

10/100 to 100FX PoE Media Converters



The Signamax 065-1050 series media converters are 10/100BaseT/TX to 100BaseFX Power over Ethernet (PoE) devices that serve as Power Sourcing Equipment (PSE), which allows the converter to provide power to IEEE 802.3af PoE standard-compliant Powered Devices (PDs) using the twisted pair connection. This AC-powered PoE media converter combines data received over a fiber optic link with – 48 Volt DC power, which the PD can use in lieu of a separate power connector. The 065-1050 series converters are also equipped with PD signature-sensing, power monitoring, over-current protection, under-current detection, and input fault protection features. The 065-1050 series' Link Fault Signaling (LFS) capability allows the media converter to monitor both the fiber and copper RX ports for loss of signal. In case of a loss of RX signal on one media port, the converter will automatically disable the TX signal to the other media port, thus passing through the link fault. Far End Fault (FEF) capability enables the converter to stop sending link pulse to the link partner once a loss of the fiber RX signal is encountered; the link partner will then synchronously stop sending data, thereby preventing the loss of data that would occur when trying to transmit over a failed link.

The Signamax 065-1052 series media converters are PoE 10/100BaseT/TX to 100BaseFX Powered Devices supporting two types of media, 10/100BaseT/TX and 100BaseFX, for network connection. They are also equipped with Link Fault Signaling (LFS), to maintain link integrity and enable automatic failover when used with Spanning Tree-equipped switches.

KEY FEATURES

- PoE, to Save Power Infrastructure Costs
- Link Fault Signaling (LFS) with Far End Fault
- DIP Switches for Setting PoE Configuration
- IEEE 802.3af PoE PSE (Power Source Equipment) Compatible (065-1050 series)
- Internal AC Power Supply (065-1050 series)
- Over-Current Protection & Under-Current Detection (065-1050 series)
- Minimum Load Sensing (065-1050 series)
- Fault Protection Input (065-1050 series)
- IEEE 802.3af PoE PD (Powered Device) Compatible (065-1052 series)

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ORDERING INFORMATION

Part Number	Description
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10/100 To 100FX PoE Media Converters - (PSE) Power Source Equipment

065-1050ST	10/100 to 100FX MM/ST, 2 km PSE PoE Converter
065-1050SC	10/100 to 100FX MM/SC, 2 km PSE PoE Converter
065-1050SM	10/100 to 100FX SM/SC, 15 km PSE PoE Converter
065-1050SMED	10/100 to 100FX SM/SC, 40 km PSE PoE Converter
065-1050SMXLD	10/100 to 100FX SM/SC, 75 km PSE PoE Converter

10/100 To 100FX PoE Media Converters - (PD) Powered Devices

065-1052ST	10/100 to 100FX MM/ST, 2 km PD PoE Converter
065-1052SC	10/100 to 100FX MM/SC, 2 km PD PoE Converter
065-1052SM	10/100 to 100FX SM/SC, 15 km PD PoE Converter
065-1052SMED	10/100 to 100FX SM/SC, 40 km PD PoE Converter
065-1052SMXLD	10/100 to 100FX SM/SC, 75 km PD PoE Converter

SPECIFICATIONS

• **APPLICABLE STANDARDS**

- IEEE 802.3 10BaseT
- IEEE 802.3u 100BaseTX
- IEEE 802.3u 100BaseFX
- IEEE 802.3af Power over Ethernet (PoE)

• **FIXED PORTS**

Models 065-1050ST, 065-1050SC, 065-1050SM, 065-1050SMED, 065-1050SMXLD:

1 Auto-MDIX twisted-pair port meeting IEEE 802.3 10BaseT & IEEE 802.3u 100TX standard specifications; Category 5 or better cable, 100 meters maximum distance for 100TX, Category 3 or better cable, 100 meters maximum distance for 10BaseT

PLUS

1 fiber optic port meeting IEEE 802.3u 100FX standard specification; 62.5/125 or 50/125 micron MM fiber, 2,000 meters maximum distance (Models 065-1050ST & 065-1050SC)

OR

1 fiber optic port meeting IEEE 802.3u 100FX standard specification; 9/125 micron SM fiber, spanning: 15 kilometers maximum distance (065-1050SM)

OR

1 fiber optic port meeting IEEE 802.3u 100FX standard specification; 9/125 micron SM fiber, spanning: 40 kilometers maximum distance (065-1050SMED)

OR

1 fiber optic port meeting IEEE 802.3u 100FX standard specification; 9/125 micron SM fiber, spanning: 75 kilometers maximum distance (065-1050SMXLD)

Models 065-1052ST, 065-1052SC, 065-1052SM, 065-1052SMED, 065-1052SMXLD:

1 Auto-MDIX twisted-pair port meeting IEEE 802.3 10BaseT & IEEE 802.3u 100BaseTX standard specifications; Category 5 or better cable, 100 meters maximum distance for 100BaseTX, Category 3 or better cable, 100 meters maximum distance for 10BaseT

PLUS

1 fiber optic port meeting IEEE 802.3u 100FX standard specification; 62.5/125 or 50/125 micron MM cable, 2,000 meters maximum distance (065-1052ST & 065-1052SC)

OR

1 fiber optic port meeting IEEE 802.3u 100BaseFX standard specification; 9/125 micron SM fiber, spanning: 15 kilometers maximum distance (065-1052SM)

OR

1 fiber optic port meeting IEEE 802.3u 100BaseFX standard specification; 9/125 micron SM fiber optic, spanning: 40 kilometers maximum distance (065-1052SMED)

OR

1 fiber optic port meeting IEEE 802.3u 100BaseFX standard specification; 9/125 micron SM fiber optic cable, spanning: 75 kilometers maximum distance (065-1052SMXLD)

• **LED STATUS INDICATORS**

Models 065-1050ST, 065-1050SC, 065-1050SM, 065-1050SMED, 065-1050SMXLD:

Power, PoE, TP Link/Act, 100, FX Link/Act, FDX/COL, 4W, 7W, 15.4W, Power Bad
Nine LEDs total

Models 065-1052ST, 065-1052SC, 065-1052SM, 065-1052SMED, 065-1052SMXLD:

FX Link/Act, FX FDX/Col, TX Link/Act, TX 100, PSE Power Good, PSE Power Bad, Power
Six LEDs total

• **PERFORMANCE**

Latency: <4.5 μs (LIFO).

Throughput @ 100Base: 148,810 pps (64-byte packets)

• **FIBER INTERFACE, MULTIMODE MODELS**

Type: LED

Wavelength: 1300 nm nominal (1270 nm maximum, 1380 nm minimum)

Maximum Output Power: - 14.0 dBm

Minimum Output Power: - 20.0 dBm

Sensitivity: -33.0 dBm

Maximum Input Power: - 8.0 dBm

Link Power Budget: 13.0 dB

• **FIBER INTERFACE, SM PN 065-1050SM & 065-1052SM**

Type: MQW Laser

Wavelength: 1300 nm nominal (1260 nm maximum, 1360 nm minimum)

Maximum Output Power: - 7.0 dBm

Minimum Output Power: - 15.0 dBm

Sensitivity: -34.0 dBm

Maximum Input Power: - 7.0 dBm

Link Power Budget: 19.0 dB

SPECIFICATIONS**• FIBER INTERFACE, SINGLEMODE PN 065-1050SMXLD & 065-1052SMXLD**

Type: MQW Laser
Wavelength: 1300 nm nominal (1270 nm maximum, 1350 nm minimum)
Maximum Output Power: + 3.0 dBm
Minimum Output Power: - 3.0 dBm
Sensitivity: -37.0 dBm
Maximum Input Power: - 0.0 dBm
Link Power Budget: 34.0 dB

• PHYSICAL CHARACTERISTICS

Models 065-1050ST, 065-1050SC, 065-1050SM, 065-1050SMED, 065-1050SMXLD:

Case dimensions: 6.22"W x 5.24"D x 1.57"H
(158mm x 133mm x 40mm)

Fiber connector protrusion varies with model.

Weight: 1.66 pounds (0.75 kilograms)

Models 065-1052ST, 065-1052SC, 065-1052SM, 065-1052SMED, 065-1052SMXLD:

Case dimensions: 3.70"L x 2.77"W x 1.03"H
(94mm x 70.3mm x 26.2mm)

Fiber connector protrusion varies with model.

Weight: 0.5 pounds (0.23 kilograms)

• ELECTRICAL CHARACTERISTICS

Models 065-1050ST, 065-1050SC, 065-1050SM, 065-1050SMED, 065-1050SMXLD:

Maximum Wattage: 24 Watts

PSE Power Feed Support: "Endpoint" via TP pin 1, 2, 3, 6

Maximum PoE Wattage Deliverable: 15.4 Watts (with a 15.4 Watt PoE device connected)

AC Input: 100 ~ 240 VAC, 50 ~ 60 Hz internal universal power supply

Models 065-1052ST, 065-1052SC, 065-1052SM, 065-1052SMED, 065-1052SMXLD:

Maximum Wattage: 4.8 Watts

PD Power Reception Support: "Endpoint" via TP pin 1, 2, 3, 6 or "Midspan" via TP pin 4, 5, 7, 8

Maximum PoE Draw: 100mA @ -48 V DC from IEEE 802.3af PSE or PoE injector

Power Supply: External, 1 Amp @ +5 V DC (when not powered via PoE)

• ENVIRONMENTAL CHARACTERISTICS

Operating Temperature: 32°F to 122°F (0°C to 50° C)

Storage Temperature: -4°F to 158°F (-20°C to 70° C)

Relative Humidity: 5 to 90%, non-condensing

• SAFETY

UL Listed

• WARRANTY

Lifetime