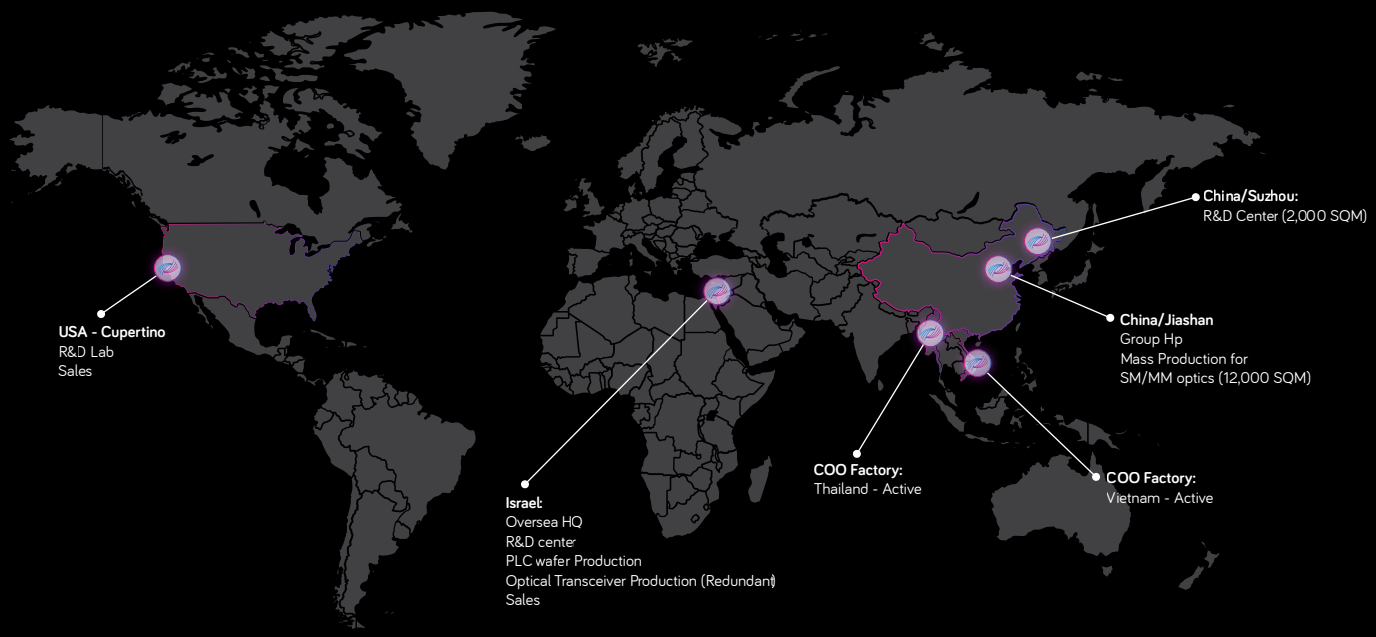
ColorChip
SystemOnGlass™

COLORCHIP TECHNOLOGY

Better word with colorful optics



Company

ColorChip Technology Co., Ltd. was established in 2020. In the same year, the company merged with ColorChip Company from Israel to form ColorChip Group. The company's headquarters is located in Israel. The company has over 20,000 square meters of production facilities in China, Israel, Vietnam and Thailand, and has 4 R&D centers to provide services and support to global customers.

Team

The ColorChip Group has over 400 employees, among whom the technical team consists of approximately 150 people. The company's management and core staff all come from well-known optical module enterprises in the optical communication industry both domestically and internationally. They have over 20 years of Technical Expertise and team management experience, forming a strong technical support system.

ColorChip is an established and trusted provider of high-performance optical modules. We offer a full portfolio of SFP, QSFP, and OSFP transceivers, along with Active Optical Cables (AOCs) and copper cables (ACC, AEC, and DAC). With data rates spanning

10G, 25G, 40G, 100G, 200G, 400G, 800G, 1.6T and beyond, ColorChip delivers scalable solutions designed to meet evolving bandwidth demands. Our products enable reliable short-, medium-, and long-reach connectivity across AI data centers, enterprise and telecom networks. We also provide highly flexible customization options, ensuring each solution is tailored to our customers' specific requirements.

1.6T

800G

400G

100G & 200G

10G & 25G & 40G

Wafer Scale Ion Exchange Process

ColorChip's' Planar-Lightwave-Circuit technology is based on the Ion-Exchange in glass fabrication method to generate Single Mode Fiber-like optical waveguides inside a proprietary glass substrate. To generate a specific geometric structure, a photolithography mask is used to create the waveguide on the glass surface, where the region that remains exposed defines the waveguide structure..

The waveguides are then created due to the unique behavior of the glass substrate at very high temperatures. Some ions diffuse into the substrate and replace the glass sodium ions. Thus the name, Ion Exchange

SystemOnGlass™: Photonic Integration, Perfected

SystemOnGlass™ is ColorChip's patented hybrid photonic integrated circuit (PIC) technology, seamlessly integrating both active and passive optical components on a single platform. Utilizing advanced automated placement systems, active optical elements are precisely assembled onto a proprietary glass substrate featuring embedded circular waveguides. This method yields a compact optical engine with significant benefits, including high integration of top-tier components and scalable performance across a broad range of data rates. The versatility of the SystemOnGlass™ platform has made it foundational to ColorChip's entire high-performance transceiver lineup. Moreover, this technology can be advanced to create hybrid-PCBs or glass interposers, enabling next-generation optical packaging applications such as Near Package Optics (NPO) and Co-Packaged Optics (CPO).

Seamless Compatibility

The glass platform offers perfect integration with all types of lasers and Photo-detectors.

Ultimate Scalability

Move seamlessly with same proven platform across generations, from transceivers to NPO/CPO.

One Optical Path

SystemOnGlass™ lets light travel through one single medium, with electric transmission lines.

ColorChip's 200G-per-lane solutions are newly built for next-generation data centers to provide artificial intelligence (AI) and machine learning (ML), harnessing advanced 3nm chipsets and silicon photonics to provide high bandwidth, low power consumption, and superior signal integrity. These solutions reflect significant progress in optical interconnect technology, supporting the bandwidth demands of modern hyperscale and AI-driven data center environments.

For detailed information, updated specifications, or sample requests, please contact our sales team using the email address provided on the last page of this product guide.

1600G OSFP2xDR4

1600G OSFP 2xFR4

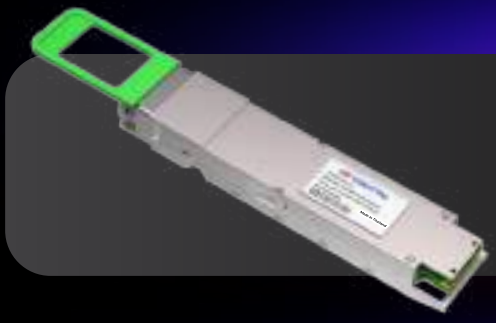
800G OSFP DR4

1600G OSFP AEC/DAC

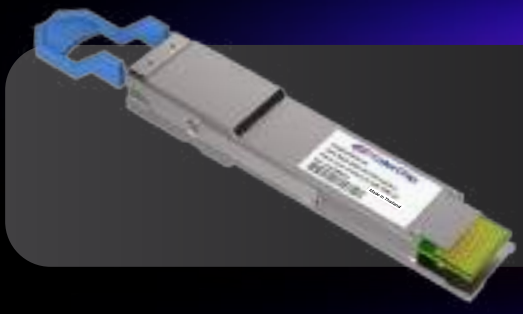
ColorChip's single-mode optical transceiver portfolio includes 800G and 400G solutions - the extensions of 200G, 100G, and lower-speed offerings. Several products leverage advanced 5nm DSP chipsets and incorporate silicon photonics in certain designs. These solutions deliver strong advantages in both performance and power efficiency, supporting a wide range of data center and AI connectivity requirements and Telecom applications.

For more product details, please refer to the product list page or contact our sales team via the email listed on the last page

800G OSFP 2xDR4



800G OSFP 2xFR4



400G QSFP-DD DR4

400G QSFP112 DR4

ColorChip's multi-mode optical modules are purpose-built for high-speed, short-reach interconnects in modern data center environments. The portfolio includes 800G, 400G, and lower-speed solutions. All modules utilize World-class optical components and DSP solutions. Available in OSFP, QSFP-DD, and QSFP112 form factors, these solutions deliver high reliability and low power consumption for short-reach connectivity.

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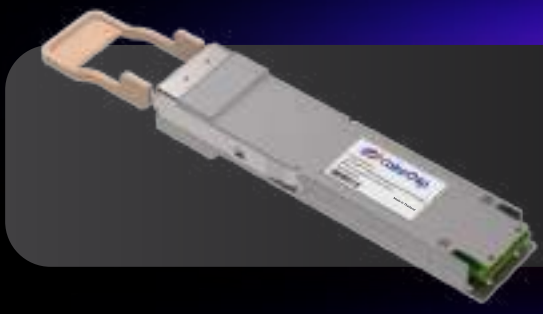
800G QSFP-DD SR8

800G OSFP 2X SR4



400G OSFP SR4

400G Q112 SR4/VR4

ColorChip delivers high-volume Active Optical Cable (AOC) solutions ranging from 400G to 800G, supporting multiple form factors and cable configurations. Flexible breakout options and customized configurations are available to accommodate diverse deployment requirements, ensuring optimal performance for a wide variety of applications in short-reach interconnects of AI data centers and clusters.

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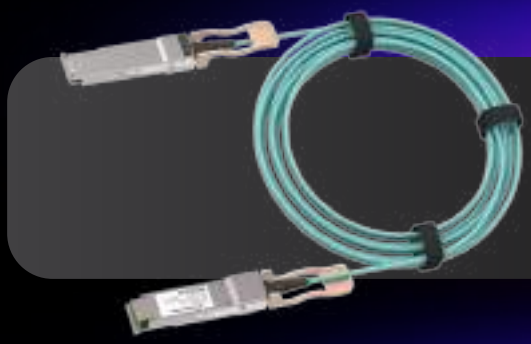
800G QSFP-DD SR8 AOC



400G QSFP112 SR4 AOC

800G OSFP SR8 to
2x400G Q112 SR4

400G OSFP SR4 to
400G Q112 SR4

ColorChip provides mass-produced AEC, ACC, and DAC solutions supporting data rates from 10Gb/s up to 800Gb/s, specifically engineered for intra-rack, high-speed interconnects in servers, ToR switches, and storage. The portfolio includes various breakout options (1:2, 1:4), enabling flexible deployments for a wide range of data center architectures For more product details, please refer to the product list page or contact our sales team via the email listed on the last page.

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800G QSFP-DD AEC/ACC/DAC

800G OSFP AEC/ACC/DAC

800G OSFP to 2xQ112 ACC/DAC

800G QSFP-DD to 2xQSFP-DD ACC/DAC

Product List - Single Mode Product

Form Factor	Type	Part Number	Data Rate (Gb/s)	Reach (M)	Connector	Temperature	Power Consumption (W)
OSFP 1600	2xDR4	CTPD82D4CS1-01	1600	500	Dual MPO-12	0-70	24
	DR8	CTPD8DR8CS1-01	1600	500	MPO-16	0-70	24
	2xFR4	CTPD82F4CS1-01	1600	2,000	Dual Duplex LC	0-70	24
OSFP 800	DR4 (4:4)	CTP8XDR4CS1-01	800	500	MPO-12	0-70	15
	DR4 (8:4)	CTO8XDR4CS1-01	800	500	MPO-12	0-70	15
	DR8	CTO8XDR8CS1-01	800	500	MPO-16	0-70	14.5
	2xDR4	CTO8X2D4CS1-01	800	500	Dual MPO-12	0-70	14.5
	2xFR4	CTO8X2F4CS2-01	800	2,000	Dual Duplex LC	0-70	14.5
QSFP-DD 800	DR8	CTF8XDR8CS1-01	800	500	MPO-16	0-70	14.5
	2xFR4	CTF8X2F4CS1-01	800	2,000	Dual Duplex LC	0-70	14.5
CFP2 DCO	ZR/ZR+	COC4XZP1CSS-01	800	-	Dual Duplex LC	0-70	30
QSFPDD 800 DCO	ZR/ZR+	COF8XZP1C3S-01	800	-	Dual Duplex LC	0-70	30
CFP2 DCO	ZR/ZR+	COC4XZP1CSS-01	400	-	Dual Duplex LC	0-70	30
QSFPDD DCO	ZR/ZR+	COD4XZP1C3S-01	400	-	MPO-12	0-70	23
QSFP-DD	DR4	CTD4XDR4CS1-01	400	500	MPO-12	0-70	10
	FR4	CTD4XFR4CS1-01	400	2,000	Duplex LC	0-70	10
	LR4	CTD4XLR4CS1-01	400	10,000	Duplex LC	0-70	10
QSFP112	DR4	CTF4XDR4CS2-01	400	500	MPO-12	0-70	8
	FR4	CTF4XFR4CS1-01	400	2,000	Duplex LC	0-70	10
	LR4	CTF4XLR4CS1-01	400	10,000	Duplex LC	0-70	10
QSFP28	CWDM4	CTQ1XCW4CS1-01	100	2,000	Dual LC	0-70	4
	LR4	CTQ1XLR4CS1-01	100	10,000	Dual LC	0-70	4
	LR4	CTQ1MLR4CS1-01	100	10,000	Dual LC	0-70	3
	DR1	CTQ1XDR1CS1-01	100	500	Dual LC	0-70	3
	FR1	CTQ1XFR1CS1-01	100	2,000	Dual LC	0-70	5
	ER4	CTQ1XER4CS1-01	100	40,000	Dual LC	0-70	6.5
	ZR4	CTQ1XZR4CS1-01	100	80,000	Dual LC	0-70	3.5
QSFP+	LR4	CTQ40LR4CS1-01	40	10,000	Dual LC	0-70	4
	ER4	CTQ40ER4CS1-01	40	40,000	Dual LC	0-70	4
	ZR4	CTQ40ZR4CS1-01	40	80,000	Dual LC	0-70	4
SFP28	CWDM-Tunable	COF8XZP1C3S-01	25	40,000	Dual LC	-40-85	3
SFP+	LR	CTS100LRIS1-01	10	10,000	Dual LC	0-70	1
	ER	CTS100ERCS1-01	10	40,000	Dual LC	0-70	1
	ZR	CTS100ZRCS1-01	10	80,000	Dual LC	0-70	1.8

All OSFP products support both RHS and IHS form factor options..

Product List - Multi-Mode Product

Form Factor	Type	Part Number	Data Rate (Gb/s)	Reach (M)	Connector	Temperature	Power Consumption (W)
OSFP 800	SR8 LPO SR8 2xSR4	CLO8XSR8CS2-01 CTO8XSR8CS2-01 CT08X2S4CS2-01	800 800 800	50 100 100	MPO-16 MPO-16 Dual MPO-12	0-70 0-70 0-70	5.5 14 14
QSFP-DD 800	SR8 LPO SR8	CLF8XSR8CS1-01 CTF8XSR8CS1-01	800 800	50 100	MPO-16 MPO-16	0-70 0-70	5.5 14
QSFP-DD	SR4 SR8	CTF4X8S4CS1-01 CTD4XSR8CS1-01	400 400	100 100	MPO-12 MPO-16	0-70 0-70	8 8
QSFP112	SR4 LPO SR4 VR4	CLF4XSR4CS1-01 CTF4XSR4CS2-01 CTF4XVR4CS2-01	400 400 400	50 100 50	MPO-12 MPO-12 MPO-12	0-70 0-70 0-70	2.5 8 8
OSFP	SR4	CTO4XSR4CS2-01	400	100	MPO-12	0-70	8
QSFP-DD	SR8	CTQ2XSR8CS1-01	200	100	MPO-16	0-70	4
QSFP28	SR4 SR4 eSR4 SWDM4	CTQ1XSR4CS1-01 CTQ1MSR4CS1-01 CTQ1XESRCS1-01 CTQ1XSW4CS1-01	100 100 100 100	100 100 100 100	MPO-12 MPO-12 MPO-12 Dual LC	0-70 0-70 0-70 0-70	2.5 2.5 2.5 3.5
QSFP+	SWDM4	CTQ40SW4CS1-01	40	240	Dual LC	0-70	3.5
SFP+	SR	CTS100SRCS1-01	10G	300	Dual LC	0-70	1

All OSFP products support both RHS and IHS form factor options..

Form Factor A	Form Factor B	Type	Part Number	Reach (M) Connector		"Reach (M)"	Temperature (C)	Power Consumption (W)
				A	B			
OSFP112	OSFP112 QSFP112 OSFP112 QSFP-DD	AOC AOC Fan-Out AOC Fan-Out AOC Fan-Out	CAO8XxxxCS1-01 CAO8XFxxxCS1-01 CAOO8XTxxCS1-01 CAOD8XTxxCS1-01	800 800 800 800	800 2x400 2x400 2x400	0.5~100 0.5~100 0.5~100 0.5~100	0-70 0-70 0-70 0-70	15 15(A) and 8(B) 15(A) and 9(B) 15(A) and 9(B)
QSFP-DD 800	QSFP-DD800 QSFP112 QSFP-DD	AOC AOC Fan-Out AOC Fan-Out	CAF8XxxxCS1-01 CAF8XxxxCSQ-01 CAF8XxxxCSD-01	800 800 800	800 2x400 2x400	0.5~100 0.5~100 0.5~100	0-70 0-70 0-70	14 14(A) and 8(B) 14(A) and 8(B)
QSFP112	QSFP112 QSFP112	AOC AOC Fan-Out	CAF4XxxxCS1-01 CAF4XFxxCS1-01	400 400	400 2x200	0.5~100 0.5~100	0-70 0-70	8 8(A) and 6(B)
QSFP-DD	QSFP-DD QSFP56	AOC AOC Fan-Out	CAD4XxxxCS1-01 CAD4XFxxCS1-01	400 400	400 2x200	0.5~100 0.5~100	0-70 0-70	8 8(A) and 6(B)
QSFP56	QSFP28	AOC Fan-Out	CAD2XFxxCS1-01	200	2x100	0.5~100	0-70	4(A) and 3(B)
QSFP28	QSFP28 SFP28	AOC AOC Fan-Out	CAQ1XxxxCS1-01 CAQ1XFxxCS1-01	100 100	100 4x25	0.5~100 0.5~100	0-70 0-70	2.5 2.5(A) and 1(B)
QSFP+	QSFP+ SFP28	AOC AOC Fan-Out	CAQ40xxxCS1-01 CAQ40FxxCS1-01	40 40	40 4x10	0.5~100 0.5~100	0-70 0-70	1.5 1.5(A) and 0.35(B)
SFP28	SFP28	AOC	CAS25xxxCS1-01	25	25	0.5~100	0-70	1
SFP+	SFP+	AOC	CAS10xxxCS1-01	10	10	0.5~100	0-70	1

All OSFP products support both RHS and IHS form factor options..

Product List - Passive cable

Form Factor A	Form Factor B	Type	Part Number	Reach (M) Connector		"Reach (M)"	Temperature (C)	Power Consumption (W)
				A	B			
OSFP	OSFP	AEC	C-EPPD8xRxyx-00	1600	1600	1.5~4	0-70	18
	OSFP	DAC	C-DPPD81R0R0-00	1600	1600	0.5~1	0-70	0.25
	OSFP	DAC	C-DOO8XxRxyx-00	800	800	0.5~2.5	0-70	0.25
	OSFP	ACC	C-BOO8XxRxyx-00	800	800	0.5~5	0-70	1.5
	OSFP	AEC	C-EOO8XxRxyx-00	800	800	1~7	0-70	14
	OSFP	DAC Fan-Out	C-DOO8XTxRxyx-00	800	2x400	0.5~2.5	0-70	0.25(A) and 0.25(B)
	QSFP112	DAC Fan-Out	C-DOQ8XTxRxyx-00	800	2x400	0.5~2.5	0-70	0.25(A) and 0.25(B)
	OSFP	ACC Fan-Out	C-BOO8XTxRxyx-00	800	2x400	0.5~5	0-70	1.5(A) and 1(B)
	QSFP112	ACC Fan-Out	C-BOQ8XTxRxyx-00	800	2x400	0.5~5	0-70	1.5(A) and 1(B)
QSFP-DD	QSFP-DD	DAC	C-DDD8XxRxAx-00	800	800	0.5~2.5	0-70	0.25
	QSFP-DD	ACC	C-BDD8XxRxAx-00	800	800	0.5~5	0-70	1.5
	QSFP-DD	AEC	C-EDD8XxRxAx-00	800	800	1~6	0-70	14
	QSFP-DD	DAC Fan-Out	C-DDD8XTxRxAx-00	800	2x400	0.5~2.5	0-70	0.25(A) and 0.25(B)
	QSFP-DD	ACC Fan-Out	C-BDD8XTxRxAx-00	800	2x400	0.5~5	0-70	0.25(A) and 0.25(B)
	QSFP112	DAC Fan-Out	C-DDQ8XTxRxAx-00	800	2x400	0.5~2.5	0-70	0.25(A) and 0.25(B)
	QSFP112	ACC Fan-Out	C-BDQ8XTxRxAx-00	800	2x400	0.5~5	0-70	0.25(A) and 0.25(B)
OSFP	OSFP	DAC	C-DOO4XxRxyx-00	400	400	0.5-3	0-70	0.25
QSFP112	QSFP112	DAC	C-DQQ4XxRxAx-00	400	400	0.5~3	0-70	0.25
	QSFP112	ACC	C-BQQ4XxRxAx-00	400	400	0.5-5	0-70	1
	QSFP112	AEC	C-EQQ4XxRxAx-00	400	400	0.5-7	0-70	8
QSFP-DD	QSFP-DD	DAC	C-DDD4XxRxAx-00	400	400	0.5~3	0-70	0.25
	QSFP56	DAC Fan-Out	C-DDQ4XTxRxAx-00	400	2x200	0.5~3	0-70	0.25(A) and 0.25(B)
QSFP56	QSFP56	DAC	C-DQQ2XxRxAx-00	200	200	0.5~3	0-70	0.25
	QSFP28	DAC Fan-Out	C-DQQ2XTxRxAx-00	200	2x100	0.5~3	0-70	0.25(A) and 0.25(B)
QSFP28	QSFP28	AOC	CAQ1XxxxCS1-01	100	100	0.5~5	0-70	2.5
	SFP28	AOC Fan-Out	CAQ1XFxxCS1-01	100	4x25	0.5~5	0-70	2.5(A) and 1(B)
QSFP+	QSFP+	DAC	C-DQQ40xRxAx-00	40	40	0.5~5	0-70	0.25
	SFP+	DAC Fan-Out	C-DQS40FxRxAx-00	40	4x10	0.5~5	0-70	0.25(A) and 0.25(B)
SFP28	SFP28	DAC	C-DSS25xRxAx-00	25	25	0.5~5	0-70	0.25
SFP+	SFP+	DAC	C-DSS10xRxAx-00	10	10	0.5-7	0-70	0.25

All OSFP products support both RHS and IHS form factor options..

ColorChip
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BETTER WORD WITH COLORFUL OPTICS

ColorChip Technology Co.,Ltd

www.color-chip.com

Email: sales@color-chip.com
Email: Michael.Watson@color-chip.com | **Tel:** (+1)408-821-7878
Email: Bryan@color-chip.com | **Tel:** (+1)803-960-9390
Location: 10413 Torre Ave, Suite 500, Cupertino,
California 95014