BLACK BOX®

Hardened Mini Industrial Media Converters

Tough, DIN rail-mountable media converters connect 10-/100-Mbps copper to 100-Mbps fiber.

FEATURES

» Inexpensive, unmanaged Layer 2 conversion devices for easily converting legacy 10-/100-Mbps copper to 100-Mbps fiber—without taking up much-needed space.

» Designed for use in harsh environments.

» Offer an extended temperature range of 14 to 140° F.

» All feature an industrial-strength plastic case and comply with IEC 61000-Part 6-2 Generic standards for electromagnetic compatibility (EMC) in industrial environments.

» Enable you to connect a copper Ethernet device to a fiber Ethernet segment on your network.

» Enable you to extend 10BASE-T or 100BASE-TX Ethernet data much farther than what's possible over ordinary UTP cabling links.

» Converting to fiber also provides interference-free connections and stronger data security.

» Offer full wire-speed forwarding rates across the network.

» Copper port autonegotiates for 10-/100-Mbps speed and autodetects full- or half-duplex mode.

» Copper side also features Auto MDI/MDI-X so no crossover cables are needed.

» Feature 384 KB buffer memory.

» Can be installed easily on a DIN rail. Mounting kit is included.

OVERVIEW

Easily convert between copper and fiber segments in harsh environments with the Black Box® Hardened Mini Industrial Media Converters.

Featuring an industrial-strength case, the rugged, 2-port (1-to-1) devices are particularly ideal for any factory application where you need unmanaged conversion between a legacy 10- or 100-Mbps copper segment and a fiber backbone or other optical cable segment.

Use them in power plants, mining and military sites, or anywhere temperature and contaminants would ordinarily wreak havoc on the conversion circuitry.

The Hardened Mini Industrial Media Converters function at temperatures ranging from 14 to 140° F (-10 to +60° C).

They're also compact. They give you an affordable media-conversion solution for harsh environments where you have limited space for networking hardware, such as in transportation cabinets on roadsides, on shop floors, and in multi-tenant dwellings or fiber-to-the-home (FTTH) applications.

Plug and play, the media converters don't have any complicated software to set up and run.

What's more, the Hardened Mini Industrial Media Converters can be DIN-rail mounted (a mounting kit is included) and are equipped with terminal block power input for use in industrial applications that require Ethernet copper-to-fiber conversion.

Four versions are available: Choose from models with SC or ST® fiber connectors for either multimode or single-mode connectivity. Using the LMC270A-SM-20K-SC or LMC270A-SM-20K-ST copper-to-single-mode fiber converter, you can extend your Ethernet data communications as far as 20 kilometers (12.43 miles).

Because they perform standard autonegotiation and include auto-MDI-X on the copper ports, the media converters are cost effective for integrating legacy 10-Mbps UTP networks with 100-Mbps Fast Ethernet fiber networks. The copper ports autonegotiate for 10- or 100-Mbps speed and auto-detect full- or half-duplex mode.

TECH SPECS

Compliance —
EMI: FCC Part 15, Class A;
EN61000-6-3: EN55022,
EN61000-3-2, EN61000-3-3;
EMS: EN61000-6-2:
EN61000-4-2 (ESD standard),
EN61000-4-3 (radiated RFI standards),
EN61000-4-4 (burst standards),
EN61000-4-5 (surge standards),
EN61000-4-6 (induced RFI standards),
EN61000-4-8 (magnetic field standards),
EN61000-4-11 (voltage dips standards);
Environmental test:
IEC60068-2-6 Fc (vibration resistance),
IEC60068-2-27 Ea (shock),
IEC60068-2-32 Ed (free fall)

Enclosure — Plastic case, IP30 rated

Packet Buffer — 384 KB

Performance —
Ethernet: 14,880 pps;
Fast Ethernet: 148,800 pps

Processing Type — Store and forward with half-duplex back pressure and IEEE 802.3x full-duplex flow control

Standards — IEEE 802.3 10BASE-T, IEEE802.3u 100BASE-TX/100BASE-FX, IEEE802.3x

CE Approval — Yes

Indicators — LEDs:
Per unit: Power Status (Power1, Power2);
Per port: 10/100TX, 100FX: Link/Activity (green), Speed (yellow)

Connectors —
Ethernet/Fast Ethernet: (1) RJ-45;
Fiber optic: (1) pair of SC or ST®

Operating Environment —
Temperature: +14 to +140° F (-10 to +60° C);
Humidity: 5 to 95%, non-condensing

Power — Input: 12–48 VDC (terminal block);
Output: Per optional DC or AC power supply ordered;
Consumption: 2.4 W max.;
0.2 A at 12 VDC,
0.1 A at 24 VDC,
0.05 A at 48 VDC

Size — 4.3"H x 1"W x 2.8"D (10.9 x 2.5 x 7.1 cm)

Weight — 0.5 lb. (0.2 kg)

Item			Code
Hardened Mini Industrial Media Converters, 2-Port (1-to-1)			
(1) 10-/100-Mbps Copper to (1) 100-Mbps Fiber			
Multimode	SC	2 km	**LMC270A-MM-SC**
	ST	2 km	**LMC270A-MM-ST**
Single-Mode	SC	20 km	**LMC270A-SM-20K-SC**
	ST	20 km	**LMC270A-SM-20K-ST**
For your media converter, choose a DIN rail-mountable DC power supply or an AC power supply…			
DIN Mount Power Supply	24-VDC		**PSD012**
	48-VDC		**PSD014**
External 100–240-VAC Power Adapter			
12-VDC Stripped Ends Output	U.S. Cord		**PS003A**
	No Cord		**PS003**