

FAQ | QSFP28

Frequently asked questions about Siemon's QSFP28 cables

What does QSFP stand for?

QSFP28 stands for Quad Small Form-Factor Pluggable 28. It is the third generation of the QSFP interconnect systems designed for 25/100G performance per the IEEE 802.3bj specification (100GBASE-CR4).

What is your standard turn around time for delivery?

Siemon carries high levels of inventory on standard lengths (0.5m, 1m, 1.5m, 2m, 2.5m, 3m, and 5m). Other lengths are available in 4 to 6 weeks.

What gauges and lengths do you offer?

30 AWG, 28 AWG, and 26 AWG cables are available. Standard lengths are 0.5m, 1m, 1.5m, 2m, 2.5m, 3m, and 5m. Custom lengths are available upon request.

Do you offer custom EEPROM programming?

Yes, upon request. Cables with custom EEPROMs will be supplied under a different part number.

What product documentation do you offer?

Product specification sheets, customer use drawings, signal integrity reports, 3rd party interoperability reports and EEPROM content tables are available on our website.

Do you have design qualification test data?

Yes, mechanical and electrical test data is available upon request.

Do you offer production test data?

We can provide production test data for insertion loss and return loss, NEXT and FEXT upon request. Standard production testing includes insertion loss and return loss. All test data is stored by cable serial number.

What are the other key product attributes?

Our automated termination process insures our cable assemblies exhibit best in class impedance and cross talk performance.

What cable jacket color is available?

Standard jacket color is black. Red, white and blue jackets are available on special order.

Are Siemon QSFP28 cables returnable?

Standard lengths are returnable within 90 days. Non-standard lengths are not returnable.

Do these products support the 25G per lane data rate and for what standards?

Yes, per SFF-8636, SFF-8661, SFF-8665, SFF-8679 and IEEE 802.3bj, these cables support 25/100G Ethernet.

Where do you manufacture these cables?

China. We inventory cables in several of our global manufacturing locations for regional supply. Contact Siemon customer service for additional information.

Where are these cable assemblies used?

These are “point-to-point” cables that are used to directly connect two pieces of active network equipment like switch-to-switch or switch-to-server applications. They are most commonly used in data centers for ToR (top of rack) or MoR (middle of rack) aka leaf-spine applications that require increased bandwidth.

What is IEEE 802.3bj and 802.3by and how do they differ?

These are Ethernet standards that govern 25 and 100G data transmissions. The IEEE 802.3bj specification was released in 2014 and it addresses 100Gb/s Ethernet data rates using 4 by 25Gb/s channels. It covers the QSFP28 form factor which looks the same as the 40Gb/s QSFP+. The IEEE 802.3by specification was released in June 2016 and it addresses 25Gb/s Ethernet data rates. It covers the SFP28 form factor which looks the same as the 10Gb/s SFP+. But it also includes the QSFP28 form factor and the QSFP28 to four SFP28 breakout cables.

One major difference between the cables used for the “bj” spec and the “by” spec is that the “bj” only recognizes one FEC (forward error correction) mode of operation whereas the “by” specification recognizes three different FEC modes. These are designated as long, short and no FEC. Typically long would be required for cables longer than 3 meters, short for cables 3 meters long and no FEC for cables shorter than 3 meters. However, the designation depends on the performance of the cable and can vary depending on the cable design.

