

QSFP+ PRODUCTS

Driving Your Next Generation DataCenter

QSFP+ Passive Copper Cable

APPLICATIONS

- InfiniBand 4X SDR, DDR, QDR and FDR
- Ethernet 10G, 40G
- FiberChannel 10G, 40G, SAN, 4X16G
- RapidIO
- Rack-to-Rack, Shelf-to-Shelf Interconnect
Top of Rack (TOR) and Core Switch
- Networking, Storage
- Hubs, switches, routers, servers

STANDARDS COMPLIANCE

QSFP+ End

- Electrical: IBTA V2 Revision 1.2.1 and 1.3
- IEEE 802.3ba
- SFF-8436

SFP+ End

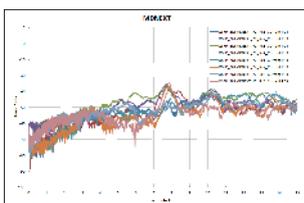
- SFF-8431
- SFF-8432
- SFF-8472
- RoHS

10Gtek QSFP+ direct attach copper cable assemblies are a high-speed, cost-effective alternatives to fiber optics in Ethernet, Fibre Channel and InfiniBand technology applications. These cable assemblies are designed to meet emerging data center and high performance computing application and support the bandwidth transmission requirements as defined by IEEE 802.3ba (40 Gb/s) and Infiniband QDR (4x10 Gb/s per channel) and FDR (4x14 Gb/s per channel) specifications. The QSFP+ copper cable form factor uses 8 differential pairs that provide 4 data transmission channels. The cable assemblies meet or exceed the industry MSA for signal integrity performance.

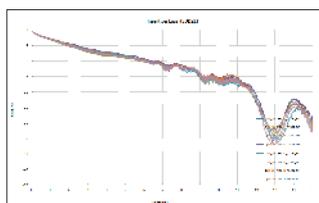
QSFP+ to 4SFP+ direct-attach assemblies are available in standard lengths up to 7 meters with longer custom lengths available. These Interconnect Solutions breakout cables allow users to connect equipment with QSFP+ ports configured to work as four SFP+ ports.

Optimizing systems to operate with 10Gtek's passive copper cables significantly reduces power consumption, EMI emission, eliminating the use of EDC hosts and enlarge the connectivity opportunities of the system.

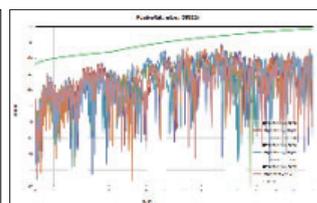
Typical QSFP+ DAC S Parameters 3Meters



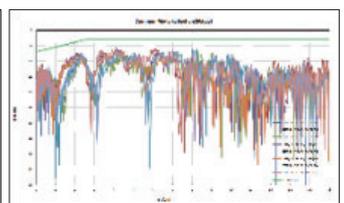
MDNEXT



Insertion Loss (SDD21)



Receive Return Loss (SDD22)



Common Mode Reflection (SCC22)

Performance Specifications:

Electrical				
Parameter	Symbol	Min	Type	Max
Input voltage(V)	Vcc	3.15	3.3	3.45
Clock frequency(kHz)	Fscl			400
Power(mW)				0.001
Current(mA)	Icc			0.1
Data rate(Gbps)		0.010		10.3125(QDR) 14.0625(FDR)
Operating Temperature(℃)		0		70

Plug	
Back shell Material	Nickel Plated Zinc Diecast
Contact Material	PCB with Gold-Plated Pads
Latch	Positive Latching w/Pull
Insertion Force	QSFP+: 40N Max. SFP+40N Max
Withdrawal Force	QSFP+: 30N Max. SFP+11.5N Max
Retention Force	90N Max
Durability	QSFP+: 250 Cycles Min. SFP+250 Cycles Min.

General	
Min. Dielectric Withstand Voltage	300 VDC
Insulation Resistance	1000 Mohms
Current Rating	0.5 Amp Min/signal Contact
Flammability Rating (Plastics)	UL 94
Green Features	ROHS, Lead-Free
Shield	Braid/Foil

Raw Cable	
Conductor	Solid
Wire Gauge	30 AWG to 24 AWG
Impedance	100+/-5 ohms
Construction	Twinaxial
Cable OD	30 AWG=6.60mm(0.259 in)
	28 AWG=7.50mm(0.295 in)
	26 AWG=8.80mm(0.346 in)
	24 AWG=9.80mm(0.385 in)
Jacket Type	PVC
Bend Radius	5X Cable OD-Single
	10X Cable OD-Repeated

Ordering Information:

QSFP+ QDR/ FDR Passive Copper Cable Assemblies

Length	Data Rate	P/N	AWG
1 m	40Gbps	CAB-QSFP/QSFP-P1M	/ / 28 30
3 m	40Gbps	CAB-QSFP/QSFP-P3M	/ / 28 30
5 m	40Gbps	CAB-QSFP/QSFP-P5M	24 26 28 /
7 m	40Gbps	CAB-QSFP/QSFP-P7M	24 / / /
Length	Data Rate	P/N	AWG
0 m	56Gbps	CAB-Q14/Q14-P50CM	/ / 30
1 m	56Gbps	CAB-Q14/Q14-P1M	/ / 30
2 m	56Gbps	CAB-Q14/Q14-P2M	/ / 30
3 m	56Gbps	CAB-Q14/Q14-P3M	/ 28 /
4 m	56Gbps	CAB-Q14/Q14-P4M	26 / /

QSFP+ to 4x SFP+ Passive Copper Cable Assemblies

Length	Data Rate	P/N	AWG
1 m	40Gbps	CAB-QSFP/4SFP-P1M	/ / 30
3 m	40Gbps	CAB-QSFP/4SFP-P3M	/ 28 30
5 m	40Gbps	CAB-QSFP/4SFP-P5M	26 / /
7 m	40Gbps	CAB-QSFP/4SFP-P7M	26 / /