

	Part Name	Description	Form Factor	Light Source	Optical Connector	Max. Reach	Temp.
800G Pluggable	TES-K18FE-CCZ	800GBASE OSFP DR8 InfiniBand Compatible	OSFP Fintop	1310nm DFB	MPO16	500m	0~70°C
	TES-K18BF-CCZ	800GBASE OSFP 2x DR4 InfiniBand Compatible	OSFP Fintop	1310nm DFB	2xMPO12	500m	0~70°C
	TES-K18HF-8CZ	800GBASE OSFP 2x SR4 InfiniBand Compatible	OSFP Fintop	850nm VCSEL	2xMPO12	100m	0~70°C
	TES-K18HE-8CZ	800GBASE OSFP SR8 InfiniBand Compatible	OSFP Fintop	850nm VCSEL	MPO16	100m	0~70°C
	TES-J18BF-CCZ	800GBASE OSFP 2x DR4 LPO	OSFP Fintop	1310nm DFB	2xMPO12	500m	0~70°C
	TES-J18BE-CCZ	800GBASE OSFP DR8 LPO	OSFP Fintop	1310nm DFB	MPO16	500m	0~70°C
400G Pluggable	TQS-Q18HE-8CZ	800GBASE QSFP-DD SR8 InfiniBand Compatible	QSFP-DD	850nm VCSEL	MPO16	100m	0~70°C
	TQS-R16B9-CCZ	400GBASE QSFP-DD DR4 InfiniBand Compatible	QSFP-DD	1310nm DFB	MPO12	500m	0~70°C
	TQS-R16H9-8CZ	400GBASE QSFP-DD SR4 InfiniBand Compatible	QSFP-DD	850nm VCSEL	MPO12	100m	0~70°C
	TES-L16HB-CCZ	400GBASE OSFP-RHS DR4 InfiniBand Compatible	OSFP-RHS	1310nm DFB	MPO12	500m	0~70°C
	TES-L16H9-8CZ	400GBASE OSFP-RHS SR4 InfiniBand Compatible	OSFP-RHS	850nm VCSEL	MPO12	100m	0~70°C
	TQS-P16H9-8CZ	400GBASE QSFP112 SR4 InfiniBand Compatible	QSFP112	850nm VCSEL	MPO12	100m	0~70°C
200G Pluggable	TQS-N16H9-9CZ	400GBASE QSFP112 SR4 LPO	QSFP112	850nm VCSEL	MPO12	100m	0~70°C
800G AOC	TQS-Q15H9-8FZ	200GBASE QSFP56 SR4 InfiniBand Compatible	QSFP56	850nm VCSEL	MPO12	100m	0~70°C
	TES-K18H8-XCZ##	800GBASE OSFP AOC	OSFP Fintop	850nm VCSEL		100m	0~70°C
	TQS-Q18H8-XCZ##	800GBASE QSFP-DD AOC	QSFP-DD	850nm VCSEL		100m	0~70°C
	TQS-R16H8-X83##	400GBASE QSFP-DD AOC	QSFP-DD	850nm VCSEL		100m	0~70°C
	TQS-P16H8-XCZ##	400GBASE QSFP112 AOC	QSFP112	850nm VCSEL		100m	0~70°C
	TES-L16H8-XCZ##	400GBASE OSFP RHS AOC	OSFP-RHS	850nm VCSEL		100m	0~70°C
200G AOC	TQS-Q15H8-XCZ##	200GBASE QSFP56 AOC (CDR)	QSFP56	850nm VCSEL		100m	0~70°C
100G Pluggable	TQS-Q14H9-J87	100GBASE SR4	QSFP28	850nm VCSEL	MPO	100m	0~70°C
	TQS-Q24H9-J87	100GBASE SR4	QSFP28	850nm VCSEL	MPO	100m	-40~85°C
	TQS-QG4H9-J83	100GBASE SR4	QSFP28	850nm VCSEL	MPO	100m	-20~85°C
	TQS-Q24H9-J83	100GBASE SR4	QSFP28	850nm VCSEL	MPO	100m	-40~85°C
	TQS-Q1JH9-J83	100GBASE SR4	QSFP28	850nm VCSEL	MPO	100m	0~70°C
	TQS-Q14H9-J85	100GBASE SR4	QSFP28	850nm VCSEL	MPO	100m	0~70°C
	TCW-Q14AA-D81	100GBASE CWDM4	QSFP28	CWDM DFB	LC	2km	0~70°C
	TGW-Q14BB-FCT	100GBASE LR4	QSFP28	LWDM DFB	LC	10km	0~70°C
	TGW-Q14BB-J87	100GBASE LR4	QSFP28	LWDM DFB	LC	10km	0~70°C
	TGW-Q14BB-F81	100GBASE LR4	QSFP28	LWDM DFB	LC	10km	0~70°C
100G AOC	TQS-Q1489-F82	100GBASE PSM4	QSFP28	1310nm DFB	MPO	10km	0~70°C
	TQS-Q14H8-X83##	100GBASE AOC	QSFP28	850nm VCSEL		100m	0~70°C
	TQS-Q14H8-X85##	100GBASE AOC	QSFP28	850nm VCSEL		100m	0~70°C
100G AOC FANOUT	TQS-Q14H8-X87##	100GBASE AOC	QSFP28	850nm VCSEL		100m	0~70°C
40G QSFP+	TQS-214H8-X83##	100GBASE Fanout AOC 25G*4	QSFP28/SFP28	850nm VCSEL		100m	0~70°C
	TQS-Q1L59-882	40GBASE SR4 CT	QSFP+	850nm VCSEL	MPO	150m	0~70°C
	TQS-Q2L59-882	40GBASE SR4 IT	QSFP+	850nm VCSEL	MPO	150m	-40~85°C
	TQS-QJL59-882	40GBASE SR4 ET	QSFP+	850nm VCSEL	MPO	150m	0~85°C
	TCW-Q1LAA-F81	40GBASE LR4 CT	QSFP+	CWDM DFB		10km	0~70°C
	TCW-Q2LAA-F81	40GBASE LR4 IT	QSFP+	CWDM DFB		10km	-40~85°C
40G AOC	TQS-Q1LB9-F11	40GBASE PSM4	QSFP+	1310nm DFB	MPO	10km	0~70°C
40G AOC FANOUT	TQS-Q1L58-X85##	40GBASE AOC	QSFP+	850nm VCSEL		100m	0~70°C
	TQS-21L58-X85##	40GBASE AOC Fanout 4x10GB	QSFP+ /SFP+	850nm VCSEL		100m	0~70°C

25G Pluggable

25G AOC

10G Pluggable

10G AOC

MiniSAS-HD AOC

1G/4.25G Pluggable

SFP28 LC BiDi

800G DAC

400G DAC

200G DAC

Part Name	Description	Form Factor	Light Source	Optical Connector	Max. Reach	Temp.
TAS-A1EH1-834	25GBASE SR CT	SFP28	850nm VCSEL	LC	100m	0~70°C
TAS-A2EH1-837	25GBASE SR IT	SFP28	850nm VCSEL	LC	100m	-40~85°C
TAS-A1EH1-837	25GBASE/10GBASE SR Dual Rate CT	SFP28	850nm VCSEL	LC	100m	0~70°C
TAS-AGEH1-837	25GBASE/10GBASE SR Dual Rate ET	SFP28	850nm VCSEL	LC	100m	-20~85°C
TAS-A1EB1-F11	25GBASE LR CT	SFP28	1310nm DFB	LC	10km	0~70°C
TAS-A2EB1-F11	25GBASE LR IT	SFP28	1310nm DFB	LC	10km	-40~85°C
TAS-A1EH8-X31##	25GBASE AOC	SFP28	850nm VCSEL	LC	100m	0~70°C
TAS-A1NH1-P11	10GBASE SR	SFP+	850nm VCSEL	LC	300m	0~70°C
TAS-A2NH1-P11	10GBASE SR	SFP+	850nm VCSEL	LC	300m	-40~85°C
AS-A1NB1-FAH	10GBASE LR	SFP+	1310nm DFB	LC	10km	0~70°C
AS-A2NB1-FAH	10GBASE LR	SFP+	1310nm DFB	LC	10km	-40~85°C
TAS-A1NA1-D11	10GBASE LR-LITE	SFP+	1310 FP	LC	2km	0~70°C
TAS-A1NS1-K11	10GBASE ER	SFP+	1550nm EML	LC	40km	0~70°C
TAS-A1NL1-Q11	10GBASE ZR	SFP+	1550nm EML	LC	80km	0~70°C
TAS-A5NH1-P11	10GBASE SR	SFP+	850nm VCSEL	LC	300m	-5~70°C
TAS-A5NB1-FAH	10GBASE LR	SFP+	1310nm DFB	LC	10km	-5~70°C
TAS-A1NS5-KA8	10GBASE ER	SFP+	1550nm EML	LC	40km	0~70°C
TAS-A1NS5-KA6	10GBASE ER	SFP+	1550nm EML	LC	40km	0~70°C
TAS-A1NA1-1AF	10GBASE LRM	SFP+	1310 FP	LC	220m	0~70°C
TAS-A5NB1-F15	10GBASE LR	SFP+	1310nm DFB	LC	10km	-5~70°C
TAS-A2NH1-P15	10GBASE SR	SFP+	850nm VCSEL	LC	300m	-40~85°C
TAS-A5NH1-P15	10GBASE SR	SFP+	850nm VCSEL	LC	300m	-5~70°C
TAS-A1NH1-PAH	10GBASE SR	SFP+	850nm VCSEL	LC	300m	0~70°C
TAS-A1JB1-FAH	Dual rate 1G/10GBASE LR	SFP+	1310nm DFB	LC	10km	0~70°C
TAS-A5JB1-F11	Dual rate 1G/10GBASE LR	SFP+	1310nm DFB	LC	10km	-5~70°C
TAS-A1JH1-P11	Dual rate 1G/10GBASE SR	SFP+	850nm VCSEL	LC	300m	0~70°C
TAS-S1NH1-P13	Dual mini SFF	SFF	850nm VCSEL	LC	300m	0~70°C
TAS-A1NH8-X13##	10GBASE AOC	SFP+	850nm VCSEL	LC	150m	0~70°C
TMS-E1EH8-XCP##	48G MiniSAS	Mini-SAS HD	850nm VCSEL	LC	100m	0~70°C
TSD-S1KH1-A1G2	4.25G SX	SFP	850nm VCSEL	LC	150m	0~70°C
TSP-S1CH1-C11	1.25G 1000BASE SX	SFP	850nm VCSEL	LC	550m	0~70°C
TSD-S2CH1-C11	1.25G 1000BASE SX	SFP	850nm VCSEL	LC	550m	-40~85°C
TSP-S2CA1-DAV	1.25G 1000BASE LXM	SFP	1310nm DFB	LC	2km	-40~85°C
TSD-S2CA1-F11	1.25G 1000BASE LX	SFP	1310nm DFB	LC	10km	-40~85°C
TBD-A2E11-FCF	25GBASE BX10-U	SFP+	1270nm DFB	LC	10km	-40~85°C
TBD-A2E21-FCF	25GBASE-BX10-D	SFP+	1330nm DFB	LC	10km	-40~85°C
TBD-A2E11-VCF	25GBASE-BX15-U	SFP+	1270nm DFB	LC	15km	-40~85°C
TBD-A2E21-VCF	25GBASE-BX15-D	SFP+	1330nm DFB	LC	15km	-40~85°C
TBD-A2E11-GCF	25GBASE-BX20-U	SFP+	1270nm DFB	LC	15km	-40~85°C
TBD-A2E21-GCF	25GBASE-BX20-D	SFP+	1330nm DFB	LC	15km	-40~85°C
TCP-K1832-X2E##	OSFP 800G DAC	OSFP			3m	0~70°C
TCP-K1632-X2E##	OSFP 400G DAC	OSFP			3m	0~70°C
TCP-R1632-X2E##	QSFP-DD 400G DAC	QSFP-DD			3m	0~70°C
TCP-11632-X2E##	QSFP-DD 400G to 4x100G fanout DAC	QSFP-DD/QSFP28			3m	0~70°C
TCP-Q1512-X2E##	QSFP56 200G DAC	QSFP56			3m	0~70°C
TCP-11512-X2E##	QSFP-56 200G to 2x100G fanout DAC	QSFP56/QSFP28			3m	0~70°C

100G DAC

50G DAC

40G DAC

Immersion AOC

Immersion AOP

Immersion DAC

Immersion Extender

USB

HDMI

DisplayPort

Multi-signal extender

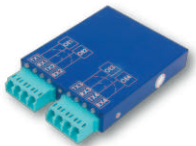
Part Name	Description	Form Factor	Light Source	Optical Connector	Max. Reach	Temp.
TCP-Q1412-22E##	QSFP28 100G DAC	QSFP28			5m	0~70°C
TCP-11412-X2E##	QSFP28 100G to 4x25G Fanout DAC	QSFP28/SFP28			5m	0~70°C
TCP-S1132-X2E##	SFP56 50G DAC	SFP56			5m	0~70°C
TCP-C1D12-22E##	QSFP+ DAC	QSFP+			5m	0~70°C
TQS-R16H8-P8M##	400GBASE QSFP-DD Immersion AOC Ethernet/InfiniBand	QSFP-DD	850nm VCSEL		100m	0~70°C
TES-L16H8-P8M##	400GBASE OSFP RHS Immersion AOC Ethernet/InfiniBand	OSFP-RHS	850nm VCSEL		100m	0~70°C
TQS-Q1JH8-P8M##	100/40GBASE QSFP28 Immersion AOC	QSFP28	850nm VCSEL		100m	0~70°C
TAS-A1ZH8-P3M##	25G/10GBase SFP28 Immersion AOC	SFP28	850nm VCSEL		100m	0~70°C
TAS-A1JH8-P1M##	10/1GBASE SFP+ Immersion AOC	SFP+	850nm VCSEL		100m	0~70°C
	800G OSFP to 2x400G OSFP RHS Fanout					
TES-717H8-P8M##	Immersion AOC Ethernet/InfiniBand	OSFP/OSFP RHS	850nm VCSEL		100m	0~70°C
	400GBASE DR4 immersion AOP					
TQS-P16B8-P8M##	Ethernet/InfiniBand	QSFP112	1310nm DFB	MPO12	100m	0~70°C
	400GBASE SR8 immersion AOP					
TQS-R167C-P8M##	Ethernet/InfiniBand	QSFP-DD	850nm VCSEL	MPO w/Pin	100m	0~70°C
TGW-Q14BB-V8M##	100GBASE CWDM4 immersion AOP	QSFP28	1310 LDWM	LC	100m	0~70°C
TQS-Q1JHB-P8M##	100/40GBASE SR4 immersion AOP	QSFP28	850nm VCSEL	MPO w/Pin	100m	0~70°C
TQS-Q14H8-P8M##	100G SR4 immersion AOP	QSFP28	850nm VCSEL	MPO w/Pin	100m	0~70°C
TQS-Q1LHB-P8M##	40G SR4 immersion AOP	QSFP+	850nm VCSEL	MPO w/Pin	100m	0~70°C
TAS-A1ZH5-P3M##	25G/10GBase SR immersion AOP	SFP28	850nm VCSEL	Duplex LC	100m	0~70°C
TAS-A1EH5-P3M##	25G SR immersion AOP	SFP28	850nm VCSEL	Duplex LC	100m	0~70°C
TAS-A1JH5-P1M##	10/1GBASE SR immersion AOP	SFP+	850nm VCSEL	Duplex LC	100m	0~70°C
TAS-A1NH5-P1M##	10GBASE SR immersion AOP	SFP+	850nm VCSEL	Duplex LC	100m	0~70°C
DMR-M1SS1-PxE##	800G OSFP Immersion DAC	OSFP Fintop			3m	0~70°C
DMR-M1SR2-PxE##	800G OSFP to 2x400G OSFP-RHS Fanout Immersion DAC	OSFP/OSFP RHS			3m	0~70°C
DMR-K1RR1-RxE##	400G OSFP RHS Immersion DAC	OSFP RHS			3m	0~70°C
DMR-J1LL1-PxE##	400G QSFP-DD Immersion DAC	QSFP-DD			3m	0~70°C
DMR-H1JJ1-PxE##	200G QSFP56 Immersion DAC	QSFP56			3m	0~70°C
DMR-G1HH1-PxE##	100G QSFP28 Immersion DAC	QSFP28			3m	0~70°C
DMR-F1GG1-PxE##	40G QSFP+ Immersion DAC	QSFP+			3m	0~70°C
DMR-B1CC1-PxE##	25G SFP28 Immersion DAC	SFP28			3m	0~70°C
DMR-A1BB1-PxE##	10G SFP+ Immersion DAC	SFP+			3m	0~70°C
TCP-S1F1A-NNE##	Extender cable 10G	SFP+ to Cage			75cm	0~70°C
TCP-S1E1A-NNE##	Extender cable 25G	SFP28 to Cage			75cm	0~70°C
TCP-Q141B-NNE##	Extender cable 100G	QSFP28 to Cage			50cm	0~70°C
TCP-Q151B-NNE##	Extender cable 200G	QSFP56 to Cage			50cm	0~70°C
CAC-HA1AE-1-###-FR1	USB 3.2 Gen 2 (10G), Hybrid AOC	USB A/M to MB/M	850 VCSEL		50m	0~50°C
CAC-HA1AF-1-###-FR1	USB 3.2 Gen 2 (10G), Hybrid AOC	USB A/M to MB/M w screw	850 VCSEL		50m	0~50°C
CAC-HA1AA-1-###-FR1	USB 3.2 Gen 2 (10G), Hybrid AOC	USB A/M to A/M	850 VCSEL		50m	0~50°C
CAC-HA1CC-1-###-FR1	USB 3.2 Gen 2 (10G), Hybrid AOC	USB C/M to C/M	850 VCSEL		50m	0~50°C
CA3-HA1HH-1-###-FR1	HDMI 2.1 Cl2-rated, Hybrid AOC	HDMI A/M to A/M	850 VCSEL		150m	0~50°C
CF3-AB1H1-1-###-FR1	HDMI 2.1 Pigtail, All-fiber, 8KH-TX/RX	HDMI A/M to MPO	850 VCSEL		300m	0~50°C
CD3-AB1HH-1-###-FR1	HDMI 2.1 All-fiber AOC, Dongle both ends	HDMI A/M to A/M	850 VCSEL		300m	0~50°C
CA1-HA1DD-1-### FR1	DisPlayPort 1.4, Hybrid AOC	Display Port	850 VCSEL		15m	0~50°C
CA1-AA1DD-1-### FR1	DisPlayPort 1.4, All-fiber AOC	Display Port	850 VCSEL		99cm	0~50°C
CE1-AA1A1-1-###-FR1	DisplayPort 1.4 Pigtail, All-fiber, TX/RX	Display Port	850 VCSEL		99cm	0~50°C
VS3-H1H1B-DM1-FR1	Video transceiver box (All-fiber extender for HDMI, audio, USB 2.0, TOSLINK & Ethernet via control box)					0~50°C

Featured Products – Transceivers/Cables/Extenders



OSFP Pluggable

- 400G, 800G, SR8, 2xSR4 and DR8, 2xDR4
- DPO or LPO. Ethernet and InfiniBand Compatible
- Up to 500m Max. range
- AI/ML Data Center, Cloud, Supercomputing



QSFP-DD/QSFP112 Pluggable

- 400G, 800G, SR4, SR8, DR4
- DPO and LPO. Ethernet and InfiniBand Compatible
- Up to 500m Max. range
- AI/ML Data Center, Cloud, Supercomputing



QSFP28 Pluggable

- SR4, LR4, ER4, ZR4. Up to 80km Max. range
- Commercial or Industrial temperature
- Single lambda to 8 lambdas by WDM
- Data Center, Commercial Networking, 5G



SFP+/SFP28 Pluggable

- 10G, 25G, Ethernet,
- Single Rate, Dual Rate
- 100m-10km Max. range
- Commercial or Industrial temperature



AOC

- 10G, 25G, 40G, 100G, 200G, 400G, 800G
- 100m Max. range
- 1-on-1 or Fanout available



HDMI Cable

- Hybrid type or All-Fiber type
- Data rate Up to 48 Gbps
- Resolution Up to 8K@60Hz
- HDMI High Speed HDCP 1.4/2.2/2.3 HDR CEC Dolby Vision Up to 4:4:4 color sampling eARC



Multi-Signal Extender Box

- Video transceiver box
- Video transmitter, receiver box
- All-Fiber extender for HDMI, audio, USB 2.0, TOSLINK & Ethernet via control box

Optical Bypass Module

- 1G, 10G, 25G, 40G, 100G Ethernet
- Single rate, Dual rate
- Reliable Passive Bypass by latching
- Failproof, ideal for inline networking appliance
- 2 ports or 4 ports. Low Return Loss
- Digital Diagnostic Monitoring

Immersible AOC/Pigtail

- 10G to 800G, Ethernet, InfiniBand compatible
- 1-on-1 or Fanout available
- Low Power Consumption
- Material compatible with various immersion coolant

Immersible Extender

- QSFP56, QSFP28, SFP28, SFP+, SFP
- Low EMI, Crosstalk, Insertion Loss
- Coolant Resistance. Low capillarity

Direct Attach Cable

- OSFP, QSFP-DD, QSFP-112, QSFP56, QSFP28, QSFP+, SFP28
- 10G to 800G all data rates
- Fanout available

Display Port Cable

- Hybrid type or All-Fiber type
- Data rate 32.4 Gbps
- Resolution up to 8K x 4K via 4;2;0 or VESA
- DisplayPort 1.4, HDCP 1.4/2.2/2.3, HDR

USB Cable

- Hybrid type or All-Fiber type
- Data rate Up to 10 Gbps (Type C Gen2 x2: 20Gbps)
- Fiber Optics - High Speed & 300m Long Reac
- EMI/RFI resistant



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Formerica Optoelectronics Inc.



Complete Optical
and Data Connectivity
Solution

Optics for all applications