



What is SFP+?

Small Form-Factor Pluggable Plus (SFP+) is an innovative, next-generation transceiver module. Initially, it is targeted to support speeds of 10 Gbps for next-generation Gigabit Ethernet applications. It is smaller than any of the currently shipping form factors and provides the highest density per line card (Figure 1).

Figure 1. The SFP+ form factor allows higher densities



Why Should Customers Care?

SFP+ offers customers both immediate benefits and long-term advantages in supporting evolving data center needs.

Reduced Costs

- Through its simpler electronics, reduces costs per port compared to other technologies
- Through its smaller form factor, allows higher densities per line card than other technologies
- Through its pay-as-you-go model, allows line cards and I/O modules to be populated as needed
- Net impact: increases the affordability of 10 gigabit Ethernet

High Quality

- Built to Cisco and industry specifications to meet stringent performance specifications

- Supports the Cisco quality identification feature that enables a Cisco switch or router to identify whether the module has been certified and tested by Cisco

Reduced Power Consumption

- Draws only 1 watt (W) per port, which is significantly lower than competing technologies (Table 1)
- Hot-pluggable, so unused ports are not powered up

Table 1. The SFP+ Reduced Power Draw

Technology	Power Draw (W)
SFP+	1
XFP	2.5 to 3.5
X2	4
XENPAK	9 or more

Flexibility and Availability

- Offer hot-swappable capability
- Offer pay-as-you-go implementation capability
- Provide interface flexibility
- Interoperates with respective XFP, X2, and XENPAK modules on the same link

For What Products Is the SFP+ Available?

The SFP+ is available for the Cisco Nexus 7000 Series and Cisco Nexus 5000 Series. The new transceiver is expected to propagate across the Cisco Catalyst 6000 Series Switches, including incorporation in new line cards for the Cisco Catalyst 6500, as well as to the next-generation Cisco Catalyst 4500 Series and Cisco Catalyst 3000 Series Switches. The SFP+ transceiver will also be incorporated in other Cisco product families.

SFP+ technology will also be adopted by products from a number of other companies.

Cisco SFP+ Optics Portfolio

- Cisco SFP-10G-SR: Link lengths of up to 26 meters (85 feet) on Fiber Distributed Data Interface (FDDI) grade multimode fiber or 300 meters (984 feet) on OM3 fiber
- Cisco SFP-10G-LR: Link lengths of up to 10 kilometers (32,808 feet) over single mode fiber.

Other physical-medium-dependent (PMD) products will be made available in the SFP+ form factor in the future.

Standards Compliance

- IEEE 802.3ae
- GR-20-CORE
- GR-326-CORE
- GR-1435-CORE

For More Information

Please visit <http://www.cisco.com/go/nexus7000>.