IE100U Industrial Media Converters

Highlights

- The IE100U series operates from -40°C to +75°C, far wider than standard converters. It's suitable for harsh industrial and outdoor settings with extreme temperatures.
- Built with high-quality parts, it has an extended lifespan. A long mean time between failures reduces replacement needs and ensures continuous network operation.
- Supports high-speed data rates for industrial applications like real-time monitoring. Advanced tech ensures stable transmission in noisy environments.
- Comes with various port configs, including RJ45 and SFP fiber ports. This allows for seamless connections in different industrial network setups.
- Adheres to multiple IEEE standards, ensuring compatibility with diverse networking gear. It can be easily integrated into existing industrial networks.
- Features 6KV 8/20us lightning protection and IP30-rated dust and water resistance. It withstands electrical surges and harsh elements in industrial areas.

Product Overview

The IE100U series of industrial-grade media converters is a high-performance networking solution tailored to the demanding requirements of industrial environments. Unlike ordinary media converters, its extended temperature range and long-lifespan characteristics make it a reliable choice for applications where continuous operation is crucial. With a focus on providing seamless optical-electrical or copper-fiber media conversion, the series enables efficient data transmission across different network segments. Its multiple port configurations and wide compatibility ensure easy integration into existing industrial networks, whether they are legacy systems or modern, high-speed networks. The enhanced protection features safeguard the device from environmental hazards, while the high-speed data transfer capabilities support data-intensive industrial applications. Backed by a comprehensive warranty, the IE100U series offers a cost-effective and reliable networking solution for industrial users.

Unparalleled Temperature Tolerance

The IE100U series of industrial-grade media converters truly shines with its remarkable temperature tolerance. Capable of operating within a range from -40°C to +75°C, it outperforms ordinary media converters by a wide margin. In extremely cold environments like arctic oil rigs or high-altitude communication stations, the device remains unfazed, ensuring consistent data transmission. Conversely, in scorching industrial settings such as steel mills or desert-based power plants, it maintains stable operation. This wide-ranging temperature resilience eliminates the need for additional climate-control measures, reducing overall costs and making it an ideal choice for various industrial applications.

Extended Lifespan and Durability

Engineered with high-quality components and state-of-the-art manufacturing techniques, the IE100U series offers an extended lifespan. The mean time between failures (MTBF) is significantly longer compared to standard media converters. This means fewer disruptions due to device failures and lower maintenance costs over time. The converters are designed to withstand the rigors of industrial environments, including vibrations, shocks, and electromagnetic interference. Whether it's in a busy factory floor or a remote outdoor installation, the IE100U series provides long-term reliability, ensuring continuous network operation for critical industrial processes.

High-Speed and Secure Data Transmission

The IE100U series supports high-speed data transfer, catering to the demands of modern industrial applications. It can handle large volumes of data with low latency, making it suitable for real-time industrial monitoring, video surveillance, and automation systems. Moreover, the converters are equipped with advanced security features to protect data integrity. They support encryption protocols and access control mechanisms, safeguarding sensitive industrial data from unauthorized access and cyber threats. This ensures that industrial networks can operate efficiently and securely, even in the face of potential security risks.
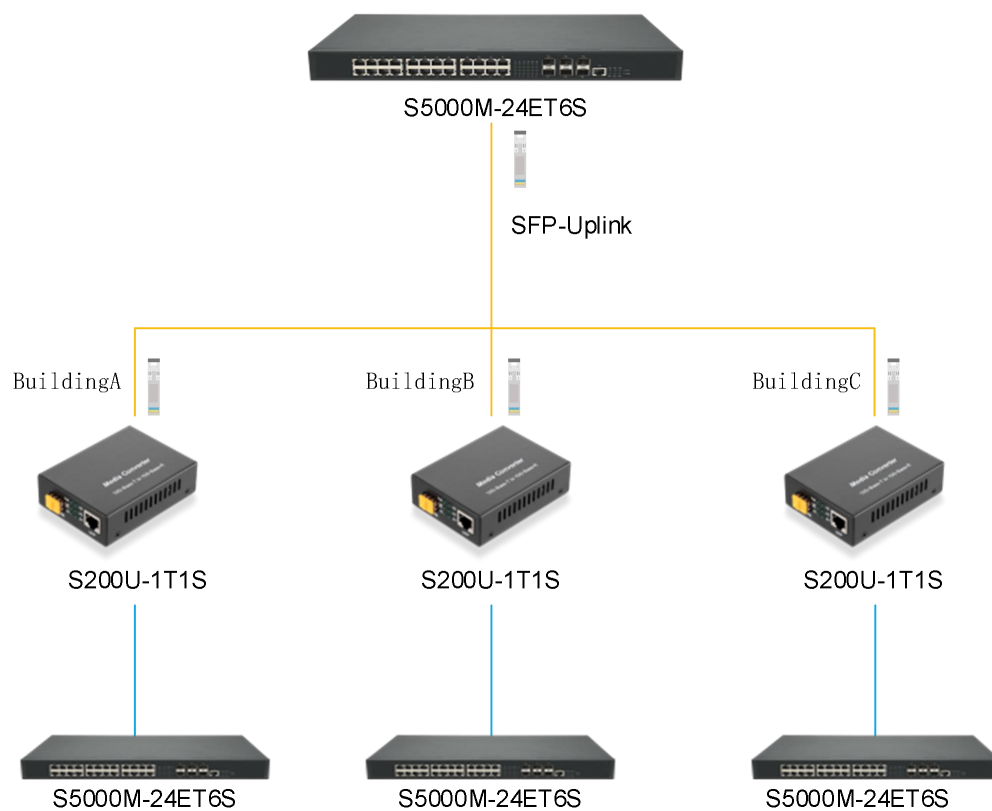
Comprehensive Compatibility and Flexibility

This series of media converters offers comprehensive compatibility with a wide range of networking equipment. Adhering to multiple IEEE standards, it can seamlessly integrate with existing industrial networks, whether they are legacy systems or the latest high-speed networks. The various port configurations, including 10/100/1000Base-T RJ45 and 1000M SFP fiber ports, provide flexibility in network design. Users can easily connect different types of devices, such as sensors, controllers, and servers, to create a unified and efficient industrial network. Additionally, the support for VLANs, multicast protocols, and redundancy technologies further enhances the network's functionality and reliability.
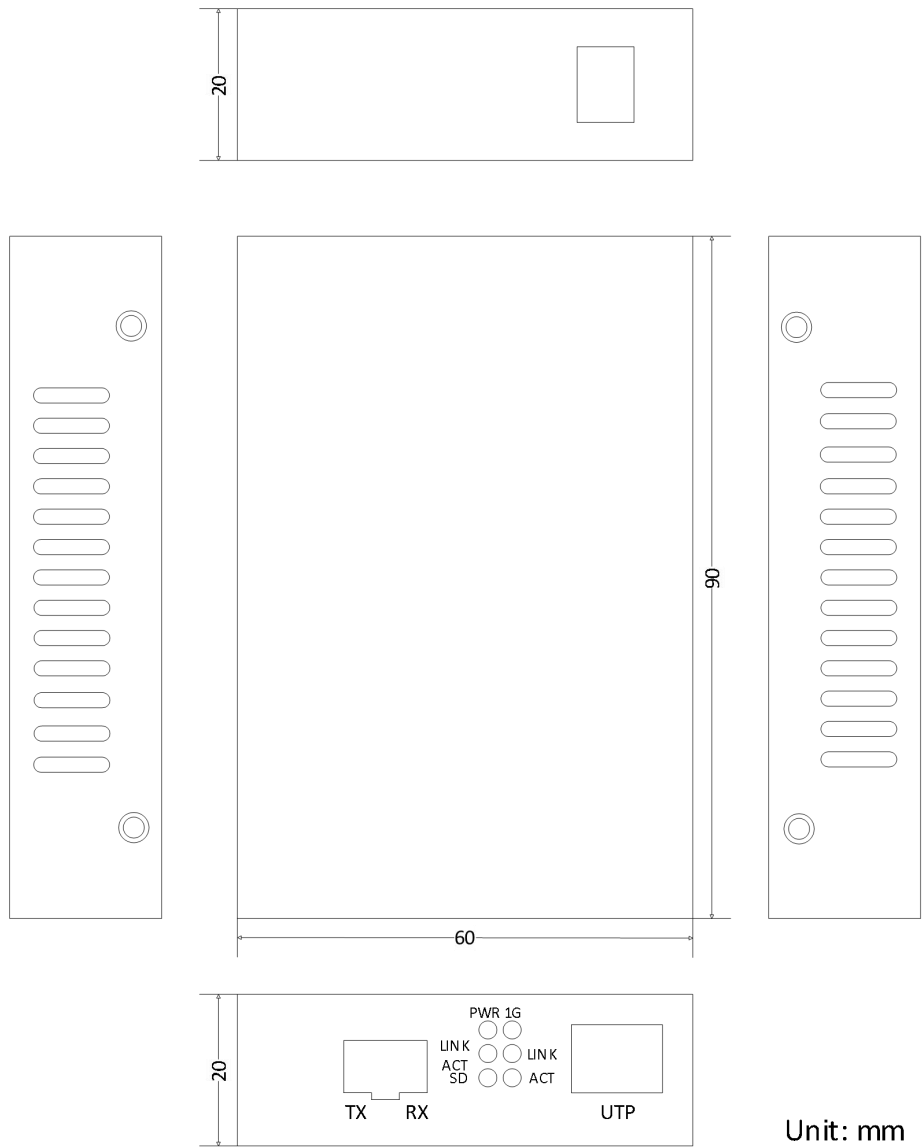
Hardware Specifications

Parameter	Specification		
	IE100U-1T1S	IE100U-1TP1S	IE100U-2TP1S
Cooper Port (RJ45)	1*10/100/1000Base (Auto)		2*10/100/1000Base (Auto)
Fiber Port	1x 100/1000Base-X SFP		
Transmission Mode	Store and Forward (full wirespeed)		
Bandwidth	5Gbps		7.5Gbps
Packet Forwarding	2.98Mpps		4.46Mpps
MAC Address	2K		
Buffer	2.5M		
Cable Type (Copper)	Cat5/5e/6		
Cable Type (Fiber)	Multi-mode 50/125μm, 62.5/125μm Single-mode 9/125μm		
Transmission Diatance	2km (MM fiber) or 160km (SM/WDM fiber)		
Wave Length	Depends on the used SFP module		
PoE Output Power	-	30W per port	
Power Consumption	≤3W	≤30W (12V DC) ≤48W (48V DC)	
Input Power	DC 5-12V	12~48V DC, 3A Max.	
Network Protocol	IEEE 802.3, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3z, IEEE 802.3x		
Detailed Transmission Distance	10BASE-T: Cat3,4,5 UTP (Max 100m) 100BASE-TX: Cat5 or later UTP (Max 100m) 1000BASE-TX: Cat6 or later UTP (Max 100m) Optional 2-160km Optical Fiber Module		
LED Indicator	PWR: Power LED PDX: Working status LED TX Link: Network Port LED FX Link: (Optical fiber LED) Port: (Tx100 LED=10/100M + Tx100LED =1000M)		
Certificate	CE mark, commercial; CE/LVD EN60950; FCC Part 15 Class B; RoHS; MA; CNAS		
Operating Temperature/Humidity	-40 ~ +75°C; 5%~90% RH non-condensing		
Storage Temperature/Humidity	-40 ~ +85°C; 5%~95% RH non-condensing		
Product size/Packing size （L*W*H）	94mm*70mm*25mm/230mm*125mm*55mm		

N.W/G.W（kg）	0.1kg/0.225kg
Latency	1μs
MTBF	> 50,000Hrs
Lightning Protection Level	3KV 8/20μs; IP40
Installation	Desktop (optional wall hanger+machine hanger parts)
VLAN	Support for port-based VLANs
Multicast Protocol	Supports IGMP Snooping
Redundancy Technology	Supports ERPS ring network, supports static link aggregation
Warranty	Whole device for 2 year

Application

S5000M-24ET6S

SFP-Uplink

BuildingA   BuildingB   BuildingC

S200U-1T1S   S200U-1T1S   S200U-1T1S

S5000M-24ET6S   S5000M-24ET6S   S5000M-24ET6S

Technical Drawing

20

90

60

20

PWR 1G

LINK

ACT

SD

LINK

ACT

TX   RX

UTP

Unit: mm

Order Information

Module	Description
IE100U-1T1S	Industrial Unmanaged 1x 10/100/1000Base-T RJ45 to 1x 100/1000Base-X SFP Slot Gigabit Ethernet Media Converter
IE100U-2TP1S	Industrial Unmanaged 2x 10/100/1000Base-T RJ45 to 1x 100/1000Base-X SFP Slot Gigabit Ethernet PoE+ Media Converter
IE100U-1TP1S	Industrial Unmanaged 1x 10/100/1000Base-T RJ45 to 1x 100/1000Base-X SFP Slot Gigabit Ethernet PoE+ Media Converter

Further Information

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Disclaimer

1. We are committed to continuous product improvement and feature upgrades, and the contents contained in this manual are subject to change without notice.

2. Nothing herein should be construed as constituting an additional warranty.

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