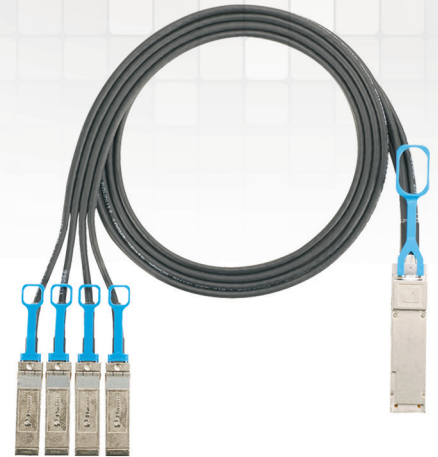


# QSFP+ to Four SFP+ Breakout Copper Cable Assemblies

To meet the needs for migration from 10 to 40 GbE, Panduit offers QSFP+ to Four SFP+ Direct Attach Breakout Cable Assemblies. As part of the Panduit High Speed Data Transport (HSDT) solution, these passive cables provide a cost-effective solution for interconnecting high speed 40 GbE switches and servers to existing 10 GbE equipment.

The 40 GbE QSFP+ end operates as four separate 10 Gb/s channels, which are connected to four 10 Gb/s SFP+ equipment ports. The four 10 Gb/s SFP+ ports can be located on the same switch/server or four different locations within the same rack. Each breakout cable includes Panduit® Tak-Ty® Hook & Loop Cable Ties, which are adjustable to control the breakout point for maximum flexibility.

End-to-end high speed data transport solutions from Panduit deliver enhanced availability, agility, and security. Visit [www.panduit.com](http://www.panduit.com) to learn more about how these solutions help customers manage risk across their physical infrastructure.



Key Features	Benefits
<b>Compliant to SFF-8431</b>	Compliant with 40GBASE-CR4 QSFP+ and 10 GbE SFP+ enabled equipment; hot pluggable to QSFP+/SFP+ compliant host ports
<b>EEPROM compliant to SFF-8472</b>	Ensures interoperability with 10 GbE and 40 GbE equipment
<b>Passive low power assembly</b>	Provides a low cost, low power alternative to fiber optics up to 3.5 meters
<b>100% performance tested</b>	Confidence that each assembly delivers specified performance for ensured network availability
<b>Low latency performance</b>	Ideal for high performance computer clustering and other latency sensitive applications
<b>Robust construction</b>	High speed, 2-pair, 10 GHz, twin-axial cable, factory terminated to QSFP+ and SFP+ modular connectors; rated to a minimum 250 mating cycles
<b>Advanced connector design</b>	Excellent EMI resistance and alien crosstalk due to continuous shielding throughout the assembly including a unique design for transitioning the four cables into the QSFP+ housing
<b>Adjustable breakout</b>	Tak-Ty® Hook & Loop Cable Ties can be adjusted to control breakout points on the breakout end of the cable assembly
<b>High density deployment</b>	QSFP+ connectors triple switch port density; robust easy-to-use latching feature allows high density belly-to-belly installation and deployments
<b>Variety of lengths</b>	Available 1 to 3.5 meters (0.5 meter increments) for design flexibility
<b>Part of the Panduit Unified Physical Infrastructure<sup>SM</sup> solution</b>	Designed to be integrated with Panduit® NetAccess™ Cabinets for design flexibility, improved thermal, and cable management

## Key applications include:

- Top of Rack Switch to Server
- 8 Gb/s Fibre Channel
- Fibre Channel over Ethernet (FCoE)
- 10 Gigabit Ethernet

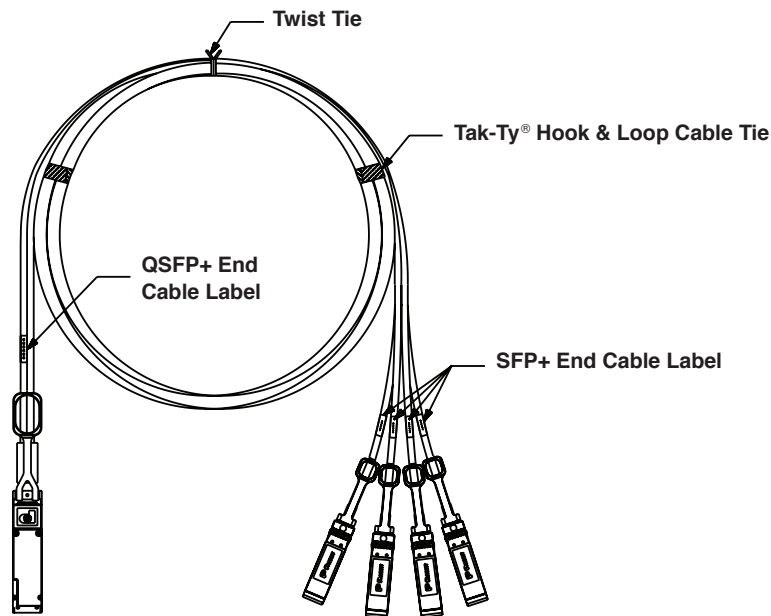
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## Technical Information

Characteristic impedance	100 +/- 10 Ohm
Temperature range	-25°C to 80°C (-13°F to 176°F)
IEC flame compliance	IEC 60332-3-24
Bend radius	5 x O.D. single time, 10 x O.D. repeated times
Insertion force to cage	40N (9 lbf.) maximum
Withdrawal force from cage	30N (7 lbf.) maximum
Durability	250 mating cycles minimum
ROHS status	Compliant

## Ordering Information

Part Number	Length (m)	Length (Ft.)	Cable Gauge	No. Tak-Ty® Hook & Loop Cable Ties	Nominal Cable O.D.		Cable Color
					mm	In.	
PHQ4SFPXA1MBL	1	3.3	30 AWG	2	4.1	0.61	Black
PHQ4SFPXA1.5MBL	1.5	5.0	30 AWG	2	4.1	0.61	Black
PHQ4SFPXA2MBL	2	6.6	30 AWG	3	4.1	0.61	Black
PHQ4SFPXA2.5MBL	2.5	8.3	30 AWG	3	4.1	0.61	Black
PHQ4SFPXA3MBL	3	9.8	30 AWG	4	4.1	0.61	Black
PHQ4SFPXA3.5MBL	3.5	11.6	30 AWG	4	4.1	0.61	Black



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62017