



Splitting 40Gbps Ports into Four 10Gbps Ports

Supermicro Ethernet switches support the split of 40Gbps QSFP+ ports into four 10Gbps SFP+ ports. The 40Gbps QSFP ports can also be converted to use a single 10Gbps SFP+ port.

Once split, the four individual 10Gbps ports operate just like any other 10Gbps ports on the switch; they support all the functions supported over regular 10Gbps ports including Link Aggregation (LA).

Supported Switch Models

This feature is supported on the following Supermicro switch products.



Supported Ports

In the SSE-X3348S and SSE-X3348SR models the following 40Gbps interfaces can be split into four 10Gbps interfaces:

QX1	When split QX1 will introduce ports Ex 0/49, EX 0/50, Ex0/51 and Ex 0/52
QX2	When split QX2 will introduce ports Ex 0/53, EX 0/54, Ex0/55 and Ex 0/56
QX3	When split QX3 will introduce ports Ex 0/57, EX 0/58, Ex0/59 and Ex 0/60

Note: In X3348S and X3348SR switches, port QX4 can operate only at 40Gbps speed; it cannot be split into four 10Gbps ports or be set up to operate at 10Gbps.



In the SSE-X3348T and SSE-X3348TR models the following 40Gbps interfaces can be split into four 10Gbps interfaces:

QX1	When split QX1 will introduce ports Ex 0/49, EX 0/50, Ex0/51 and Ex 0/52
QX3	When split QX3 will introduce ports Ex 0/53, EX 0/54, Ex0/55 and Ex 0/56
QX4	When split QX4 will introduce ports Ex 0/57, EX 0/58, Ex0/59 and Ex 0/60

Note: In X3348T and X3348TR switches, port QX 2 can operate only at 40Gbps speed; it cannot be split into four 10Gbps ports or be set up to operate at 10Gbps.

Supported Cables

The table below lists the supported and verified cables that can be used to split 40Gbps ports into four 10Gbps ports or to provide a single 10Gbps port.

<p>To split a 40Gbps QX port into four 10Gbps ports, use one of the following cable models:</p> <p>Mellanox model P/N:</p> <ul style="list-style-type: none">MC2609130-001 (1M)MC2609130-003 (3M)MC2609125-005 (5M)	
<p>To convert a 40Gbps QX port to a single 10Gbps port, use the cable model:</p> <p>Mellanox P/N:</p> <ul style="list-style-type: none">MC2309130-003	

Configuration

By default the QX port operates as a single 40Gbps speed port. To split a 40Gbps QX port into one or four 10Gbps ports, it is necessary to configure the split. This configuration is possible either through the Command Line Interface or through Web GUI interface.

The configuration steps are the same whether you wish to configure the split of 40Gbps ports into four 10Gbps ports or to convert the 40Gbps ports to a single 10Gbps port.

- Step 1: Configure the split number of ports
- Step 2: Save the configuration
- Step 3: Reload the switch
- Step 4: After the switch has restored the configuration, check the configuration and add the newly created Ex/Qx ports to the required VLANs and port channel (Link Aggregation or LA) interfaces if any. Note that the saved configurations related to the removed Qx/Ex ports will not be restored. After correcting the configurations, save the configurations.

Note:

The QX port split configuration needs to be saved and the switch reloaded to make the configuration effective.

The QX port split is based on the number of QX ports that need to be split. You cannot specifically choose a particular QX port alone to split. Refer to the command or web options explained in the following sections to see how to select your preferred split configuration.

CLI Configuration

The ***split40g*** command configures the split of 40Gbps QX ports. The command syntax is given below.

```
split40g mode <number>
```

Syntax Description

number – The number of QX ports that need to be split. The possible values are explained below.

0 - The default value is 0. It means no split, all QX ports operated in 40Gbps speed. To remove an existing split configuration, use this command with 0 as the parameter.

1 – This will configure the QX1 port to be split into 10Gbps ports.

2 – In X3348S or X3348SR models, this will configure ports QX1 and QX2 to be split into 10Gbps ports. In X3348T or X3348TR models, this will configure ports QX1 and QX3 to be split into 10Gbps ports.

3 – In X3348S or X3348SR models, this will configure ports QX1, QX2 and QX3 to be split into 10Gbps ports. In X3348T or X3348tR models, this will configure ports QX1, QX3 and QX4 to be split into 10Gbps ports.

Mode

Privileged EXEC Mode

Defaults

0 – No split

Example

To split port QX1 into 10Gbps ports.

```
SMIS# split40g mode 1
```

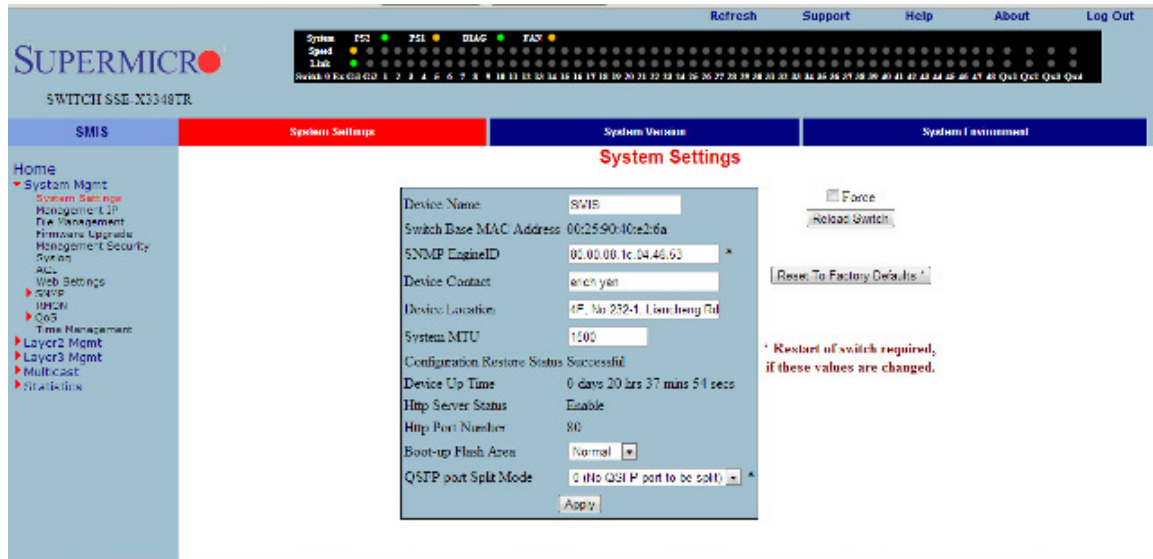
Related Command

show split40g mode - Displays split configuration information

show system information - Displays split configuration information

Web Configuration

In the System Management → System Settings page, the split configuration is supported as shown in the following picture.



The “QSFP port Split Mode” field provides a selection of choices to configure a split of one or more QSFP ports.