High Speed Interconnects

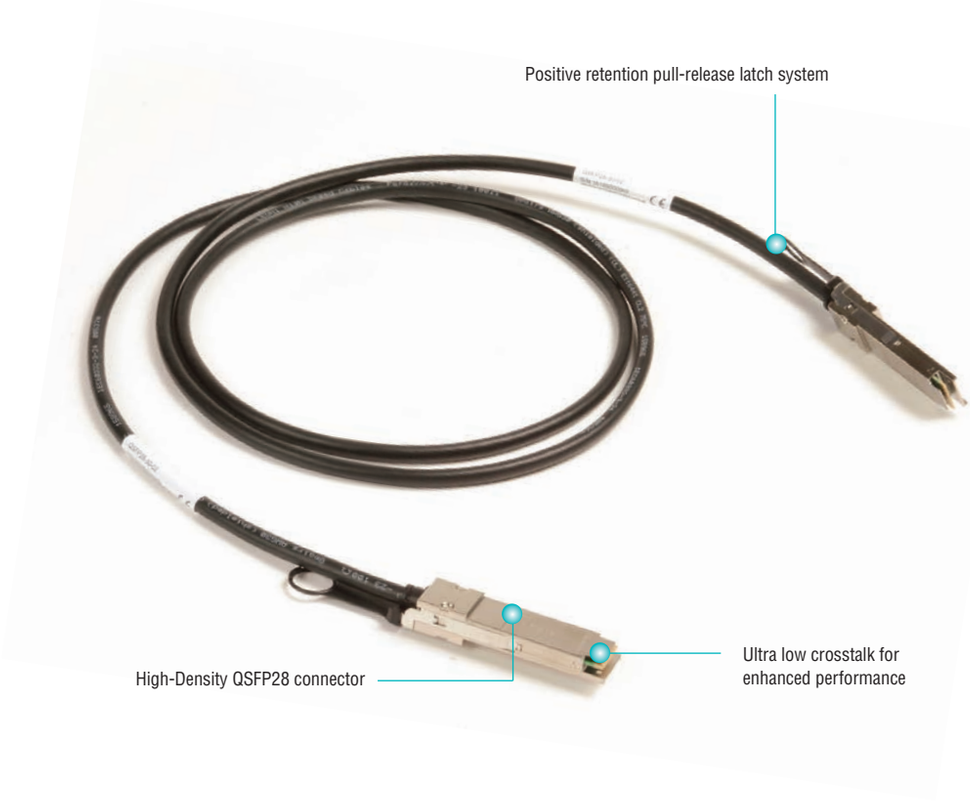
Siemon has a comprehensive offering of interconnect assemblies for ultra high-speed point-to-point applications. Supporting speeds up to 100Gb/s across an array of application standards, the line features QSFP28, SFP28, QSFP+, SFP+, and CXP interfaces, as well as hybrid assemblies. Independently tested to be interoperable with most major equipment manufacturers, Siemon interconnects deliver cost-effective, flexible support for your high-speed, direct attach equipment connections.

Section Contents

QSFP28 100G Passive Copper Cable Assemblies . . . . . 12.1 - 12.2
QSFP28 to 2 QSFP28 50/100G Passive Copper Cable Assemblies . . . . . 12.3 - 12.4
QSFP28 to 4 SFP28 25/100G Passive Copper Cable Assemblies . . . . . 12.5 - 12.6
SFP28 25G Passive Copper Cable Assemblies . . . . . 12.7 - 12.8
CXP 100G Passive Copper Cable Assemblies . . . . . 12.9 - 12.10
CXP to 3 QSFP+ 40/100G Passive Copper Cable Assemblies . . . . . 12.11 - 12.12
QSFP+ 56G FDR Passive Copper Cable Assemblies . . . . . 12.13 - 12.14
QSFP+ 40G Passive Copper Cable Assemblies . . . . . 12.15 - 12.16
QSFP+ 40G Active Optical Cable Assemblies . . . . . 12.17 - 12.18
QSFP+ to 4 SFP+ 10/40G Passive Copper Cable Assemblies . . . . . 12.19 - 12.20
SFP+ 10G Active and Passive Copper Cable Assemblies . . . . . 12.21 - 12.22
SFP+ 10G Cisco Compatible Active and Passive Copper Cable Assemblies 12.23- 12.24

QSFP28 100G
Passive Copper Cable Assemblies

Siemon QSFP28 Passive Copper Cable assemblies exceed 100G Ethernet (100GBASE-CR4) specifications. They are designed for high-density applications, offering a cost-effective, low-power option for high-speed data centre interconnects. This next generation product shares the same mating interface with QSFP+ (SFF-8436) form factors, making it backward compatible with existing QSFP+ ports. These direct attach cable assemblies are available in standard lengths up to 5 metres (16.4 ft.) for support of up to 100G Ethernet applications.



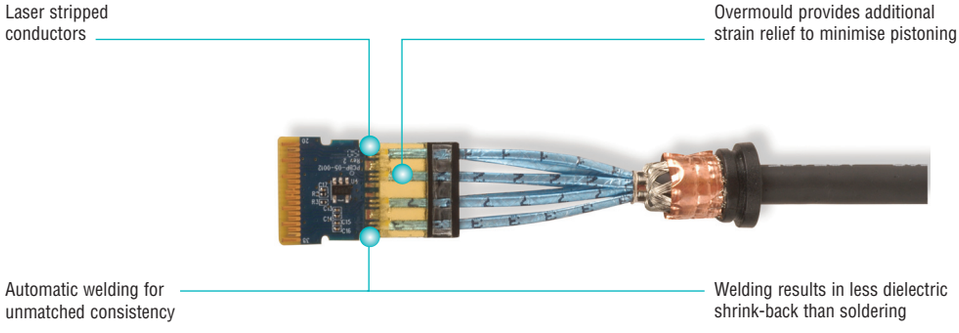
STANDARDS COMPLIANCE

- Electrical: IEEE 802.3by, IEEE 802.3bj
- SFF-8636, SFF-8661, SFF-8665, SFF-8679
- RoHS

APPLICATIONS

- Ethernet 10G, 25G, 40G, 100G (100GBASE-CR4)
- Intra-Rack System, Top of Rack (ToR), Middle of Rack (MoR)
- Switch, Storage, Server, NIC
- Switch-to-Switch, Switch-to-Server

PCB Termination



Product Information

PERFORMANCE SPECIFICATIONS

Electrical	
Min. Dielectric Withstand Voltage	300 VDC
Insulation Resistance	1000 Mohms
Current Rating	0.5 Amp Min/Signal Contact
General	
Operating Temperature	-5 to 70° C (32 to 158° F)
Flammability Rating (Plastics)	UL 94
Green Features	RoHS, Lead-Free
Shield	Braid/Foil
Marking	Mfg Name, Part #, Date Code

Plug	
Backshell Material	Nickel Plated Zinc Diecast
Contact Material	PCB with Gold-Plated Pads
Latch	Positive Latching with Nylon Pull Tab
Insertion Force	40N (9.0 lbf.) Max
Withdrawal Force	30N (6.7 lbf.) Max
Retention Force	90N (20.2 lbf.) Min
Durability	250 Cycles Min
Cable	
Conductor	Solid
Wire Gauge	30 AWG and 26 AWG
Impedence	100 +/- 10 ohms
Construction	Twinaxial
Cable OD	30 AWG = 4.1mm (0.16 in.) 26 AWG = 4.8mm (0.18in.)
Jacket Type	PVC or LS0H
Bend Radius	5X Cable OD - Single 10X Cable OD - Repeated

Ordering Information:

QSFP28 to QSFP28 Passive Copper Cable Assemblies

Part Number	Length	Gauge
Q1Q28P300.5-01(X)	0.5m (1.6 ft.)	30
Q1Q28P301.0-01(X)	1m (3.3 ft.)	30
Q1Q28P301.5-01(X)	1.5m (4.9 ft.)	30
Q1Q28P302.0-01(X)	2m (6.6 ft.)	30
Q1Q28P262.5-01(X)	2.5m (8.2 ft.)	26
Q1Q28P263.0-01(X)	3m (9.8 ft.)	26
Q1Q28P265.0-01(X)*	5m (16.4 ft.)	26

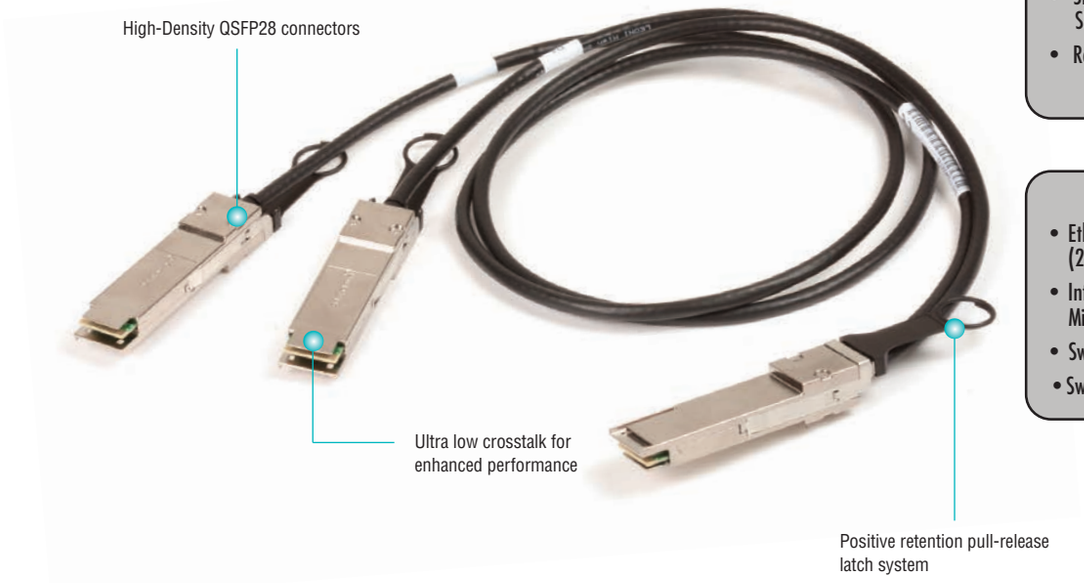
Use (X) to specify jacket: L = LS0H, P = PVC

All cables compliant to IEEE 802.3by, CA-N. Will work with or without FEC unless otherwise noted.

**Compliant to IEEE 802.3bj, CA-L. Will work with RS-FEC.*

QSFP28 to 2 QSFP28 50/100G Passive Copper Cable Assemblies

Siemon QSFP28 to 2 QSFP28 Passive Copper Cable assemblies exceed 100G Ethernet (100GBASE-CR4) specifications. They are designed for high-density applications, offering a cost-effective low-power option for high-speed data centre interconnects. This next generation product shares the same mating interface with QSFP+ (SFF-8436) form factors, making it backward compatible with existing QSFP+ ports. These direct attach cable assemblies are available in standard lengths up to 5 metres (16.4 ft.) for support of up to 50/100G (2x50G) Ethernet applications.



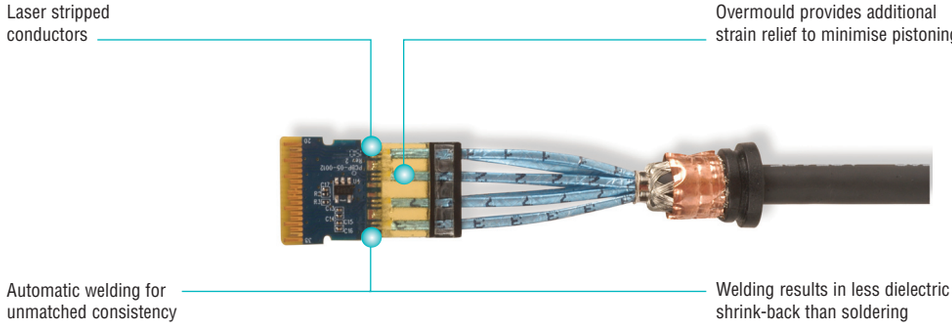
STANDARDS COMPLIANCE

- Electrical: IEEE 802.3by, IEEE 802.3bj
- SFF-8636, SFF-8661, SFF-8665, SFF-8679
- RoHS

APPLICATIONS

- Ethernet 10G, 25G, 40G, 100G (25GBASE-CR, 100GBASE-CR4)
- Intra-Rack System, Top of Rack (ToR), Middle of Rack (MoR)
- Switch, Storage, Server, NIC
- Switch-to-Switch, Switch-to-Server

PCB Termination



Product Information

PERFORMANCE SPECIFICATIONS

Electrical	
Min. Dielectric Withstand Voltage	300 VDC
Insulation Resistance	1000 Mohms
Current Rating	0.5 Amp Min/Signal Contact
General	
Operating Temperature	-5 to 70° C (32 to 158° F)
Flammability Rating (Plastics)	UL 94
Green Features	RoHS, Lead-Free
Shield	Braid/Foil
Marking	Mfg Name, Part #, Date Code

Plug	
Backshell Material	Nickel Plated Zinc Diecast
Contact Material	PCB with Gold-Plated Pads
Latch	Positive Latching with Nylon Pull Tab
Insertion Force	40N (9.0 lbf.) Max
Withdrawal Force	30N (6.7 lbf.) Max
Retention Force	90N (20.2 lbf.) Min
Durability	250 Cycles Min
Cable	
Conductor	Solid
Wire Gauge	30 AWG and 26 AWG
Impedence	100 +/- 10 ohms
Construction	Twinaxial
Cable OD	30 AWG = 4.1mm (0.16 in.)
	26 AWG = 4.8mm (0.18in.)
Jacket Type	PVC or LS0H
Bend Radius	5X Cable OD - Single 10X Cable OD - Repeated

Ordering Information:

QSFP28 to 2 QSFP28 Passive Copper Cable Assemblies

Part Number	Length	Gauge
Q2Q28P300.5-01(X)	0.5m (1.6 ft.)	30
Q2Q28P301.0-01(X)	1m (3.3 ft.)	30
Q2Q28P301.5-01(X)	1.5m (4.9 ft.)	30
Q2Q28P302.0-01(X)	2m (6.6 ft.)	30
Q2Q28P262.5-01(X)	2.5m (8.2 ft.)	26
Q2Q28P263.0-01(X)	3m (9.8 ft.)	26
Q2Q28P265.0-01(X)*	5m (16.4 ft.)	26

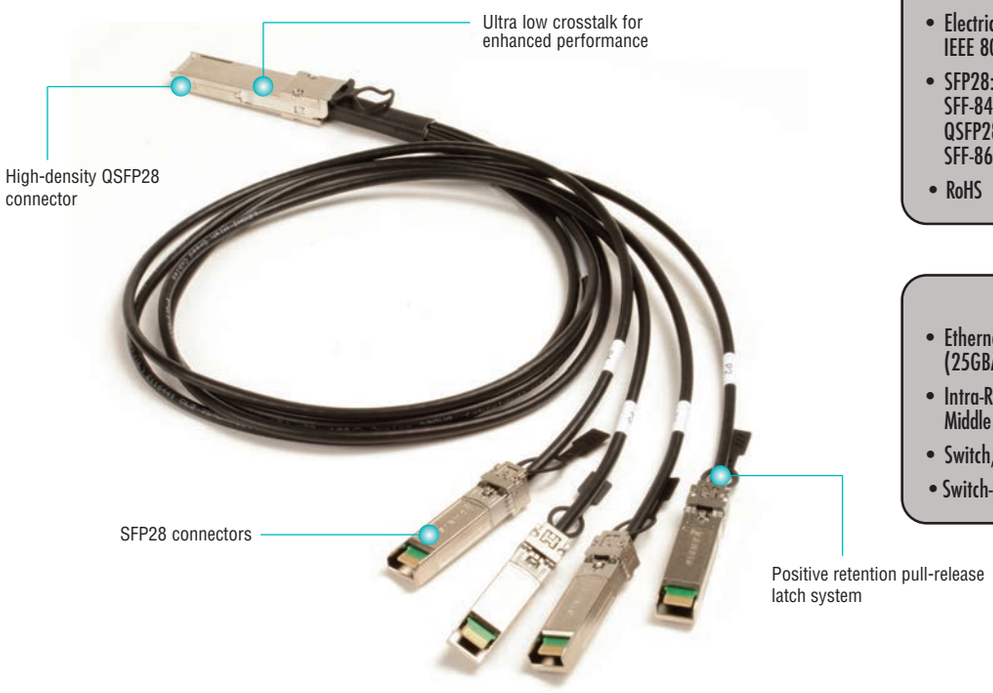
Use (X) to specify jacket: L = LS0H, P = PVC

All cables compliant to IEEE 802.3by, CA-N. Will work with or without FEC unless otherwise noted.

**Compliant to IEEE 802.3bj, CA-L. Will work with RS-FEC..*

QSFP28 to 4 SFP28 25/100G Passive Copper Cable Assemblies

Siemon QSFP28 to 4 SFP28 Passive Copper Cable assemblies exceed 100G Ethernet (100GBASE-CR4) specifications. They are designed for high-density applications, offering a cost-effective, low-power option for high-speed data centre interconnects. This next generation product shares the same mating interface with QSFP+ (SFF-8436) and SFP+ (SFF-8431) form factors, making it backward compatible with existing QSFP+ and SFP+ equipment ports. These direct attach cable assemblies are available in standard lengths up to 5 metres (16.4 ft.) for support of up to 100G (4x25G) Ethernet applications.



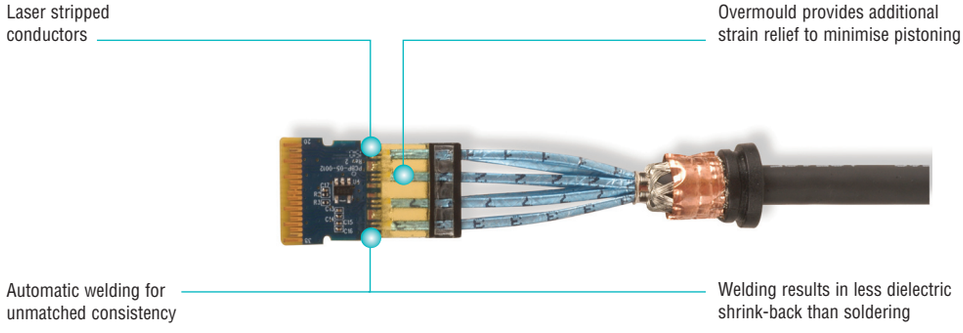
STANDARDS COMPLIANCE

- Electrical: IEEE 802.3by, IEEE 802.3bj
- SFP28: SFF-8402, SFF-8419, SFF-8437, SFF-8472
  QSFP28: SFF-8636, SFF-8661, SFF-8665, SFF-8679
- RoHS

APPLICATIONS

- Ethernet 10G, 25G, 40G, 100G (25GBASE-CR, 100GBASE-CR4)
- Intra-Rack System, Top of Rack (ToR), Middle of Rack (MoR)
- Switch, Storage, Server, NIC
- Switch-to-Switch, Switch-to-Server

PCB Termination



Product Information

PERFORMANCE SPECIFICATIONS

Electrical	
Min. Dielectric Withstand Voltage	300 VDC
Insulation Resistance	1000 MΩ
Current Rating	0.5 Amp Min/Signal Contact
General	
Operating Temperature	-5 to 70° C (32 to 158° F)
Flammability Rating (Plastics)	UL 94
Green Features	RoHS, Lead-Free
Shield	Braid/Foil
Marking	Mfg Name, Part #, Date Code

Plug	
Backshell Material	Nickel Plated Zinc Diecast
Contact Material	PCB with Gold-Plated Pads
Latch	Positive Latching with Nylon Pull Tab
Insertion Force	QSFP28: 40N (9.0 lbf.) Max SFP28: 18N (4.0 lbf.) Max
Withdrawal Force	QSFP28: 30N (6.7 lbf.) Max SFP28: 12.5N (2.8 lbf.) Max
Retention Force	90N (20.2 lbf.) Min
Durability	QSFP28: 250 Cycles Min SFP28: 250 Cycles Min
Cable	
Conductor	Solid
Wire Gauge	30 AWG and 26 AWG
Impedence	100 +/- 10 ohms
Construction	Twinaxial
Cable OD	30 AWG = 4.1mm (0.16 in.)
	26 AWG = 4.8mm (0.18 in.)
Jacket Type	PVC or LS0H
Bend Radius	5X Cable OD - Single 10X Cable OD - Repeated

Ordering Information:

QSFP28 to 4 SFP28 Passive Copper Cable Assemblies

Part Number	Length	Gauge
Q4S28P300.5-01(X)	0.5m (1.6 ft.)	30
Q4S28P301.0-01(X)	1m (3.3 ft.)	30
Q4S28P301.5-01(X)	1.5m (4.9 ft.)	30
Q4S28P302.0-01(X)	2m (6.6 ft.)	30
Q4S28P262.5-01(X)	2.5m (8.2 ft.)	26
Q4S28P263.0-01(X)	3m (9.8 ft.)	26
Q4S28P265.0-01(X)*	5m (16.4 ft.)	26

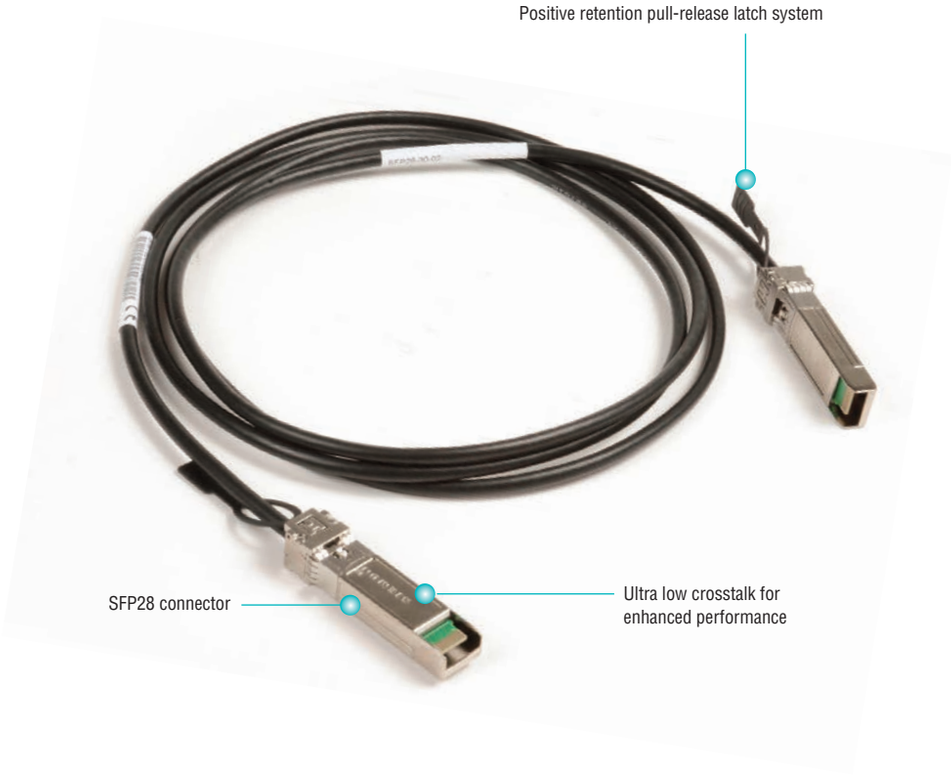
Use (X) to specify jacket: L = LS0H, P = PVC

All cables compliant to IEEE 802.3by, CA-N. Will work with or without FEC unless otherwise noted.

**Compliant to IEEE 802.3bj, CA-L. Will work with RS-FEC.*

SFP28 25G
Passive Copper Cable Assemblies

Siemon SFP28 Passive Copper Cable assemblies exceed 25G Ethernet (25GBASE-CR) specifications. They are designed for high-density applications, offering a cost-effective, low-power option for high-speed data centre interconnects. This next generation product shares the same mating interface with SFP+ (SFF-8431) form factors, making it backward compatible with existing SFP+ ports. These direct attach cable assemblies are available in standard lengths up to 5 metres (16.4 ft.) for support of up to 25G Ethernet applications.



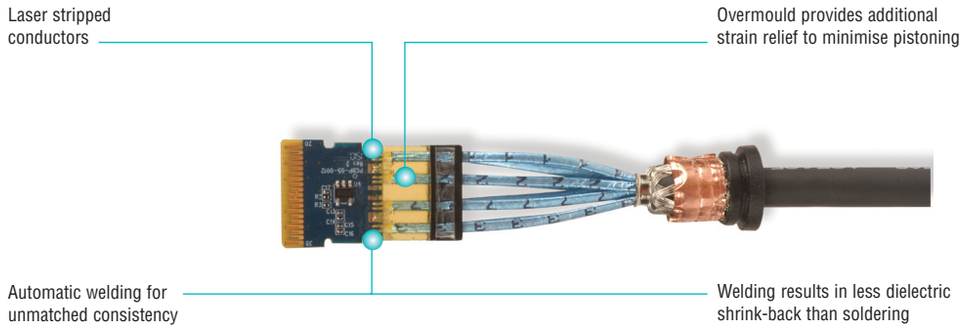
STANDARDS COMPLIANCE

- Electrical: IEEE 802.3by
- SFF-8402, SFF-8419, SFF-8432, SFF-8472
- RoHS

APPLICATIONS

- Ethernet 10G, 25G (25GBASE-CR)
- Intra-Rack System, Top of Rack (ToR), Middle of Rack (MoR)
- Switch, Storage, Server, NIC
- Switch-to-Switch, Switch-to-Server

PCB Termination



Product Information

PERFORMANCE SPECIFICATIONS

Electrical	
Min. Dielectric Withstand Voltage	300 VDC
Insulation Resistance	1000 Mohms
Current Rating	0.5 Amp Min/Signal Contact
General	
Operating Temperature	-5 to 70° C (32 to 158° F)
Flammability Rating (Plastics)	UL 94
Green Features	RoHS, Lead-Free
Shield	Braid/Foil
Marking	Mfg Name, Part #, Date Code

Plug	
Backshell Material	Nickel Plated Zinc Diecast
Contact Material	PCB with Gold-Plated Pads
Latch	Positive Latching with Nylon Pull Tab
Insertion Force	18N (4.0 lbf.) Max
Withdrawal Force	12.5N (2.8 lbf.) Max
Retention Force	90N (20.2 lbf.) Min
Durability	250 Cycles Min
Cable	
Conductor	Solid
Wire Gauge	30 AWG and 26 AWG
Impedence	100 +/- 10 ohms
Construction	Twinaxial
Cable OD	30 AWG = 4.1mm (0.16 in.)
	26 AWG = 4.8mm (0.18 in.)
Jacket Type	PVC or LS0H
Bend Radius	5X Cable OD - Single 10X Cable OD - Repeated

Ordering Information:

SFP28 to SFP28 Passive Copper Cable Assemblies

Part Number	Length	Gauge
S1S28P300.5-01(X)	0.5m (1.6 ft.)	30
S1S28P301.0-01(X)	1m (3.3 ft.)	30
S1S28P301.5-01(X)	1.5m (4.9 ft.)	30
S1S28P302.0-01(X)	2m (6.6 ft.)	30
S1S28P262.5-01(X)	2.5m (8.2 ft.)	26
S1S28P263.0-01(X)	3m (9.8 ft.)	26
S1S28P265.0-01(X)*	5m (16.4 ft.)	26

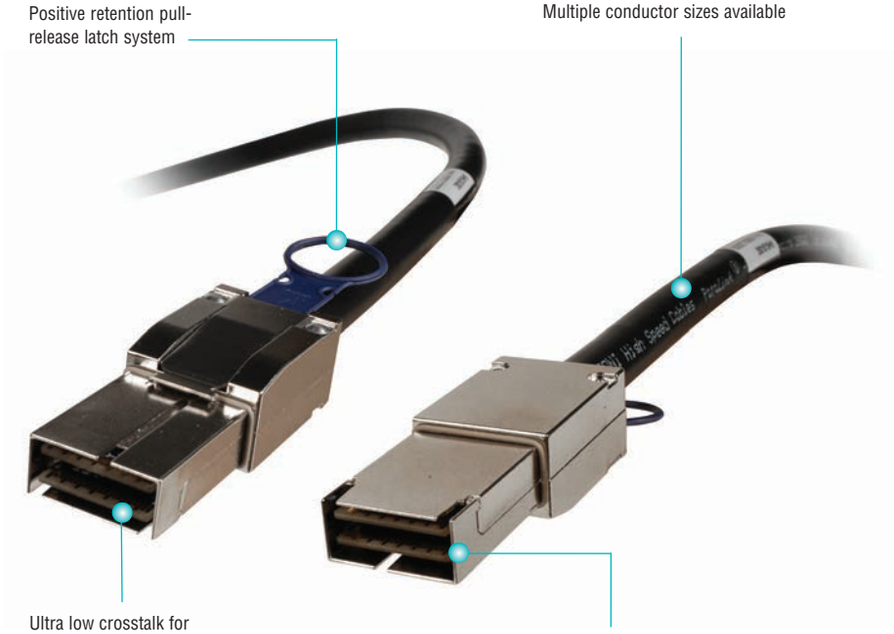
Use (X) to specify jacket: L = LS0H, P = PVC

All cables compliant to IEEE 802.3by, CA-N. Will work with or without FEC unless otherwise noted.

**Compliant to IEEE 802.3bj, CA-L. Will work with RS-FEC.*

CXP 100G Passive Copper Cable Assemblies

Siemon CXP Copper Cable assemblies were developed for high-density applications, offering a cost-effective, low-power option for high-speed data centre interconnects. The CXP form factor can replace up to three standard QSFP+ connections, providing greater density and reduced system cost. These direct attached assemblies support 12 channels of 10Gb/s (QDR) for 120Gb/s InfiniBand, or 10 channels of 10Gb/s for 100Gb/s (IEEE 802.3ba) and are available in standard lengths up to 4 metres with longer custom lengths available.



STANDARDS COMPLIANCE

- SFF-8642
- IBTA V2 Revision 1.3
- IEEE 802.3ba
- RoHS

APPLICATIONS

- InfiniBand 12xSDR, 12xDDR, 12xQDR
- Ethernet 10G, 40G, 100G
- Rack-to-Rack, Shelf-to-Shelf Interconnect
- Networking, NIC
- Storage: DAS, SAN, NAS
- Hubs, switches, routers, servers

Product Information

PERFORMANCE SPECIFICATIONS

Electrical	
Min. Dielectric Withstand Voltage	300 VDC
Insulation Resistance	1000 Mohms
Current Rating	0.5 Amp Min/Signal Contact
General	
Operating Temperature	0 to 70° C (32 to 158° F)
Flammability Rating (Plastics)	UL 94
Green Features	RoHS, Lead-Free
Shield	Braid/Foil
Marking	Mfg Name, Part #, Date Code

Plug	
Backshell Material	Nickel Plated Zinc Diecast
Contact Material	PCB with Gold-Plated Pads
Plastic Material	Nylon
Latch	Positive Latching w/Pull Tab
Insertion Force	150N (33.7 lbf.) Max
Withdrawal Force	30N (6.7 lbf.) Max
Durability	250 Cycles
Tightest Recommended Vertical Spacing (Belly to Belly)	27.00mm (1.06 in.) Centre to Centre
Tightest Recommended Vertical Spacing (Stacked)	16.50mm (0.65 in.) Centre to Centre
Cable	
Conductor	Solid
Wire Gauge	30 AWG, 28 AWG and 27 AWG
Impedence	100 +/- 5 ohms
Construction	Twinaxial
Cable OD	30 AWG = 9.5mm (0.37 in.)
	28 AWG = 11mm (0.43 in.)
	27 AWG = 13.8mm (0.54 in.)
Jacket Type	PVC
Bend Radius	5X Cable OD -Single 10X Cable OD - Repeated

Ordering Information:

CXP to CXP Passive Copper Cable Assemblies

Part Number	Length	Gauge
CXP30-01	1m (3.3 ft.)	30
CXP30-02	2m (6.6 ft.)	30
CXP28-03	3m (9.8 ft.)	28
CXP27-04	4m (13.1 ft.)	27

Maximum Lengths

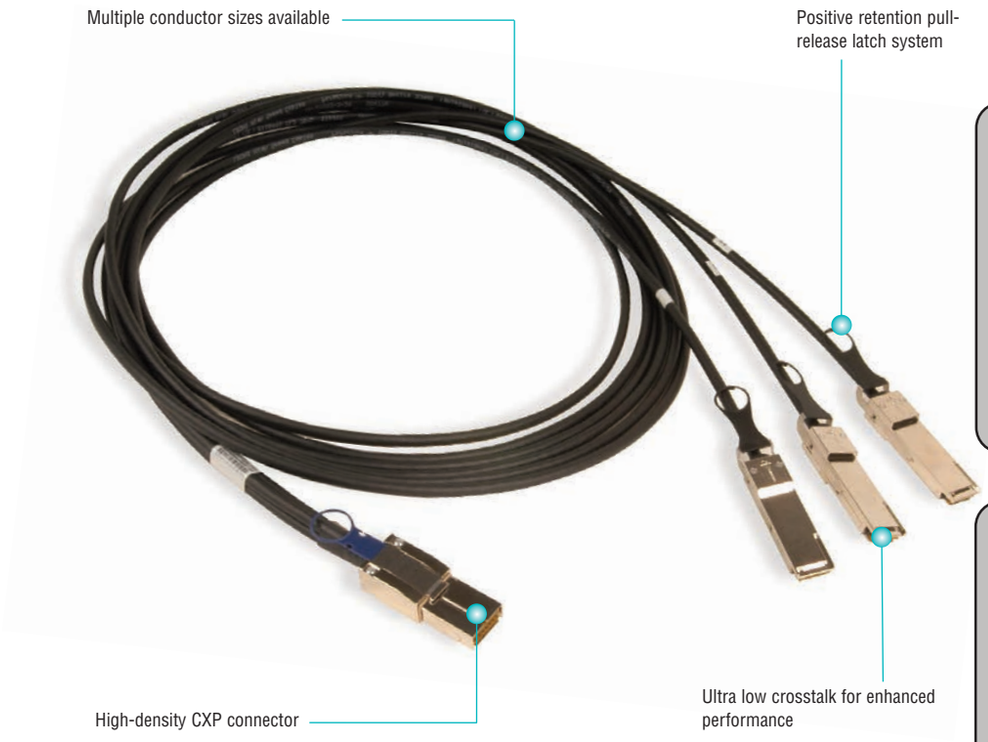
Gauge	IBTA DDR	IBTA QDR	IEEE 802.3ba
30	4m (13.1 ft.)	2m (6.6 ft.)	2m (6.6 ft.)
28	7m (22.9 ft.)	3m (9.8 ft.)	3m (9.8 ft.)
27	7m (22.9 ft.)	3m (9.8 ft.)	3m (9.8 ft.)

CXP27-04 is not guaranteed to meet IBTA QDR or IEEE 802.3ba inserstion loss requirements.

Note: Contact Customer Service for additional lengths.

CXP to 3 QSFP+ 40/100G Passive Copper Cable Assemblies

Siemon CXP to 3 QSFP+ Copper Cable assemblies allow users to connect CXP and QSFP+ equipment together. Compliant with both CXP and QSFP+ specifications, this breakout cable provides a cost effective, low-power option for high density high-speed data centre interconnects. The CXP form factor can replace up to three standard QSFP+ connections, providing greater density and reduced system cost. The direct-attach assemblies support emerging 100Gb/s applications and are available in standard lengths up to 3 metres with longer custom lengths available.



STANDARDS COMPLIANCE

QSFP+ End
- SFF-8436

CXP End
- SFF-8642

Assembly
- IEEE 802.3ba
- IBTA V2 Revision 1/3
- RoHS

APPLICATIONS
- InfiniBand 12xSDR, 12xDDR, 12xQDR
- Ethernet 10G, 40G, 100G
- Rack-to-Rack, Shelf-to-Shelf Interconnect
- Networking, NIC
- Storage: DAS, SAN, NAS
- Hubs, switches, routers, servers

Product Information

PERFORMANCE SPECIFICATIONS

Electrical	
Min. Dielectric Withstand Voltage	300 VDC
Insulation Resistance	1000 Mohms
Current Rating	0.5 Amp Min/Signal Contact
General	
Operating Temperature	0 to 70° C (32 to 158° F)
Flammability Rating (Plastics)	UL 94
Green Features	RoHS, Lead-Free
Shield	Braid/Foil
Marking	Mfg Name, Part #, Date Code

Plug	
Backshell Material	Nickel Plated Zinc Diecast
Contact Material	PCB with Gold-Plated Pads
Plastic Material	Nylon
Latch	Positive Latching w/Pull Tab
Insertion Force	CXP: 150N (33.7 lbf.) Max QSFP+: 40N (8.9 lbf.) Max
Withdrawal Force	CXP: 50N (11.2 lbf.) Max QSFP+: 30N (6.7 lbf.) Max
Durability	250 Cycles
CXP Tightest Recommended Horizontal Spacing	27.00mm (0.54 in.) Centre to Centre
CXP Tightest Recommended Vertical Spacing (Stacked)	16.50mm (0.65 in.) Centre to Centre
Cable	
Conductor	Solid
Wire Gauge	30 AWG to 26 AWG
Impedence	100 +/- 5 ohms
Construction	Twinaxial
Cable OD	30AWG = 9.5mm (0.37 in.)
	28AWG = 11mm (0.43 in.)
Jacket Type	PVC
Bend Radius	5X Cable OD -Single 10X Cable OD - Repeated

Ordering Information:

CXP to QSFP+ Passive Copper Cable Assemblies

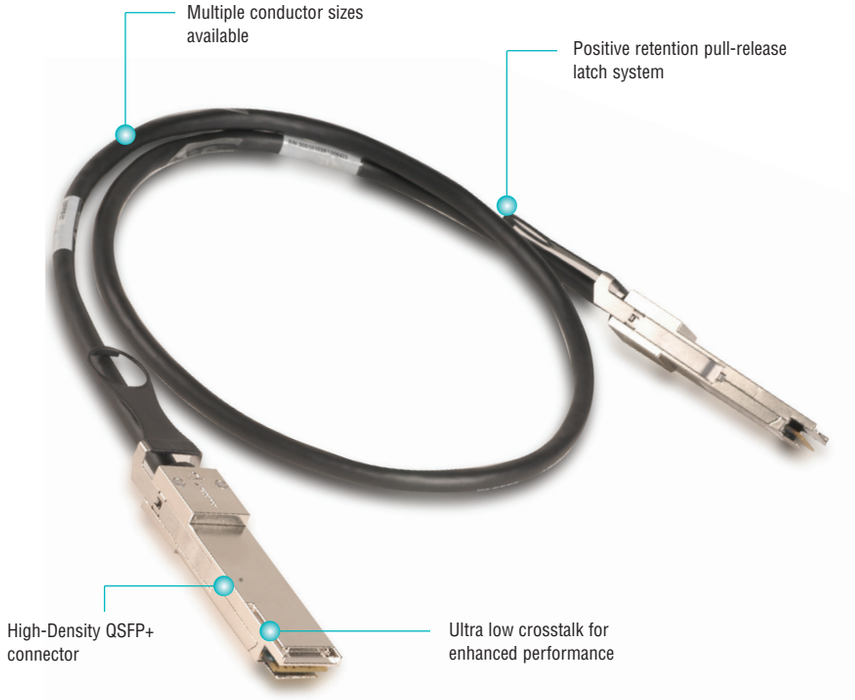
Part Number	Length	Gauge
CXPQSFP30-01	1m (3.3 ft.)	30
CXPQSFP30-02	2m (6.6 ft.)	30
CXPQSFP28-03	3m (9.8 ft.)	28

Maximum Lengths

Gauge	IBTA DDR	IBTA QDR	IEEE 802.3ba
30	4m (13.1 ft.)	2m (6.6 ft.)	2m (6.6 ft.)
28	6m (19.7 in.)	3m (9.8 ft.)	3m (9.8 ft.)

QSFP+ 56G FDR Passive Copper Cable Assemblies

Siemon QSFP+ Fourteen Data Rate (FDR) Copper Cable assemblies provide 56Gb/s of bandwidth (4 X 14Gb/s). These QSFP+ (SFF-8436) cables exceed industry standards to support DDR, QDR, FDR and emerging 4x16Gb/s applications. Siemon's QSFP+ FDR assemblies are a high-density, cost-effective, low-power option for leading edge 56Gbs high-speed data centres, available in standard lengths up to 3 metres with longer custom lengths available upon request.



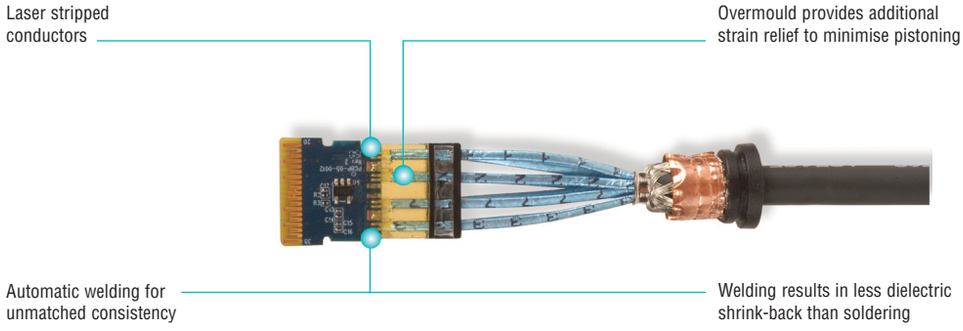
STANDARDS COMPLIANCE

- Electrical: IBTA V2 Revision 1.3
- IEEE 802.3ba
- EEPROM: SFF-8436
- RoHS

APPLICATIONS

- InfiniBand 4X SDR, DDR, QDR
- Ethernet 10G,40G
- Fibre Channel 10G,40G, SAN, 4x16G
- RapidIO
- Myrinet 40G
- Rack-to-Rack, Shelf-to-Shelf Interconnect
- Networking
- Storage
- Hubs, switches, routers, servers

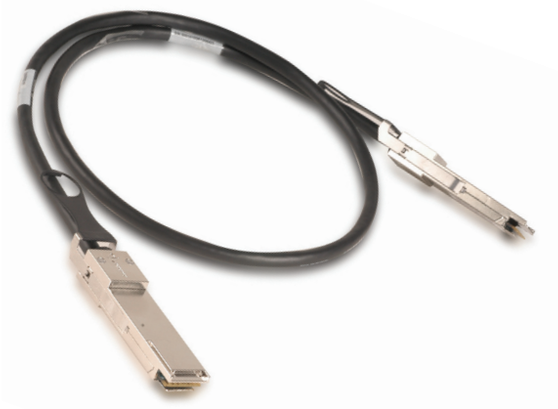
PCB Termination



Product Information

PERFORMANCE SPECIFICATIONS

Electrical	
Min. Dielectric Withstand Voltage	300 VDC
Insulation Resistance	1000 Mohms
Current Rating	0.5 Amp Min/Signal Contact
General	
Operating Temperature	0 to 70° C (32 to 158° F)
Flammability Rating (Plastics)	UL 94
Green Features	RoHS, Lead-Free
Shield	Braid/Foil
Marking	Mfg Name, Part #, Date Code



Plug	
Backshell Material	Nickel Plated Zinc Diecast
Contact Material	PCB with Gold-Plated Pads
Plastic Material	Nylon
Latch	Positive Latching w/Pull Tab
Insertion Force	40N (8.9 lbf.) Max
Withdrawal Force	30N (6.7 lbf.) Max
Retention Force	90N (20.2 lbf.) Min
Durability	250 Cycles
Tightest Recommended Vertical Spacing (Belly to Belly)	11.80mm (0.46 in.) Centre to Centre
Tightest Recommended Vertical Spacing (Stacked)	17.50mm (0.69 in.) Centre to Centre
Cable	
Conductor	Solid
Wire Gauge	30 AWG to 24 AWG
Impedence	100 +/- 5 ohms
Construction	Twinaxial
Cable OD	30 AWG = 6.1mm
	28 AWG = 8.7mm
Jacket Type	PVC
Bend Radius	5X Cable OD -Single 10X Cable OD - Repeated

Ordering Information:

QSFP+ to QSFP+ FDR Passive Copper Cable Assemblies

Part Number	Length	Gauge
QSFPFDR30-0.5	0.5m (1.6 ft.)	30
QSFPFDR30-01	1m (3.3 ft.)	30
QSFPFDR30-02	2m (6.6 ft.)	30
QSFPFDR28-03	3m (9.8 ft.)	28

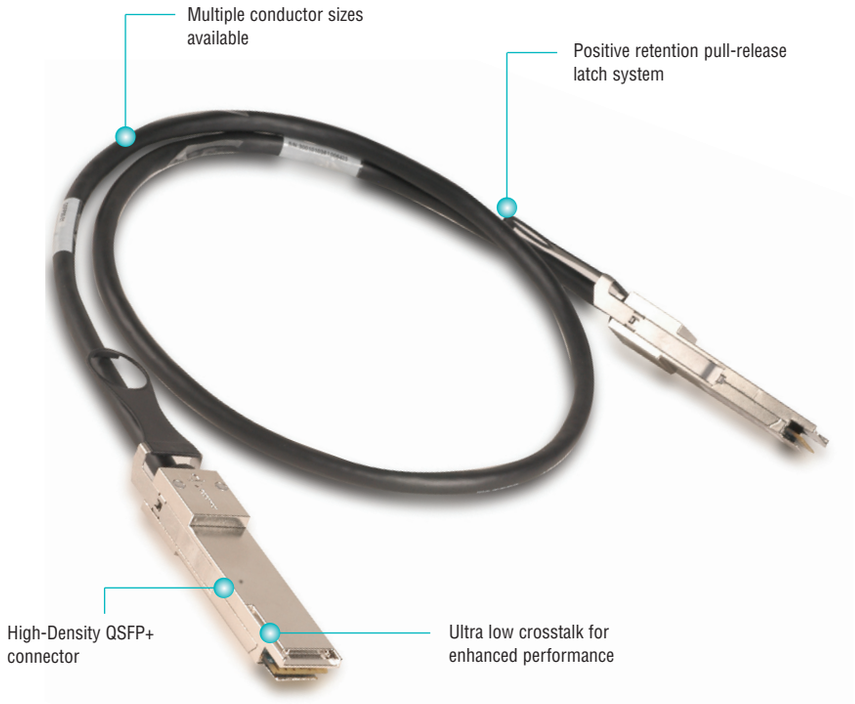
Maximum Lengths

Gauge	IBTA DDR	IBTA QDR	IEEE 802.3ba	IBTA FDR
30	5m (16.4 ft.)	3m (9.8 ft.)	3m (9.8 ft.)	2m (6.6 ft.)
28	7m (22.9 ft.)	4m (13.1 ft.)	4m (13.1 ft.)	3m (9.8 ft.)

Note: Contact Customer Service for additional lengths.

QSFP+ 40G Passive Copper Cable Assemblies

Siemon QSFP+ Copper Cable assemblies were developed for high-density applications, offering a cost-effective, low-power option for high-speed data centre interconnects. The QSFP+ form factor can replace up to four standard SFP+ connections, providing greater density and reduced system cost. The direct-attach assemblies support emerging 40Gb/s applications and are available in standard lengths up to 5 metres with longer custom lengths available.



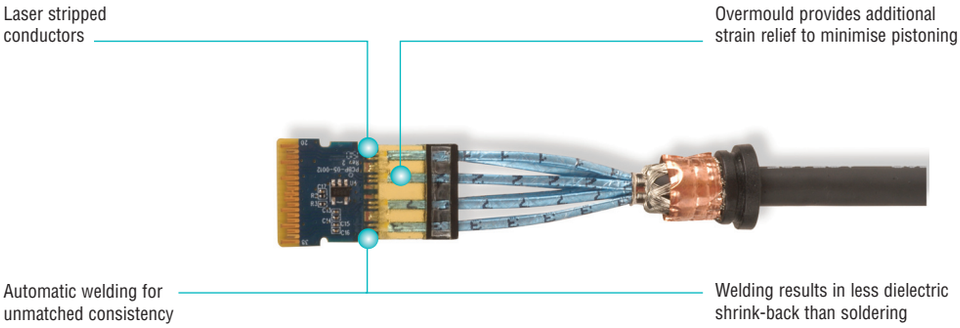
STANDARDS COMPLIANCE

- Electrical: IBTA V2 Revision 1.3
- IEEE 802.3ba
- EEPROM: SFF-8436
- RoHS

APPLICATIONS

- InfiniBand 4X SDR, DDR, QDR
- Ethernet 10G,40G
- Fibre Channel 10G,40G, SAN
- RapidIO
- Myrinet 40G
- Rack-to-Rack, Shelf-to-Shelf Interconnect
- Networking
- Storage
- Hubs, switches, routers, servers

PCB Termination



Product Information

PERFORMANCE SPECIFICATIONS

Electrical	
Min. Dielectric Withstand Voltage	300 VDC
Insulation Resistance	1000 Mohms
Current Rating	0.5 Amp Min/Signal Contact
General	
Operating Temperature	0 to 70° C (32 to 158° F)
Flammability Rating (Plastics)	UL 94
Green Features	RoHS, Lead-Free
Shield	Braid/Foil
Marking	Mfg Name, Part #, Date Code

Colour Options Available:

Plug	
Backshell Material	Nickel Plated Zinc Diecast
Contact Material	PCB with Gold-Plated Pads
Plastic Material	PA66
Latch	Positive Latching w/Pull Tab
Insertion Force	40N (8.9 lbf.) Max
Withdrawal Force	30N (6.7 lbf.) Max
Retention Force	90N (20.2 lbf.) Min
Durability	250 Cycles
Tightest Recommended Vertical Spacing (Belly to Belly)	11.80mm (0.46 in.) Centre to Centre
Tightest Recommended Vertical Spacing (Stacked)	17.50mm (0.69 in.) Centre to Centre
Cable	
Conductor	Solid
Wire Gauge	30 AWG to 24 AWG
Impedence	100 +/- 5 ohms
Construction	Twinaxial
Cable OD	30 AWG = 6.50mm (0.26 in.)
	28 AWG = 7.49mm (0.29 in.)
	26 AWG = 8.61mm (0.34 in.)
Jacket Type	PVC or LS0H
Bend Radius	5X Cable OD -Single 10X Cable OD - Repeated

Ordering Information:

QSFP+ to QSFP+ Passive Copper Cable Assemblies

Part Number (Black)	Part Number (Coloured)	Length	Gauge
QSFP30-00.5(X)	QSFP30-00.5-(XX)(X)	0.5m (1.6 ft.)	30
QSFP30-01(X)	QSFP30-01-(XX)(X)	1m (3.3 ft.)	30
QSFP30-01.5(X)	QSFP30-01.5-(XX)(X)	1.5m (4.9 ft.)	30
QSFP30-02(X)	QSFP30-02-(XX)(X)	2m (6.6 ft.)	30
QSFP30-02.5(X)	QSFP30-02.5-(XX)(X)	2.5m (8.2 ft.)	30
QSFP30-03(X)	QSFP30-03-(XX)(X)	3m (9.8 ft.)	30
QSFP26-05(X)	QSFP26-05-(XX)(X)	5m (16.4 ft.)	26

Use (X) to specify cable jacket: L = LS0H, blank = PVC
Use (XX) to specify colour: 01 = Black, 02 = White, 03 = Red, 06 = Blue

Maximum Lengths

Gauge	IBTA DDR	IBTA QDR[1]	IEEE 802.3ba
30	5m (16.4 ft.)	3m (9.8 ft.)	3m (9.8 ft.)
28	7m (22.9 ft.)	4m (13.1 ft.)	4m (13.1 ft.)
26	8m (26.2 ft.)	5m (16.4 ft.)	5m (16.4 ft.)
24	10m (32.8 ft.)	6m (19.7 ft.)	n/a

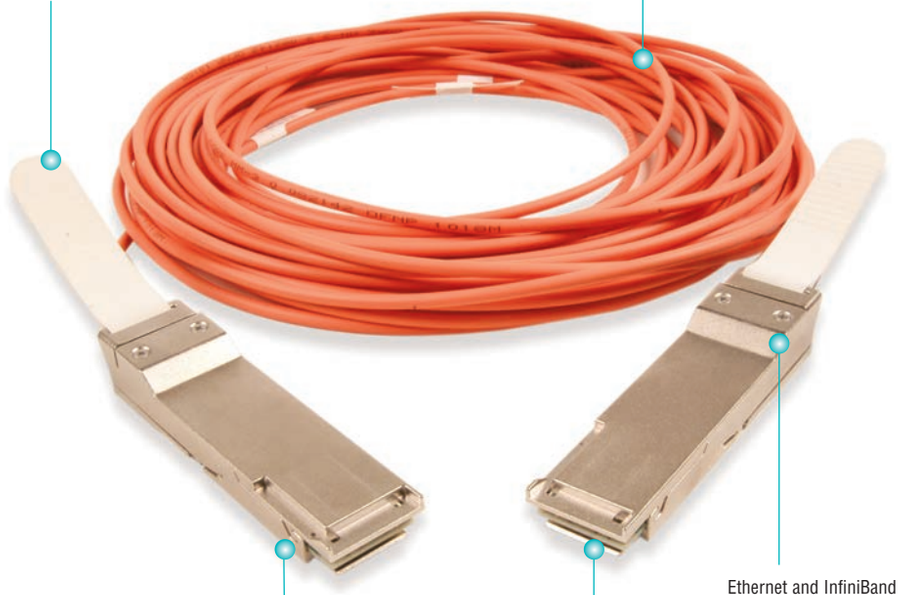
1 Per IBTA cable MOI V0.69: -13dB @5GHz

Note: Contact Customer Service for additional lengths.

QSFP+ 40G Active Optical Cable Assemblies

Siemon 40Gb/s Low Power Active Optical Cable (AOC) assemblies offer a cost-effective, extended reach option for high-speed data centre interconnects. These AOC assemblies incorporate integrated opto-electronics with four fibre optic transceivers per end, each operating at data rates from 1 to 10.5 Gb/s and supporting a reach up to 100 metres. The cable is available in a number of standard lengths up to 100 metres.

AOC's offer customers the flexibility of traditional optical modules by interfacing to systems via a standard QSFP+ MSA, SFF-8436 connector. The cable is electrically compliant with the SFP+ interface supporting InfiniBand, Ethernet, Fibre Channel and other applications. The QSFP+ connector includes the Digital Diagnostic Monitoring Interface (DDMI).



STANDARDS COMPLIANCE

- Electrical: ITBTA V2 Revision 1.3, IEEE 802.3ba
- SFF-8436, SFF-8636
- RoHS-6 (lead free)
- Class 1 laser product per IEC 60825-1
- IEEE 802.3ba

APPLICATIONS

- InfiniBand SDR, DDR, QDR
- Ethernet 40G BASE-SR4
- Fibre Channel 4G, 8G, 10G
- Rack-to-Rack, Shelf-to-Shelf Interconnect
- Proprietary Cluster Interconnect
- Networking
- Storage
- Hubs, switches, routers, servers

Product Information

PERFORMANCE SPECIFICATIONS

Electrical	
Supply Voltage	3.1 to 3.6V
Power Consumption Per End	0.8W typical, 1.2W Max
General	
Operating Temperature	0 to 70° C (32 to 158° F)
Storage Temperature	-25 to 75° C (-13 to 167° F)
Channels	4 channels, bi-directional
Connector (each end)	QSFP+

Cable	
Type	OFNP (PVC)
Minimum Bend Radius	15xDIA - Dynamic 10xDIA - Static
Minimum Cable Assembly Bend Radius	Cable and Connector: 56mm (2.20 in.)
Cross Section (without connector)	3 -13mm (0.12 - 0.51 in.) to OD
Channel Parametres	
Channels	4 Lanes, bi-directional
Date Rate	10.5 Gbps/ channel Max
Operating Optical Wavelength	850nm

Ordering Information:

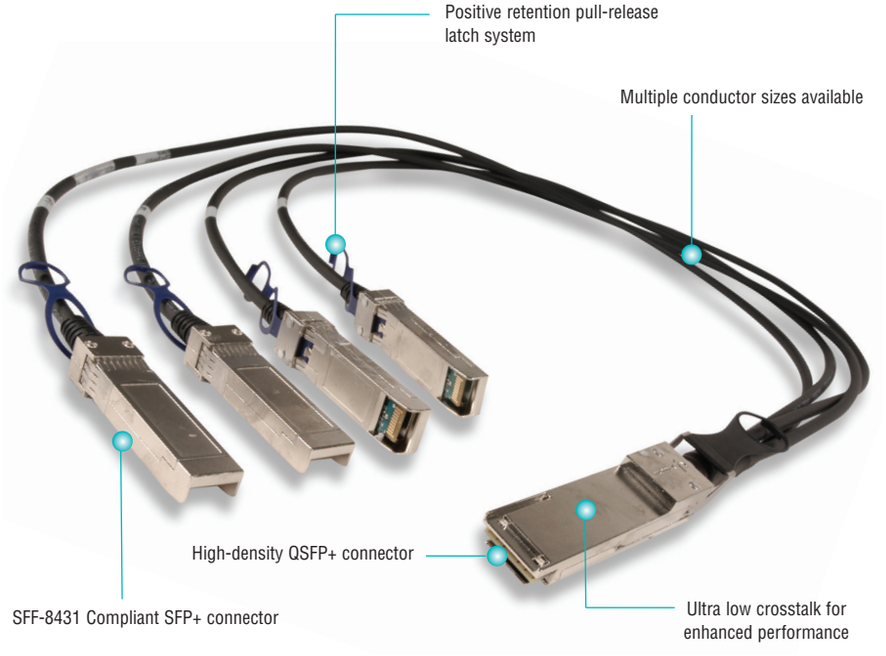
QSFP+ to QSFP+ Active Optical Cable Assemblies

Part Number	Length
QSFP-FB-005	5m (16.4 ft.)
QSFP-FB-010	10m (32.8 ft.)
QSFP-FB-015	15m (49.2 ft.)
QSFP-FB-020	20m (65.6 ft.)
QSFP-FB-030	30m (98.4 ft.)
QSFP-FB-050	50m (164.0 ft.)
QSFP-FB-100	100m (328.1 ft.)

Note: Contact Customer Service for additional lengths.

QSFP+ to 4 SFP+ 10/40G Passive Copper Cable Assemblies

Siemon hybrid cables allow users to connect SFP+ and QSFP+ equipment. They offer a cost-effective, low-power option for high-speed data centre interconnects. The direct-attach assemblies support 4 lanes of 10Gb/s (40Gb/s composite) and are available in standard lengths up to 5 metres with longer custom lengths available.



STANDARDS COMPLIANCE

QSFP+ End

- Electrical: IBTA V2 Revision 1.3, IEEE 802.3ba
- SFF-8436, SFF-8636
- RoHS

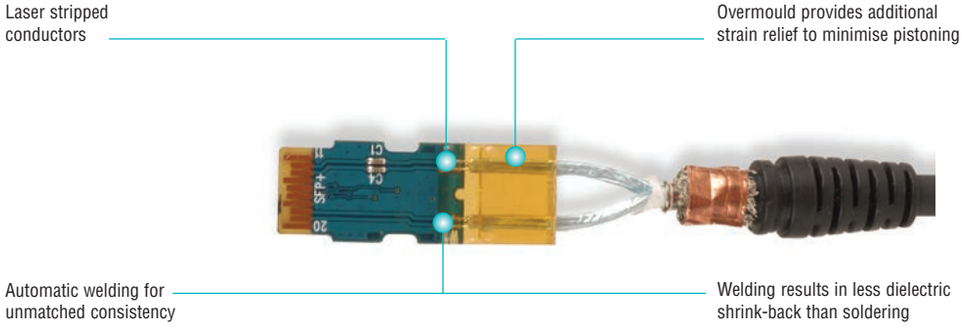
SFP+ End

- SFF-8431
- SFF-8432
- SFF-8472
- RoHS

APPLICATIONS

- InfiniBand SDR, DDR
- Ethernet 1G, 10G
- Fibre Channel
- Rack-to-Rack, Shelf-to-Shelf Interconnect
- Networking
- Storage
- Hubs, switches, routers, servers

PCB Termination



Product Information

PERFORMANCE SPECIFICATIONS

Electrical	
Min. Dielectric Withstand Voltage	300 VDC
Insulation Resistance	1000 Mohms
Current Rating	0.5 Amp Min/Signal Contact
General	
Operating Temperature	0 to 70° C (32 to 158° F)
Flammability Rating (Plastics)	UL 94
Green Features	RoHS, Lead-Free
Shield	Braid/Foil
Marking	Mfg Name, Part #, Date Code

Plug	
Backshell Material	Nickel Plated Zinc Diecast
Contact Material	PCB with Gold-Plated Pads
Latch	Positive Latching w/Pull Tab
Insertion Force	QSFP+: 40N (8.9 lbf.) Max SFP+: 30N (6.7 lbf.) Max
Withdrawal Force	QSFP+: 30N (6.7 lbf.) Max SFP+: 20N (4.5 lbf.) Max
Retention Force	90N (20.2 lbf.) Min
Durability	QSFP+: 250 Cycles Min SFP+: 50 cycles Min
Cable	
Conductor	Solid
Wire Gauge	30 AWG and 28 AWG
Impedence	100 +/- 5 ohms
Construction	Twinaxial
Cable OD	30 AWG = 4.5mm (0.18 in.) 28 AWG = 4.7mm (0.19 in.)
Jacket Type	PVC or LS0H
Bend Radius	5X Cable OD -Single 10X Cable OD - Repeated

Ordering Information:

QSFP+ to SFP+ Passive Copper Cable Assemblies

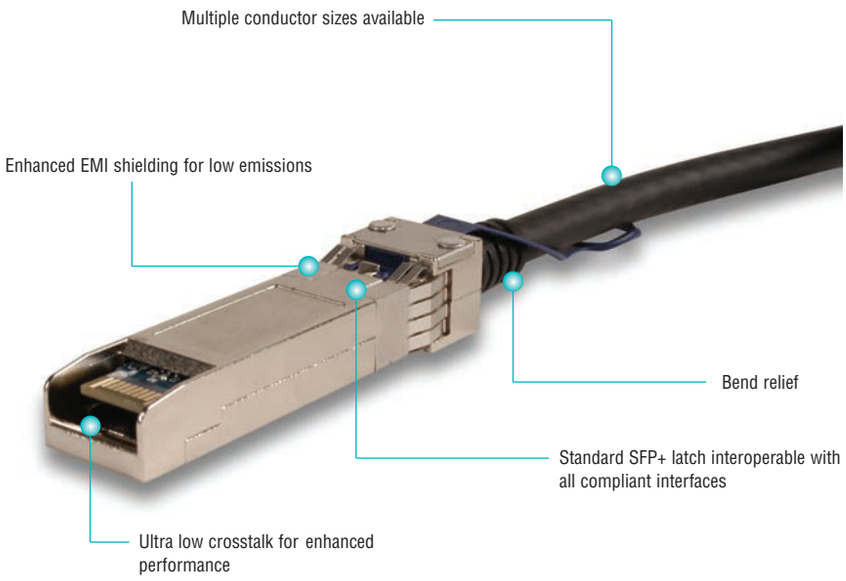
Part Number (Black PVC)	Part Number (Black LS0H)	Length	Gauge
SFPPQSFP30-00.5	SFPPQSFP3000.5L	0.5m (1.6 ft.)	30
SFPPQSFP30-01	SFPPQSFP3001L	1m (3.3 ft.)	30
SFPPQSFP30-01.5	SFPPQSFP3001.5L	1.5m (4.9 ft.)	30
SFPPQSFP30-02	SFPPQSFP3002L	2m (6.6 ft.)	30
SFPPQSFP30-02.5	SFPPQSFP3002.5L	2.5m (8.2 ft.)	30
SFPPQSFP28-03	SFPPQSFP2803L	3m (9.8 ft.)	28
SFPPQSFP28-05	SFPPQSFP2805L	5m (16.4 ft.)	28

SFP+ 10G Active and Passive Copper Cable Assemblies

Siemon SFP+ active and passive copper cable assemblies were developed specifically as a cost-effective alternative to optical modules for short reach links in high-speed interconnect applications such as high-performance computing (HPC), enterprise networking and network storage markets. These assemblies support data transfer rates up to 10+ Gb/s per lane, meeting or exceeding current standards specifications.

These SFP+ fully-shielded assemblies combine twin-axial shielded cable configuration with robust die cast housings for enhanced support of high frequency data rates. These SFP+ assemblies are impedance matched to ensure interoperability and minimise EMI leakage through their fully-shielded design.

The active cables use signal processing within the connector back shells to extend the length that copper cables can reach beyond the limits of passive copper solutions.

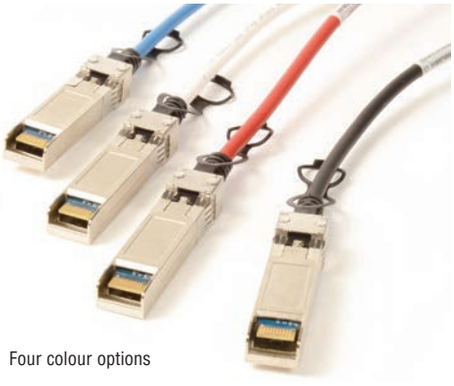


STANDARDS COMPLIANCE

- Electrical: SFF-8431, SFF-8083
- Mechanical: SFF-8432
- EEPROM: SFF-8472
- RoHS

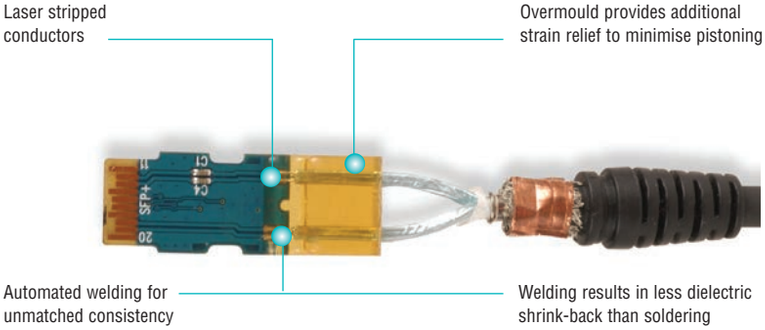
APPLICATIONS

- InfiniBand SDR, DDR and QDR
- Ethernet 1G, 10G and 40G
- Fibre Channel
- Rack-to-Rack, Top of Rack (TOR) and Core Switch
- Networking
- Storage
- Hubs, switches, routers, servers



Four colour options

PCB Termination



Product Information

PERFORMANCE SPECIFICATIONS

Electrical	
Min. Dielectric Withstand Voltage	300 VDC
Insulation Resistance	1000 Mohms
Current Rating	0.5 Amp Min/Signal Contact
Power Consumption (active cables only)	700mw Max
General	
Operating Temperature	-10 to 70°C (14 to 158°F)
Flammability Rating	UL 94 V-0
Green Features	RoHS, Lead-Free
Shield	Braid/Foil
Marking	Mfg Name, Part #, Date Code

Plug	
Backshell Material	Nickel-Plated Zinc Diecast
Contact Material	PCB with Gold-Plated Pads
Latch	Positive Latching w/ Pull
Insertion Force	30N (6.7 lbf.) Max
Withdrawal Force	20N (4.5 lbf.) Max
Retention Force	90N (20.2 lbf.) Max
Durability	50 Cycles Min
Cable	
Conductor	Solid
Wire Gauge	30 AWG to 24 AWG
Impedance	100± 5 ohms
Construction	Twinaxial
Cable OD	30 AWG = 4.5mm (0.18 in.)
	28 AWG = 4.7mm (0.19 in.)
	24 AWG = 6.2mm (0.24 in.)
Jacket Type	PVC or LS0H
Bend Radius	5X Cable OD

Colour Options Available:

Ordering Information:

SFP+ Passive/Active Copper Cable Assemblies

Part Number (Black)	Part Number (Coloured)	Length	Gauge	Type
SFPP30-00.3(X)	SFPP30-00.3-(XX)(X)	0.3m (1 ft.)	30	Passive
SFPP30-00.5(X)	SFPP30-00.5-(XX)(X)	0.5m (1.6 ft.)	30	Passive
SFPP30-01(X)	SFPP30-01-(XX)(X)	1m (3.3 ft.)	30	Passive
SFPP30-01.5(X)	SFPP30-01.5-(XX)(X)	1.5m (4.9 ft.)	30	Passive
SFPP30-02(X)	SFPP30-02-(XX)(X)	2m (6.6 ft.)	30	Passive
SFPP30-02.5(X)	SFPP30-02.5-(XX)(X)	2.5m (8.2 ft.)	30	Passive
SFPP30-03(X)	SFPP30-03-(XX)(X)	3m (9.8 ft.)	30	Passive
SFPP30-03.5(X)	SFPP30-03.5-(XX)(X)	3.5m (11.5 ft.)	30	Passive
SFPP30-04(X)	SFPP30-04-(XX)(X)	4m (13.1 ft.)	30	Passive
SFPP28-05(X)	SFPP28-05-(XX)(X)	5m (16.4 ft.)	28	Passive
SFPP24-07(X)	SFPP24-07-(XX)(X)	7m (23.0 ft.)	24	Passive
SFPPA28-07(X)	SFPPA28-07-(XX)(X)	7m (23.0 ft.)	28	Active
SFPPA28-10(X)	SFPPA28-10-(XX)(X)	10m (32.8 ft.)	28	Active

Use (X) to specify LS0H: L = LS0H, blank = PVC
Use (XX) to specify colour: 01 = Black, 02 = White, 03 = Red, 06 = Blue

Colour-Coded Cable Clips:

Our colour-coded cable clips are designed to be highly visible, have a secure fit to the cable and easily field attachable to Siemon SFP+ cables. With 8 available colours to choose from, these colour-coded cable clips provide Data Centre Administrators the ability to customise their cables to clearly differentiate and identify various networks.

Part# **Description**

CLIP-CBL-50-(XX)..... Colour-coded cable clip, 30 and 28 AWG, bag of 25 clips
CLIP-CBL-62-(XX)..... Colour-coded cable clip, 26 and 24 AWG, bag of 25 clips

Use (XX) to specify colour:
02 = White, 03 = Red, 04 = Grey, 05 = Yellow, 06 = Blue, 07 = Green, 08 = Violet, 09 = Orange

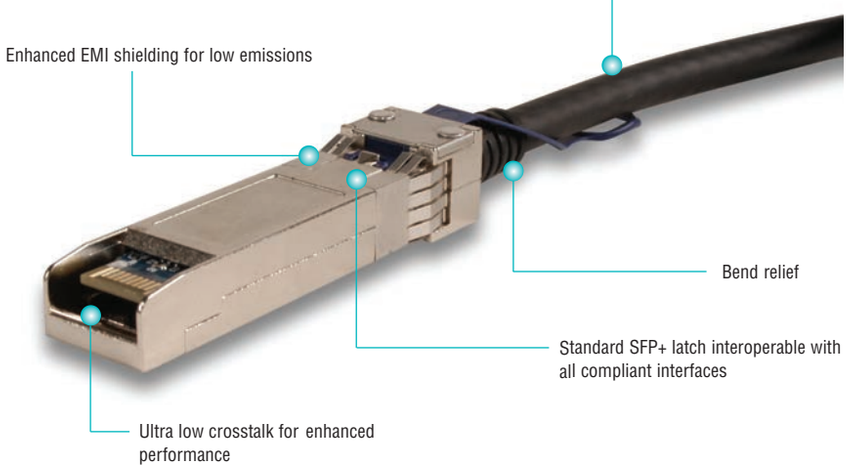
SFP+ 10G Cisco Compatible Active and Passive Copper Cable Assemblies

Cisco Compatible SFP+ cables from Siemon were developed specifically as a cost-effective and lower-power alternative to optical modules for short reach links in high-speed interconnect applications such as high-performance computing (HPC), enterprise networking including top-of-rack switching and network storage markets. The assemblies support data transfer rates up to 10+ Gb/s per lane, meeting or exceeding current standards specifications.

Cisco Compatible SFP+ active and passive copper cable assemblies are programmed specifically to work with Cisco equipment. When these cables are plugged into Cisco equipment they will not trigger the warning message that a non-Cisco transceiver has been detected. These cables do not violate Cisco's warranty.

These SFP+ fully-shielded assemblies combine twin-axial shielded cable configuration with robust die cast housings for enhanced support of high frequency data rates. These SFP+ assemblies are impedance matched to ensure interoperability and minimise EMI leakage through their fully-shielded design.

The active cables use signal processing within the connector back shells to extend the length that copper cables can reach beyond the limits of passive copper solutions.

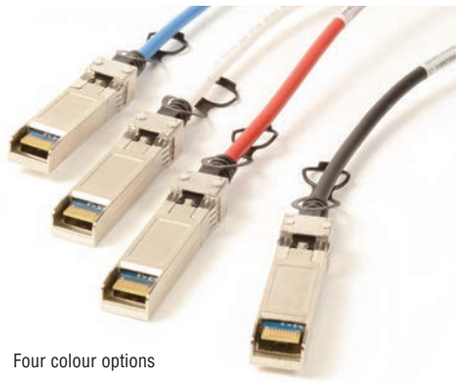


STANDARDS COMPLIANCE

- Electrical: SFF-8431, SFF-8083
- Mechanical: SFF-8432
- EEPROM: SFF-8472
- RoHS

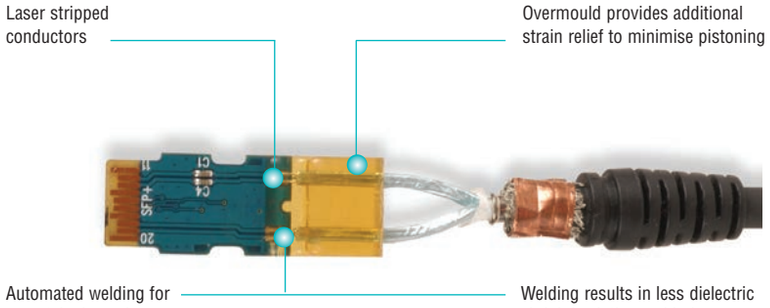
APPLICATIONS

- All Cisco Network equipment having 10GBASE-CX1 ports including Catalyst and Nexus



Four colour options

PCB Termination



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Product Information

PERFORMANCE SPECIFICATIONS

Electrical	
Min. Dielectric Withstand Voltage	300 VDC
Insulation Resistance	1000 Mohms
Current Rating	0.5 Amp Min/Signal Contact
Power Consumption (active cables only)	700mw Max
General	
Operating Temperature	-10 to 70° C (32 to 15° F)
Flammability Rating	UL 94 V-0
Green Features	RoHS, Lead-Free
Shield	Braid/Foil
Marking	Mfg Name, Part #, Date Code

Plug	
Backshell Material	Nickel-Plated Zinc Diecast
Contact Material	PCB with Gold-Plated Pads
Latch	Positive Latching w/ Pull
Insertion Force	30N (6.7 lbf.) Max
Withdrawal Force	20N (4.5 lbf.) Max
Retention Force	90N (20.2 lbf.) Max
Durability	50 Cycles Min
Cable	
Conductor	Solid
Wire Gauge	30 AWG to 24 AWG
Impedance	100± 5 ohms
Construction	Twinaxial
Cable OD	30 AWG = 4.5mm (0.18 in.)
	28 AWG = 4.7mm (0.19 in.)
	24 AWG = 6.2mm (0.24 in.)
Jacket Type	PVC or LS0H
Bend Radius	5X Cable OD

Colour Options Available:

Ordering Information:

SFP+ Passive/Active Copper Cable Assemblies

Part Number (Black)	Part Number (Coloured)	Part Number (LS0H)	Length	Gauge	Type
SFPH10GBCU0.3MS	SFPH10GB0.3MS(XX)	SFPH10GB0.3M(XX)L	0.3m (1 ft.)	30	Passive
SFPH10GBCU0.5MS	SFPH10GB0.5MS(XX)	SFPH10GB0.5M(XX)L	0.5m (1.6 ft.)	30	Passive
SFPH10GBCU1MS	SFPH10GB1MS(XX)	SFPH10GB1.0M(XX)L	1m (3.3 ft.)	30	Passive
SFPH10GBCU1.5MS	SFPH10GB1.5MS(XX)	SFPH10GB1.5M(XX)L	1.5m (4.9 ft.)	30	Passive
SFPH10GBCU2MS	SFPH10GB2MS(XX)	SFPH10GB2.0M(XX)L	2m (6.6 ft.)	30	Passive
SFPH10GBCU2.5MS	SFPH10GB2.5MS(XX)	SFPH10GB2.5M(XX)L	2.5m (8.2 ft.)	30	Passive
SFPH10GBCU3MS	SFPH10GB3MS(XX)	SFPH10GB3.0M(XX)L	3m (9.8 ft.)	30	Passive
SFPH10GBCU3.5MS	SFPH10GB3.5MS(XX)	SFPH10GB3.5M(XX)L	3.5m (11.5 ft.)	30	Passive
SFPH10GBCU4MS	SFPH10GB4MS(XX)	SFPH10GB4.0M(XX)L	4m (13.1 ft.)	26	Passive
SFPH10GBCU5MS	SFPH10GB5MS(XX)	SFPH10GB5.0M(XX)L	5m (16.4 ft.)	24	Passive
SFPH10GBACU7MS	SFPH10GBA7MS(XX)	SFPH10GBA7M(XX)L	7m (23.0 ft.)	28	Active
SFPH10GBACU10MS	SFPH10GBA10MS(XX)	SFPH10GBA10M(XX)L	10m (32.8 ft.)	28	Active

Use (XX) to specify colour: 01 = Black, 02 = White, 03 = Red, 06 = Blue

Colour-Coded Cable Clips:

Our colour-coded cable clips are designed to be highly visible, have a secure fit to the cable and easily field attachable to Siemon SFP+ cables. With 8 available colours to choose from, these colour-coded cable clips provide Data Centre Administrators the ability to customise their cables to clearly differentiate and identify various networks.

Part# **Description**

CLIP-CBL-50-(XX)....Colour-coded cable clip, 30 and 28 AWG, bag of 25 clips
CLIP-CBL-62-(XX)....Colour-coded cable clip, 26 and 24 AWG, bag of 25 clips

Use (XX) to specify colour:
02 = White, 03 = Red, 04 = Grey, 05 = Yellow, 06 = Blue, 07 = Green, 08 = Violet, 09 = Orange