

# SGFEB Series

## Stand-alone Gigabit Ethernet Media and Rate Converter

### 10/100/1000Base-T to 1000Base-SX/LX



## Features

- Auto Negotiation
- Auto-MDI/MDIX
- Link Pass Through
- Far End Fault (FEF)
- Remote Fault Detect
- Provides rate conversion while also increasing transmission distances
- Supports multimode or single mode fiber
- Versions available with fixed SC or LC optics, as well as modular SFP optics
- Long haul transmission distances are supported with a variety of SFP modules
- SFP ports support dual speeds: 100/1000/SGMII
- Multiport versions provide 3 or 4 port switch functionality or provide redundant fiber links
- Supports IEEE 802.3az Energy Efficient Ethernet

The SGFEB Series is a stand-alone media converter that provides an interface between 10/100/1000Base-T ports and 1000Base-SX/LX ports, allowing users to integrated fiber optic cabling into 10/100/1000 copper environments. Operating at Layer 2, the data link layer, this converter not only converts copper to fiber, it also provides rate conversion allowing legacy 10/100 copper devices to connect to 1000Base-SX/LX fiber.

## Specifications

Standards	IEEE 802.3 IEEE 802.3ab IEEE 802.3u IEEE 802.3z IEEE 802.3az
Data Rates	Copper: 10/100/1000 Mbps Fiber: 1000Mbps, 100Mbps also supported via SFP port
Filtering Addresses	8k MAC Addresses
Max Frame Size	10,260 byte Jumbo Frames
Dip Switches	Two Port Models Switch 1: TP1 - Auto-Negotiation Enable / Disable Switch 2: TP1 - Force 100Mbps or 10Mbps with switch 1 disabled Switch 3: TP1 - Force Full or Half-Duplex with switch 1 disabled Switch 4: Link Pass Through Enable / Disable Switch 5 & 6: Controls the Fiber SFP port for 1000M, 100M, or SGMII Multiport Models with additional 4 position dip-switch: Switch 1 & 2: Controls the 2nd Fiber SFP port for 1000M, 100M, or SGMII Switch 3 & 4: Fiber Redundancy Enable/Disable, Revertive Mode, and Fiber P2/P3 blocking
Status LEDs	PWR (Power): On = Power is provided to converter LACT (Fiber Link/Activity): On = Link, Blink = Activity RJ-45 Upper Left (TLink/Activity/Duplex): Green = Link Full-Duplex, Blink = Activity, Amber = Link Half-Duplex, Blink = Activity RJ-45 Upper Right (Speed): Green = 1000Mbps, Amber = 100Mbps, Off = 10Mbps
Dimensions	Width: 3.25" [82.55 mm] Depth: 4.8" [121.92 mm] Height: 1" [25 mm]
Power Consumption	2.2 Watts
Power Input	7.5 to 24 VDC, Provided by wide input AC Wall Mount Adapter
Environment	Operating: 0°C to 50°C Storage: -15°C to 65°C Humidity: 5% to 95% (non-condensing) Altitude: 0 - 10,000 ft.
Weight	2 lbs. [0.90 kg]
Compliance	EN55022 Class A, EN55024, FCC Class A, CE Mark Safety: Wall Mounted Power Supply: UL Listed, UL60950 and CSA Certified
Warranty	Lifetime

### Power Supply Included

To order the corresponding country specific power supply, add the extension from the list below to the end of the SKU  
Ex: SGFEB1040-130-NA

### -NA = Country Code

NA = North America, LA = Latin America, EU = Europe, UK = United Kingdom, SA = South Africa, JP = Japan, OZ = Australia, BR = Brazil



## Ordering Information

### SGFEB1040-130

10/100/1000Base-T (RJ-45) [100 m/328 ft.]  
to 100/1000Base-X SFP Slot (empty)

### SGFEB1013-130

10/100/1000Base-T (RJ-45) [100 m/328 ft.]  
to 1000Base-SX 850nm multimode (SC)  
[62.5/125 um: 220 m/722 ft.] [50/125 um: 550 m/1804 ft.] Link Budget 7.5dB

### SGFEB1039-130

10/100/1000Base-T (RJ-45) [100 m/328 ft.]  
to 1000Base-SX 850nm multimode (LC)  
[62.5/125 um: 220 m/722 ft.] [50/125 um: 550 m/1804 ft.] Link Budget 8.0dB

### SGFEB1014-130

10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-LX 1310nm single mode (SC) [10 km/6.2 mi.] Link Budget 10.5dB

### SGFEB1024-130

10/100/1000Base-T (RJ-45) [100 m/328ft.] to 1000Base-SX 1310nm Extended multimode (62.5/125mm fiber only) (SC) [up to 2 km] Link Budget 7.0dB

### SGFEB1019-130

10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-LX 1310nm single mode (LC) [10 km/6.2 mi.] Link Budget 10.5dB

### SGFEB1040-230

(1) Port 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to (2) Ports 100/1000Base-X SFP Slot (empty)

### SGFEB1040-330

(2) Port 10/100/1000Base-T (RJ-45) [100 m/328 ft.] to (2) Ports 100/1000Base-X SFP Slot (empty)

## Single Fiber Products

### SGFEB1029-130

10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-LX 1310nm TX/1550nm RX single mode (SC) [20 km/12.4 mi.] Link Budget 13.0dB

### SGFEB1029-131

10/100/1000Base-T (RJ-45) [100 m/328 ft.] to 1000Base-LX 1550nm TX/1310nm RX single mode (SC) [20 km/12.4 mi.] Link Budget 13.0dB

### Optional Accessories (sold separately)

#### SFP Modules

Supports 100Mbps and 1000Mbps fiber SFPs

#### DC Power Supply

SPS-2460-SA or SPS-2460-PS: wide input 24 - 60 VDC power supply

#### Mounting options

#### E-MCR-05

12 Slot Powered Media Converter Rack

#### RMS19-SA4-02

4-Slot Media Converter Shelf

#### WMBL

Wall Mount Bracket

#### WMBD

DIN Rail Mount Bracket