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YFY-5GSC-240823



5G and Metro Telecom High-Speed Optical Transceivers Manual

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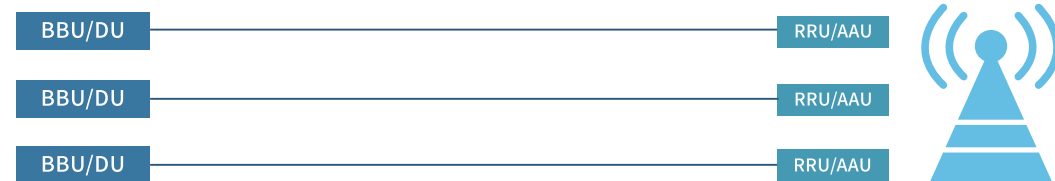
16G to 800G Optical Transceivers 04

5G Fronthaul

Gigalight provides industrial-grade 25G/50G optical transceivers for 5G fronthaul, compliant with Ethernet transmission protocols and compatible with eCPRI transmission protocols. These transceivers provide a highly competitive cost-performance ratio, reliable quality, and stability, making them an ideal choice for 5G fronthaul network deployment.

Application

Fiber Direct Drive Solution



WDM Solution



01

Fronthaul Base Station Optical Transceivers (50G/25G)

Images	Product Name	TX	RX	Max. Power Consumption	Reach	Temp (°C)	Part Number
	50G SFP56 SR	850nm VCSEL	PIN	2W	100m	0~70 -40~+85	GSS-MPO560-SRC GSS-MPO560-SRT
	50G SFP56 LR	1310nm EML	PIN	3W	10km	0~70 -40~+85	GSS-SPO500-LR1C GSS-SPO500-LR1T
	50G SFP56 ER	1310nm EML	APD	3W	40km	0~70 -40~+85	GSS-SPO500-ER1C GSS-SPO500-ER1T
	50G SFP56 BR20-D	1330/1270nm EML	PIN	3W	20km	0~70 -40~+85	GBS-3327500-12C GBS-3327500-12T
	50G SFP56 BR20-U	1270/1330nm EML	PIN	3W	20km	0~70 -40~+85	GBS-2733500-L2C GBS-2733500-L2T
	50G SFP56 BR30-D	1310/1270nm EML	APD	3W	30km	0~70 -40~+85	GBS-3127500-L3C GBS-3127500-L3T
	50G SFP56 BR30-U	1270/1310nm EML	APD	3W	30km	0~70 -40~+85	GBS-2731500-L3C GBS-2731500-L3T
	50G SFP56 DWDM	C-BAND EML	PIN	3W	5km	0~70 -40~+85	GSS-Dxx500-05C GSS-Dxx500-05T
	25G SFP28 SR	850nm VCSEL	PIN	1W	100m 300m	-40~+85	GSS-MPO250-SRT GSS-MPO250-CSRT
	25G SFP28 LR	1310nm DML	PIN	1.2W	10km 20km	-40~+85	GSS-SPO250-LRT GSS-SPO250-L2T
	25G SFP28 ER	1310nm EML	APD	1.8W	40km	-40~+85	GSS-SPO250-ERT
	25G SFP28 ZR	1300nm EML	SOA+PIN	2.5W	80km	0~70	GSS-SPO250-ZRC
	25G SFP28 BR10-U	1270/1330nm DML	PIN	1.5W	10km	-40~+85	GBP-2733250-LRT
	25G SFP28 BR10-D	1330/1270nm DML	PIN	1.5W	10km	-40~+85	GBP-3327250-LRT
	25G SFP28 BR20-U	1270/1330nm DML	APD	1.8W	20km	-40~+85	GBP-2733250-L2T
	25G SFP28 BR20-D	1330/1270nm DML	APD	1.8W	20km	-40~+85	GBP-3327250-L2T
	25G SFP28 BR40-U	1270/1310nm EML 1270/1330nm EML	APD	1.9W	40km	-40~+85	GBP-2731250-ERT GBP-2733250-ERT
	25G SFP28 BR40-D	1310/1270nm EML 1330/1270nm EML	APD	1.9W	40km	-40~+85	GBP-3127250-ERT GBP-3327250-ERT
	25G SFP28 CWDM	1271~1371nm DML 1271~1371nm DML 1411~1591nm EML	PIN APD APD	1.8W	10km 10km 15km	-40~+85	GSS-Cxx250-LRT GSS-Cxx250-LRT GSS-Cxx250-LST
	25G SFP28 LWDM	1269.23~1318.35nm DML 1269.23~1318.35nm DML 1273.55~1309.14nm EML	PIN APD APD	1.5W 1.8W 2W	10km 20km 40km	-40~+85	GSS-Sxx250-LRT GSS-Sxx250-L2T GSS-Sxx250-ERT
	25G SFP28 DWDM	C-BAND EML	PIN APD	1.8W 2W	2km 10km	-40~+85	GSS-Dxx250-02T GSS-Dxx250-LRT
	25G SFP28 DWDM	O-BAND DML	PIN APD	1.8W 2W	10km 40km	-40~+85	GSS-Oxx250-LRT GSS-Oxx250-ERT

02





5G Base Station Immersible Transceiver Assemblies

GIGALIGHT provides a full range of immersible transceiver assemblies for scenarios with high heat dissipation requirements and immersion liquid-cooling technology in 5G fronthaul applications. These products are compatible with fluorinated fluids and mineral oils, and remain highly reliable even at submersion depths up to 10 meters.

Product Name	Transmitter	LD	PD	Reach	Optical Interface	Max. Power Consumption (W)	Part Number
	10G SFP+ LR	1310nm DML	PIN	10km	LC Pigtail FC Pigtail	0.8	GL-S100-LR-L/F
	10G SFP+ BiDi LR	1270nm/ 1310nm DML	PIN	10km	LC Pigtail FC Pigtail	1.5	GL-S100-23LR-L/F GL-S100-32LR-L/F
	25G SFP28 LR	1310nm DML	PIN	10km(SMF)	LC Pigtail FC Pigtail	1	GL-S250-LR-L/F
	25G SFP28 BiDi LR	1270nm/ 1310nm DML	PIN	10km	LC Pigtail FC Pigtail	1.6	GL-S250-23LR-L/F GL-S250-32LR-L/F
	100G QSFP28 SR4	850nm VCSEL	PIN	70m(OM3) 100m(OM4)	MPO12 Pigtail	2	GL-Q101-SR4-M
	100G QSFP28 PSM4	1310nm DML	PIN	2km	MPO12 Pigtail	3.5	GL-P101-IR4-M

5G Base Station HAOC

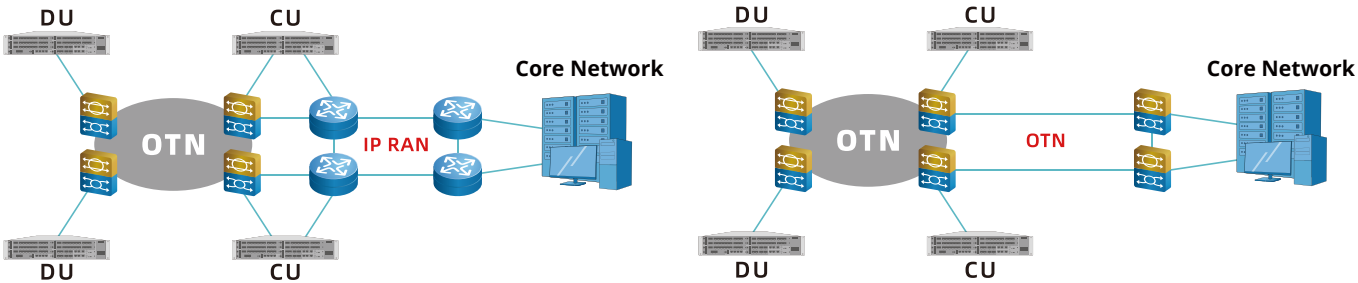
GIGALIGHT provides a full range of 10G SFP+, 25G SFP28 & 100G QSFP28 Hardened Active Optical Cable (HAOC) assemblies for scenarios with high requirements for waterproof, dustproof and anti-interference in 5G fronthaul applications.

Images	Product Name	Fiber Type	Length (Customizable)	Form Factor	TX	RX	Max. Power Consumption	Temp (°C)	Part Number
	10G SFP+ HAOC	MMF	300m	SFP+ SFP+	850nm VCSEL	PIN	0.8W/0.8W	-40~+85	GSS-MDO100-xxxT
	25G SFP28 HAOC	MMF	70m/100m	SFP28 SFP28	850nm VCSEL	PIN	1W/1W	-40~+85	GSS-MDO250-xxxT
	100G QSFP28 HAOC	MMF	70m/100m	QSFP28 QSFP28	850nm VCSEL	PIN	2W/2W	-40~+85	GQS-MDO101-xxxT
	100G QSFP28 to 4x25G SFP28 HAOC	MMF	1m~100m	QSFP28 4xSFP28	850nm VCSEL	PIN	2W/4x1W	-40~+85	GQP-MDO101-xxxT











Metro Telecom

In order to meet the growing demand for 5G backhaul and metro telecom network construction, Gigalight has launched a series of 16G to 800G optical transceivers that support both Ethernet and OTN dual rates. These transceivers not only support all types of backhaul network architectures but are also compatible with mainstream optical transmission equipment, providing global telecom operators with complete peace of mind.

Application


















800G/400G/200G Optical Transceivers

Images	Product Name	TX	RX	Max. Power Consumption	Reach	Temp (°C)	Part Number
	800G QSFP-DD FR8	LAN-WDM EML	PIN	18W	2km	0~70	GQD-SPO801-FR8C
	800G QSFP-DD LR8	LAN-WDM EML	PIN	18W	10km	0~70	GQD-SPO801-LR8C
	400G QSFP-DD FR8	LWDM8 EML	PIN	12.5W	2km	0~70	GQD-SPO401-FR8C
	400G QSFP-DD LR8	LWDM8 EML	PIN	12.5W	10km	0~70	GQD-SPO401-LR8C
	400G QSFP-DD LR4	CWDM4 EML CWDM4 CW+MZ	PIN	12W	10km	0~70	GQD-SPO401-LR4C GQD-SI401LR4C
	400G QSFP-DD ER4-30	LAN-WDM EML	PIN	11W	30km	0~70	GQP-SPO401-ER4C
	200G QSFP-DD LR8	LWDM8 DML	PIN	7.5W	10km/20km	0~70	GQD-SPO201-LR8C
	200G QSFP-DD FR4	CWDM EML	PIN	9W	2km	0~70	GQD-SPO201-FR4C
	200G QSFP-DD LR4	LWDM4 EML	PIN	9W	10km	0~70	GQD-SPO201-LR4C
	200G QSFP-DD ER4	LWDM4 EML	APD	9W	40km	0~70	GDM-SPO201-ER4C


100G Optical Transceivers

Gigalight 5G series 100G optical transceivers include parallel, wave division, single lambda, silicon photon-ics series, which can be used for 5G and metro telecommunications. They use LC or MPO optical ports and are compatible with IEEE 802.3BM, SFF-8636 and other standards. It features low power consumption, high density and reliable quality assurance.

Images	Product Name	TX	RX	Max. Power Consumption	Reach	Temp (°C)	Part Number
	100G QSFP28 CWDM4	CWDM4 DML	PIN	3.5W	2km/10km	0~70 -40~+85	GQS-SPO101-CIR4C GQS-SPO101-CLR4C GQS-SPO101-CLR4T
	100G QSFP28 LR4	LWDM4 DML	PIN	3.5W	10km 20km	0~70 -40~+85	GQS-SPO101-LR4C GQS-SPO101-LR4T GQS-SPO111-LR4C GQS-SPO111-L24C
	100G QSFP28 ER4 Lite	LWDM4 DML	APD	3.8W	30km	0~70	GQS-SPO111-ES4C
	100G QSFP28 ER4	LWDM4 EML	PIN+SOA	6W	40km	0~70	GQS-SPO111-ER4C
	100G QSFP28 ZR4	LWDM4 EML	PIN+SOA	6W	80km	0~70	GQS-SPO101-ZR4C
	100G QSFP28 PSM DWDM4	O-band150GHz DML C-band100GHz EML	PIN+SOA PIN+EDFA +DCM	5W	40km 80km	0~70	GQS-Dxx101-124C GQS-Oxx101-ER4C
	100G QSFP28 DWDM1	O-BAND CW+MZ	PIN	4W	25km	0~70	GQS-SI101-DES1C
	100G QSFP28 LR1	1310nm EML 1310nm CW+MZ	PIN	4W	20km 10km	0~70	GQS-SPO101-LR1C GQS-SI101-LR1C
	100G QSFP28 BiDi LR1	1271nm/1331nm EML	PIN	4.5W	10km	0~70	GBQ-2733101-LR1C GBQ-3327101-LR1C
	100G QSFP28 BiDi XLR1	1295/1309 1291/1311nm	PIN	4.5W	20km	0~70	GBQ-2930101-L21C GBQ-2931101-L21C
	100G QSFP28 BiDi ER1-30	1304/1309nm DML	PIN	4.5W	30km	0~70	GBQ-3030101-L31C
	100G QSFP28 BiDi ZR4	LAN WDM EML	SOA+PIN	6.5W	80km	0~70	GBQ-U101-ZR4 GBQ-D101-ZR4
	100G QSFP28 ER1	1310nm EML	APD	4W	40km	0~70	GQS-SPO101-ER1C
	100G SFP56-DD LR1	1310nm EML	PIN	3.5W	20km	0~70	GSD-SPO111-LR1C
	100G SFP56-DD ER1 Lite	1310nm EML	PIN	5.5W	30km	0~70	GSD-SPO111-ER1C







40G Optical Transceivers

Gigalight 5G metro series 40G optical module adopts QSFP+ package, complies with 40G Ethernet specification and is compatible with InfiniBand 4x SDR/DDR/QDR transmission protocol. With low power consumption, high density and reliable quality assurance.

Images	Product Name	TX	RX	Max. Power Consumption	Reach	Temp (°C)	Part Number
	40G QSFP+ LR4	CWDM4 FP/DML	PIN	3.5W	2km/10km	0~70	GQS-SPO400-IR4C GQS-SPO400-LR4C
	40G QSFP+ ER4	CWDM DML	APD	3.5W	40km	0~70	GQS-SPO400-ER4C
	40G QSFP+ ZR4	LWDM4 EML	APD	3.5W	80km	0~70	GQS-SPO401-ZR4C

32G/16G Optical Transceivers

For 5G and metropolitan area telecommunications transmission, Gigalight provides 32G/16G optical transceivers that comply with SFP28/SFP+MSA and Fibre Channel standard transmission protocols and support 2G/4G/8G multi-rate transmission.

Images	Product Name	TX	RX	Max. Power Consumption	Reach	Temp (°C)	Part Number
	32G SFP28 LR	1310nm EML	PIN	1.8W	10km	0~70 -40~+85	GSS-MPO280-LRC GSS-MPO280-LRT
	32G SFP28 ER	1310nm EML	APD	1.8W	40km	0~70 -40~+85	GSS-MPO280-ERC GSS-MPO280-ERT
	32G SFP28 DWDM	C18-C61 100GHz EML	PIN	1.8W	2km 10km	0~70 -40~+85	GSS-Dxx280-LRC GSS-Dxx280-LRT
	16G SFP+ LR	1330nm DML	PIN	1.5W	10km	0~70	GPP-3114G-LRC
	16GFC SFP+ ER	1310nm DML	PIN	1.5W	40km	0~70	GPP-3114G-ERC
	16G SFP+ DWDM	C18-C61 100GHz EML	PIN/APD	1.8W	10km/40km	0~70 -40~+85	GDP-xx14G-01C GDP-xx14G-01T GDP-xx14G-04C GDP-xx14G-04T