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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# Small Form Pluggable Modules

Copper SFP (10/100/1000 and 1000 Mbps)

Fiber SFP, SFP+ & XFP (155 Mbps, 1.25 Gbps, 2.4 Gbps, 10 Gbps)

**B+B SMARTWORX**

Powered by

**ADVANTECH**

[www.advantech-bb.com](http://www.advantech-bb.com)



Copper

Fiber LC

## FEATURES & BENEFITS

- Future-proof network equipment
- Available in SM, MM fiber types
- Maximize network hardware
- Troubleshooting diagnostics
- Plug-and-play operation

SFPs, SFP+s and XFPs are compact transceivers that function as modular connectors. Available for copper (RJ-45) and all common fiber modes, wavelengths and data rates, these modules allow network operators to connect different interface types to the same network equipment via an SFP, SFP+, XFP port. The cost of cable upgrades is greatly reduced, preserving the networking equipment investment – all for the price of a relatively inexpensive module.

More and more network equipment is being designed with SFP/SFP+/XFP ports to take advantage of the inherent flexibility and to eliminate the guesswork and uncertainty of expensive equipment purchases. Remember to select an SFP, SFP+ or XFP to match the speed of your designated port. All modules from Advantech B+B SmartWorx carry a limited lifetime warranty.

### Standard Diagnostics

- SFP/XFP Type
- Fiber Link Length
- Wavelength
- Bit Rate
- Date Code

### DDMI/Extended Diagnostics

- Temperature
- Voltage
- Bias Current
- TX Power
- RX Power

## COPPER SFP MODULES

### Applications

- Gigabit Ethernet over CAT 5e or greater cable
- Switch/Router to Switch/Router Link

### Features

- Up to 1.25 Gbps bi-directional data links
- Hot-pluggable SFP footprint
- Temperature range (0 to +85 °C)
- Fully metallic enclosure for low EMI
- Low power dissipation
- Compact RJ-45 connector assembly
- Detailed product information in EEPROM
- 10/100/1000 BASE-T operation in host systems with SGMII interface

### Standards Compliant

- SFP MSA Compliant
- IEEE Std 802.3TM-2002
- FCC 47 CFR Part 15, Class B
- RoHS compliant

### Voltage/Temperature

- Input Voltage: 3.3V
- Operating Temperature: 0 to +85 °C
- Storage Temperature: -40 to +100 °C

### Two Versions Available

- 10/100/1000 Mbps, SGMII interface
- 1000 Mbps only, SERDES interface

## FIBER SFP, SFP+ & XFP MODULES

### Robust Industrial Performance

- Extended operating temperature range
- Hot swappable

### Feature Friendly

- Available in a wide range of fiber types, wavelengths and transmission rates to meet almost any networking need
- Includes single-strand fiber versions

### Extended Diagnostics

- Powerful troubleshooting Digital Diagnostics Monitoring Interface (DDMI)

### Standard Compliances

- MSA compliant: available in dual- or single-strand, SC or LC connector
- Eye Safety meets Laser Class 1 compliance with IEC 60825-1
- Complies with Telecordia GR-468-CORE
- RoHS compliant

### Voltage/Temperature

- Input Voltage: 3.3V
- Operating Temperature: -40 to +85 °C
- Operating Temperature, 10 Gbps IE-SFP+: -10 to +70 °C
- Operating Temperature, CWDM & 10 Gbps IE-XFP: 0 to +70 °C
- Storage Temperature: -40 to +85 °C

### Data Rates

#### 155 Mbps

- ITU-T G.957, G.958 and IEEE 802.3u
- Applications: Fast Ethernet, OC-3/STM-1 and other optical links 1.25 Gbps
- Compliant with specifications for IEEE 802.3z
- Applications: Gigabit Ethernet and other optical links

#### 2.4 Gbps

- Applications: Gigabit Ethernet, OC-48 and other optical links

#### 10 Gbps

- Applications: Ten Gigabit Ethernet, OC-192 and other optical links

All product specifications are subject to change without notice.

IE SFP-XFP Modules\_3917ds

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## COPPER SFP ORDERING INFORMATION

PART NUMBER	PORT DESCRIPTION	CONNECTOR	DISTANCE
808-39001	10 - 1250, TX	RJ45	100 m
808-39010	1250, TX	RJ45	100 m

## FIBER SFP ORDERING INFORMATION

Note: For each fiber product listed in the ordering tables below, DISTANCE represents an approximate fiber distance based on industry-standard fiber attenuation specifications. Actual distances will vary for each installation. For complete power budgets and additional information on calculating specific distances, contact B+B SmartWorx Technical Support at (815) 433-5100 (USA).

### IE-SFP Modules: 100 to 155 Mbps (OC-3)<sup>2</sup>

PART NUMBER	PORT DESCRIPTION	FIBER	DISTANCE	POWER BUDGET
				(db)
<i>W/ DDMI</i>				
808-38101	MM850	LC	2 km	14.5
808-38102	MM1300	LC	2 km	11
808-38103	SM1310	LC	20 km	21
808-38104	SM1310/PLUS	LC	40 km	31
808-38105	SM1550/LONG	LC	80 km	31
<i>Single-Strand Fiber</i>				
808-38121	SSFX-SM1310/1550	SC	20 km	20
808-38122	SSFX-SM1550/1310	SC	20 km	20
808-38123	SSFX-SM1310/1550/PLUS	SC	40 km	29
808-38124	SSFX-SM1550/1310/PLUS	SC	40 km	29
808-38125	SSFX-SM1310/1550/PLUS	SC	40 km	29
808-38126	SSFX-SM1310/1550/LONG	SC	40 km	29
808-38521	SSFX-SM1310/1550	LC	20 km	20
808-38522	SSFX-SM1550/1310	LC	20 km	20
808-38529	SSFX-SM1310/1550/LONG	LC	60 km	29
808-38530	SSFX-SM1550/1310/LONG	LC	60 km	29

### IE-SFP Modules: 2.4 Gbps Gigabit Ethernet (OC-48)<sup>2</sup>

PART NUMBER	PORT DESCRIPTION	FIBER	DISTANCE	POWER BUDGET
				(db)
<i>W/ DDMI</i>				
808-38301	MM850	LC	300 m	7.5
808-38302	SM1310	LC	2 km	8.5

### IE-SFP+ Modules: 10 Gbps Ethernet (OC-192) with DDMI<sup>1,2</sup>

PART NUMBER	PORT DESCRIPTION	FIBER	DISTANCE	POWER BUDGET(db)
808-38600	IE-SFP+SR/10G-ED, MM850	LC	33 m	2.8
808-38601	IE-SFP+LR/10G-ED, SM1310	LC	10 km	8.4

### IE-XFP Modules: 10 Gbps Ethernet (OC-192) with DDMI<sup>1</sup>

PART NUMBER	PORT DESCRIPTION	FIBER	DISTANCE	POWER BUDGET(db)
808-38610	IE-XFP SR/10G-ED, MM850	LC	33 m	2.8
808-38611	IE-XFP LR/10G-ED, SM1310	LC	10 km	8.4
808-38612	IE-XFP ER/10G-ED, SM1550	LC	40 km	15
808-38613	IE-XFP ZR/10G-ED, SM1550/PLUS	LC	80 km	23

### IE-SFP Modules: 1.25 Gbps Gigabit Ethernet (OC-24)<sup>2</sup>

PART NUMBER	PORT DESCRIPTION	FIBER	DISTANCE	POWER BUDGET
				(db)
<i>W/ DDMI</i>				
808-38201	MM850	LC	220/550 m	7.5
808-38206	MM1300	LC	2 km	10
808-38200	SM1310	LC	20 km	14
808-38203	SM1310/PLUS	LC	30 km	17
808-38204	SM1550/LONG	LC	40 km	18
808-38205	SM1550/XLONG	LC	70 km	21
<i>Single-Strand Fiber</i>				
808-38227	SSBX-SM1310/1490	SC	10 km	12.5
808-38228	SSBX-SM1490/1310	SC	10 km	12.5
808-38221	SSLX-SM1310/1550	SC	20 km	15
808-38222	SSLX-SM1550/1310	SC	20 km	15
808-38223	SSLX-SM1310/1550/PLUS	SC	40 km	20
808-38224	SSLX-SM1550/1310/PLUS	SC	40 km	20
<i>Single-Strand Fiber - LC</i>				
808-38721	SSLX-SM1310/1550	LC	20 km	15
808-38722	SSLX-SM1550/1310	LC	20 km	15
808-38723	SSLX-SM1310/PLUS	LC	40 km	20
808-38724	SSLX-SM1550/PLUS	LC	40 km	20
808-38725	SSLX-SM1490/LONG	LC	70 km	21
808-38726	SSLX-SM1550/LONG	LC	70 km	21

### IE-SFP Modules: CWDM (155 Mbps/1.25 Gbps) with DDMI

PART NUMBER	DESCRIPTION	FIBER	DISTANCE	POWER BUDGET (db)		
155 Mbps		1.25 Gbps		155 Mbps		
				1.25 Gbps		
				155 Mbps		
				1.25 Gbps		
808-38149	808-38249 CWDM-SM1430	LC	80 km	70 km	29	22
808-38150	808-38250 CWDM-SM1450	LC	80 km	70 km	29	22
808-38151	808-38251 CWDM-SM1470	LC	80 km	70 km	29	22
808-38152	808-38252 CWDM-SM1490	LC	80 km	70 km	29	22
808-38153	808-38253 CWDM-SM1510	LC	80 km	70 km	29	22
808-38154	808-38254 CWDM-SM1530	LC	80 km	70 km	29	22
808-38155	808-38255 CWDM-SM1550	LC	80 km	70 km	29	22
808-38156	808-38256 CWDM-SM1570	LC	80 km	70 km	29	22
808-38157	808-38257 CWDM-SM1590	LC	80 km	70 km	29	22
808-38158	808-38258 CWDM-SM1610	LC	80 km	70 km	29	22

<sup>1</sup> 10 Gbps XFP (OC-192) and 10 Gbps SFP+ (OC-192) form factors have varying dimensions and are not typically interchangeable; this will depend on the device type.

<sup>2</sup> 10 Gbps SFP+ (OC-192) and Fiber SFPs (OC-3, OC-24 and OC-48) form factors have virtually identical dimensions and are not typically interchangeable; this will depend on the device type.