edge
OPTICAL SOLUTIONS

2016

Price-Book

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Datacom & Transmission • Datacenter • Mobile Networks

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About Us:

Our Mission:

We, EDGE Technologies Ltd, are Latvia based company, dedicating ourselves to pursue efficiency in network implementation world. Our home – Latvia – is place where is globally ranking 3rd place in terms of Internet Connection Speed, but in terms of ARPU (Average Revenue Per User) Latvia is one of lowest in European Union. This is putting high pressure on service providers in terms of CAPEX and OPEX. We consider our mission to minimize this pressure and make possible to save CAPEX of any networking equipment by 15-20%. One of way we can help is deliver high class of quality and performance compatible optical transceiver products, for competitive price. This is possible due our focus and ability to establish distributed production, delivery and service process with best manufacturing facilities and our continuous efforts to maintain efficiency of these processes.

Our Values are Simplicity & Reliability.

EDGE Technologies Team

Some of Our Customers:

elisa, lmt, TELE2, bitė, BELAM, Fima, emt, baltcom, Blue Bridge technologies, Telia Latvija, SKYNET, NETPLAZA

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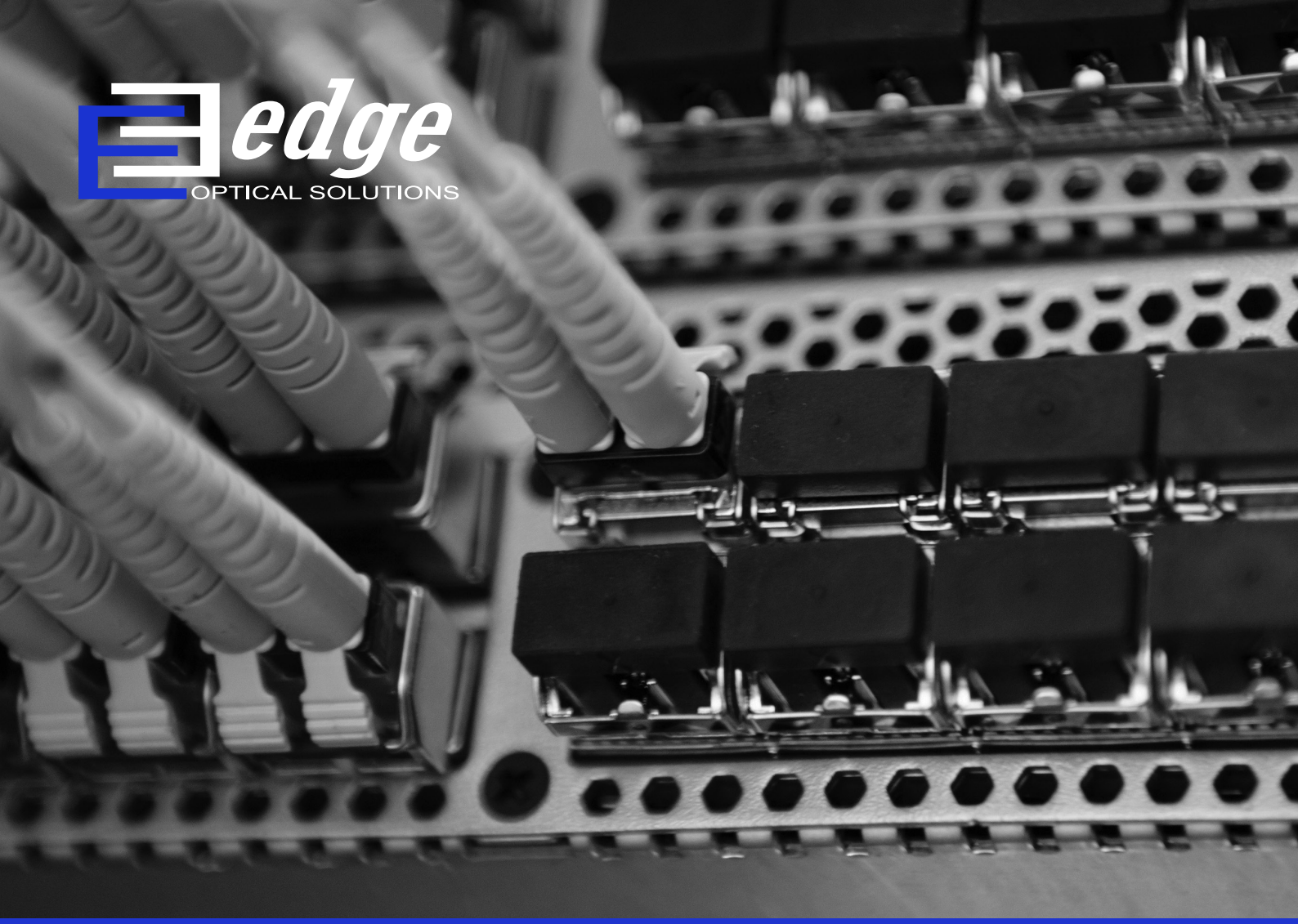

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09. GBIC:

01. Passive WDM series

1.1 Single Fiber CWDM Muxes and OADMs

Single Fiber CWDM Mux/Demux and OADM series consist of passive multiplexers in order to help maximizing dark fiber use. We have implemented highest quality filters to achieve lowest possible insertion loss and longest transmission reach. Products come in LGX design and should be used with 19" inch LGX shelf (Section 1.5 in the price-book).

Our Single Fiber CWDM Mux/Demux and OADM series are ITU G.694.2 and G.695 compliant, operating temperature -40~85 with LC connectors.

P.N. (Part Number - Used for Ordering)	TYPE	CH. (Number of Duplex Lines)	CHANNEL NO (According ITU-T G.694.2)	EXP. (Type of Expansion Ports)	INSERTION LOSS (Maximum in dB)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
SCMD-9A	Mux/Demux	9	Tx: 27/31/39/35/43/47/51/55/59 Rx: 29/33/37/41/45/49/53/57/61	No	<3.5 dB	Coming Soon	€ 543.40
SCMD-9B	Mux/Demux	9	Tx: 29/33/37/41/45/49/53/57/61 Rx: 27/31/39/35/43/47/51/55/59	No	<3.5 dB	Coming Soon	€ 543.40
SCMD-8A	Mux/Demux	8	Tx:31/39/35/43/47/51/55/59 Rx:29/33/37/41/49/53/57/61	No	<3.2 dB	Coming Soon	€ 493.35
SCMD-8B	Mux/Demux	8	Tx:29/33/37/41/49/53/57/61 Rx:31/39/35/43/47/51/55/59	No	<3.2 dB	Coming Soon	€ 493.35
SCMD-4A	Mux/Demux	4	Tx:47/51/55/59 Rx:49/53/57/61	No	<1.8 dB	Coming Soon	€ 314.60
SCMD-4B	Mux/Demux	4	Tx: 49/53/57/61 Rx:47/51/55/59	No	<1.8 dB	Coming Soon	€ 314.60
SCMD-4A-E	Mux/Demux	4	Tx:47/51/55/59 Rx:49/53/57/61	1270/1330	<1.8 dB EXP <0.8 dB	Coming Soon	€ 397.54
SCMD-4B-E	Mux/Demux	4	Tx: 49/53/57/61 Rx:47/51/55/59	1330/1270	<1.8 dB EXP <0.8 dB	Coming Soon	€ 397.54
SCLT-1-xx	One Side OADM (E or W)	1	xx	No	Bypass IL<1.0dB A/D IL<1.0dB	Coming Soon	€ 122.98
SCLT-2-xxyy	One Side OADM (E or W)	2	xx-yy	No	Bypass IL<1.5dB A/D IL<1.5dB	Coming Soon	€ 168.74
SCAD-1-xx	Two Side OADM (E and W)	1	xx	No	Bypass IL<1.5dB A/D IL<1.5dB	Coming Soon	€ 168.74
SCAD-2-xxyy	Two Side OADM (E and W)	2	xx-yy	No	Bypass IL<2.0dB A/D IL<2.0dB	Coming Soon	€ 257.40

1.2 Single Fiber DWDM Muxes and OADMs

Single Fiber DWDM Mux/Demux and OADM series consist of passive multiplexers in order to help maximizing dark fiber use. We have implemented highest quality filters to achieve lowest possible insertion loss and longest transmission reach. Products come in LGX design and should be used with 19inch LGX rack (Section 1.5 in the price-book).

Our Single Fiber DWDM Mux/Demux and OADM series are ITU G.694.1 compliant, operating temperature -40~85 with LC connectors.

P.N. (Part Number - Used for Ordering)	TYPE	CH. (Number of Duplex Lines)	CHANNEL NO (According ITU-T G.694.2)	EXP. (Type of Expansion Ports)	INSERTION LOSS (Maximum in dB)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
SDMD-8A-E	Mux/Demux	8	Tx: 21/23/25/27/29/31/33/35 Rx: 22/24/26/28/30/32/34/36	Yes (for SDMD-8A)	IL<3.5dB EXP IL<2.5	Coming Soon	€ 729.30
SDMD-8B-E	Mux/Demux	8	Tx: 22/24/26/28/30/32/34/36 Rx: 21/23/25/27/29/31/33/35	Yes (for SDMD-8B)	IL<3.5dB EXP IL<2.5	Coming Soon	€ 729.30
SDMD-8A	Mux/Demux	8	Tx: 39/41/43/45/47/49/51/53 Rx: 40/42/44/46/48/50/52/54	No	IL<3.5dB	Coming Soon	€ 729.30
SDMD-8B	Mux/Demux	8	Tx:40/42/44/46/48/50/52/54 Rx: 39/41/43/45/47/49/51/53	No	IL<3.5dB	Coming Soon	€ 729.30
SDLT-1-xx	One Side OADM (E or W)	1	xx	No	Bypass IL<1.2dB A/D IL<1.5dB	Coming Soon	€ 150.15
SDLT-2-xxyy	One Side OADM (E or W)	2	xx-yy	No	Bypass IL<1.5dB A/D IL<2.0dB	Coming Soon	€ 225.94
SDAD-1-xx	Two Side OADM (E and W)	1	xx	No	Bypass IL<1.5dB A/D IL<1.5dB	Coming Soon	€ 225.94
SDAD-2-xxyy	Two Side OADM (E and W)	2	xx-yy	No	Bypass IL<2.5dB A/D IL<2.0dB	Coming Soon	€ 371.80

1.3 Double Fiber CWDM Muxes and OADMs

Double Fiber CWDM Mux/Demux and OADM series consist of passive multiplexers in order to help maximizing dark fiber use. We have implemented highest quality filters to achieve lowest possible insertion loss and longest transmission reach. Products come in LGX design and should be used with 19" inch LGX shelf (Section 1.5 in the price-book).

Our Double Fiber CWDM Mux/Demux and OADM series are ITU G.694.2 and G.695 compliant, operating temperature -40~85 with LC connectors.

P.N. (Part Number - Used for Ordering)	TYPE	CH. (Number of Duplex Lines)	CHANNEL NO (According ITU-T G.694.2)	EXP. (Type of Expansion Ports)	INSERTION LOSS (Maximum in dB)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
DCMD-8H-E	Mux/Demux	8	Tx: 47/49/51/53/55/57/59/61 Rx: 47/49/51/53/55/57/59/61	Yes (DC-MD-8L or DCMD-4L)	IL<2.5dB EXP IL<1.2	Coming Soon	€ 500.00
DCMD-8H	Mux/Demux	8	Tx: 47/49/51/53/55/57/59/61 Rx: 47/49/51/53/55/57/59/61	No	IL<1.7dB	Coming Soon	€ 464.75
DCMD-4H-E	Mux/Demux	4	Tx: 51/53/55/57 Rx: 51/53/55/57	Yes (DC-MD-8L or DCMD-4L)	IL<2.2dB EXP IL<1.2	Coming Soon	€ 321.75
DCMD-4H	Mux/Demux	4	Tx: 51/53/55/57 Rx: 51/53/55/57	No	IL<1.7dB	Coming Soon	€ 286.00
DCMD-8L	Mux/Demux	8	Tx: 29/31/33/35/37/39/41/43 Rx: 29/31/33/35/37/39/41/43	No	IL<2.0dB <3.5dB if combine with DCMD-8H-E	Coming Soon	€ 443.30
DCMD-4L	Mux/Demux	4	Tx: 29/31/33/35 Rx: 29/31/33/35	No	IL<1.7dB <3.0dB if combine with DCMD-8H-E	Coming Soon	€ 264.55
DCLT-1-xx	One Side OADM (E or W)	1	xx	No	Bypass IL<1.0db A/D IL<1.0dB	Coming Soon	€ 131.56
DCLT-2-xxyy	One Side OADM (E or W)	2	xx-yy	No	Bypass IL<1.0db A/D IL<2.0dB	Coming Soon	€ 179.89
DCLT-4-xxyy	One Side OADM (E or W)	4	xx-yy	No	Bypass IL<2.0db A/D IL<2.5dB	Coming Soon	€ 264.44
DCAD-1-xx	Two Side OADM (E and W)	1	xx	No	Bypass IL<1.5db A/D IL<1.0dB	Coming Soon	€ 175.89
DCAD-2-xxyy	Two Side OADM (E and W)	2	xx-yy	No	Bypass IL<2.0db A/D IL<2.0dB	Coming Soon	€ 264.55
DCAD-4-xxyy	Two Side OADM (E and W)	4	xx-yy	No	Bypass IL<2.5db A/D IL<2.5dB	Coming Soon	€ 443.30

1.4 Double Fiber DWDM Muxes and OADMs

Double Fiber DWDM Mux/Demux and OADM series consist of passive multiplexers in order to help maximizing dark fiber use. We have implemented highest quality filters to achieve lowest possible insertion loss and longest transmission reach. All products come in LGX design and should be used with 19inch LGX rack (Section 1.5 in the price-book), except DDMD-40-100 and DDMD-32 which come in 19inch Rack design.

Our Double Fiber DWDM Mux/Demux and OADM series are ITU G.694.1 compliant, operating temperature -40~85 with LC connectors.

P.N. (Part Number - Used for Ordering)	TYPE	CH. (Number of Duplex Lines)	CHANNEL NO (According ITU-T G.694.2)	EXP. (Type of Expansion Ports)	INSERTION LOSS (Maximum in dB)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
DDMD-40-100	Mux/Demux	40	Tx: 21-60 Rx: 21-60	No	IL<6.8dB	Coming Soon	€ 1 140.00
DDMD-32	Mux/Demux	32	Tx: 21-59 Rx: 21-59	No	IL<5.0dB	Coming Soon	€ 900.00
DDMD-16-E	Mux/Demux	16	Tx: 21-39 Rx: 21-39	Yes (for DDMD-16)	IL<4.5dB Expansion IL <0.8dB	Coming Soon	€ 475.00
DDMD-16	Mux/Demux	16	Tx: 41-59 Rx: 41-59	No	IL<4.0dB	Coming Soon	€ 450.00
DDMD-8-E	Mux/Demux	8	Tx: 21-29 Rx: 21-29	Yes (for DDMD-8)	IL<4.0dB Expansion IL <3.8dB	Coming Soon	€ 280.00
DDMD-8	Mux/Demux	8	Tx: 31-39 Rx: 31-39	No	IL<3.0dB	Coming Soon	€ 255.00
DDMD-4-E	Mux/Demux	4	Tx: 21-24 Rx: 21-24	Yes (for DDMD-4)	L<2.5dB Expansion IL <2.0dB	Coming Soon	€ 180.00
DDMD-4	Mux/Demux	4	Tx: 26-29 Rx: 26-29	No	IL<2.5dB	Coming Soon	€ 160.00
DDLT-1-xx	One Side OADM (E or W)	1	xx-yy	No	Bypass IL<1.2dB A/D IL<1.2dB	Coming Soon	€ 110.00
DDLT-2-xxyy	One Side OADM (E or W)	2	xx-yy	No	Bypass IL<2.0dB A/D IL<2.5dB	Coming Soon	€ 160.00
DDLT-4-xxyy	One Side OADM (E or W)	4	xx-yy	No	Bypass IL<1.5dB A/D IL<2.0dB	Coming Soon	€ 255.00
DDLT-8-xxyy	One Side OADM (E or W)	8	xx-yy	No	Bypass IL<2.5db A/D IL<2.5dB	Coming Soon	€ 450.00
DDAD-1-xx	Two Side OADM (E and W)	1	xx-yy	No	Bypass IL<1.5db A/D IL<1.0dB	Coming Soon	€ 160.00
DDAD-2-xxyy	Two Side OADM (E and W)	2	xx-yy	No	Bypass IL<1.5db A/D IL<1.5dB	Coming Soon	€ 255.00
DDAD-4-xxyy	Two Side OADM (E and W)	4	xx-yy	No	Bypass IL<2.0db A/D IL<2.0dB	Coming Soon	€ 450.00

1.5 LGX Racks

Currently there are two variations of 19 inch LGX Racks which can be used together with WDM LGX cassettes.

P.N. (Part Number - Used for Ordering)	DESCRIPTION	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
LGX-RCK-2-1U	2 SLOT LGX RACK	Coming Soon	€ 84.00
LGX-RCK-4-2U	4 SLOT LGX RACK	Coming Soon	€ 150.00

02. CFP/CFP2/CFP4

2.1 100G CFP/CFP2/CFP4:

100G CFP/CFP/CFP4 Transceivers are fully compliant to 100G CFP/CFP/CFP4 MSA and IEEE 802.3ae (100GBASE-SR4, 100GBASE-LR4) standards.

The 100G-CFP-10/ 100G-CFP2-10/ 100G-CFP4-10 are 100G LR4 optical modules which use 4 CWDM channels 28Gbps per channel and can achieve up to 112Gbps OTU4 speeds. 100G-CFP-150/ 100G-CFP2-150/ 100G-CFP4-100 use 10x850nm Channels, each: 11.2Gbps, together up to 112Gbps.

100G CFP/CFP/CFP4 Transceivers family includes solution from 100m to 10km transmission ranges, from MMF to SMF, use MTP/MPO or Double LC connector and support normal operating **temperature range 0 - 70 Celsius**.

Modules can be provided with custom-encoded firmware, in order to provide **compatibility with Cisco, Juniper, Huawei, Arista and other platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	OPTICAL BUDGET (Minimum)	WAVELENGHT (TX/Rx range)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
100G-CFP-150	MMF	150m	1.9 dB	850/850 nm	Coming Soon	**€ 1 996.84**
100G-CFP-10	SMF	10km	6.2 dB	4xCWDM lines	Coming Soon	**€ 9 413.70**
100G-CFP-40	SMF	40km	18 dB	4xCWDM lines	Coming Soon	**€ 15 784.58**
100G-CFP2-100	MMF	100m	1.9 dB	850/850nm	Coming Soon	**€ 2 187.02**
100G-CFP2-10	SMF	10 km	6.2 dB	4xCWDM lines	Coming Soon	**€ 9 603.87**
100G-CFP2-40	SMF	40 km	18 dB	4xCWDM lines	Coming Soon	**€ 18 180.80**
100G-CFP4-100	MMF	100m	1.9 dB	850/850 nm	Coming Soon	**€ 1 426.32**
100G-CFP4-10	SMF	10 km	6.2 dB	4xCWDM lines	Coming Soon	**€ 9 603.87**
100G-CFP4-40	SMF	40km	18 dB	4xCWDM lines	Coming Soon	**€ 18 447.04**

03. QSFP

3.1 100G QSFP28 :

100G QSFP28 Transceiver is a 100Gbps Small Form-factor Pluggable (QSFP28) optical module. The QSFP28 full-duplex optical module offers 4 independent transmit and receive channels, each capable of 25Gb/s operation for an aggregate data rate of 100Gbps. These optical modules supports following applications:

Ethernet:

- 100G Eth (103.125 Gbps)

Infiniband:

- QDR and DDR

100G QSFP28 Transceivers family includes solution from 100m to 10km transmission ranges, from MMF to SMF, use MTP/MPO or Double LC connector and support normal operating **temperature range 0 - 70 Celsius**.

100G-QSFP28-2 use 4x25Gbps in 1310nm using independent PSM (parallel single mode fibers). 100G-QSFP28-10 use 4x25Gb/s LAN WDM EML TOSA (1295.56, 1300.05, 1304.58, 1309.14nm) for transmitting and 4x25Gb/s PIN ROSA for receiving.

100G QSFP28 Transceivers are fully compliant to QSFP28 MSA and IEEE 802.3ba (100GBASE-SR4, 100GBASE-LR4 and 100GBASE PSM4).

Modules can be provided with custom-encoded firmware, in order to provide **compatibility with Cisco, Huawei, Alcatel, Juniper and other platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	OPTICAL BUDGET (Minimum)	WAVELENGHT (TX/Rx range)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
100G-QSFP28-100	MMF	100m (OM4)	1.9 dB	850/850 nm	Click	€ 912.84
100G-QSFP28-2	SMF	2 km	10 dB	4x1310 PSM	Click	€ 3 708.43
100G-QSFP28-3	SMF	2 km	1.6 dB	4xCWDM lines	Coming soon	€ 4 944.57
100G-QSFP28-4	SMF	4 km	1.8 dB	4xCWDM lines	Coming soon	€ 5 039.66
100G-QSFP28-10	SMF	10 km	4.3 dB	4xCWDM lines	Click	€ 5 420.01
100G-QSFP28-25	SMF	25 km	13.8 dB	4xCWDM lines	Coming soon	€ 11 981.07
100G-QSFP28-40	SMF	40 km	18 dB	4xCWDM lines	Coming soon	€ 16 164.93

3.2 40G QSFP+:

40G QSFP+ Transceiver is a 40Gbps (Quad Small Form-factor Pluggable Plus) optical module. 40G QSFP+ use 4 independent transmit and receive channels, each capable of 10Gbps operation for an aggregated data rate of 40Gbps. These optical modules supports following applications:

Ethernet:

- 40G Eth (41.25 Gbps)

Infiniband:

- QDR (4 x 10G)

Optical Transmission Network:

- OTU3 (43.01Gbps)
- OTU3e2 (44.58Gbps)

40G QSFP+ Transceiver family includes solutions from 150m to 40km transmission, from MMF (MPO/MTP) to SMF (Double LC) and support normal operating **temperature range 0 - 70 Celsius**.

40G-QSFP-1.4 and 40G-QSFP-11 achieve 40Gbps using 4x10Gbps in 1310nm with independent PSM (parallel single mode fibers).

40G-QSFP-2, 40G-QSFP-10, 40G-QSFP-12, 40G-QSFP-40 achieve 40Gbps using 4x10Gbps CWDM lines: 1270nm, 1290nm, 1310nm, 1330nm.

40G QSFP+ Transceivers are fully compliant to QSFP+ MSA and IEEE 802.3ba. QSFP+ Transceivers can be provided with custom-encoded firmware, in order to provide **compatibility with Cisco, Juniper, Huawei, Alcatel, HP, Arista, Brocade, Force10, Moxa, Intel, and many others brands** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
40G-QSFP-150	MMF	150m (OM4)	1.9 dB	850/850 nm	Click	€ 133.12
40G-QSFP-300	MMF	300m	2.4 dB	850/850 nm	Click	€ 171.16
40G-QSFP-1.4	SMF	1.4 km	5.5 dB	4x1310 PSM	Click	€ 646.60
40G-QSFP-2	SMF	2 km	4.5 dB	4xCWDM	Click	€ 1 007.93
40G-QSFP-2.1	S/MMF	150 m/2 km	2.0/4.7 dB	4xCWDM	Click	€ 988.91
40G-QSFP-10	SMF	10 km	4.5 dB	4xCWDM	Click	€ 1 007.93
40G-QSFP-11	SMF	10 km	8.6 dB	4x1310 PSM	Click	€ 810.15
40G-QSFP-40	SMF	40 km	14.3 dB	4xCWDM	Click	€ 2 909.69

04. SFP+

4.1 10G RJ-45 Copper SFP+:

10G RJ45 Copper SFP+ transceiver is designed to operate over Cat.6a and Cat.7 twisted pair cables with distance up to 30m. This transceiver support following data rates: **10GBASE-T/1000BASE-T/100BASE-T.**

10G RJ45 Copper SFP+ transceiver is equipped with **RJ45 connectors** and support normal operating **temperature range 0 - 70 Celsius**.

10G RJ45 Copper SFP+ transceivers are fully compliant to SFF-8431 MSA, SFF-8432 MSA, IEEE 802.3az and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	APPLICATION (Supported Applications)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
10G-SFP-T	Twisted Pair Cat 6a/7	30 m	100/1'000/10'000 Mbps	Click	**€ 380.35**

4.2 10G Double Fiber SFP+:

10G Double Fiber SFP+ transceivers are designed to operate over two fiber multi-mode or single mode optical cables with distances ranging from few meters up to 100km. These optical modules supports **10 Gigabit Ethernet application (10.31 Gbps)**, **STM-64 or OC-192 (9.95 Gbps)** and provides fallback speed of **Gigabit Ethernet (1.25 Gbps)**. 10G Double Fiber SFP+ are equipped with **double LC connectors** and support normal operating **temperature range 0 - 70° Celsius**.

10G Double Fiber SFP+ Transceivers are fully compliant to SFP Multi Source Agreement SFF-8431 and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
10G-SFP-300	MMF	300 m	4.6 dB	850/850 nm	Click	**€ 23.77**
10G-SFP-220	MMF	220 m	3.5 dB	1310/1310 nm	Click	**€ 49.07**
10G-SFP-10	SMF	10 km	6.0 dB	1310/1310 nm	Click	**€ 49.07**
10G-SFP-20	SMF	20 km	9 dB	1310/1310 nm	Click	**€ 49.07**

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
10G-SFP-40	SMF	40 km	14 dB	1550/1550 nm	Click	€ 245.33
10G-SFP-41	SMF	40 km	14 dB	1310/1310 nm	Click	€ 152.14
10G-SFP-80	SMF	80 km	23 dB	1550/1550 nm	Click	€ 473.54
10G-SFP-100	SMF	100 km	26 dB	1550/1550 nm	Click	€ 855.79

4.3 10G BiDi SFP+:

10G Single Fiber BiDi SFP+ transceivers are designed to operate over one single mode optical fiber with distances ranging from 10km up to 80km. These optical modules supports **10 Gigabit Ethernet application (10.31 Gbps)**, **STM-64 or OC-192 (9.95 Gbps)** and provides fallback speed of **Gigabit Ethernet (1.25 Gbps)**. We are using WDM technology, separating both transmission directions by using different wavelength. 10G Single Fiber SFP+ transceivers are equipped with **single LC connector** and support normal operating **temperature range 0 - 70 Celsius**.

10G Single Fiber SFP+ Transceivers are fully compliant to SFP Multi Source Agreement SFF-8431 and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
BIDI-10G-SFP-10A	SMF	10 km	6.2 dB	1270/1330 nm	Click	€ 79.87
BIDI-10G-SFP-10B	SMF	10 km	6.2 dB	1330/1270 nm	Click	€ 79.87
BIDI-10G-SFP-20A	SMF	20 km	9 dB	1270/1330 nm	Click	€ 79.87
BIDI-10G-SFP-20B	SMF	20 km	9 dB	1330/1270 nm	Click	€ 79.87
BIDI-10G-SFP-40A	SMF	40 km	14 dB	1270/1330 nm	Click	€ 116.01
BIDI-10G-SFP-40B	SMF	40 km	14 dB	1330/1270 nm	Click	€ 116.01
BIDI-10G-SFP-60A	SMF	60 km	21 dB	1270/1330 nm	Click	€ 342.32
BIDI-10G-SFP-60B	SMF	60 km	21 dB	1330/1270 nm	Click	€ 342.32
BIDI-10G-SFP-80A	SMF	80 km	23 dB	1490/1550 nm	Click	€ 1 426.32
BIDI-10G-SFP-80B	SMF	80 km	23 dB	1550/1490 nm	Click	€ 1 426.32

4.4 10G CWDM SFP+:

10G CWDM (Coarse Wavelength Division Multiplexing) SFP+ transceivers are designed to operate over single mode optical fiber with distances ranging from 10km up to 80km. These optical modules supports following applications:

Ethernet:

- 10G Eth (10.31Gbps)

SDH/SONET:

- STM-64 (9.95Gbps)

Optical Transmission Network:

- OTU2 (10.70Gbps)
- OTU1e (11.049Gbps)
- OTU2e (11.095Gbps)
- OTU1f (11.27Gbps)
- OTU2f (11.32Gbps)
- ODU2 (10.037Gbps)
- ODU2e (10.399Gbps)

Each transceiver uses one **20nm wide CWDM channel according ITU-T G.694.2 CWDM grid** for transmission, but can receive all CWDM range wavelengths (1270 – 1610 nm). In combination with CWDM passive mux/demux and OADM devices, is possible to achieve up to 18x10G connections over pair of fiber, or up to 9x10G connections over single fiber.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX Range)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
CWDM-10G-SFP-10	SMF	10 km	9 dB	1270-1330 nm	Click	€ 264.34
CWDM-10G-SFP-10	SMF	10 km	9 dB	1350-1450 nm	Click	€ 264.34
CWDM-10G-SFP-10	SMF	10 km	9 dB	1470-1610 nm	Click	€ 494.46
CWDM-10G-SFP-40	SMF	40 km	13 dB	1270-1410 nm	Click	€ 283.36
CWDM-10G-SFP-40	SMF	40 km	14 dB	1430-1450 nm	Click	€ 283.36
CWDM-10G-SFP-40	SMF	40 km	14 dB	1470-1610 nm	Click	€ 283.36
CWDM-10G-SFP-80	SMF	80 km	23 dB	1270-1450 nm	Click	€ 494.46
CWDM-10G-SFP-80	SMF	80 km	23 dB	1470-1610 nm	Click	€ 816.08

4.5 10G DWDM SFP+:

10G DWDM (Dense Wavelength Division Multiplexing) SFP+ transceivers are designed to operate over single mode optical fiber with distances ranging from 40km up to 80km. These optical modules supports following applications:

Ethernet:

- 10G Eth (10.31Gbps)

SDH/SONET:

- STM-64 (9.95Gbps)

Optical Transmission Network:

- OTU2 (10.70Gbps)
- OTU1e (11.049Gbps)
- OTU2e (11.095Gbps)
- OTU1f (11.27Gbps)
- OTU2f (11.32Gbps)
- ODU2 (10.037Gbps)
- ODU2e (10.399Gbps)

Each fixed wavelenght DWDM transceiver uses one **DWDM channel according ITU-T 100GHz Channel Spacing C-Band DWDM grid** for transmission and tunable DWDM tranceiver uses one **DWDM channel according ITU-T 50GHz Channel Spacing C-Band DWDM grid**, but **can receive complete WDM range 1270-1610nm**.

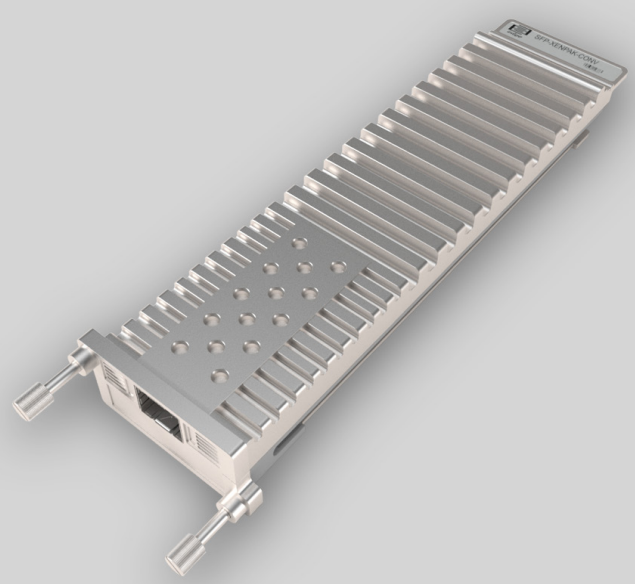
In combination with DWDM passive mux/demux and OADM devices, is possible to achieve up to 45x10G connections over pair of fiber, or up to 22x10G connections over single fiber.

10G DWDM SFP+ transceivers are equipped with **double LC connector** and support normal operating **temperature range 0 - 70 Celsius**.

10G DWDM SFP+ Transceivers are fully compliant to SFP Multi Source Agreement SFF-8431 and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX Range)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
DWDM-10G-SFP-40	SMF	40 km	14 dB	100GHz (C) (Ch. 17-61)	Click	€ 441.21
DWDM-10G-SFP-80	SMF	80 km	23 dB	100GHz (C) (Ch. 17-61)	Click	€ 644.70
DWDM-10G-SFP-80-TUN	SMF	80 km	23 dB	50GHz (C) (Ch. 13.5-61)	Coming Soon	€ 3 708.43

4.6 10G SFP+ Converters



SFP + Converters are designed to provide investment protection and enable usage of currently most popular form factor SFP+ in equipment and line cards, with are still equipped with legacy optical transceiver form factor ports – such as XENPAK & X2.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX Range)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
SFP-X2-CONV	As per inserted SFP+ Module				Click	€ 180.67
SFP-XENPAK-CONV	As per inserted SFP+ Module				Click	€ 180.67

05. XFP

5.1 10G Double Fiber XFP:

10G Double Fiber XFP transceivers are designed to operate over two fiber multi-mode or single mode optical cables with distances ranging from few meters up to 120km. These optical modules supports following applications:

Ethernet:

- 10G Eth (10.31Gbps)
- Gigabit Eth (1.25Gbps)

SDH/SONET:

- STM-64 (9.95Gbps)
- STM-16 (2.488Gbps)

Fiber Channel:

- 10G FC (10.52 Gbps)
- 8.5G FC (8.5 Gbps)
- 4G FC (4.25 Gbps)
- 2G FC (2.125 Gbps)
- 1G FC (1.0625 Gbps)

Optical Transmission Network:

- OTU1 (2.66Gbps)
- OTU2 (10.70Gbps)
- OTU1e (11.049Gbps)
- OTU2e (11.095Gbps)
- OTU1f (11.27Gbps)
- OTU2f (11.32Gbps)
- ODU0 (1.244Gbps)
- ODU1 (2.498Gbps)
- ODU2 (10.037Gbps)
- ODU2e (10.399Gbps)

10G Double Fiber XFP are equipped with **double LC connectors** and support normal operating **temperature range 0 - 70 Celsius**.

10G Double Fiber XFPTransceivers are fully compliant to XFP Multi Source Agreement INF-8077i and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
10G-XFP-300	MMF	300 m	4.6 dB	850/850 nm	Click	€ 63.71
10G-XFP-2	SMF	2 km	6.2 dB	1310/1310 nm	Click	€ 74.17
10G-XFP-10	SMF	10 km	6.8 dB	1310/1310 nm	Click	€ 74.17
10G-XFP-20	SMF	20 km	9 dB	1310/1310 nm	Click	€ 74.17

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
10G-XFP-41	SMF	40 km	14 dB	1310/1310 nm	Click	€ 152.14
10G-XFP-40	SMF	40 km	14 dB	1550/1550 nm	Click	€ 245.33
10G-XFP-80	SMF	80 km	23 dB	1550/1550 nm	Click	€ 492.56
10G-XFP-120	SMF	120 km	26 dB	1550/1550 nm	Click	€ 1 064.98

5.2 10G BiDi XFP:

10G Single Fiber BiDi XFP transceivers are designed to operate over one single mode optical fiber with distances ranging from 10km up to 80km. We are using WDM technology, separating both transmission directions by using different wavelength.These optical modules supports following applications:

Ethernet:

- 10G Eth (10.31Gbps)
- Gigabit Eth (1.25Gbps)

SDH/SONET:

- STM-64 (9.95Gbps)
- STM-16 (2.488Gbps)

Fiber Channel:

- 10G FC (10.52 Gbps)
- 8.5G FC (8.5 Gbps)
- 4G FC (4.25 Gbps)
- 2G FC (2.125 Gbps)
- 1G FC (1.0625 Gbps)

Optical Transmission Network:

- OTU1 (2.66Gbps)
- OTU2 (10.70Gbps)
- OTU1e (11.049Gbps)
- OTU2e (11.095Gbps)
- OTU1f (11.27Gbps)
- OTU2f (11.32Gbps)
- ODU0 (1.244Gbps)
- ODU1 (2.498Gbps)
- ODU2 (10.037Gbps)
- ODU2e (10.399Gbps)

10G Single Fiber BiDi XFP are equipped with **single LC connector** and support normal operating **temperature range 0 - 70 Celsius**.

10G Single Fiber BiDi XFP Transceivers are fully compliant to XFP Multi Source Agreement INF-8077i and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
BIDI-10G-XFP-10A	SMF	10 km	8 dB	1270/1330 nm	Click	€ 116.01
BIDI-10G-XFP-10B	SMF	10 km	8 dB	1330/1270 nm	Click	€ 116.01
BIDI-10G-XFP-20A	SMF	20 km	12 dB	1270/1330 nm	Click	€ 116.01
BIDI-10G-XFP-20B	SMF	20 km	12 dB	1330/1270 nm	Click	€ 116.01
BIDI-10G-XFP-40A	SMF	40 km	14 dB	1270/1330 nm	Click	€ 180.67
BIDI-10G-XFP-40B	SMF	40 km	14 dB	1330/1270 nm	Click	€ 180.67
BIDI-10G-XFP-60A	SMF	60 km	20 dB	1270/1330 nm	Click	€ 382.25
BIDI-10G-XFP-60B	SMF	60 km	20 dB	1330/1270 nm	Click	€ 382.25
BIDI-10G-XFP-80A	SMF	80 km	23 dB	1490/1550 nm	Click	€ 1 426.32
BIDI-10G-XFP-80B	SMF	80 km	23 dB	1550/1490 nm	Click	€ 1 426.32

5.3 10G CWDM XFP:

10G CWDM (Coarse Wavelength Division Multiplexing) XFP transceivers are designed to operate over single mode optical fiber with distances ranging from 10km up to 80km. These optical modules supports following applications:

Ethernet:

- 10G Eth (10.31Gbps)
- Gigabit Eth (1.25Gbps)

SDH/SONET:

- STM-64 (9.95Gbps)
- STM-16 (2.488Gbps)

Fiber Channel:

- 10G FC (10.52 Gbps)
- 8.5G FC (8.5 Gbps)
- 4G FC (4.25 Gbps)
- 2G FC (2.125 Gbps)
- 1G FC (1.0625 Gbps)

Optical Transmission Network:

- OTU1 (2.66Gbps)
- OTU2 (10.70Gbps)
- OTU1e (11.049Gbps)
- OTU2e (11.095Gbps)
- OTU1f (11.27Gbps)
- OTU2f (11.32Gbps)
- ODU0 (1.244Gbps)
- ODU1 (2.498Gbps)
- ODU2 (10.037Gbps)
- ODU2e (10.399Gbps)

Each transceiver uses one **20nm wide CWDM channel according ITU-T G.694.2** CWDM grid for transmission, but **can receive all CWDM range wavelengths (1270 – 1610 nm)**. In combination with CWDM passive mux/demux and OADM devices, is possible to achieve up to 18x10G connections over pair of fiber, or up to 9x10G connections over single fiber.

10G CWDM XFP are equipped with **double LC connectors** and support normal operating **temperature range 0 - 70° Celsius**.

10G CWDM XFP Transceivers are fully compliant to XFP Multi Source Agreement INF-8077i and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX range)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
CWDM-10G-XFP-10	SMF	10 km	9 dB	1270-1330 nm	Click	€ 264.34
CWDM-10G-XFP-10	SMF	10 km	9 dB	1350-1450 nm	Click	€ 473.54
CWDM-10G-XFP-10	SMF	10 km	9 dB	1470-1610 nm	Click	€ 568.63
CWDM-10G-XFP-40	SMF	40 km	14 dB	1270-1410 nm	Click	€ 275.75
CWDM-10G-XFP-40	SMF	40 km	14 dB	1430-1450 nm	Click	€ 321.40
CWDM-10G-XFP-40	SMF	40 km	14 dB	1470-1610 nm	Click	€ 513.47
CWDM-10G-XFP-80	SMF	80 km	23 dB	1470-1610 nm	Click	€ 692.70

5.4 10G DWDM XFP:

10G DWDM (Dense Wavelength Division Multiplexing) XFP transceivers are designed to operate over single mode optical fiber with distances ranging from 40km up to 120km. These optical modules supports following applications:

Ethernet:

- 10G Eth (10.31Gbps)
- Gigabit Eth (1.25Gbps)

SDH/SONET:

- STM-64 (9.95Gbps)
- STM-16 (2.488Gbps)

Fiber Channel:

- 10G FC (10.52 Gbps)
- 8.5G FC (8.5 Gbps)
- 4G FC (4.25 Gbps)
- 2G FC (2.125 Gbps)
- 1G FC (1.0625 Gbps)

Optical Transmission Network:

- OTU1 (2.66Gbps)
- OTU2 (10.70Gbps)
- OTU1e (11.049Gbps)
- OTU2e (11.095Gbps)
- OTU1f (11.27Gbps)
- OTU2f (11.32Gbps)
- ODU0 (1.244Gbps)
- ODU1 (2.498Gbps)
- ODU2 (10.037Gbps)
- ODU2e (10.399Gbps)

Each fixed wavelenght DWDM transceiver uses one **DWDM channel according ITU-T 100GHz Channel Spacing C-Band DWDM grid** for transmission and each tunable DWDM tranceiver uses one **DWDM channel according ITU-T 50GHz Channel Spacing C-Band DWDM grid**, but all **can receive complete WDM range 1270-1610nm**.

In combination with DWDM passive mux/demux and OADM devices, is possible to achieve up to 45x10G connections over pair of fiber, or up to 22x10G connections over single fiber.

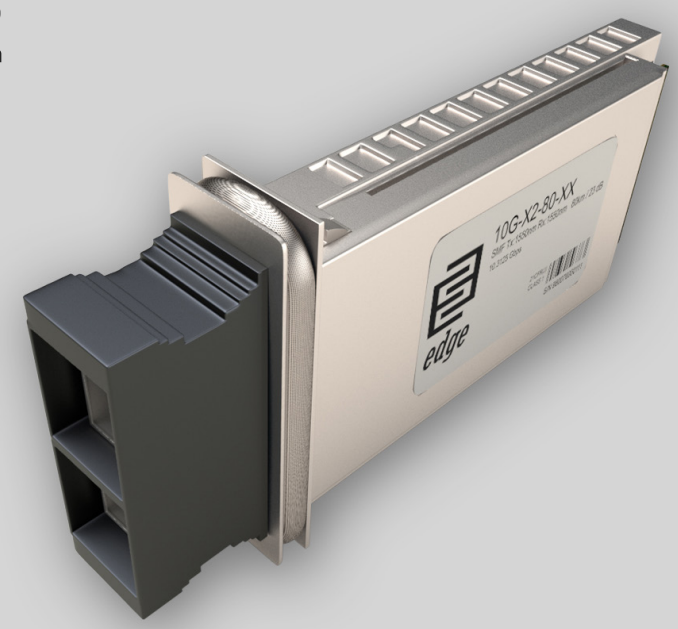
10G DWDM XFP are equipped with **double LC connectors** and support normal operating **temperature range 0 - 70° Celsius**.

10G DWDM XFP Transceivers are fully compliant to XFP Multi Source Agreement INF-8077i and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX Range)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
DWDM-10G-XFP-40	SMF	40 km	14 dB	100GHz (C) (Ch. 17-61)	Click	€ 441.21
DWDM-10G-XFP-80	SMF	80 km	23 dB	100GHz (C) (Ch. 17-61)	Click	€ 644.70
DWDM-10G-XFP-80-TUN-F*	SMF	80 km	23 dB	50GHz (C) (Ch. 13.5-61)	Coming Soon	€ 4621.27

* **-F indicates that tunable XFP module supporting FEC (Forward Error Correction).**

06. X2



6.1 10G Double Fiber X2:

10G Double Fiber X2 transceivers are designed to operate over two fiber multi-mode or single mode optical cables with distances ranging from few meters up to 80km. These optical modules supports 10 Gigabit Ethernet application (10.31 Gbps).

10G Double Fiber X2 are equipped with **double SC connectors** and support normal operating **temperature range 0 - 70 Celsius**.

10G Double Fiber X2 transceivers are fully compliant to X2 MSA Rev.2.0b and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
10G-X2-300	MMF	300 m	4.6 dB	850/850 nm	Click	**€ 114.11**
10G-X2-220	MMF	220 m	3.5 dB	1310/1310 nm	Click	**€ 209.19**
10G-X2-10	SMF	10 km	6.2 dB	1310/1310 nm	Click	**€ 209.19**
10G-X2-40	SMF	40 km	14 dB	1550/1550 nm	Click	**€ 798.74**
10G-X2-80	SMF	80 km	23 dB	1550/1550 nm	Click	**€ 1 671.64**

6.2 10G CWDM X2:

10G CWDM X2 transceivers are designed to operate over two fiber multi-mode or single mode optical cables with distances ranging from 40km up to 80km. These optical modules supports 10 Gigabit Ethernet application **(10.31 Gbps.)** Each transceiver uses one **20nm wide CWDM channel according ITU-T G.694.2 CWDM grid** for transmission, but can receive all CWDM range wavelengths (1470 – 1610 nm). In combination with CWDM passive mux/demux and OADM devices, is possible to achieve up to 8x10G connections over pair of fiber, or up to 4x10G connections over single fiber.

10G CWDM X2 are equipped with **double SC connectors** and support normal operating **temperature range 0 - 70 Celsius**.

10G CWDM X2 transceivers are fully compliant to X2 MSA Rev.2.0b and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
CWDM-10G-X2-40	SMF	40 km	14 dB	1470-1610 nm	Click	€ 1 443.43
CWDM-10G-X2-80	SMF	80 km	23 dB	1470-1610 nm	Click	€ 1 823.78

6.3 10G DWDM X2:

10G DWDM (Dense Wavelength Division Multiplexing) X2 transceivers are designed to operate over two fiber multi-mode or single mode optical cables with distances ranging from 40km up to 80km. These optical modules supports 10 Gigabit Ethernet application (10.31 Gbps.) Each transceiver uses **one DWDM channel according ITU-T 100GHz Channel Spacing C-Band DWDM grid** for transmission, but can receive all DWDM C-Band range channels (17 – 61ch). In combination with DWDM passive mux/demux and OADM devices, is possible to achieve up to 45x10G connections over pair of fiber, or up to 22x10G connections over single fiber.

10G DWDM X2 are equipped with **double SC connectors** and support normal operating **temperature range 0 - 70 Celsius**.

10G DWDM X2 transceivers are fully compliant to X2 MSA Rev.2.0b and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
DWDM-10G-X2-40	SMF	40 km	14 dB	100GHz (C) (Ch. 17-61)	Click	€ 1 443.43
DWDM-10G-X2-80	SMF	80 km	23 dB	100GHz (C) (Ch. 17-61)	Click	€ 1 823.78

07. XENPAK

7.1 10G Double Fiber XENPAK:

10G Double Fiber XENPAK transceivers are designed to operate over two fiber multi-mode or single mode optical cables with distances ranging from few meters up to 80km. These optical modules supports 10 Gigabit Ethernet application **(10.31 Gbps)**.

10G Double Fiber XENPAK are equipped with **double SC connectors** and support normal operating **temperature range 0 - 70 Celsius**.

10G Double Fiber XENPAK transceivers are fully compliant to XENPAK Multi Source Agreement Rev.3 and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
10G-XENPAK-300	MMF	300 m	4.6 dB	850/850 nm	Click	€ 123.61
10G-XENPAK-220	MMF	220 m	3.5 dB	1310/1310 nm	Click	€ 218.70
10G-XENPAK-10	SMF	10 km	6.2 dB	1310/1310 nm	Click	€ 218.70
10G-XENPAK-40	SMF	40 km	14 dB	1550/1550 nm	Click	€ 796.84
10G-XENPAK-80	SMF	80 km	23 dB	1550/1550 nm	Click	€ 1 671.64

7.2 10G CWDM XENPAK:

10G CWDM XENPAK transceivers are designed to operate over two fiber multi-mode or single mode optical cables with distances ranging from 40km up to 80km. These optical modules supports 10 Gigabit Ethernet application **(10.31 Gbps.)** Each transceiver uses one **20nm wide CWDM channel according ITU-T G.694.2 CWDM grid** for transmission, but can receive all CWDM range wavelengths (1470 – 1610 nm). In combination with CWDM passive mux/demux and OADM devices, is possible to achieve up to 8x10G connections over pair of fiber, or up to 4x10G connections over single fiber.

10G CWDM XENPAK are equipped with **double SC connectors** and support normal operating **temperature range 0 - 70 Celsius**.

10G CWDM XENPAK transceivers are fully compliant to XXENPAK Multi Source Agreement Rev.3 and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
CWDM-10G-XENPAK-40	SMF	40 km	14 dB	1470-1610 nm	Click	€ 1 443.43
CWDM-10G-XENPAK-80	SMF	80 km	23 dB	1470-1610 nm	Click	€ 1 823.78

7.3 10G DWDM XENPAK:

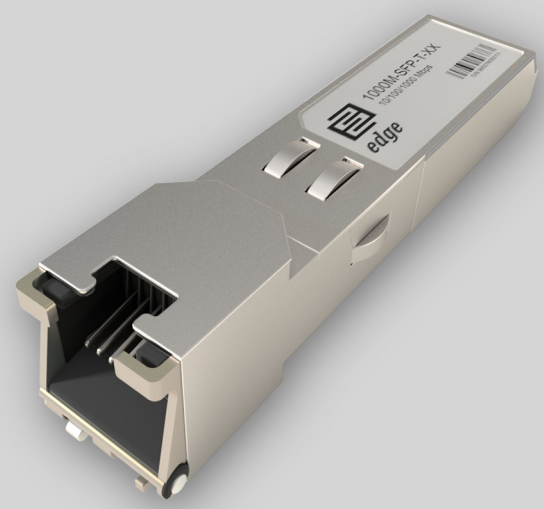
10G DWDM (Dense Wavelength Division Multiplexing) XENPAK transceivers are designed to operate over two fiber multi-mode or single mode optical cables with distances ranging from 40km up to 80km. These optical modules supports 10 Gigabit Ethernet application **(10.31 Gbps.)** Each transceiver uses **one DWDM channel according ITU-T 100GHz Channel Spacing C-Band DWDM grid** for transmission, but can receive all DWDM C-Band range channels (17 – 61ch). In combination with DWDM passive mux/demux and OADM devices, is possible to achieve up to 45x10G connections over pair of fiber, or up to 22x10G connections over single fiber.

10G DWDM XENPAK are equipped with **double SC connectors** and support normal operating **temperature range 0 - 70 Celsius**.

10G DWDM XENPAK transceivers are fully compliant to XXENPAK Multi Source Agreement Rev.3 and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
DWDM-10G-XENPAK-40	SMF	40 km	14 dB	100GHz (C) (Ch. 17-61)	Click	€ 1 443.43
DWDM-10G-XENPAK-80	SMF	80 km	23 dB	100GHz (C) (Ch. 17-61)	Click	€ 1 823.78

08. SFP



8.1 RJ45 Copper SFP Transceivers:

RJ45 Copper SFP transceivers are designed to operate over Cat.5 and Cat. 6 twisted pair cables with distance up to 100m. These Transceivers supports data rates from **10 Mbps up to 1000 Mbps**.

RJ45 Copper SFP transceivers are equipped with **RJ45 connectors** and support normal operating **temperature range 0 - 70 Celsius**.

RJ45 Copper SFP transceivers are fully compliant to SFP Multi Source Agreement SFF-8472 and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	APPLICATION (Supported Applications)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
1000M-SFP-T	Twisted Pair Cat 5/6	100 m	10/100/1000 Mbps	Click	**€ 20.92**
100M-SFP-F	Twisted Pair Cat 5/6	100 m	10/100 Mbps	Click	**€ 28.53**
1000M-SFP-M	Twisted Pair Cat 5/6	100 m	1000 Mbps	Click	**€ 20.92**

8.2 GE Double Fiber SFP:

GE 1.25G Double Fiber SFP transceivers are designed to operate over two fiber multi-mode or single mode optical cables with distances ranging from few meters up to 150km. These optical modules supports 1.25G Gigabit Ethernet application **(1.25 Gbps)** and 1G FC Fiber Channel **(1.0603 Gbps)**.

GE 1.25G Double Fiber SFP transceivers are equipped with **double LC connectors** and support normal operating **temperature range 0 - 70° Celsius**.

GE 1.25G Double Fiber SFP transceivers are fully compliant to SFP Multi Source Agreement SFF-8472 and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
1.25G-SFP-550D	MMF	550m	7.5 dB	850/850 nm	Click	€ 11.79
1.25G-SFP-2D	MMF	2 km	13 dB	1310/1310 nm	Click	€ 11.79
1.25G-SFP-10D	SMF	10 km	13 dB	1310/1310 nm	Click	€ 11.79
1.25G-SFP-20D	SMF	20 km	13 dB	1310/1310 nm	Click	€ 11.79
1.25G-SFP-41D	SMF	40 km	17 dB	1310/1310 nm	Click	€ 24.72
1.25G-SFP-40D	SMF	40 km	23 dB	1550/1550 nm	Click	€ 17.12
1.25G-SFP-80D	SMF	80 km	24 dB	1550/1550 nm	Click	€ 38.04
1.25G-SFP-120D	SMF	120 km	32 dB	1550/1550 nm	Click	€ 85.58
1.25G-SFP-150D	SMF	150 km	37 dB	1550/1550 nm	Click	€ 283.36

8.3 GE BiDi SFP (LC version):

GE 1.25G Single Fiber SFP transceivers are designed to operate over one single mode optical fiber with distances ranging from 3km up to 120km. These optical modules supports Gigabit Ethernet application **(1.25 Gbps)** and 1G FC Fiber Channel **(1.063 Gbps)**. We are using WDM technology, separating both transmission directions by using different wavelength.

GE 1.25G Single Fiber SFP transceivers are equipped with **single LC connector** and support normal operating **temperature range 0 - 70 Celsius**.

GE 1.25G Single Fiber SFP transceivers are fully compliant to SFP Multi Source Agreement SFF-8472 and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
BIDI-1.25G-SFP-3-AD	SMF	3 km	7 dB	1310/1550 nm	Click	€ 15.21
BIDI-1.25G-SFP-3-BD	SMF	3 km	7 dB	1550/1310 nm	Click	€ 15.21
BIDI-1.25G-SFP-10-AD	SMF	10 km	12 dB	1310/1550 nm	Click	€ 13.31
BIDI-1.25G-SFP-10-BD	SMF	10 km	12 dB	1550/1310 nm	Click	€ 20.54
BIDI-1.25G-SFP-20-AD	SMF	20 km	13 dB	1310/1550 nm	Click	€ 13.31
BIDI-1.25G-SFP-20-BD	SMF	20 km	13 dB	1550/1310 nm	Click	€ 20.54

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
BIDI-1.25G-SFP-40-AD	SMF	40 km	17 dB	1310/1550 nm	Click	€ 19.02
BIDI-1.25G-SFP-40-BD	SMF	40 km	17 dB	1550/1310 nm	Click	€ 38.04
BIDI-1.25G-SFP-80-AD	SMF	80 km	22 dB	1490/1550 nm	Click	€ 58.95
BIDI-1.25G-SFP-80-BD	SMF	80 km	22 dB	1550/1490 nm	Click	€ 58.95
BIDI-1.25G-SFP-120-AD	SMF	120 km	31 dB	1490/1550 nm	Click	€ 95.09
BIDI-1.25G-SFP-120-BD	SMF	120 km	31 dB	1550/1490 nm	Click	€ 95.09
BIDI-1.25G-SFP-4-AD	SMF	3 km	7 dB	1310/1490 nm	Click	€ 13.69
BIDI-1.25G-SFP-4-BD	SMF	3 km	7 dB	1490/1310 nm	Click	€ 32.52
BIDI-1.25G-SFP-11-AD	SMF	10 km	12 dB	1310/1490 nm	Click	€ 13.69
BIDI-1.25G-SFP-11-BD	SMF	10 km	12 dB	1490/1310 nm	Click	€ 28.53
BIDI-1.25G-SFP-21-AD	SMF	20 km	13 dB	1310/1490 nm	Click	€ 13.69
BIDI-1.25G-SFP-21-BD	SMF	20 km	13 dB	1490/1310 nm	Click	€ 28.53
BIDI-1.25G-SFP-41-AD	SMF	40 km	17 dB	1310/1490 nm	Click	€ 19.40
BIDI-1.25G-SFP-41-BD	SMF	40 km	17 dB	1490/1310 nm	Click	€ 39.75
BIDI-1.25G-SFP-121-AD	SMF	120 km	31 dB	1510/1570 nm	Click	€ 131.22
BIDI-1.25G-SFP-121-BD	SMF	120 km	31 dB	1570/1510 nm	Click	€ 131.22

8.4 GE BiDi SFP (SC version):

GE 1.25G Single Fiber SFP transceivers are designed to operate over one single mode optical fiber with distances ranging from 3km up to 120km. These optical modules supports Gigabit Ethernet application **(1.25 Gbps)** and 1G FC Fiber Channel **(1.063 Gbps)**. We are using WDM technology, separating both transmission directions by using different wavelength.

GE 1.25G Single Fiber SFP transceivers are equipped with **single SC connector** and support normal operating **temperature range 0 - 70 Celsius**.

GE 1.25G Single Fiber SFP transceivers are fully compliant to SFP Multi Source Agreement SFF-8472 and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
BIDI-1.25G-SFP-3-ADS	SMF	3 km	7 dB	1310/1550 nm	Click	€ 16.16
BIDI-1.25G-SFP-3-BDS	SMF	3 km	7 dB	1550/1310 nm	Click	€ 16.16
BIDI-1.25G-SFP-10-ADS	SMF	10 km	12 dB	1310/1550 nm	Click	€ 14.26
BIDI-1.25G-SFP-10-BDS	SMF	10 km	12 dB	1550/1310 nm	Click	€ 21.49
BIDI-1.25G-SFP-20-ADS	SMF	20 km	13 dB	1310/1550 nm	Click	€ 14.26
BIDI-1.25G-SFP-20-BDS	SMF	20 km	13 dB	1550/1310 nm	Click	€ 21.49
BIDI-1.25G-SFP-40-ADS	SMF	40 km	17 dB	1310/1550 nm	Click	€ 19.97

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
BIDI-1.25G-SFP-40-BDS	SMF	40 km	17 dB	1550/1310 nm	Click	€ 38.99
BIDI-1.25G-SFP-80-ADS	SMF	80 km	22 dB	1490/1550 nm	Click	€ 59.91
BIDI-1.25G-SFP-80-BDS	SMF	80 km	22 dB	1550/1490 nm	Click	€ 59.91
BIDI-1.25G-SFP-120-ADS	SMF	120 km	31 dB	1490/1550 nm	Click	€ 96.04
BIDI-1.25G-SFP-120-BDS	SMF	120 km	31 dB	1550/1490 nm	Click	€ 96.04
BIDI-1.25G-SFP-4-ADS	SMF	3 km	7 dB	1310/1490 nm	Click	€ 14.64
BIDI-1.25G-SFP-4-BDS	SMF	3 km	7 dB	1490/1310 nm	Click	€ 33.47
BIDI-1.25G-SFP-11-ADS	SMF	10 km	12 dB	1310/1490 nm	Click	€ 14.83
BIDI-1.25G-SFP-11-BDS	SMF	10 km	12 dB	1490/1310 nm	Click	€ 29.48
BIDI-1.25G-SFP-21-ADS	SMF	20 km	13 dB	1310/1490 nm	Click	€ 14.64
BIDI-1.25G-SFP-21-BDS	SMF	20 km	13 dB	1490/1310 nm	Click	€ 29.48
BIDI-1.25G-SFP-41-ADS	SMF	40 km	17 dB	1310/1490 nm	Click	€ 20.35
BIDI-1.25G-SFP-41-BDS	SMF	40 km	17 dB	1490/1310 nm	Click	€ 40.70
BIDI-1.25G-SFP-121-ADS	SMF	120 km	31 dB	1510/1570 nm	Click	€ 132.17
BIDI-1.25G-SFP-121-BDS	SMF	120 km	31 dB	1570/1510 nm	Click	€ 132.17

8.5 GE CWDM SFP:

1.25Gbps CWDM (Coarse Wavelength Division Multiplexing) SFP transceivers are designed to operate over two fiber multi-mode or single mode optical cables with distances ranging from 40km up to 150km. These optical modules supports Gigabit Ethernet **(1.25 Gbps)** and 1G-FC Fiber Channel **(1.063 Gbps)** applications. Each transceiver uses one 2**0nm wide CWDM channel according ITU-T G.694.2 CWDM grid** for transmission, but can receive all CWDM range wavelengths (1270 – 1610 nm).

GE 1.25G CWDM SFP transceivers are equipped with **double LC connectors** and support normal operating **temperature range 0 - 70 Celsius**.

GE 1.25G CWDM SFP transceivers are fully compliant to SFP Multi Source Agreement SFF-8472 and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
CWDM-1.25G-SFP-40	SMF	40 km	19 dB	1270-1610 nm	Click	€ 57.05
CWDM-1.25G-SFP-80	SMF	80 km	24 dB	1470-1610 nm	Click	€ 57.05
CWDM-1.25G-SFP-80	SMF	80 km	24 dB	1270-1450 nm	Click	€ 57.05
CWDM-1.25G-SFP-120	SMF	120 km	32 dB	1270-1610 nm	Click	€ 57.05
CWDM-1.25G-SFP-150	SMF	150 km	36 dB	1270-1450 nm	Click	€ 104.60
CWDM-1.25G-SFP-150	SMF	150 km	36 dB	1470-1610 nm	Click	€ 370.84

8.6 GE DWDM SFP:

1.25G DWDM (Dense Wavelength Division Multiplexing) SFP transceivers are designed to operate over single mode optical fiber with distances ranging from 80km up to 160km. These optical modules supports Gigabit Ethernet **(1.25 Gbps)** and 1G-FC Fiber Channel **(1.063 Gbps)** applications. Each transceiver uses **one DWDM channel according ITU-T 100GHz Channel Spacing C-Band DWDM grid** for transmission, but can receive all DWDM C-Band range channels (17 – 61ch).

GE 1.25G DWDM SFP transceivers are equipped with **double LC connectors** and support normal operating **temperature range 0 - 70 Celsius**.

GE 1.25G DWDM SFP transceivers are fully compliant to SFP Multi Source Agreement SFF-8472 and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
DWDM-1.25G-SFP-80	SMF	80 km	24 dB	100GHz (C) (Ch. 17-61)	Click	€ 380.35
DWDM-1.25G-SFP-120	SMF	120 km	32 dB	100GHz (C) (Ch. 17-61)	Click	€ 380.35
DWDM-1.25G-SFP-160	SMF	160 km	37 dB	100GHz (C) (Ch. 17-61)	Click	€ 551.51

8.7 FE Double Fiber SFP:

100/155Mbps Double Fiber SFP transceivers are designed to operate over two fiber multimode or single mode optical cables with distances ranging from few meters up to 150km. These optical modules supports Fast Ethernet application **(100 Mbps)** and **STM-1/OC-3 (155 Mbps)**.

100/155Mbps Double Fiber SFP transceivers are equipped with **double LC connectors** and support normal operating **temperature range 0 - 70 Celsius**.

100/155Mbps Double Fiber SFP transceivers are fully compliant to SFP Multi Source Agreement SFF-8472 and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
155M-SFP-2D	MMF	2 km	11 dB	1310/1310 nm	Click	€ 13.69
155M-SFP-15D	SMF	15 km	19 dB	1310/1310 nm	Click	€ 13.69
155M-SFP-40D	SMF	40 km	25 dB	1310/1310 nm	Click	€ 22.82
155M-SFP-80D	SMF	80 km	29 dB	1550/1550 nm	Click	€ 28.53
155M-SFP-120D	SMF	120 km	34 dB	1550/1550 nm	Click	€ 57.05
155M-SFP-150D	SMF	150 km	37 dB	1550/1550 nm	Click	€ 302.38

8.8 FE BiDi SFP (LC version):

100/155Mbps BiDi Single Fiber SFP transceivers are designed to operate over single fiber single mode optical cables with distances ranging from 2km up to 120km. These optical modules supports Fast Ethernet application **(100 Mbps)** and **STM-1/OC-3 (155 Mbps)** .We are using WDM technology, separating both transmission directions by using different wavelength.

100/155Mbps BiDi Single Fiber SFP transceivers are equipped with **one LC connector** and support normal operating **temperature range 0 - 70 Celsius**.

100/155Mbps BiDi Single Fiber SFP transceivers are fully compliant to SFP Multi Source Agreement SFF-8472 and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
BIDI-155M-SFP-2-AD	SMF	2 km	12 dB	1310/1550 nm	Click	€ 13.88
BIDI-155M-SFP-2-BD	SMF	2 km	12 dB	1550/1310 nm	Click	€ 13.88
BIDI-155M-SFP-15-AD	SMF	15 km	17 dB	1310/1550 nm	Click	€ 13.88
BIDI-155M-SFP-15-BD	SMF	15 km	17 dB	1550/1310 nm	Click	€ 13.88
BIDI-155M-SFP-40-AD	SMF	40 km	24 dB	1310/1550 nm	Click	€ 18.07
BIDI-155M-SFP-40-BD	SMF	40 km	24 dB	1550/1310 nm	Click	€ 19.21
BIDI-155M-SFP-80-AD	SMF	80 km	31 dB	1490/1550 nm	Click	€ 32.33
BIDI-155M-SFP-80-BD	SMF	80 km	31 dB	1550/1490 nm	Click	€ 32.33
BIDI-155M-SFP-120-AD	SMF	120 km	34 dB	1490/1550 nm	Click	€ 55.15
BIDI-155M-SFP-120-BD	SMF	120 km	34 dB	1550/1490 nm	Click	€ 57.05
BIDI-155M-SFP-16-AD	SMF	20 km	17 dB	1310/1490 nm	Click	€ 15.21
BIDI-155M-SFP-16-BD	SMF	20 km	17 dB	1490/1310 nm	Click	€ 19.97
BIDI-155M-SFP-41-AD	SMF	40 km	24 dB	1310/1490 nm	Click	€ 18.26
BIDI-155M-SFP-41-BD	SMF	40 km	24 dB	1490/1310 nm	Click	€ 25.86

8.9 FE BiDi SFP (SC version):

100/155Mbps BiDi Single Fiber SFP transceivers are designed to operate over single fiber single mode optical cables with distances ranging from 2km up to 120km. These optical modules supports Fast Ethernet application **(100 Mbps)** and **STM-1/OC-3 (155 Mbps)** .We are using WDM technology, separating both transmission directions by using different wavelength.

100/155Mbps BiDi Single Fiber SFP transceivers are equipped with **one SC connector** and support normal operating **temperature range 0 - 70 Celsius**.

100/155Mbps BiDi Single Fiber SFP transceivers are fully compliant to SFP Multi Source Agreement SFF-8472 and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
BIDI-155M-SFP-2-ADS	SMF	2 km	12 dB	1310/1550 nm	Click	€ 14.83
BIDI-155M-SFP-2-BDS	SMF	2 km	12 dB	1550/1310 nm	Click	€ 14.83
BIDI-155M-SFP-15-ADS	SMF	15 km	17 dB	1310/1550 nm	Click	€ 14.83
BIDI-155M-SFP-15-BDS	SMF	15 km	17 dB	1550/1310 nm	Click	€ 14.83
BIDI-155M-SFP-40-ADS	SMF	40 km	24 dB	1310/1550 nm	Click	€ 19.02
BIDI-155M-SFP-40-BDS	SMF	40 km	24 dB	1550/1310 nm	Click	€ 20.16
BIDI-155M-SFP-80-ADS	SMF	80 km	31 dB	1490/1550 nm	Click	€ 33.28
BIDI-155M-SFP-80-BDS	SMF	80 km	31 dB	1550/1490 nm	Click	€ 33.28
BIDI-155M-SFP-120-ADS	SMF	120 km	34 dB	1490/1550 nm	Click	€ 56.10
BIDI-155M-SFP-120-BDS	SMF	120 km	34 dB	1550/1490 nm	Click	€ 58.00
BIDI-155M-SFP-21-ADS	SMF	20 km	17 dB	1310/1490 nm	Click	€ 16.16
BIDI-155M-SFP-21-BDS	SMF	20 km	17 dB	1490/1310 nm	Click	€ 20.92
BIDI-155M-SFP-41-ADS	SMF	40 km	24 dB	1310/1490 nm	Click	€ 19.21
BIDI-155M-SFP-41-BDS	SMF	40 km	24 dB	1490/1310 nm	Click	€ 26.81

8.10 FE CWDM SFP:

100/155 Mbps CWDM (Coarse Wavelength Division Multiplexing) SFP transceivers are designed to operate over two fiber multi-mode or single mode optical cables with distances ranging from 80km up to 120km. These optical modules supports **Fast Ethernet (100 Mbps)** application and **STM-1/OC-3 (155 Mbps)** applications. Each transceiver uses **one 20nm wide CWDM channel according ITU-T G.694.2 CWDM grid** for transmission, but can receive all CWDM range wavelengths (1270 – 1610 nm).

100/155 Mbps CWDM SFP transceivers are equipped with **double LC connectors** and support normal operating **temperature range 0 - 70 Celsius**.

100/155 Mbps CWDM SFP transceivers are fully compliant to SFP Multi Source Agreement SFF-8472 and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
CWDM-155M-SFP-80	SMF	80 km	29 dB	1270-1610 nm	Click	€ 66.56
CWDM-155M-SFP-120	SMF	120 km	36 dB	1270-1450 nm	Click	€ 104.60
CWDM-155M-SFP-120	SMF	120 km	36 dB	1470-1610 nm	Click	€ 104.60

8.11 Multirate 2.67G Double Fiber SFP:

2.67G Double Fiber Multirate SFP transceivers are designed to operate over two fiber multimode or single mode optical cables with distances ranging from few meters up to 120km. These optical modules supports following applications:

Ethernet:
- Fast Ethernet (100 Mbps)
- Gigabit Eth (1.25Gbps)

SDH/SONET:
- STM-1 (155Mbps)
- STM-4 (622Mbps)
- STM-16 (2.488 Gbps)

OTN:
- OTU1 (2.67Gbps)
- ODU0 (1.24416Gbps)
- ODU1 (2.499Gbps)

CPRI:
- 2.458 Gbps
- 1.229 Gbps
- 614.4 Mbps

Fiber Channel:
- 1G FC (1.063Gbps)
- 2G FC (2.125Gbps)

OBSAI:
- 1.536 Gbps
- 768 Mbps

2.67G Double Fiber Multirate SFP transceivers are equipped with **double LC connectors** and support normal operating **temperature range 0 - 70 Celsius**.

2.67G Double Fiber Multirate SFP transceivers are fully compliant to SFP Multi Source Agreement SFF-8472 and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
2.67G-SFP-300D	MMF	300 m	7.5 dB	850/850 nm	Click	€ 22.82
2.67G-SFP-2D	SMF	2 km	8.5 dB	1310/1310 nm	Click	€ 22.82
2.67G-SFP-10D	SMF	10 km	12 dB	1310/1310 nm	Click	€ 40.89
2.67G-SFP-15D	SMF	15 km	13 dB	1310/1310 nm	Click	€ 40.89
2.67G-SFP-41D	SMF	40 km	18 dB	1310/1310 nm	Click	€ 39.94
2.67G-SFP-40D	SMF	40 km	18 dB	1550/1550 nm	Click	€ 43.74
2.67G-SFP-80D	SMF	80 km	26 dB	1550/1550 nm	Click	€ 152.14
2.67G-SFP-120D	SMF	120 km	32 dB	1550/1550 nm	Click	€ 237.72

8.12 Multirate 2.67G BiDi SFP (LC version):

2.67G Single Fiber Multirate BiDi SFP transceivers are designed to operate over one fiber single mode optical cables with distances ranging from 2km up to 80km. We are using WDM technology, separating both transmission directions by using different wavelength.These optical modules supports following applications:

Ethernet:
- Fast Ethernet (100 Mbps)
- Gigabit Eth (1.25Gbps)

SDH/SONET:
- STM-1 (155Mbps)
- STM-4 (622Mbps)
- STM-16 (2.488 Gbps)

OTN:
- OTU1 (2.67Gbps)
- ODU0 (1.24416Gbps)
- ODU1 (2.499Gbps)

CPRI:
- 2.458 Gbps
- 1.229 Gbps
- 614.4 Mbps

Fiber Channel:
- 1G FC (1.063Gbps)
- 2G FC (2.125Gbps)

OBSAI:
- 1.536 Gbps
- 768 Mbps

2.67G Single Fiber Multirate BiDi SFP transceivers are equipped with **single LC connector** and support normal operating **temperature range 0 - 70 Celsius**.

2.67G Single Fiber Multirate BiDi SFP transceivers are fully compliant to SFP Multi Source Agreement SFF-8472 and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
BIDI-2.67G-SFP-2-AD	SMF	2 km	13 dB	1310/1550 nm	Click	€ 35.18
BIDI-2.67G-SFP-2-BD	SMF	2 km	13 dB	1550/1310 nm	Click	€ 39.94
BIDI-2.67G-SFP-15-AD	SMF	15 km	13 dB	1310/1550 nm	Click	€ 35.18
BIDI-2.67G-SFP-15-BD	SMF	15 km	13 dB	1550/1310 nm	Click	€ 39.94
BIDI-2.67G-SFP-40-AD	SMF	40 km	18 dB	1310/1550 nm	Click	€ 49.45
BIDI-2.67G-SFP-40-BD	SMF	40 km	18 dB	1550/1310 nm	Click	€ 55.15
BIDI-2.67G-SFP-80-AD	SMF	80 km	28 dB	1490/1550 nm	Click	€ 161.65
BIDI-2.67G-SFP-80-BD	SMF	80 km	28 dB	1550/1490 nm	Click	€ 161.65

8.13 Multirate 2.67G BiDi SFP (SC version):

2.67G Single Fiber Multirate BiDi SFP transceivers are designed to operate over one fiber single mode optical cables with distances ranging from 2km up to 80km. We are using WDM technology, separating both transmission directions by using different wavelength.These optical modules supports following applications:

Ethernet:
- Fast Ethernet (100 Mbps)
- Gigabit Eth (1.25Gbps)

SDH/SONET:
- STM-1 (155Mbps)
- STM-4 (622Mbps)
- STM-16 (2.488 Gbps)

OTN:
- OTU1 (2.67Gbps)
- ODU0 (1.24416Gbps)
- ODU1 (2.499Gbps)

CPRI:
- 2.458 Gbps
- 1.229 Gbps
- 614.4 Mbps

Fiber Channel:
- 1G FC (1.063Gbps)
- 2G FC (2.125Gbps)

OBSAI:
- 1.536 Gbps
- 768 Mbps

2.67G Single Fiber Multirate BiDi SFP transceivers are equipped with **single SC connector** and support normal operating **temperature range 0 - 70 Celsius**.

2.67G Single Fiber Multirate BiDi SFP transceivers are fully compliant to SFP Multi Source Agreement SFF-8472 and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
BIDI-2.67G-SFP-2-ADS	SMF	2 km	13 dB	1310/1550 nm	Click	€ 36.13
BIDI-2.67G-SFP-2-BDS	SMF	2 km	13 dB	1550/1310 nm	Click	€ 40.89
BIDI-2.67G-SFP-15-ADS	SMF	15 km	13 dB	1310/1550 nm	Click	€ 36.13
BIDI-2.67G-SFP-15-BDS	SMF	15 km	13 dB	1550/1310 nm	Click	€ 40.89
BIDI-2.67G-SFP-40-ADS	SMF	40 km	18 dB	1310/1550 nm	Click	€ 50.40
BIDI-2.67G-SFP-40-BDS	SMF	40 km	18 dB	1550/1310 nm	Click	€ 56.10
BIDI-2.67G-SFP-80-ADS	SMF	80 km	28 dB	1490/1550 nm	Click	€ 162.60
BIDI-2.67G-SFP-80-BDS	SMF	80 km	28 dB	1550/1490 nm	Click	€ 162.60

8.14 Multirate 2.67G CWDM SFP:

2.67G CWDM (Coarse Wavelength Division Multiplexing) Multirate SFP transceivers are designed to operate over two fiber single mode optical cables with distances ranging from 40km up to 120km. Each transceiver uses one **20nm wide CWDM channel according ITU-T G.694.2 CWDM grid** for transmission, but **can receive all CWDM range wavelengths (1270 – 1610 nm)**. These optical modules supports following applications:

Ethernet:
- Fast Ethernet (100 Mbps)
- Gigabit Eth (1.25Gbps)

SDH/SONET:
- STM-1 (155Mbps)
- STM-4 (622Mbps)
- STM-16 (2.488 Gbps)

OTN:
- OTU1 (2.67Gbps)
- ODU0 (1.24416Gbps)
- ODU1 (2.499Gbps)

CPRI:
- 2.458 Gbps
- 1.229 Gbps
- 614.4 Mbps

Fiber Channel:
- 1G FC (1.063Gbps)
- 2G FC (2.125Gbps)

OBSAI:
- 1.536 Gbps
- 768 Mbps

2.67G CWDM Multirate SFP transceivers are equipped with **double LC connector** and support normal operating **temperature range 0 - 70 Celsius**.

2.67G CWDM Multirate SFP transceivers are fully compliant to SFP Multi Source Agreement SFF-8472 and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
CWDM-2.67G-SFP-40	SMF	40 km	15 dB	1270-1610 nm	Click	€ 142.63
CWDM-2.67G-SFP-80	SMF	80 km	28 dB	1270-1610 nm	Click	€ 152.14
CWDM-2.67G-SFP-120	SMF	120 km	30 dB	1270-1610 nm	Click	€ 180.67

8.15 Multirate 2.67G DWDM SFP:

2.67G DWDM (Dense Wavelength Division Multiplexing) SFP transceivers are designed to operate over single mode optical fiber with distances ranging from 40km up to 120km. Each transceiver uses **one DWDM channel according ITU-T 100GHz Channel Spacing C-Band DWDM** grid for transmission, but **can receive all DWDM C-Band range channels (17 – 61ch)**. These optical modules supports following applications:

Ethernet:
- Fast Ethernet (100 Mbps)
- Gigabit Eth (1.25Gbps)

SDH/SONET:
- STM-1 (155Mbps)
- STM-4 (622Mbps)
- STM-16 (2.488 Gbps)

OTN:
- OTU1 (2.67Gbps)
- ODU0 (1.24416Gbps)
- ODU1 (2.499Gbps)

CPRI:
- 2.458 Gbps
- 1.229 Gbps
- 614.4 Mbps

Fiber Channel:
- 1G FC (1.063Gbps)
- 2G FC (2.125Gbps)

OBSAI:
- 1.536 Gbps
- 768 Mbps

2.67G DWDM Multirate SFP transceivers are equipped with **double LC connector** and support normal operating **temperature range 0 - 70 Celsius**.

2.67G DWDM Multirate SFP transceivers are fully compliant to SFP Multi Source Agreement SFF-8472 and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
DWDM-2.67G-SFP-40	SMF	40 km	15 dB	100GHz (C) (Ch. 17-61)	Click	€ 435.50
DWDM-2.67G-SFP-80	SMF	80 km	28 dB	100GHz (C) (Ch. 17-61)	Click	€ 435.50
DWDM-2.67G-SFP-120	SMF	120 km	32 dB	100GHz (C) (Ch. 17-61)	Click	€ 454.52

09. GBIC

9.1 RJ45 Copper GBIC Transceivers:

RJ45 Copper GBIC transceivers are designed to operate over Cat.5 and Cat. 6 twisted pair cables with distance up to **100m**. These Transceivers supports data rate **1000 Mbps.**

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	APPLICATION (Supported Applications)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
1000M-GBIC-T	Twisted Pair Cat 5/6	100 m	1000 Mbps	Click	€ 36.13

9.2 GE Double Fiber GBIC:

1.25G Double Fiber GBIC transceivers are designed to operate over two fiber multi-mode or single mode optical cables with distances ranging from few meters up to 80km. These optical modules supports 1.25G Gigabit Ethernet application **(1.25 Gbps)** and 1G FC Fiber Channel **(1.0603 Gbps)**.

1.25G Double Fiber GBIC transceivers are equipped with **double SC connectors** and support normal operating **temperature range 0 - 70 Celsius**.

1.25G Double Fiber GBIC transceivers are fully compliant to GBIC Multi Source Agreement SFF-8053 and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
1.25G-GBIC-550	MMF	550m	7.5 dB	850/850 nm	Click	€ 28.53
1.25G-GBIC-10	SMF	10 km	12 dB	1310/1310 nm	Click	€ 29.48
1.25G-GBIC-40	SMF	40 km	19 dB	1550/1550 nm	Click	€ 83.68
1.25G-GBIC-80	SMF	80 km	24 dB	1550/1550 nm	Click	€ 98.89

9.3 GE BiDi GBIC:

1.25G Single Fiber BiDi GBIC transceivers are designed to operate over one single mode or multi mode optical fiber with distances ranging from 2km up to 80km. These optical modules supports Gigabit Ethernet application **(1.25 Gbps)** and 1G FC Fiber Channel **(1.063 Gbps)**. We are using WDM technology, separating both transmission directions by using different wavelength.

1.25G BiDi GBIC transceivers are equipped with **single SC connector** and support normal operating **temperature range 0 - 70 Celsius**.

1.25G BiDi GBIC transceivers are fully compliant to GBIC Multi Source Agreement SFF-8053 and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
BIDI-1.25G-GBIC-02-A	MMF	2 km	12 dB	1310/1550 nm	Click	€ 34.23
BIDI-1.25G-GBIC-02-B	MMF	2 km	12 dB	1550/1310 nm	Click	€ 34.23
BIDI-1.25G-GBIC-20-A	SMF	20 km	14 dB	1310/1550 nm	Click	€ 39.94
BIDI-1.25G-GBIC-20-B	SMF	20 km	14 dB	1550/1310 nm	Click	€ 57.05
BIDI-1.25G-GBIC-40-A	SMF	40 km	19 dB	1310/1550 nm	Click	€ 76.07
BIDI-1.25G-GBIC-40-B	SMF	40 km	19 dB	1550/1310 nm	Click	€ 76.07
BIDI-1.25G-GBIC-80-A	SMF	80 km	24 dB	1490/1550 nm	Click	€ 133.12
BIDI-1.25G-GBIC-80-B	SMF	80 km	24 dB	1550/1490 nm	Click	€ 133.12

9.4 GE CWDM GBIC:

1.25G CWDM (Coarse Wavelength Division Multiplexing) GBIC transceivers are designed to operate over two fiber multi-mode or single mode optical cables with distance 80km. These optical modules supports Gigabit Ethernet **(1.25 Gbps)** and 1G-FC Fiber Channel **(1.063 Gbps)** applications. Each transceiver uses one 20nm wide CWDM channel according ITU-T G.694.2 CWDM grid for transmission, but can receive all CWDM range wavelengths (1270 – 1610 nm).

1.25G CWDM GBIC transceivers are equipped with **double SC connectors** and support normal operating **temperature range 0 - 70 Celsius**.

1.25G CWDM GBIC transceivers are fully compliant to GBIC Multi Source Agreement SFF-8053 and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
CWDM-1.25G-GBIC-80	SMF	80km	24 dB	1470 - 1610 nm	Click	€ 114.11

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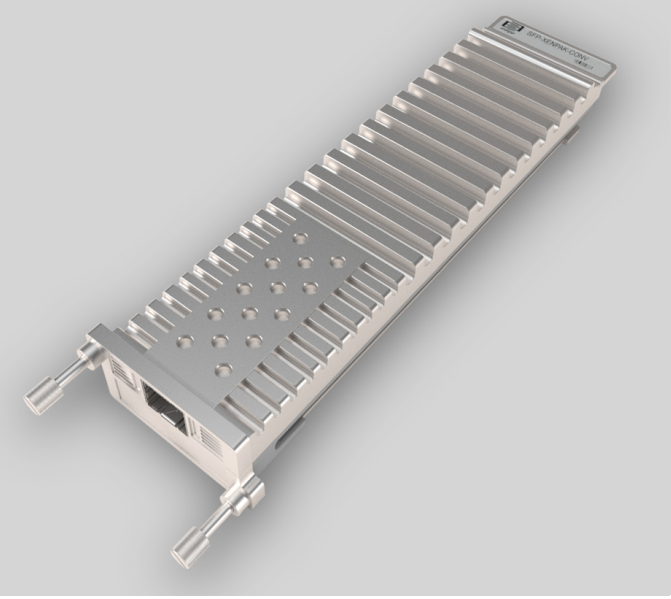
OPTICAL SOLUTIONS

For Datacenters

10. Fiber Channel SFP+:

11. DAC:

10. Fiber Channel SFP



10.1 16G FC SFP+:

16G Fibre Channel SFP+ Transceiver is a (Small Form-factor Pluggable Plus) optical module designed to operate over double fiber multi-mode or single mode optical cables with distances ranging from few meters up to 10km. These optical modules supports following Fibre Channel applications: **16G FC (14.025 Gbps), 10GFC (10.51875 Gbps), 8GFC (8.5 Gbps), 4GFC (4.25 Gbps)**

16G Double Fiber SFP+ are equipped with **double LC connectors** and support normal operating **temperature range 0 - 70 Celsius**.

16G Double Fiber SFP+ Transceivers are fully compliant to SFP Multi Source Agreement SFF-8431 and it can be provided with custom-encoded firmware, in order to provide **compatibility Cisco, Juniper, Brocade, Huawei, Alcatel, Force10 platforms** industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/Rx range)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
16GFC-SFP-100	MMF	100 m	5.7dB	850/850 nm	Coming Soon	€ 161.65
16GFC-SFP-10	SMF	10 km	6.2 dB	1310/1310 nm	Coming Soon	€ 370.84
16GFC-SFP-25	SMF	25 km	12.1 dB	1310/1310 nm	Coming Soon	€ 418.39
16GFC-SFP-40	SMF	40 km	14 dB	1550/1550 nm	Coming Soon	€ 1 274.18

10.2 10G FC Double Fiber

10G Fibre Channel Double Fiber SFP+ transceivers are designed to operate over two fiber multi-mode or single mode optical cables with distances ranging from few meters up to 100km. These optical modules support following Fibre Channel applications: 1**0GFC (10.51875 Gbps), 8GFC (8.5 Gbps), 4GFC (4.25 Gbps).**

10G FC Double Fiber SFP+ are equipped with double **LC connectors** and support normal operating temperature range **0 - 70 Celsius**.

10G FC Double Fiber SFP+ Transceivers are fully compliant to SFP Multi Source Agreement SFF-8431 and it can be provided with custom-encoded firmware, in order to provide c**ompatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
10GFC-SFP-300	MMF	300 m	4.6 dB	850/850 nm	Coming Soon	€ 23.77
10GFC-SFP-220	MMF	220 m	3.5 dB	1310/1310 nm	Coming Soon	€ 49.07
10GFC-SFP-10	SMF	10 km	6.0 dB	1310/1310 nm	Coming Soon	€ 49.07
10GFC-SFP-20	SMF	20 km	9 dB	1310/1310 nm	Coming Soon	€ 49.07
10GFC-SFP-40	SMF	40 km	14 dB	1550/1550 nm	Coming Soon	€ 245.33
10GFC-SFP-41	SMF	40 km	14 dB	1310/1310 nm	Coming Soon	€ 152.14
10GFC-SFP-80	SMF	80 km	23 dB	1550/1550 nm	Coming Soon	€ 473.54
10GFC-SFP-100	SMF	100 km	26 dB	1550/1550 nm	Coming Soon	€ 855.79

10.3 10G FC BiDi SFP+ :

10G Fibre Channel BiDi SFP+ transceivers are designed to operate over one single mode optical fiber with distances ranging from 10km up to 80km. These optical modules support following Fibre Channel applications: **10GFC (10.51875 Gbps), 8GFC (8.5 Gbps), 4GFC (4.25 Gbps), 2GFC (2.125 Gbps), 1GFC (1.0625 Gbps).** We are using WDM technology, separating both transmission directions by using different wavelength.

10G FC BiDi SFP+ transceivers are equipped with **single LC connector** and support normal operating **temperature range 0 - 70 Celsius**.

10G FC Single Fiber SFP+ Transceivers are fully compliant to SFP Multi Source Agreement SFF-8431 and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
BIDI-10GFC-SFP-10A	SMF	10 km	6.2 dB	1270/1330 nm	Coming Soon	€ 79.87
BIDI-10GFC-SFP-10B	SMF	10 km	6.2 dB	1330/1270 nm	Coming Soon	€ 79.87
BIDI-10GFC-SFP-20A	SMF	20 km	9 dB	1270/1330 nm	Coming Soon	€ 79.87
BIDI-10GFC-SFP-20B	SMF	20 km	9 dB	1330/1270 nm	Coming Soon	€ 79.87
BIDI-10GFC-SFP-40A	SMF	40 km	14 dB	1270/1330 nm	Coming Soon	€ 116.01
BIDI-10GFC-SFP-40B	SMF	40 km	14 dB	1330/1270 nm	Coming Soon	€ 116.01
BIDI-10GFC-SFP-60A	SMF	60 km	21 dB	1270/1330 nm	Coming Soon	€ 342.32
BIDI-10GFC-SFP-60B	SMF	60 km	21 dB	1330/1270 nm	Coming Soon	€ 342.32
BIDI-10GFC-SFP-80A	SMF	80 km	23 dB	1490/1550 nm	Coming Soon	€ 1 426.32
BIDI-10GFC-SFP-80B	SMF	80 km	23 dB	1550/1490 nm	Coming Soon	€ 1 426.32

10.4 10G FC CWDM SFP+:

10G Fibre Channel CWDM (Coarse Wavelength Division Multiplexing) SFP+ transceivers are designed to operate over single mode optical fiber with distances ranging from 10km up to 80km. These optical modules supports following Fibre Channel applications: **10GFC (10.51875 Gbps), 8GFC (8.5 Gbps), 4GFC (4.25 Gbps), 2GFC (2.125 Gbps), 1GFC (1.0625 Gbps).**

Each transceiver uses one **20nm wide CWDM channel according ITU-T G.694.2 CWDM grid** for transmission, but can receive all CWDM range wavelengths (1270 – 1610 nm). In combination with CWDM passive mux/demux and OADM devices, is possible to achieve up to 18x10G connections over pair of fiber, or up to 9x10G connections over single fiber.

10G FC CWDM SFP+ transceivers are equipped with **double LC connector** and support normal operating **temperature range 0 - 70° Celsius**.

10G FC CWDM SFP+ Transceivers are fully compliant to SFP Multi Source Agreement SFF-8431 and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX Range)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
CWDM-10GFC-SFP-10	SMF	10 km	9 dB	1270-1330 nm	Coming Soon	€ 264.34
CWDM-10GFC-SFP-10	SMF	10 km	9 dB	1350-1450 nm	Coming Soon	€ 264.34
CWDM-10GFC-SFP-10	SMF	10 km	9 dB	1470-1610 nm	Coming Soon	€ 494.46
CWDM-10GFC-SFP-40	SMF	40 km	13 dB	1270-1410 nm	Coming Soon	€ 283.36
CWDM-10GFC-SFP-40	SMF	40 km	14 dB	1430-1450 nm	Coming Soon	€ 283.36
CWDM-10GFC-SFP-40	SMF	40 km	14 dB	1470-1610 nm	Coming Soon	€ 494.46
CWDM-10GFC-SFP-80	SMF	80 km	23 dB	1270-1450 nm	Coming Soon	Upon request
CWDM-10GFC-SFP-80	SMF	80 km	23 dB	1470-1610 nm	Coming Soon	€ 760.70

10.5 10G FC DWDM SFP+:

10G Fibre Channel DWDM (Dense Wavelength Division Multiplexing) SFP+ transceivers are designed to operate over single mode optical fiber with distances ranging from 40km up to 80km. These optical modules supports following Fibre Channel applications:**10GFC (10.51875 Gbps), 8GFC (8.5 Gbps), 4GFC (4.25 Gbps), 2GFC (2.125 Gbps), 1GFC (1.0625 Gbps).**

Each fixed wavelenght DWDM transceiver uses one **DWDM channel according ITU-T 100GHz Channel Spacing C-Band DWDM grid** for transmission and each tunable DWDM tranceiver uses one **DWDM channel according ITU-T 50GHz Channel Spacing C-Band DWDM grid**, but **can receive complete WDM range 1270-1610nm**.In combination with DWDM passive mux/demux and OADM devices, is possible to achieve up to 45x10G connections over pair of fiber, or up to 22x10G connections over single fiber.

10G FC DWDM SFP+ transceivers are equipped with **double LC connector** and support normal operating **temperature range 0 - 70 Celsius**.

10G FC DWDM SFP+ Transceivers are fully compliant to SFP Multi Source Agreement SFF-8431 and it can be provided with custom-encoded firmware, in order to provide **compatibility of most equipment vendors platforms** in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX Range)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
DWDM-10GFC-SFP-40	SMF	40 km	14 dB	100GHz (C) (Ch. 17-61)	Coming Soon	€ 441.21
DWDM-10GFC-SFP-80	SMF	80 km	23 dB	100GHz (C) (Ch. 17-61)	Coming Soon	€ 644.70
DWDM-10GFC-SFP-80-TUN	SMF	80 km	23 dB	50GHz (C) (Ch. 13.5-61)	Coming Soon	€ 3 708.43

10.6 4G FC Double Fiber SFP:

4G Fibre Channel Double Fiber SFP transceivers are designed to operate over two fiber multi-mode or single mode optical cables with distances ranging from few meters up to 40km. These optical modules support following Fibre Channel applications: **4GFC (4.25 Gbps), 2GFC (2.125 Gbps), 1GFC (1.0625 Gbps).**

4G FC Double Fiber SFP are equipped with **double LC** connectors and support normal operating **temperature range 0 - 70 Celsius.**

4G FC Double Fiber SFP Transceivers are fully compliant to SFP Multi Source Agreement SFF-8472 and it can be provided with custom-encoded firmware, in order to **provide compatibility of most equipment vendors platforms** in data and telecom communications industry:

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
4.25G-SFP-550D	MMF	550 m	6.0 dB	850/850 nm	Coming Soon	€ 35.18
4.25G-SFP-5D	SMF	5 km	9.0 dB	1310/1310 nm	Coming Soon	€ 72.27
4.25G-SFP-10D	SMF	10 km	10.0 dB	1310/1310 nm	Coming Soon	€ 72.27
4.25G-SFP-40D	SMF	40 km	18.0 dB	1550/1550 nm	Coming Soon	€ 171.16

11. DAC

11.1 100G QSFP28 DAC Cop-

100G QSFP28 Direct Attach Copper (Twinax) cables support aggregated data rates of 100Gbps avaliable for short distance connections (1-3 meters) and support normal operating temperature range 0 - 70 Celsius.

These Twinax cables support following applications: 100G Ethernet and InfiniBand EDR (4x25Gbps) and are fully compliant to SFF-8665 and can be provided with custom-encoded firmware, in order to provide compatibility with Mellanox and other equipment vendor platforms in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Physical)	TYPE (Passive (P) or Active (A))	CABLE TYPE (Form Factor)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
100GDAC-QSFP28-P1M	AWG30	1 m	P	QSFP28 to QSFP28	Coming Soon	€ 212.05
100GDAC-QSFP28-P2M	AWG30	2 m	P	QSFP28 to QSFP28	Coming Soon	€ 233.92
100GDAC-QSFP28-P3M	AWG26	3 m	P	QSFP28 to QSFP28	Coming Soon	€ 277.66

11.2 40G QSFP+ AOC

QSFP+ AOC is a high data rate parallel active optical cable (AOC), to overcome the bandwidth limitation of traditional copper cable. The AOC offers 4 independent data transmission channels and 4 data receiving channels via the multimode ribbon fibers, each capable of 10Gbps operation. Consequently, an aggregate data rate of 40Gbps over 100 meters transmission can be achieved by this cable for supporting the ultra- fast computing data exchange.

Ethernet:

- 40G Eth (44.8 Gbps)
- 10G Eth (10.31 Gbps)

Infiniband:

- QDR (4 x 10Gbps)
- DDR (4 x 5Gbps)
- SDR (4 x 2.5Gbps)

Fibre Channel:

- 32GFC (28.05 Gbps)
- 16G FC (14.025 Gbps)
- 10GFC (10.51875 Gbps)
- 8GFC (8.5 Gbps)
- 4GFC (4.25 Gbps)

40G QSFP+ AOC support optical/electrical connection according to the QSFP+ Multi-Source Agreement (MSA) and SFF- 8436 can be provided with custom-encoded firmware, in order to provide compatibility with Cisco, Arista, Juniper, Mellanox, Brocade, Extreme Networks, Huawei, H3C, HP, IBM and other equipment vendor platforms in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Fiber Type)	DISTANCE (Physical)	CABLE TYPE (Form Factor)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
40GAOC-QSFP-A1M	OM3	1 m	QSFP+ to QSFP+	Coming Soon	€ 404.88
40GAOC-QSFP-A5M	OM3	5 m	QSFP+ to QSFP+	Coming Soon	€ 451.82
40GAOC-QSFP-A10M	OM3	10 m	QSFP+ to QSFP+	Coming Soon	€ 473.90
40GAOC-QSFP-A15M	OM3	15 m	QSFP+ to QSFP+	Coming Soon	€ 503.01
40GAOC-QSFP-A20M	OM3	20 m	QSFP+ to QSFP+	Coming Soon	€ 549.97
40GAOC-QSFP-A25M	OM3	25 m	QSFP+ to QSFP+	Coming Soon	€ 592.91

11.3 40G QSFP+ DAC Copper

40G QSFP+ Direct Attach Copper (Twinax) cables can either be passive or active and can support QSFP+ to QSFP+ connections or breakout cable connections QSFP+ to 4xSFP+ or QSFP+ to 4xXFP.

Ethernet:

- 40G Eth (44.8 Gbps)
- 10G Eth (10.31 Gbps)

Infiniband:

- QDR (4 x 10Gbps)
- DDR (4 x 5Gbps)
- SDR (4 x2.5Gbps)

Fibre Channel:

- 32GFC (28.05 Gbps)
- 16G FC (14.025 Gbps)
- 10GFC (10.51875 Gbps)
- 8GFC (8.5 Gbps)
- 4GFC (4.25 Gbps)

QSFP+ DAC Copper are fully compliant to SFF-8436 and QSFP+ MSA can be provided with custom-encoded firmware, in order to provide compatibility with Cisco, Arista, Juniper, Mellanox, Brocade, Extreme Networks, Huawei, H3C, HP, IBM and other equipment vendor platforms in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Physical)	TYPE (Active or Passive)	CABLE TYPE (Form Factor)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
40GDAC-QSFP-A1M	AWG30	1 m	Active	QSFP+ to QSFP+	Coming Soon	€ 262.44
40GDAC-QSFP-A5M	AWG30	5 m	Active	QSFP+ to QSFP+	Coming Soon	€ 294.77
40GDAC-QSFP-A10M	AWG28	10 m	Active	QSFP+ to QSFP+	Coming Soon	€ 532.49
40GDAC-QSFP-P0.5M	AWG30	0.5 m	Passive	QSFP+ to QSFP+	Coming Soon	€ 76.07
40GDAC-QSFP-P1M	AWG30	1 m	Passive	QSFP+ to QSFP+	Coming Soon	€ 76.07
40GDAC-QSFP-P2M	AWG30	2 m	Passive	QSFP+ to QSFP+	Coming Soon	€ 88.43
40GDAC-QSFP-P3M	AWG30	3 m	Passive	QSFP+ to QSFP+	Coming Soon	€ 104.60
40GDAC-QSFP-P5M	AWG28	5 m	Passive	QSFP+ to QSFP+	Coming Soon	€ 117.91
40GDAC-QSFP-P7M	AWG24	7 m	Passive	QSFP+ to QSFP+	Coming Soon	€ 163.55
QSFP-4xSFP-P0.5M	AWG30	0.5 m	Passive	QSFP+ to 4xSFP+	Coming Soon	€ 131.22
QSFP-4xSFP-P1M	AWG30	1 m	Passive	QSFP+ to 4xSFP+	Coming Soon	€ 131.22
QSFP-4xSFP-P2M	AWG30	2 m	Passive	QSFP+ to 4xSFP+	Coming Soon	€ 148.34
QSFP-4xSFP-P3M	AWG30	3 m	Passive	QSFP+ to 4xSFP+	Coming Soon	€ 163.55

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Physical)	TYPE (Active or Passive)	CABLE TYPE (Form Factor)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
QSFP-4xXFP-P0.5M	AWG30	0.5 m	Passive	QSFP+ to 4xXFP	Coming Soon	€ 247.23
QSFP-4xXFP-P1M	AWG30	1 m	Passive	QSFP+ to 4xXFP	Coming Soon	€ 247.23

11.4 10G SFP+ AOC

SFP+ AOC is a high data rate active optical cable (AOC), to overcome the bandwidth limitation of traditional copper cable using high reliability 850 nm technology with VCSEL transmitter and PIN receiver

Ethernet:

- 10G Eth (10.31 Gbps)
- 1G Eth (1.25 Gbps)

Infiniband:

- QDR (10 Gbps)
- DDR (2 x 5Gbps)
- SDR (4 x2.5Gbps)

Fibre Channel:

- 10GFC (10.51875 Gbps)
- 8GFC (8.5 Gbps)
- 4GFC (4.25 Gbps)
- 2GFC (2.125 Gbps)
- 1GFC (1.0625 Gbps)

These AOCs can be used as an alternative solution to SFP+ passive and active copper cables, while providing improved signal integrity, longer distances, superior electromagnetic immunity and better bit error rate performance.

SFP+ AOC cable are fully compliant to SFF-8432 and SFP+ MSA can be provided with custom-encoded firmware, in order to provide compatibility with Cisco, Arista, Juniper, Mellanox, Brocade, Extreme Networks, Huawei, H3C, HP, IBM and other equipment vendor platforms in data and telecom communications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Physical)	CABLE TYPE (Form Factor)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
10GAOC-SFP-A2M	OM2	2 m	SFP+ to SFP+	Coming Soon	€ 98.13
10GAOC-SFP-A3M	OM2	3 m	SFP+ to SFP+	Coming Soon	€ 100.79
10GAOC-SFP-A5M	OM2	5 m	SFP+ to SFP+	Coming Soon	€ 106.50
10GAOC-SFP-A7M	OM2	7 m	SFP+ to SFP+	Coming Soon	€ 114.11
10GAOC-SFP-A10M	OM2	10 m	SFP+ to SFP+	Coming Soon	€ 122.66
10GAOC-SFP-A12M	OM2	12 m	SFP+ to SFP+	Coming Soon	€ 127.99
10GAOC-SFP-A15M	OM2	15 m	SFP+ to SFP+	Coming Soon	€ 136.55

11.5 10G SFP+ DAC Copper

10G SFP+ Direct Attach Copper (Twinax) cables can either be passive or active and can support SFP+ to SFP+ connections.

Ethernet:

- 10G Eth (10.31 Gbps)
- 1G Eth (1.25 Gbps)

Infiniband:

- QDR (10 Gbps)
- DDR (2 x 5Gbps)
- SDR (4 x2.5Gbps)

Fibre Channel:

- 10GFC (10.51875 Gbps)
- 8GFC (8.5 Gbps)
- 4GFC (4.25 Gbps)
- 2GFC (2.125 Gbps)
- 1GFC (1.0625 Gbps)

SFP+ DAC Copper are fully compliant to SFF-8432 and SFP+ MSA can be provided with custom-encoded firmware, in order to provide compatibility with Cisco, Arista, Juniper, Mellanox, Brocade, Extreme Networks, Huawei, H3C, HP, IBM and other equipment vendor platforms in data and telecom communications industry.nications industry.

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Physical)	TYPE (Active or Passive)	CABLE TYPE (Form Factor)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
10GDAC-SFP-A5M	AWG30	5 m	Active	SFP+ to SFP+	Coming Soon	€ 110.30
10GDAC-SFP-A7M	AWG30	7 m	Active	SFP+ to SFP+	Coming Soon	€ 118.29
10GDAC-SFP-A10M	AWG28	10 m	Active	SFP+ to SFP+	Coming Soon	€ 151.19
10GDAC-SFP-A12M	AWG28	12 m	Active	SFP+ to SFP+	Coming Soon	€ 239.62
10GDAC-SFP-A15M	AWG28	15 m	Active	SFP+ to SFP+	Coming Soon	€ 279.56
10GDAC-SFP-P0.5M	AWG30	0.5 m	Passive	SFP+ to SFP+	Coming Soon	€ 26.43
10GDAC-SFP-P1M	AWG30	1 m	Passive	SFP+ to SFP+	Coming Soon	€ 26.43
10GDAC-SFP-P2M	AWG30	2 m	Passive	SFP+ to SFP+	Coming Soon	€ 30.81
10GDAC-SFP-P3M	AWG30	3 m	Passive	SFP+ to SFP+	Coming Soon	€ 34.80
10GDAC-SFP-P5M	AWG24	5 m	Passive	SFP+ to SFP+	Coming Soon	€ 66.56
10GDAC-SFP-P7M	AWG24	7 m	Passive	SFP+ to SFP+	Coming Soon	€ 83.68
10GDAC-SFP-P10M	AWG24	10 m	Passive	SFP+ to SFP+	Coming Soon	€ 107.45
10GDAC-SFP-P12M	AWG24	12 m	Passive	SFP+ to SFP+	Coming Soon	€ 124.57

For Mobile Network

12. CPRI/OBSAI SFP+:

12. CPRI/OBSAI SFP+

12.1 10GFH Double Fiber SFP+ (CPRI/OBSAI)

10GFH (Fronthaul) CPRI/OBSAI LTE Double Fiber SFP+ transceivers are designed to operate over two fiber multi-mode or single mode optical cables with distances ranging from few meters up to 100km. **CPRI (Common Public Radio Interface)** is industry specification defining connections of radio base stations between the Radio Equipment Control (REC) and the Radio Equipment (RE). The parties cooperating to define the specification are Ericsson AB, Huawei Technologies Co. Ltd, NEC Corporation, Alcatel Lucent and Nokia Networks. Our CPRI Transceivers supporting following **CPRI rates: 10.1376 Gbps, 9.830 Gbps, 7.373 Gbps, 6.144 Gbps, 4.915 Gbps, 2.458 Gbps, 1.229 Gbps.**

The **OBSAI** family of specifications provides the architecture, function descriptions and minimum requirements for integration of a set of common modules into a base transceiver station (BTS). RP3 of OBSAI is the interface between baseband block and RF block. Our transceivers are compatible with OBSAI specification and we can support following rates: **6.144 Gbps, 3.072 Gbps, 1.536 Gbps.** CPRI 10GFH Double Fiber SFP+ are equipped with **double LC** connectors and support normal operating **temperature range 0 - 70 Celsius.**

CPRI 10GFH Double Fiber SFP+ Transceivers are fully compliant to SFP Multi Source Agreement SFF-8472 and it can be provided with custom-encoded firmware, in order to **provide compatibility with Ericsson, Huawei, NSN, ZTE and other vendor BBU/RRU units**:

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	OPTICAL BUDGET (Minimum)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
10GFH-SFP-300	MMF	300 m	4.6 dB	850/850 nm	Click	€ 23.77
10GFH-SFP-220	MMF	220 m	3.5 dB	1310/1310 nm	Click	€ 49.07
10GFH-SFP-10	SMF	10 km	6.0 dB	1310/1310 nm	Click	€ 49.07
10GFH-SFP-20	SMF	20 km	9 dB	1310/1310 nm	Click	€ 49.07
10GH-SFP-40	SMF	40 km	14 dB	1550/1550 nm	Click	€ 49.07
10GFH-SFP-41	SMF	40 km	14 dB	1310/1310 nm	Click	€ 245.33
10GFH-SFP-80	SMF	80 km	23 dB	1550/1550 nm	Click	€ 152.14
10GFH-SFP-100	SMF	100 km	26 dB	1550/1550 nm	Click	€ 473.54

12.2 BiDi 10GFH SFP+ (CPRI/OBSAI)

10GFH (Fronthaul) CPRI/OBSAI LTE Single Fiber BiDi SFP+ transceivers are designed to operate over one single mode optical fiber with distances ranging from 10km up to 80km. We are using WDM technology, separating both transmission directions by using different wavelength. **CPRI (Common Public Radio Interface)** is industry specification defining connections of radio base stations between the Radio Equipment Control (REC) and the Radio Equipment (RE). The parties cooperating to define the specification are Ericsson AB, Huawei Technologies Co. Ltd, NEC Corporation, Alcatel Lucent and Nokia Networks. Our CPRI Transceivers supporting following **CPRI rates: 10.31Gbps, 9.830 Gbps, 7.373 Gbps, 6.144 Gbps, 4.915 Gbps, 2.458 Gbps, 1.229 Gbps.**

The **OBSAI** family of specifications provides the architecture, function descriptions and minimum requirements for integration of a set of common modules into a base transceiver station (BTS). RP3 of OBSAI is the interface between baseband block and RF block. Our transceivers are compatible with OBSAI specification and we can support following rates: **6.144 Gbps, 3.072 Gbps, 1.536 Gbps.** CPRI 10GFH BiDi SFP+ are equipped with **single LC** connector and support normal operating **temperature range 0 - 70 Celsius.**

CPRI 10GFH BiDi SFP+ Transceivers are fully compliant to SFP Multi Source Agreement SFF-8472 and it can be provided with custom-encoded firmware, in order to **provide compatibility with Ericsson, Huawei, NSN, ZTE and other vendor BBU/RRU units**:

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	OPTICAL BUDGET (Minimum)	WAVELENGHT (TX/RX)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
BIDI-10GFH-SFP-10A	SMF	10 km	6.2 dB	1270/1330 nm	Click	€ 79.87
BIDI-10GFH-SFP-10B	SMF	10 km	6.2 dB	1330/1270 nm	Click	€ 79.87
BIDI-10GFH-SFP-20A	SMF	20 km	9 dB	1270/1330 nm	Click	€ 79.87
BIDI-10GFH-SFP-20B	SMF	20 km	9 dB	1330/1270 nm	Click	€ 79.87
BIDI-10GFH-SFP-40A	SMF	40 km	14 dB	1270/1330 nm	Click	€ 116.01
BIDI-10GFH-SFP-40B	SMF	40 km	14 dB	1330/1270 nm	Click	€ 116.01
BIDI-10GFH-SFP-60A	SMF	60 km	21 dB	1270/1330 nm	Click	€ 342.32
BIDI-10GFH-SFP-60B	SMF	60 km	21 dB	1330/1270 nm	Click	€ 342.32
BIDI-10GFH-SFP-80A	SMF	80 km	23 dB	1490/1550 nm	Click	€ 1426.32
BIDI-10GFH-SFP-80B	SMF	80 km	23 dB	1550/1490 nm	Click	€ 1426.32

12.3 CWDM 10GFH SFP+ (CPRI/OBSAI)

10GFH (Fronthaul) CPRI/OBSAI LTE CWDM (Coarse Wavelength Division Multiplexing) SFP+ transceivers are designed to operate over one single mode optical fiber with distances ranging from 10km up to 80km. Each transceiver **uses one 20nm wide CWDM channel according ITU-T G.694.2 CWDM grid** for transmission, but can receive all CWDM range wavelengths (1270 – 1610 nm). In combination with CWDM passive mux/demux and OADM devices, is possible to achieve up to 18×10G (CPRI over CWDM) connections over pair of fiber, or up to 9×10G (CPRI over CWDM) connections over single fiber. **CPRI (Common Public Radio Interface)** is industry specification defining connections of radio base stations between the Radio Equipment Control (REC) and the Radio Equipment (RE). The parties cooperating to define the specification are Ericsson AB, Huawei Technologies Co. Ltd, NEC Corporation, Alcatel Lucent and Nokia Networks. Our CPRI Transceivers supporting following **CPRI rates: 10.137Gbps, 9.830 Gbps, 7.373 Gbps, 6.144 Gbps, 4.915 Gbps, 2.458 Gbps,**

1.229 Gbps.

The **OBSAI** family of specifications provides the architecture, function descriptions and minimum requirements for integration of a set of common modules into a base transceiver station (BTS). RP3 of OBSAI is the interface between baseband block and RF block. Our transceivers are compatible with OBSAI specification and we can support following rates: **6.144 Gbps, 3.072 Gbps, 1.536 Gbps.** CPRI 10GFH CWDM SFP+ are equipped with **double LC** connectors and support normal operating **temperature range 0 - 70 Celsius.**

CPRI 10GFH CWDM SFP+ Transceivers are fully compliant to SFP Multi Source Agreement SFF-8472 and it can be provided with custom-encoded firmware, in order to **provide compatibility with Ericsson, Huawei, NSN, ZTE and other vendor BBU/RRU units**:

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX Range)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
CWDM-10GFH-SFP-10	SMF	10 km	9 dB	1270-1330 nm	Click	€ 264.34
CWDM-10GFHSFP-10	SMF	10 km	9 dB	1350-1450 nm	Click	€ 264.34
CWDM-10GFH-SFP-10	SMF	10 km	9 dB	1470-1610 nm	Click	€ 494.46
CWDM-10GFH-SFP-40	SMF	40 km	13 dB	1270-1410 nm	Click	€ 283.36
CWDM-10GFH-SFP-40	SMF	40 km	14 dB	1430-1450 nm	Click	€ 283.36
CWDM-10GFH-SFP-40	SMF	40 km	14 dB	1470-1610 nm	Click	€ 494.46
CWDM-10GFH-SFP-80	SMF	80 km	23 dB	1270-1450 nm	Click	€ 816.08
CWDM-10GFH-SFP-80	SMF	80 km	23 dB	1470-1610 nm	Click	€ 760.70

12.4 DWDM 10GFH SFP+ (CPRI/OBSAI)

10GFH (Fronthaul) CPRI/OBSAI LTE DWDM (Dense Wavelength Division Multiplexing) SFP+ transceivers are designed to operate over one single mode optical fiber with distances ranging from 40km up to 80km. Each transceiver uses one **DWDM channel according ITU-T 100GHz Channel Spacing C-Band DWDM grid** for transmission, but can receive all DWDM C-Band range channels (17 – 61ch). In combination with DWDM passive mux/demux and OADM devices, is possible to achieve up to 45×10G (CPRI over DWDM) connections over pair of fiber, or up to 22×10G (CPRI over DWDM) connections over single fiber. **CPRI (Common Public Radio Interface)** is industry specification defining connections of radio base stations between the Radio Equipment Control (REC) and the Radio Equipment (RE). The parties cooperating to define the specification are Ericsson AB, Huawei Technologies Co. Ltd, NEC Corporation, Alcatel Lucent and Nokia Networks. Our CPRI Transceivers supporting following CPRI rates: **10.137 Gbps, 9.830 Gbps, 7.373 Gbps, 6.144 Gbps, 4.915 Gbps, 2.458 Gbps, 1.229 Gbps.**

The OBSAI family of specifications provides the architecture, function descriptions and minimum requirements for integration of a set of common modules into a base transceiver station (BTS). RP3 of OBSAI is the interface between baseband block and RF block. Our transceivers are compatible with OBSAI specification and we can support following rates: 6.144 Gbps, 3.072 Gbps, 1.536 Gbps. CPRI 10GFH DWDM SFP+ are equipped with **double LC** connectors and support normal operating **temperature range 0 - 70 Celsius.**

CPRI 10GFH DWDM SFP+ Transceivers are fully compliant to SFP Multi Source Agreement SFF-8472 and it can be provided with custom-encoded firmware, in order to **provide compatibility with Ericsson, Huawei, NSN, ZTE and other vendor BBU/RRU units**:

PART NUMBER (Used for Ordering)	MEDIA (Cable Type)	DISTANCE (Calc. according Budget)	BUDGET (Minimum Optical Budget)	WAVELENGHT (TX Range)	SPECIFICATION (Link to Website)	PRICE (EXW Latvia without VAT)
DWDM-10GFH-SFP-40	SMF	40 km	14 dB	100GHz (C) (Ch. 17-61)	Click	€ 441.21
DWDM-10GFH-SFP-80	SMF	80 km	23 dB	100GHz (C) (Ch. 17-61)	Click	€ 644.70
DWDM-10GFH-SFP-80-TUN	SMF	80 km	27 dB	50GHz (C) (Ch. 13.5-61)	Coming Soon	€ 3 708.43

Terms & Conditions

Pricing Terms

Pricing represented in this material is quoted **EXW Riga Latvia** according Incoterms 2010 of the International Chamber of Commerce without VAT.

How To Order

Ordering EDGE Optical Solutions is fast and easy - **4 steps** and our products will be shipped right to your door:

1. **Pick a product you need,** either choose the product from EDGE Optic Price List using our Part Number listed there or use the format you have been used to, for example 1000Base-SX SFP or using any vendor specific part number.
2. **Indicate the compatibility**, as time after time same vendor can have various type of coding for different type of series, please try to mention not only the Vendor, but as well equipment model in which you plan to use EDGE optical modules, for example: Cisco ASR 9010 or HP 5800 series, etc
3. Tell us **needed quantity** of each product and required **delivery address.**
4. **Send your requirement to: sales@edgeoptic.com** and our Sales team will come back with an offer including the shipping till your office and estimated delivery time.

Delivery Time

Standard delivery time for EDGE Optical products is **1-2 weeks from Purchase Order** confirmation. If you have an urgent request please contact sales@edgeoptic.com and we will prepare individual delivery shedule for your order.

Payment Terms

For **new Partners** we will require **100% prepayment**; however, for our long-term & proven partners we offer **15-days after payment** service.

Money Back Guarantee

EDGE Optical Solutions customers may return most, items **within 30 days** from delivery for a full refund. EDGE Optic's will cover the return shipping costs if the return is a result of our error (you received an incorrect or defective item, etc.). You should expect to receive your refund within two weeks of giving your package to the return shipper, however, in many cases you will receive a refund more quickly.

Compatibility

EDGE Optical transceivers can be provided with custom-encoded firmware, in order to provide compatibility with more then 50 vendor brands in data and telecom communications industry:

MS - General MSA
AD - ADVA
AL - Alcatel-Lucent
AR - Arista
AV - Avaya
BR - Brocade
CN - Ciena
CI - Cisco
DL - Dell & Force10
DK - D-Link
EM - EMC2
ET - Enterasys

ER - Ericsson
EX - Extreme Networks
F5 - F5 Networks
FO - Fortinet
FU - Fujitsu
H3 - H3C
HI - Hirschmann
HP* - HP Networking
HS* - HP Storage
HU - Huawei
IB - IBM
IF - Infinera

IN - Intel
JU - Juniper Networks
LI - Linksys
ML - Mellanox
ME - Meraki (Cisco)
MT - MikroTik
MO - Moxa
MR - MRV
NG - Netgear
NS - NSN
PA - Palo Alto Network
QL - Qlogic

RD - RAD
RU - Ruijie Networks
SM - Supermicro
SY - Synology
TC - Telco Systems
TP - TP-LINK
TN - Trendnet
WG - WatchGuard
ZT - ZTE
XX - Other

* - Please note HP compatible module prices can be higher then prices indicated in this material due to special requirements in coding. If you require HP compatibility, for exact pricing please contact our sales team: sales@edgeoptic.com

Product Naming

For example product with: **CWDM-10G-SFP-10-47-CI** part number.

- **CWDM** – particular module is for CWDM application
- **10G** – maximum supported speed is 10Gbit/s
- **SFP** – module has SFP form factor
- **10** – maximum supported distance is 10 km
- **47** – Tx wavelength is 1470nm
- **CI** – module has been coded with Cisco Firmware

Product Quality

We focus on strict product quality tests before each delivery, performing optical parameter tests, connector cleanliness tests and firmware verification tests to ensure our delivered products fully meets the promised product technical specifcation and compatibility requirements.

EDGE Optical transceivers are CE, ROHS certified and have passed Telecordia reliability tests.

Warranty

EDGE Optic's provides a limited **warranty for sixty (60) months** from Purchaser's receipt of the Equipment represented in this publication against defective design or workmanship.

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