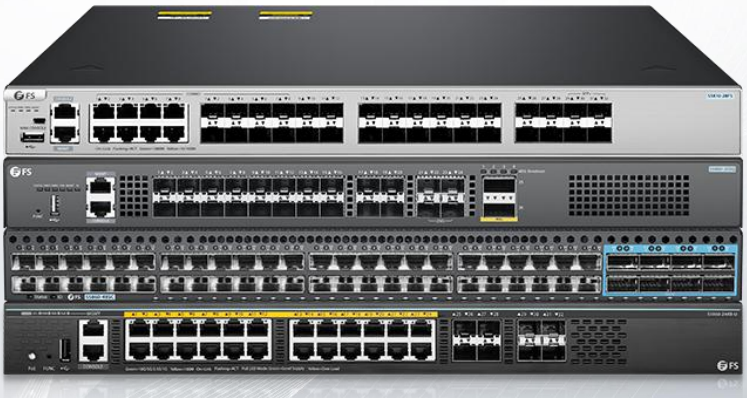
S5860 & S5810 & S3910 & S3410 SERIES SWITCHES STACKING GUIDE

Better understand the concepts and procedures to manage FS S5860, S5810, S3910, S3410 series switches stacks



Overview

This stacking guide is intended to provide a true stacking solution for S5860, S5810, S3910, S3410 series witches.

This guide provides a unified data plane and recommended connection for stacking switches. When the switches are assembled into a stack, the switches synchronize their actions so that network operation, like spanning tree protocol, VLAN, and stack port trunks, is able to span across all of their Ethernet ports.S5860

Models of Switches

- S5860 Series Switches
- S5810 Series Switches
- S3910 Series Switches
- S3410 Series Switches

What is Stacking?

S5860 & S5810 & S3910 & S3410Switches can be connected to other switches and operate together as a single unit, this configuration is called "stacks", and is useful for quickly increasing the capacity of a network.

Stackable switches can be added or removed from a stack as needed without affecting the overall performance of the stack. Depending on its topology, a stack can continue to transfer data even if a link or unit within the stack fails. This makes stacking an effective, flexible, and scalable solution to expand network capacity.

Stacking Precautions

- The stacking port does not support auto-negotiation. For example, a 10G port can only use 10G transceivers for stacking, but cannot use 1G transceivers.
- Physical member ports in a stack port must be the same type.
- The port will not support stacking after split configuration setting. For example, the 40G port which has been split into 4x 10G port, can't be used as stacking port.
- The FS software version running on a switch that you plan to add to a switch stack must either be the same as the master switch version.
- The number of member switches in a stack should not exceed the recommended value.
- The bend radius of optical fibers or cables must be larger than the minimum bend radius. The minimum bend radius of SFP+ cables is 25 mm; the minimum bend radius of AOC cables is 30 mm; the bend radius of optical fibers is generally greater than or equal to 40 mm.

S5860 Series Switches

Multi-service and multi-gigabit layer 3 stackable 10G switches for small and medium-sized network cores, large-scale campus network aggregations.

Data Platform

P/N	S5860-20SQ	S5860-24XB-U	S5860-48SC
Port Support Stacking	Ports 1-26	Ports 1-32	Ports 1-56
Port Type	10G, 25G, 40G	10G-T, 10G, 25G	10G, 100G
Mixed Stacking Port	Support Mixed Stacking Between 10G, 25G, 40G Ports	Support Mixed Stacking Between 10G-T, 10G, 25G Ports	Support Mixed Stacking Between 10G, 100G Ports
Max. Number of Stacking Port	8	8	48
Max. Number of Switches Per Stack	2 Units	2 Units	2 Units
Same Models Stacking	Yes	Yes	Yes
Mixed Stacking Between S5860 Series	Yes	Yes	No
Port Bounding	4x 25G ports will be bound if 25G ports are used for stacking		4x 10G ports will be bound if 10G ports are used for stacking

Stacking Port Display

The following figure 1, 2 and 3 show the locations of ports that can be used as stack ports on the switches, and the stacking ports could both be used as business ports.

- **S5860-20SQ**

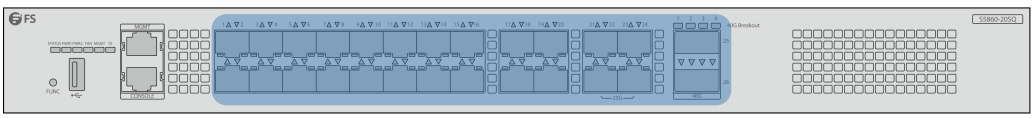


Figure 1

- **S5860-24XB-U**

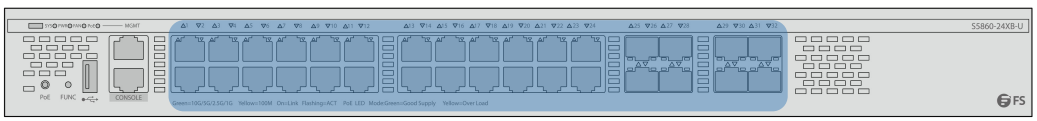


Figure 2

- **S5860-48SC**

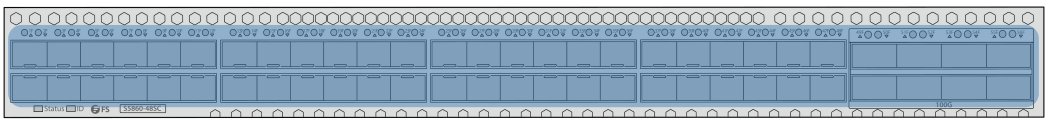


Figure 3

Recommended Stacking Connection

The following figure 4 and 5 show the appearance of S5860 series, which may be different from your selected model. The figures illustrate how to connect these ports in different stack connection models.

Recommended stack connections are shown in ring topology which is more stable and reliable.

- **Same Models**

S5860-20SQ Stacking Shown for Reference

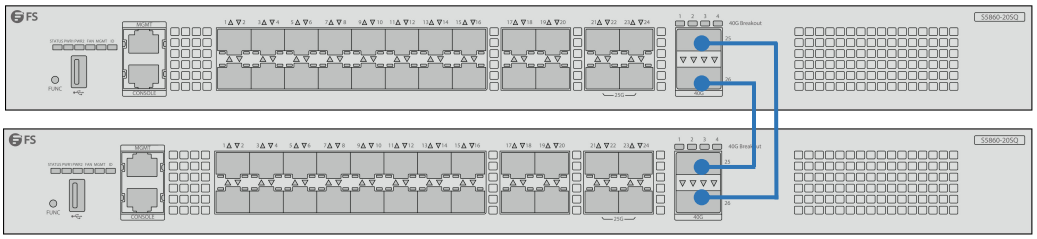


Figure 4

- **Same Series**

Mixed Stacking with S5860-20SQ & S5860-24XB-U Switches

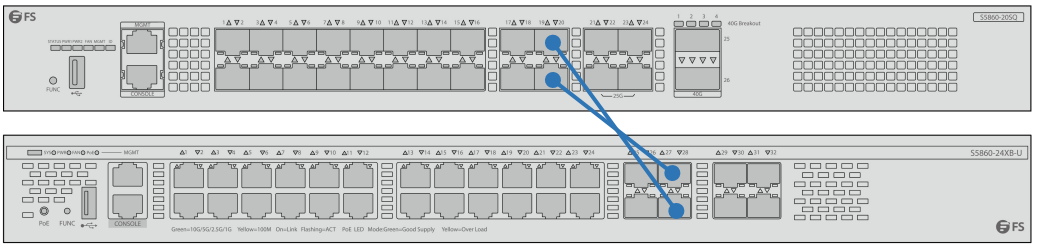


Figure 5

Stacking Configuration Settings Reference:

For details about the configuration settings on S5860-20SQ and S5860-24XB-U, please see page 2253 of **Configuration Guide**.

For details about the configuration settings on S5860-48SC, please see page 2219 of **Configuration Guide.**

S5810 Series Switches

High-performance layer 3 stackable gigabit switches for small and medium-sized network cores, large-scale campus network aggregations.

Data Platform

P/N	S5810-28FS	S5810-48FS	S5810-48TS-P
Port Support Stacking	Ports 29-32	Ports 49-52	Ports 49-52
Port Type	10G	10G	10G
Max. Number of Stacking Port	4	4	4
Max. Number of Switches Per Stack	8 Units	8 Units	8 Units
Same Models Stacking	Yes	Yes	Yes
Mixed Stacking Between S5810 Series	Yes	Yes	Yes

Stacking Port Display

The figure 6, 7 and 8 show the locations of ports that can be used as stack ports on the switches, and the stacking ports can both be used as business ports.

- **S5810-28FS**

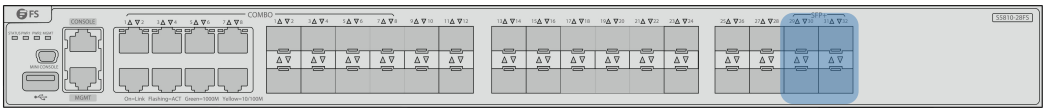


Figure 6

- **S5810-48FS**

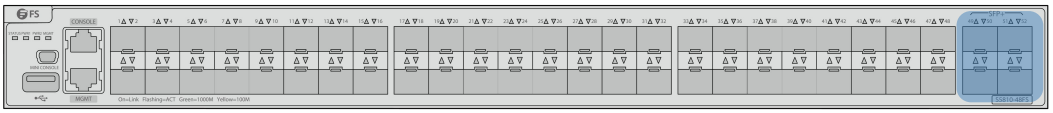


Figure 7

- **S5810-48TS-P**

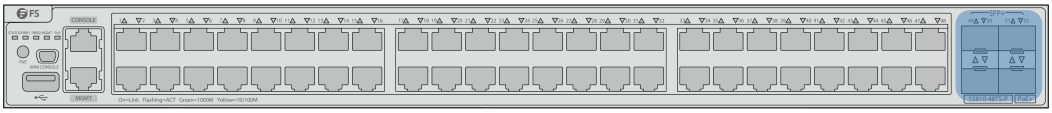


Figure 8

Recommended Stacking Connection

The following figure 9 and 10 show the appearance of S5810 series, which may be different from your selected model. The figures illustrate how to connect these ports in different stack connection models.

Recommended stack connections are shown in ring topology which is more stable and reliable.

- **Same Models**

S5810-28FS Stacking Shown for Reference

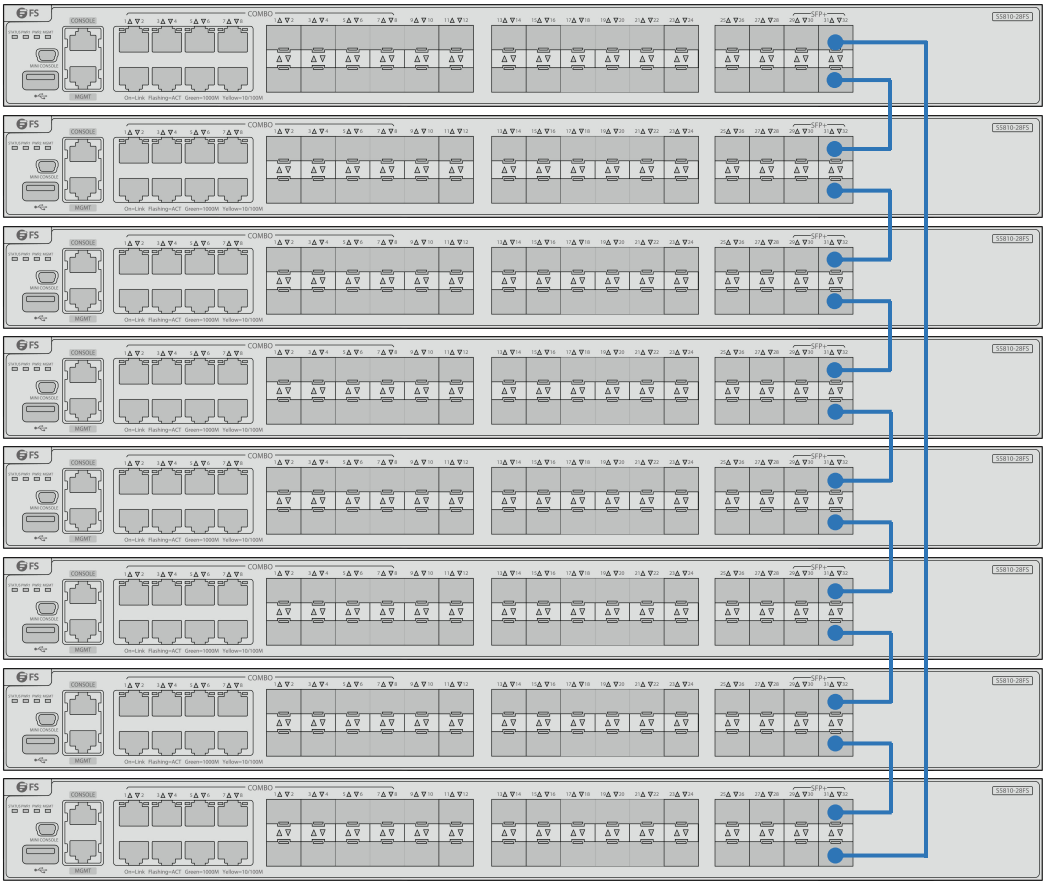


Figure 9

- **Same Series**

Mixed Stacking with S5810-48FS & S5810-48TS-P Switches

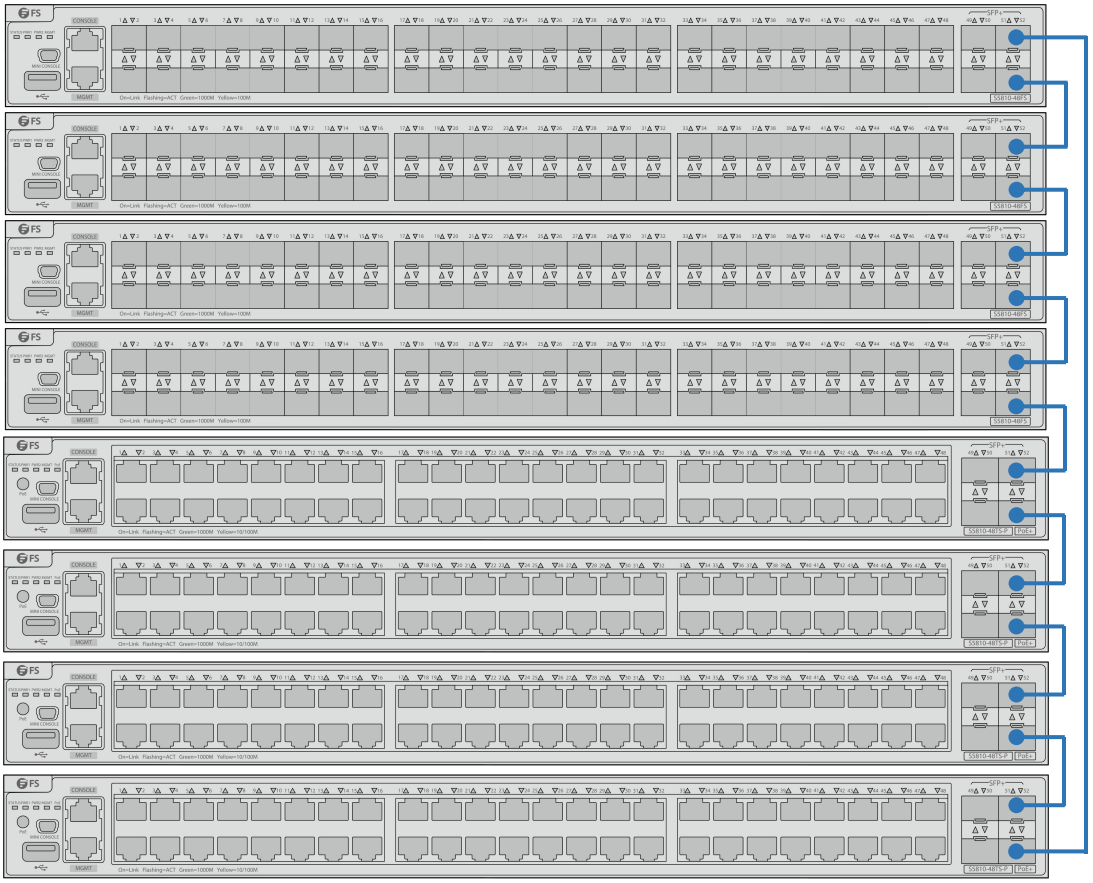


Figure 10

Stacking Configuration Settings Reference:

For details about the configuration settings on S5810 series switches, please see page 2253 of **Configuration Guide**.

S3910 Series Switches

High reliability and security layer 2+ stackable gigabit switches for small and medium-sized network and enterprise edge.

Data Platform

P/N	S3910-24TF	S3910-24TS	S3910-48TS
Port Support Stacking	Ports 25-28	Ports 25-28	Ports 51-52
Port Type	1G	10G	10G
Max. Number of Stacking Port	4	4	2
Max. Number of Switches Per Stack	4 Units	4 Units	4 Units
Same Models Stacking	Yes	Yes	Yes
Mixed Stacking Between S3910 Series	No	Yes	Yes

Stacking Port Display

The figure 11, 12 and13 show the locations of ports that can be used as stack ports on the switches, and the stacking ports could both be used as business ports.

- **S3910-24TF**

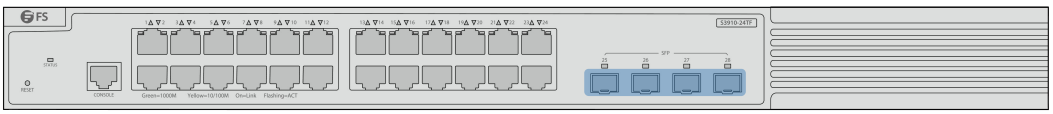


Figure 11

- **S3910-24TS**

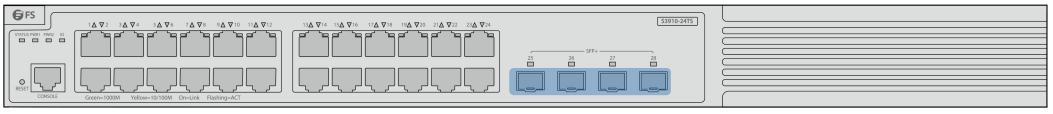


Figure 12

- **S3910-48TS**

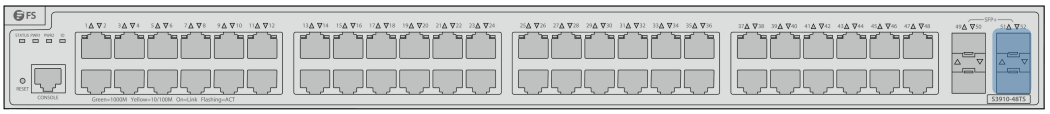


Figure 13

Recommended Stacking Connection

The following figure 14 and 15 show the appearance of S3910 series, which may be different from your selected model. The figures illustrate how to connect these ports in different stack connection models.

Recommended stack connections are shown in ring topology which is more stable and reliable.

- **Same Models**

S3910-24TF Stacking Shown for Reference

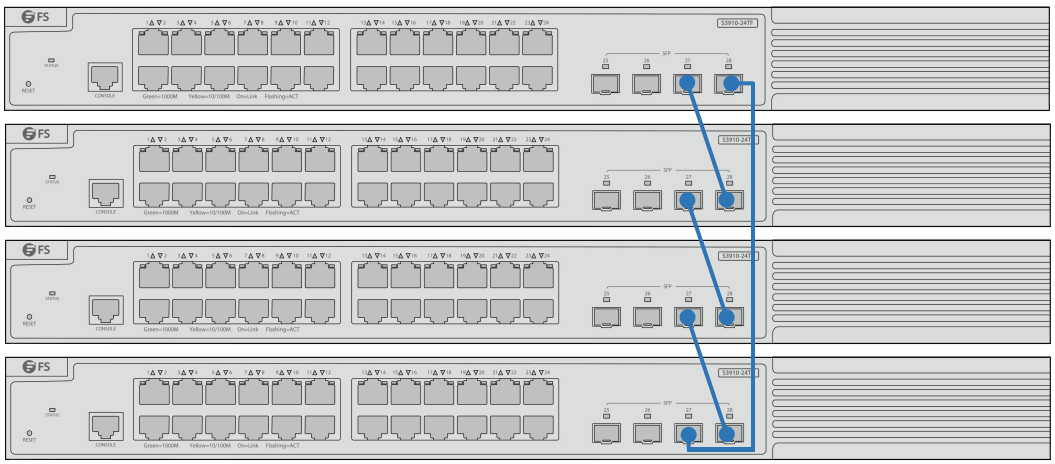


Figure 14

- **Same Series**

Mixed Stacking with S3910-24TS & S3910-48TS Switches

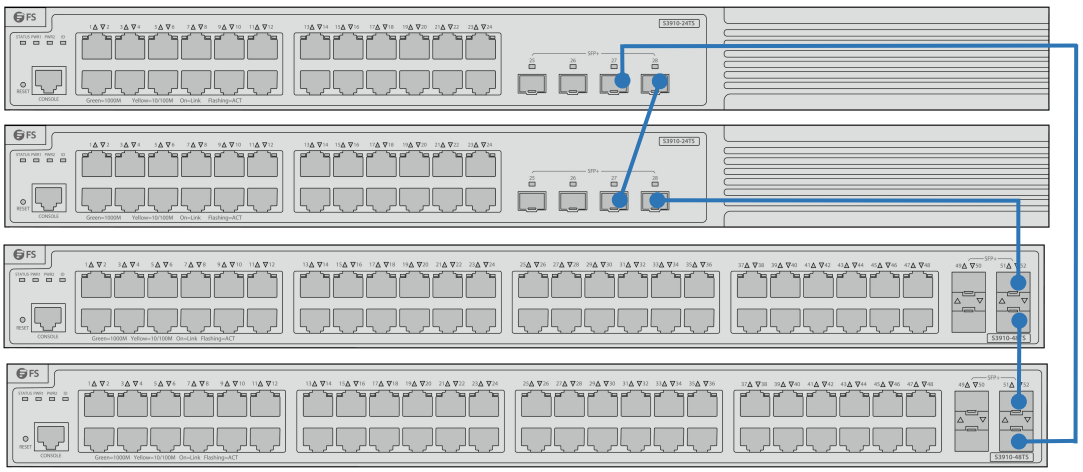


Figure 15

Stacking Configuration Settings Reference:

For details about the configuration settings on S3910 series switches, please see page 1592 of **Configuration Guide**.

S3410 Series Switches

High-efficient and energy-saving PoE+ switches to provide stable and safe power supply for various scenarios.

Data Platform

P/N	S3410-24TS-P	S3410-48TS-P	S3410-10TF-P
Port Support Stacking	Ports 25-26	Ports 49-50	-
Port Type	10G	10G	-
Max. Number of Stacking Port	2	2	-
Max. Number of Switches Per Stack	4 Units	4 Units	-
Same Models Stacking	Yes	Yes	No
Mixed Stacking Between S3410 Series	Yes	Yes	No

Stacking Port Display

This figure 16 and 17 show the locations of ports that can be used as stack ports on the switches, and the stacking ports can both be used as business ports.

- **S3410-24TS-P**

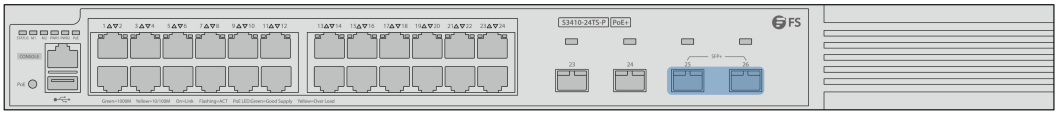


Figure 16

- **S3410-48TS-P**

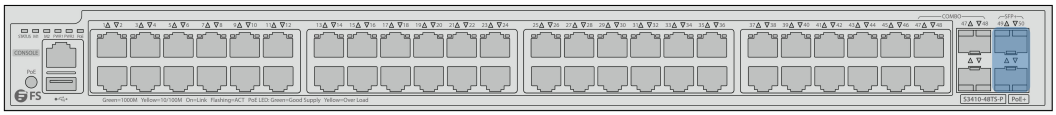


Figure 17

Recommended Stacking Connection

The following figure 18 and 19 show the appearance of S3410 series, which may be different from your selected model. The figures illustrate how to connect these ports in different stack connection models.

Recommended stack connections are shown in ring topology which is more stable and reliable.

- **Same Models**

S3410-24TS-P Stacking Shown for Reference

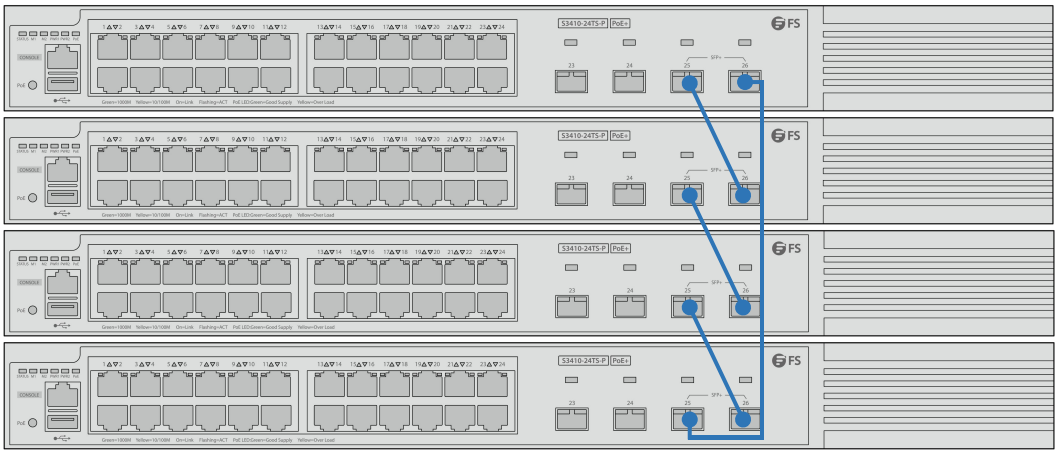


Figure 18

- **Same Series**

Mixed Stacking with S3410-24TS-P & S3410-48TS-P Switches

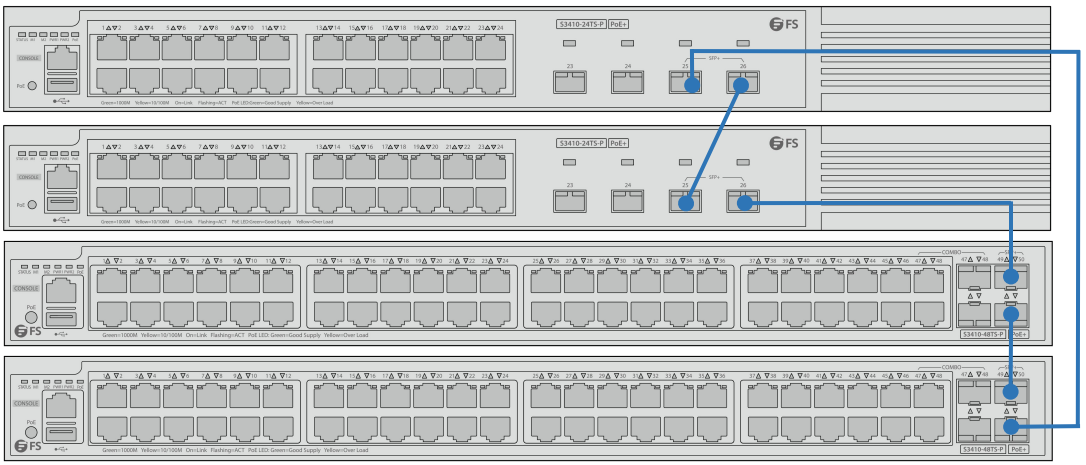


Figure 19

Stacking Configuration Settings Reference:

For details about the configuration settings on S3410 series switches, please see page 1642 of **Configuration Guide**.

FAQ

Q1: What is the stack distance supported?
A1：The recommended stacking distance should be within 30m of the same machine room.

Q2：Can I do LACP configuration after stack?
A2：After stacking, operations such as LACP (link aggregation) can be carried out as usual. Stacking does not affect other functional configurations.

Q3：The configuration I made before stacking is lost, how to deal with it?
A3：We recommend that you clear the configurations such as VLAN configuration before stacking. And you can reconfigure on the master switch after the stack is complete.

Q4：When stacking how is bandwidth calculated?
A4：The formula for calculating the stack bandwidth is: Stack Bandwidth = Number of stack member ports in stack ports x Bandwidth of a single stack member port.