E2O COMMUNICATIONS PRODUCTS CATALOG

e2o communications is a leading manufacturer of high-performance fiber optic transmission components for Local Area Networks (LANs), Storage Area Networks (SANs), Metropolitan Area Networks (MANs), Wide Area Networks (WANs) and Access Networks (ANs). the company sells its products globally to manufacturers of communications gear for public and private enterprises, internet service providers and telecommunications operating companies.

E2O FIBER OPTIC TRANSCEIVER FAMILY

MULTIMODE

SFP LC
SMALL FORM FACTOR PLUGGABLE

1 x 9
SC DUPLEX

SFP MT-RJ
SMALL FORM FACTOR PLUGGABLE

SFF LC
SMALL FORM FACTOR

10G XFP
850NM VCSEL
FOR MULTIMODE FIBRE

SFF MT-RJ
SMALL FORM FACTOR

SINGLE MODE

SFF LC-LW
GIGABIT ETHERNET, FIBRE CHANNEL,
SONET OC-3, OC-12, OC-48 LW PRODUCTS

SFP LC-LW
GIGABIT ETHERNET, FIBRE CHANNEL,
SONET OC-3, OC-12, OC-48 LW PRODUCTS

10G XFP
1310NM DFB SINGLE MODE
XFP MSA COMPATIBLE

E20 1 x 9 transceivers use the industry standard duplex SC optical fiber connector and the 1 x 9 electrical interface. They are designed to transmit and receive differential PECL signals at data rates of 1.06 and 1.25 Gbps. Each differential input/output line is AC or DC coupled depending on the user's requirement.

1 x 9 SC DUPLEX

Model Number	Product Description	Signal Rate (Gbps)	Wavelength (nm)	Voltage Supply (v)	Type	Application
EM125-N5-y-z-ss	Multimode Transceiver Gigabit Ethernet 5V	1.25	850	5.0	1X9	Gigabit Ethernet (1000Base-SX)
EM125-N3-y-z-ss	Multimode Transceiver Gigabit Ethernet 3.3V	1.25	850	3.3	1X9	Gigabit Ethernet (1000Base-SX)
EM106-N5-y-z-ss	Multimode Transceiver Fibre Channel 5V	1.06	850	5.0	1X9	Fibre Channel
EM106-N3-y-z-ss	Multimode Transceiver Fibre Channel 3.3V	1.06	850	3.3	1X9	Fibre Channel
EB-1x9-A	Evaluation Test Board AC Coupled	N/A	N/A	N/A	1X9	Test Board
EB-1x9-F	Evaluation Test Board AC/DC Coupled	N/A	N/A	N/A	1X9	Test Board

Product Selector Guide

1 X 9 SC DUPLEX

EM x – N v y z ss

x (Data Rate)
106 = 1.06 Gbps
125 = 1.25 Gbps

v (Voltage)
3 = +3.3V
5 = +5.0V

ss (Shielding)
FS = Forward Chassis Shield
BS = Backward Chassis Shield
NS = No Chassis Shield

z (Coupling)
A = AC
F = AC (TX), DC (RX)

y (Signal Detect)
T = TTL
E = PECL

SFF LC SMALL FORM FACTOR

E2O SFF-LC transceivers are designed to transmit and receive differential PECL signals at data rates from 1.06 Gbps to 1.25 Gbps. Each differential input and output line is AC or DC coupled depending on the user's requirement. The transceivers use the industry standard LC optical fiber connector and 2 x 5 electrical interface.

Model Number	Product Description	Signal Rate (Gbps)	Wavelength (nm)	Voltage Supply (v)	Type	Application
EM125-L3TA	Multimode Transceiver AC Coupled, TTL Signal Detect	1.25	850	3.3	SFF LC	Gigabit Ethernet (1000Base-SX)
EM125-L3TF	Multimode Transceiver AC/DC Coupled, TTL Signal Detect	1.25	850	3.3	SFF LC	Gigabit Ethernet (1000Base-SX)
EM106-L3TA	Multimode Transceiver AC Coupled, TTL Signal Detect	1.06	850	3.3	SFF LC	Fibre Channel
EM106-L3TF	Multimode Transceiver AC/DC Coupled, TTL Signal Detect	1.06	850	3.3	SFF LC	Fibre Channel
EM212-L3TA	Multimode Transceiver AC Coupled, TTL Signal Detect	1.06/2.12	850	3.3	SFF LC	Dual Speed Fibre Channel
EM212-L3TF	Multimode Transceiver AC/DC Coupled, TTL Signal Detect	1.06/2.12	850	3.3	SFF LC	Dual Speed Fibre Channel
EM250-L3TA	Multimode Transceiver AC Coupled, TTL Signal Detect	1.25/2.50	850	3.3	SFF LC	Gigabit Ethernet Infiniband
EM250-L3TF	Multimode Transceiver AC/DC Coupled, TTL Signal Detect	1.25/2.50	850	3.3	SFF LC	Gigabit Ethernet Infiniband
EB-SFF-A	Evaluation / Test Board AC Coupled	N/A	N/A	N/A	SFF LC	Test Board
EB-SFF-F	Evaluation / Test Board AC/DC Coupled	N/A	N/A	N/A	SFF LC	Test Board

SFF MT-RJ SMALL FORM FACTOR

E2O Small Form Factor MT-RJ transceivers are designed to transmit and receive differential PECL signals at data rates from 1.06 Gbps to 1.25 Gbps. Each differential input and output line is AC or DC coupled depending on the user's requirement. They use the industry standard MT-RJ optical fiber connector and 2 x 5 electrical interface.

Model Number	Product Description	Signal Rate (Gbps)	Wavelength (nm)	Voltage Supply (v)	Type	Application
EM125-M3TA	Multimode Transceiver AC Coupled, TTL Signal Detect	1.25	850	3.3	SFF MT-RJ	Gigabit Ethernet (1000Base-SX)
EM125-M3TF	Multimode Transceiver AC/DC Coupled, TTL Signal Detect	1.25	850	3.3	SFF MT-RJ	Gigabit Ethernet (1000Base-SX)
EM106-M3TA	Multimode Transceiver AC Coupled, TTL Signal Detect	1.06	850	3.3	SFF MT-RJ	Fibre Channel
EM106-M3TF	Multimode Transceiver AC/DC Coupled, TTL Signal Detect	1.06	850	3.3	SFF MT-RJ	Fibre Channel
EB-SFF-A	Evaluation / Test Board AC Coupled	N/A	N/A	N/A	SFF MT-RJ	Test Board
EB-SFF-F	Evaluation / Test Board AC/DC Coupled	N/A	N/A	N/A	SFF MT-RJ	Test Board

E2O Small Form Factor Pluggable optical transceivers are available as MSA Standard, or with Digital Diagnostics monitoring. They are hot-pluggable modules which use the industry standard duplex LC optical fibre connector and are compatible with the industry standard RFT connector and cage.

SFP LC

SMALL FORM FACTOR PLUGGABLE (STD MSA AND DIGITAL DIAGNOSTICS 8472)

Model Number	Product Description	Signal Rate (Gbps)	Wavelength (nm)	Voltage Supply (v)	Type	Application
EM125-LP3TA	Multimode Transceiver-Std MSA AC Coupled, TTL Signal Detect	1.25	850	3.3	SFP LC	Gigabit Ethernet (1000Base-SX)
EM106-LP3TA	Multimode Transceiver-Std MSA AC Coupled, TTL Signal Detect	1.06	850	3.3	SFP LC	Fibre Channel
EM212-LP3TA	Multimode Transceiver-Std MSA AC Coupled, TTL Signal Detect	1.06/2.12	850	3.3	SFP LC	Dual Speed Fibre Channel
EM250-LP3TA	Multimode Transceiver-Std MSA AC Coupled, TTL Signal Detect	1.25/2.50	850	3.3	SFP LC	Gigabit Ethernet Infiniband
EMA2G-LD3TA	Multimode Transceiver-D.D.(8472) AC Coupled, TTL Signal Detect	1.06/1.25/2.12	850	3.3	SFP LC	Dual Speed Fibre Channel Gigabit Ethernet

Available latches: MT = Bail Latch

E2O Small Form Factor Pluggable transceivers are hot pluggable modules using the industry standard MT-RJ optical fiber connector and are compatible with the industry standard RFT connector and cage.

SFP MT-RJ

SMALL FORM FACTOR PLUGGABLE

Model Number	Product Description	Signal Rate (Gbps)	Wavelength (nm)	Voltage Supply (v)	Type	Application
EM125-MP3TA	Multimode Transceiver AC Coupled, TTL Signal Detect	1.25	850	3.3	SFP MT-RJ	Gigabit Ethernet (1000Base-SX)
EM106-MP3TA	Multimode Transceiver AC Coupled, TTL Signal Detect	1.06	850	3.3	SFP MT-RJ	Fibre Channel
EM212-MP3TA	Multimode Transceiver AC Coupled, TTL Signal Detect	1.06/2.12	850	3.3	SFP MT-RJ	Dual Speed Fibre Channel
EM250-MP3TA	Multimode Transceiver AC Coupled, TTL Signal Detect	1.25/2.50	850	3.3	SFP MT-RJ	Gigabit Ethernet Infiniband
EB-SFP-A	Evaluation / Test Board AC Coupled	N/A	N/A	N/A	SFP MT-RJ	Test Board

Available latches: MS = MSA conforming

E2O's 10Gbps multimode XFP optical transceivers are XFP/MSA compliant and designed for use in aplications such as 10 Gigabit Ethernet and 10 Gigabit Fibre Channel.

10G XFP

850NM VCSEL FOR MULTIMODE FIBRE

Model Number	Product Description	Signal Rate (Mbps)	Wavelength (nm)	Voltage Supply (V)	Type	Application
EM1052-LDTTA	850 nm VCSEL for Multimode Fibre XFP MSA Compatible CML, AC Coupled	10Gbps	850	1.8V/3.3V	XFP-LC	GigE (10.3125 Gbps) FC (10.51875 Gbps)

E2O Small Form Factor Pluggable optical transceivers are designed for use in SONET/ SDH applications. They are available as MSA Standard, or with Digital Diagnostics monitoring. They are compatible with the industry standard RFT connector and cage MSA agreement. They meet the mezzanine height requirement of 9.8 mm.

SFP LC-LW

SMALL FORM FACTOR – SONET / SDH STM, 3.3V, SINGLE MODE

Model Number	Product Description	Signal Rate (Mbps)	Wavelength (nm)	Operating Temp.Range	Type	Application
ES015-Lv3TA-w-F3-IR1	Single-mode, AC Coupled Transceiver	155	1310	-40 to +85C 0 to +70C	SFP LC	1310 nm FP Laser for Short & Interm. Reach
ES015-Lv3TA-w-F0-LR1	Single-mode, AC Coupled Transceiver	155	1310	-40 to +85C 0 to +70C	SFP LC	1310 nm FP Laser for Long Reach 1
ES062-Lv3TA-w-F3-IR1	Single-mode, AC Coupled Transceiver	622	1310	-40 to +85C 0 to +70C	SFP LC	1310 nm FP Laser for Short & Interm. Reach
ES062-Lv3TA-w-D5-LR1	Single-mode, AC Coupled Transceiver-DD (8472)	622	1310	-20 to +85C 0 to +70C	SFP LC	1310 nm DFB Laser for Long Reach 1
ES248-Lv3TA-w-F1-SR1	Single-mode, AC Coupled Transceiver	2.488Gb/s	1310	-40 to +85C 0 to +70C	SFP LC	1310 nm FP Laser for Short Reach
ES248-Lv3TA-w-D3-y	Single-mode, AC Coupled Transceiver-DD	2.488Gb/s	1310/1550	-20 to +85C 0 to +70C	SFP LC	1310 nm or 1550 nm DFB Laser for Interm. Reach 1 or 2
ES248-Lv3TA-w-D6-y	Single-mode, AC Coupled Transceiver-DD	2.488Gb/s	1310/1550	-20 to +85C 0 to +70C	SFP LC	1310 nm or 1550 nm DFB Laser for Long Reach 1 or 2
EB-SFP-A	Evaluation / Test Board AC Coupled	N/A	N/A	N/A	SFP LC	Test Board

Note: Products shown in table above are for reference only. Use Product Selector Guide to determine part number for your application.

Product Selector Guide

SINGLE MODE TRANSCEIVERS — SMALL FORM FACTOR PLUGGABLE (SFP)
FOR 100BASE-LX AND SONET/SDH APPLICATIONS

ES x x x – L v 3 T A x y z

x x x (Data Rate)
012 = 100Base-FX (125 Mbps)
015 = SONET OC-3/SDH STM-1 (155 Mbps)
062 = SONET OC-12/SDH STM-4 (622 Mbps)
248 = SONET OC-48/SDH STM-16 (2.488 Gbps)

L (LC Connector)

v (Standard Compliance)
P = SFP MSA
D = Digital Diagnostics 8472
(For 015, 062 and 248 only)

3 (+3.3V Power Supply)

TTL Signal Detect

AC Coupling

z (Reach)
(See Data Sheet)

Laser (See Data Sheet)

x (Temp)
(See Data Sheet)

E2O Small Form Factor Fixed optical transceivers are designed for use in SONET/SDH applications. The transceivers comply with the industry standard 2x5 footprint and meet the mezzanine height requirement of 9.8 mm.

SFF LC-LW

SMALL FORM FACTOR – SONET / SDH, 3.3V, SINGLE MODE

Model Number	Product Description	Signal Rate (Mbps)	Wavelength (nm)	Operating Temp.Range	Type	Application
ES015-L3vw-x-F3-IR1	Single-mode, AC or AC/DC Coupled Transceiver	155	1310	-40 to +85C 0 to +70C	SFF LC	1310 nm FP Laser for Short & Interm. Reach
ES015-L3vw-x-F0-LR1	Single-mode, AC or AC/DC Coupled Transceiver	155	1310	-40 to +85C 0 to +70C	SFF LC	1310 nm FP Laser for Long Reach 1
ES062-L3Tw-x-F3-IR1	Single-mode, AC or AC/DC Coupled Transceiver	622	1310	-40 to +85C 0 to +70C	SFF LC	1310 nm FP Laser for Short & Interm. Reach
ES062-L3Tw-x-D5-LR1	Single-mode, AC or AC/DC Coupled Transceiver	622	1310	-20 to +85C 0 to +70C	SFF LC	1310 nm DFB Laser for Long Reach 1
ES248-L3TA-x-F1-SR1	Single-mode, AC Coupled Transceiver	2.488Gb/s	1310	-40 to +85C 0 to +70C	SFF LC	1310 nm FP Laser for Short Reach
ES248-L3TA-x-D3-z	Single-mode, AC Coupled Transceiver	2.488Gb/s	1310/1550	-20 to +85C 0 to +70C	SFF LC	1310 nm or 1550 nm DFB Laser for Interm. Reach 1 or 2
ES248-L3TA-x-D6-z	Single-mode, AC Coupled Transceiver	2.488Gb/s	1310/1550	-20 to +85C 0 to +70C	SFF LC	1310 nm or 1550 nm DFB Laser for Long Reach 1 or 2
EB-SFF-A EB-SFF-F	Evaluation / Test Board AC or AC/DC Coupled	N/A	N/A	N/A	SFF LC	Test Board

Product Selector Guide

SINGLE MODE TRANSCEIVERS — SMALL FORM FACTOR FIXED (SFF)

FOR SONET SDH APPLICATIONS

ES x x x – L 3 v w x y z

x x x (Data Rate)
015 = SONET OC-3/SDH STM-1 (155Mbps)
062 = SONET OC-12/SDH STM-4 (622Mbps)
248 = SONET OC-48/SDH STM-16 (2.488 Gbps)

L (LC Connector)

3 (+3.3V Power Supply)

v (Signal Detect)
E = PECL (OC-3 Only)
T = TTL

w (Coupling)
A = AC
F = AC/DC (OC-3 and OC-12 Only)

z (Reach)
(See Data Sheet)

Laser (See Data Sheet)

x (Temp)
(See Data Sheet)

E2O Small Form Factor Pluggable optical transceivers are designed for use in Fibre Channel and Gigabit Ethernet applications. They are available as MSA Standard, or with Digital Diagnostics monitoring. They are compatible with the industry standard RFT connector and cage MSA agreement. They meet the mezzanine height requirement of 9.8 mm.

SFP LC-LW

SMALL FORM FACTOR FIBRE CHANNEL / GIGABIT ETHERNET, 3.3V, SINGLE MODE

Model Number	Product Description	Signal Rate (Gbps)	Wavelength (nm)	Operating Temp.Range	Type	Application
ES125-Lv3TA-w-F1-LX1	Single-mode, AC Coupled Transceiver	1.25	1310	-40 to +85C 0 to +70C	SFP LC	1310 nm FP Laser for 10 Km Distance
ES125-Lv3TA-w-x-y	Single-mode, AC Coupled Transceiver	1.25	1310/1550	-20 to +85C 0 to +70C	SFP LC	1310 nm or 1550 nm DFB Laser for up to 80 Km Distance
ES106-Lv3TA-w-F1-LC1	Single-mode, AC Coupled Transceiver	1.06	1310	-40 to +85C 0 to +70C	SFP LC	1310 nm FP Laser for 10 Km Distance
ES106-Lv3TA-w-x-y	Single-mode, AC Coupled Transceiver	1.06	1550	-20 to +85C 0 to +70C	SFP LC	1310 nm or 1550 nm DFB Laser for up to 80 Km Distance
ES212-Lv3TA-w-F1-LC1	Single-mode, AC Coupled Transceiver	1.06/2.12	1310	-40 to +85C 0 to +70C	SFP LC	1310 nm FP Laser for 10 Km Distance
ES212-Lv3TA-w-x-y	Single-mode, AC Coupled Transceiver	1.06/2.12	1310/1550	-20 to +85C 0 to +70C	SFP LC	1310 nm or 1550 nm DFB Laser for up to 65 Km Distance
EB-SFP-A	Evaluation / Test Board AC Coupled	N/A	N/A	N/A	SFP LC	Test Board

Product Selector Guide

SINGLE MODE TRANSCEIVERS — SMALL FORM FACTOR PLUGGABLE (SFP)

FOR FIBRE CHANNEL AND GIGABIT ETHERNET APPLICATIONS

ES x x x – L v 3 T A x y z

x x x (Data Rate)
106 = Fibre Channel- (1.06 Gbps)
125 = Gigabit Ethernet- (1.25 Gbps)
212 = Dual Rate FC- (1.06/2.12 Gbps)

L (LC Connector)

v (Standard Compliance)
P = SFP MSA
D = Digital Diagnostics 8472

3 (+3.3V Power Supply)

TTL Signal Detect

AC Coupling

Reach (See Data Sheet)

Laser (See Data Sheet)

Temp (See Data Sheet)

E20 Small Form Factor Fixed optical transceivers are designed for use in Fibre Channel and Gigabit Ethernet applications. The transceivers comply with the industry standard 2X5 footprint and meet the mezzanine height requirement of 9.8 mm.

SFF LC-LW

SMALL FORM FACTOR FIBRE CHANNEL / GIGABIT ETHERNET, 3.3V, SINGLE MODE

Model Number	Product Description	Signal Rate (Gbps)	Wavelength (nm)	Operating Temp.Range	Type	Application
ES125-L3TA-x-F1-LX1	Single-mode, AC Coupled Transceiver	1.25	1310	-40 to +85C 0 to +70C	SFF LC	1310 nm FP Laser for 10 KM Distance
ES125-L3TA-x-y-z	Single-mode, AC Coupled Transceiver	1.25	1310/1550	-20 to +85C 0 to +70C	SFF LC	1330 nm or 1550 nm DFB Laser for up to 80 KM Distance
ES106-L3TA-x-F1-LC1	Single-mode, AC Coupled Transceiver	1.06	1310	-40 to +85C 0 to +70C	SFF LC	1310 nm FP Laser for 10 KM Distance
ES106-L3TA-x-y-z	Single-mode, AC Coupled Transceiver	1.06	1310/1550	-20 to +85C 0 to +70C	SFF LC	1310 or 1550 nm DFB Laser for up to 80 KM Distance
ES212-L3TA-x-F1-LC1	Single-mode, AC Coupled Transceiver	1.06/2.12	1310	-40 to +85C 0 to +70C	SFF LC	1310 nm FP Laser for 10 KM Distance
ES212-L3TA-x-y-z	Single-mode, AC Coupled Transceiver	1.06/2.12	1310/1550	-20 to +85C 0 to +70C	SFF LC	1310 nm or 1550 nm DFB Laser for up to 65 KM Distance
EB-SFF-A	Evaluation/Test Board AC Coupled	N/A	N/A	N/A	SFF LC	Test Board

Product Selector Guide

SINGLE MODE TRANSCEIVERS — SMALL FORM FACTOR FIXED (SFF)

FOR FIBRE CHANNEL AND GIGABIT ETHERNET APPLICATIONS

ES x x x – L 3 T A x y z

- x x x (Data Rate)
  - 106 = Fibre Channel (1.06 Gbps)
  - 125 = Gigabit Ethernet (1.25 Gbps)
  - 212 = Dual Rate Fibre Channel (1.06/2.12 Gbps)
- L (LC Connector)
- 3 (+3.3V Power Supply)
- TTL Signal Detect
- AC Coupling
- z: Reach (See Data Sheet)
- y: Laser (See Data Sheet)
- x: Temp (See Data Sheet)

E20's 10Gbps single mode XFP optical transceivers are XFP/MSA compliant and designed for use in aplications such as 10 Gigabit Ethernet and 10 Gigabit Fibre Channel.

10G XFP

1310NM DFB SINGLE MODE XFP MSA COMPATIBLE

Model Number	Product Description	Signal Rate (Gbps)	Wavelength (nm)	Voltage Supply (V)	Type	Application
ES10xx-LDTTA	1310 nm FP Single Mode XFP MSA Compatible XFI Data Input, LVTTL DD Monitoring	10	1310	1.8V/3.3V/5V	XFP-LC	GigE (10.3125 Gbps) FC (10.51875 Gbps)