Multi-Rate & 10G Media Converters (100M–10G)

Product Overview

High-performance unmanaged media converters designed to extend Ethernet networks across fiber infrastructure. Supporting 100 Mbps to 10 Gigabit Ethernet, these converters enable seamless copper-to-fiber and fiber-to-fiber connectivity using pluggable SFP/SFP+ optics.

The compact mini design allows deployment as standalone units or in a centralized rack chassis, providing flexible scaling for enterprise, telecom, and data center environments.

Product Features

- Supports 10M / 100M / 1G / 2.5G / 5G / 10G Ethernet
- Copper-to-fiber and fiber-to-fiber media conversion
- SFP+ pluggable fiber interface
- Compatible with multimode and single-mode fiber
- 10KB jumbo frame support
- Link Fault Pass-Through (LFP) for fault propagation
- Auto Laser Shutdown (ALS) protection
- DIP switch configurable operation modes
- Fanless metal enclosure for silent operation
- Supports standalone operation or rackmount chassis deployment

Applications

- Enterprise Networks
  - Extend copper Ethernet links to fiber across buildings or floors.
- Data Centers
  - Enable copper server interfaces to connect to fiber aggregation networks.
- Telecom Access Networks
  - Provide multi-rate Ethernet connectivity between access devices and fiber infrastructure.
- Industrial Connectivity
  - Offer electrical isolation and long-distance connectivity through fiber.

Technical Specifications

Parameter	Specification
Ports	1 × 10M/1G/2.5G/5G/10GBase-T RJ45 1 × 10GBase-X SFP+
Standards & Protocols	IEEE 802.3u, IEEE 802.3ab, IEEE 802.3bz, IEEE 802.3an, IEEE 802.3ae, IEEE 802.3x
MAC Address Table	2K
Jumbo Frames	10K
Fiber Cable Types	Multimode 50/125μm, 62.5/125μmSingle-mode 9/125μm
Copper Cable Types	UTP Cat5, Cat5e, Cat6, Cat6a
LED Indicators	TP/LNK, SPD, FX/LNK, PWR
DIP Switch Functions	LFP / ALS / Media Conversion Mode
Latency	2us
Input Power	DC 5–12V
Power consumption	5W Max
External Power Adapter	AC 100V–240V
Operating Temperature	0°C to 50°C
Storage Temperature	-20°C to 70°C
Housing	Metal
Warranty	2 Years
MTBF	＞ 50,000Hrs
Dimensions (Hx Wx D)	0.79''x 2.36''x 3.54'' (20x60x90mm)
Certifications	Certifications CE/RoHS/ FCC/REACH/RCM

Rackmount Deployment

Mini media converters can be deployed individually or installed in a high-density chassis.

- Supports up to 12 mini media converters
- Centralized power distribution
- Dual redundant power supplies
- Hot-swappable converter slots
- Designed for enterprise, telecom, and data center deployments

Installation & Operational Features

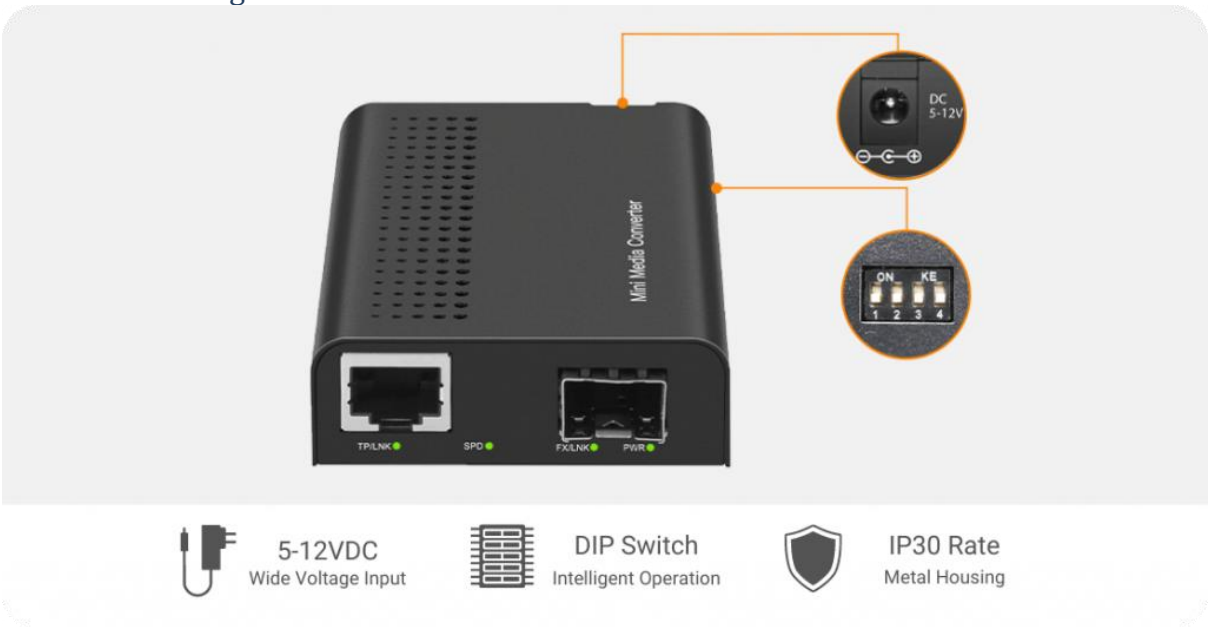
The mini media converters are designed for simple deployment and maintenance. Their hot-swappable design allows quick installation, replacement, or troubleshooting without disrupting other devices in the network. This simplifies maintenance operations and enables rapid service restoration when required.

To improve network reliability, the converters support Link Fault Pass-Through (LFP). When a link failure occurs on one side of the converter, the fault condition is automatically propagated to the opposite interface. This allows network administrators to detect connectivity issues immediately and respond quickly, reducing potential service disruption.

For flexible operation across different network environments, the converters include DIP switch configuration options that allow administrators to enable or disable key functions such as LFP, Auto Laser Shutdown (ALS), and media conversion modes.

These configuration options make the converters suitable for both standard Ethernet deployments and multi-rate migration environments.

DIP Switch Configuration



No.	Function	Status	Description
1	LFP (Link Fault Pass-Through)	OFF	LFP disabled
		ON	LFP enabled
2	ALS (Auto Laser Shutdown)	OFF	ALS disabled
		ON	ALS enabled
3	Media Conversion Mode	ON	Mode 1: TP = 10G, FX = 10G
			Mode 2: TP = 10/100/1000M, FX = 1G
		OFF	TP = 10/100/1000M/10G, FX = 10G

Ordering information

Model	Description
EN-MC-SFPPRJ45	Multi-Rate Copper to Fiber Media Converter (RJ45 ↔ SFP+)
EN-MC-SFPPSFPP	Multi-Rate Fiber to Fiber Media Converter (SFP+ ↔ SFP+)
EN-MCRCK-12S1RU-AC	12-Slot 1RU Media Converter Chassis with Redundant AC Power
EN-MCRCK-12S1RU-DC	12-Slot 1RU Media Converter Chassis with Redundant -48V DC Power

Notice:

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