enabled	Disabled	No	
<input type="radio"/>	10 XG10	Enabled	Disabled	Enabled	Disabled	No	

[\[1-10\]](#) [\[11-20\]](#) [\[21-30\]](#) [\[31-40\]](#) [\[41-48\]](#)

Step 8. In the *Copy Settings* window, enter the port(s) that you want to copy to in the text field. You can specify multiple ports, separated by commas, or a range of ports.

Copy configuration from entry 1 (XG1)

to: (Example: 1,3,5-10 or: XG1,XG3-XG5)

Step 9. Click **Apply**. The settings are copied.

Copy configuration from entry 1 (XG1)

to: (Example: 1,3,5-10 or: XG1,XG3-XG5)

You have now successfully configured energy efficiency settings on the SG350XG or SG550XG switch.