

# Introduction of 10G SFP SR optical transceiver

[10G SFP SR](#) is a very common type of optical module, mainly used in switches and routers, and we can look at its three elements separately.

First, “SFP” refers to the hot-pluggable small package module, which can be seen as an upgraded version of GBIC with the size of a thumb and can significantly increase the port density; SFP complies with IEEE802.3, SFF-8472 protocol and can use digital diagnostic function via I2C.

Second, “10G” stands for its transmission rate of up to 10.3Gbps, which is suitable for 10 Gigabit Ethernet. 10G fiber optic network has been popularized in telecom networks, and 10G switches are increasingly used.

Third, “SR” represents the transmission distance of the optical module, and the more common 10GIEEE standards are SR, LR, LRM, ER, and ZR, and they represent the transmission distance from short to long.

Through the above information, we know that 10G SFP SR represents the model name of an optical module, so, is 10G SFP SR optical module good to use?

10G SFP SR optical module is generally used with multimode fiber, and it adopts LC duplex interface. If OM3 (MMF) fiber patch cable is used, the transmission distance of 10G SFP SR can reach 300 meters, if OM4 (MMF) fiber patch cable is used, the transmission distance of it can reach 400 meters, and it supports hot-plug operation and digital monitoring (DOM) function.

There are many third-party manufacturers on the market that produce compatible Cisco SFP 10G SR optical modules, not all of which are compatible. Therefore, when purchasing an optical module, you must first ensure that the optical module is compatible with the switch. But the brand optical module is expensive, so in consideration of the cost, the optical module produced by a third-party manufacturer that worthy of the trust is also desirable.