S200U-1T1S Media Converters

Highlights

- The S200U-1T1S features one 10 Gigabit optical port and one 10 Gigabit adaptive electrical port. It can seamlessly connect twisted-pair and fiber-optic networks, enabling flexible network integration.
- The electrical port supports 1000Base-T, 2.5/5/10GBase-T auto-negotiation. This allows it to adapt to different network speeds and cable types automatically, ensuring smooth network operation.
- It supports IEEE802.3x flow control in full duplex and half-duplex back pressure flow control. These features optimize data transmission, prevent data congestion, and enhance network stability.
- With optical wavelength options of 850nm, 1310nm, and 1550nm, the product can be used in various optical fiber transmission scenarios, meeting different distance and signal-loss requirements.
- Offering multiple fiber transmission modes like dual-fiber multimode, dual-fiber single mode, and single-fiber single mode, it provides users with more choices according to their specific network deployment needs.
- Housed in an iron shell, it has low power consumption and heat. Its compact size (94mm70mm26mm) and desktop installation method make it suitable for different working environments, ensuring long-term stable operation.

Product Overview

The S200U-1T1S is a high-performance 10G media converter designed for seamless integration of different network media. It comes with one 10 Gigabit optical port and one 10 Gigabit adaptive electrical port, enabling smooth connection between twisted-pair and fiber-optic networks. The electrical port supports auto-negotiation for various speeds like 1000Base-T, 2.5/5/10GBase-T. It features IEEE802.3x flow control in full duplex and half-duplex back pressure flow control to prevent data congestion. With selectable optical wavelengths of 850nm, 1310nm, and 1550nm, and multiple fiber transmission modes, it can adapt to diverse network requirements. Housed in an iron shell, it has low power consumption and heat, ensuring stable long-term operation. Its compact size and desktop installation method make it suitable for a wide range of applications in telecommunications, broadcasting, and broadband networks.

Dual-Media Connectivity

The S200U-1T1S is uniquely designed with one 10 Gigabit optical port and one 10 Gigabit adaptive electrical port. This dual-media setup is a game-changer for network integration. It can effectively connect twisted-pair Ethernet cables and fiber-optic lines. In a corporate network, for example, it can link the local area network segments using twisted-pair cables to the long-distance fiber-optic backbone. This seamless connection between different media types ensures high-speed data transfer without the need for complex conversions, enabling efficient communication across the entire network.

Auto-Negotiation Function

The electrical port of the S200U-1T1S has an advanced auto-negotiation feature that supports 1000Base-T, 2.5/5/10GBase-T. This is a huge advantage when setting up or upgrading a network. It can automatically detect the speed capabilities of the connected device and the type of cable being used, such as UTP-6e. Whether it's connecting to an older 1000Base-T switch or a new 10GBase-T server, the device adjusts itself accordingly. This not only simplifies the installation process but also ensures compatibility, minimizing network-down times due to connection mismatches.

Flow Control Mechanisms

Equipped with IEEE802.3x flow control in full duplex and half-duplex back pressure flow control, the S200U-1T1S is well-prepared for high-traffic network environments. In a data-intensive network where multiple devices are transmitting large amounts of data simultaneously, these flow control mechanisms prevent data congestion. IEEE802.3x flow control in full duplex coordinates the data flow between devices, while half-duplex back pressure flow control stops the sender when the receiver's buffer is full. This ensures that data packets are not lost or dropped, maintaining the integrity of data transmission and enhancing overall network performance.

Wavelength and Fiber Mode Flexibility

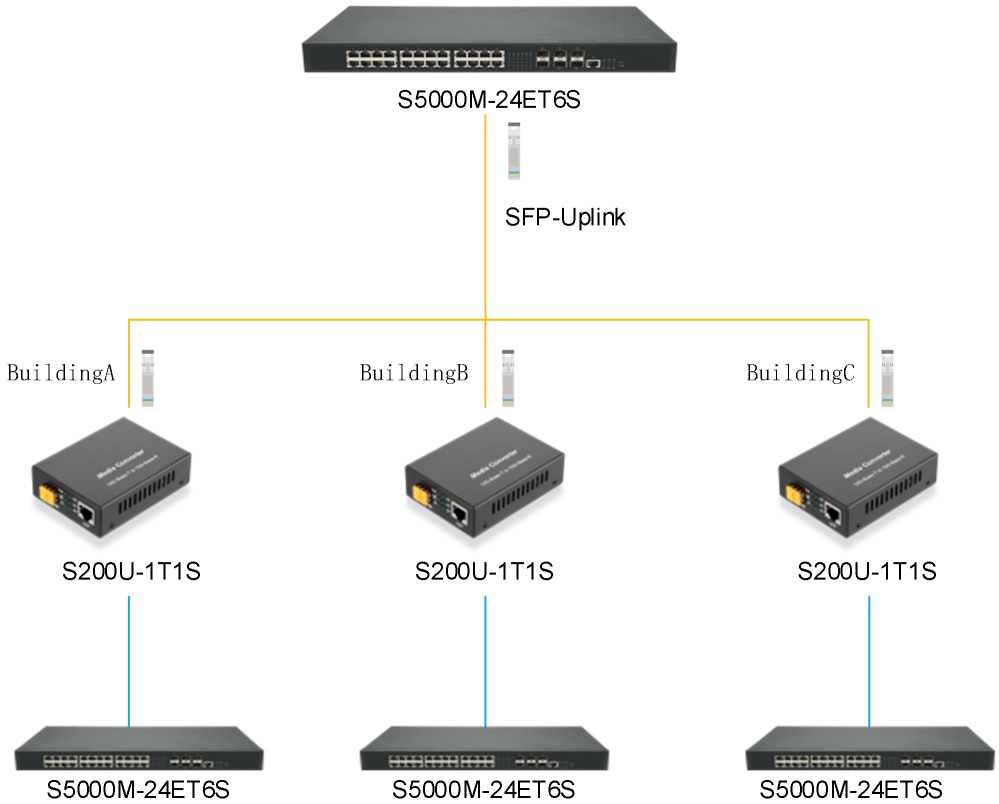
The S200U-1T1S offers remarkable flexibility with optical wavelength options of 850nm, 1310nm, and 1550nm, along with multiple fiber transmission modes. For short-range connections within a building, the 850nm wavelength in multimode fiber can be used for its cost-effectiveness. In contrast, for long-distance transmissions up to 80Km, the 1550nm wavelength in single-mode fiber is more suitable. The availability of dual-fiber and single-fiber options further caters to different installation requirements. This adaptability allows users to optimize their network design based on factors like distance, budget, and signal quality.

Hardware Specifications

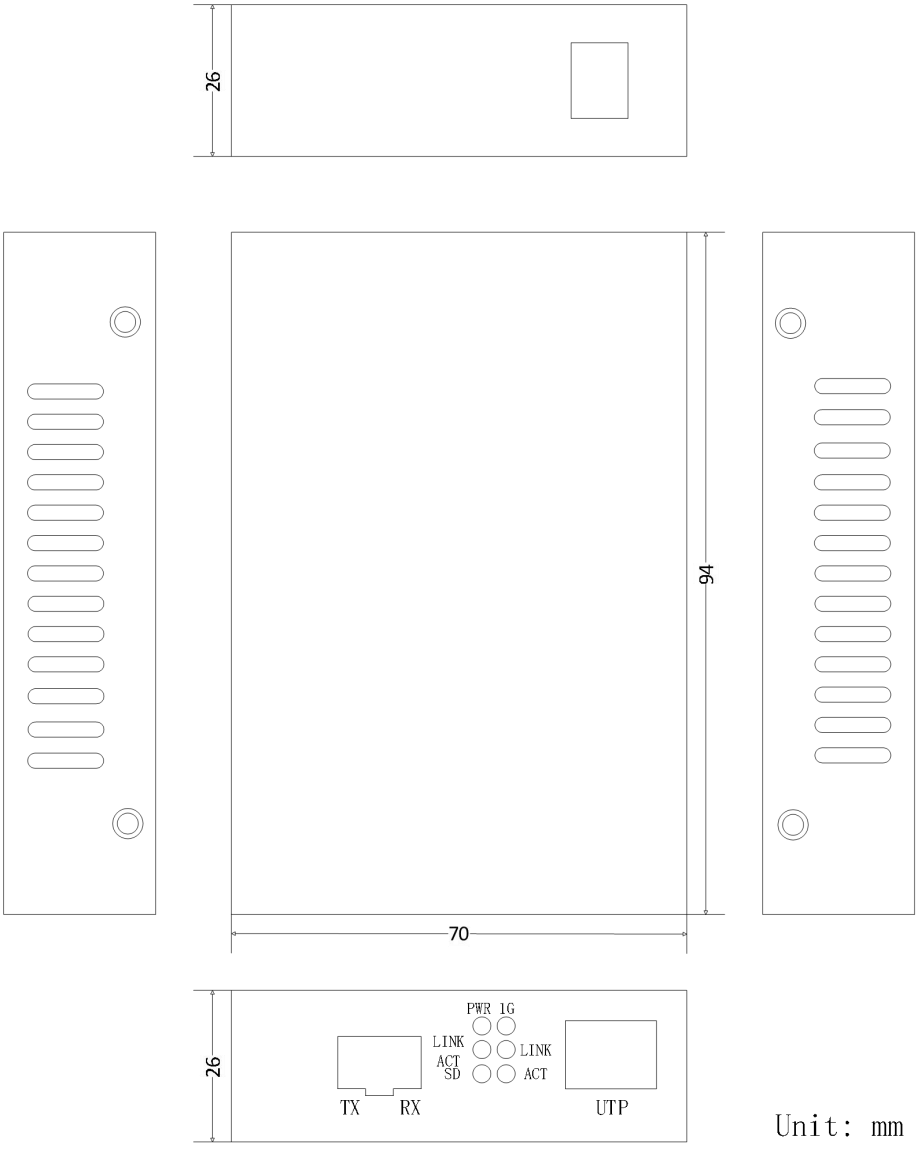
Parameter	Specification
Cooper Port (RJ45)	1*100/1000Base-T,2.5/5/10GBase-T Auto
Fiber Port	1*10GBase-X SFP+
Transmission Mode	Store and Forward (full wirespeed)
Bandwidth	10Gbps
Packet Forwarding	14.88Mpps
MAC Address	8K
Buffer	4M
Watt	≤8W
Cable Type (Copper)	Cat5/5e/6/6a/7
Cable Type (Fiber)	Multi-mode 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
Power	External power DC 5V 2A
Network Protocol	IEEE802.3, IEEE802.3i 10BASE-T, IEEE802.3u, IEEE 802.3ab, IEEE802.3x, IEEE 802.3z, IEEE 802.3ae, IEEE 802.3an, IEEE 802.3bz.
Detailed Transmission Distance	1000BASE-T: Up to 100m on Cat6 or later UTP cables 2.5GBASE-T/5GBASE-T/10GBASE-T: Up to 100m on Cat6A or later UTP cables Single-mode single-fiber: Up to 160 km Single-mode dual-fiber: Up to 160 km Multi-mode dual-fiber: Up to 2 km
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	-15 ~ +65°C; 5%~90% RH non-condensing
Storage Temperature/Humidity	-40 ~ +75°C; 5%~95% RH non-condensing
Product size/Packing size（L*W*H）	94mm*70mm*26mm 230mm*125mm*55mm
N.W/G.W（kg）	0.15kg/0.3kg

Lightning Protection Level	4KV 8/20μs; IP30
Latency	1μs
MTBF	> 50,000Hrs
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



Technical Drawing



Unit: mm

Order Information

Module	Description
S100U-1T1S	Unmanaged 1x 10/100/1000Base-T RJ45 to 1x 100/1000Base-X SFP Slot Gigabit Ethernet Media Converter
S100U-2T1S	Unmanaged 2x 10/100/1000Base-T RJ45 to 1x 100/1000Base-X SFP Slot Gigabit Ethernet Media Converter
S100U-2S	Unmanaged 1x 100/1000Base-X SFP to 1x 100/1000Base-X SFP Slot Gigabit Ethernet Media Converter
S100U-4T2S	Unmanaged 4x 10/100/1000Base-T RJ45 to 2x 100/1000Base-X SFP Slot Gigabit Ethernet Media Converter
S200U-1T1S	Unmanaged 1x 100M/1G/2.5G/5G/10GBase-T RJ45 to 1x 10GBase-X SFP+ Slot 10Gigabit Ethernet Media Converter
S100U-1TP1S	Unmanaged 1x 10/100/1000Base-T RJ45 to 1x 100/1000Base-X SFP Slot Gigabit Ethernet PoE+ Media Converter
S100U-2T2S	Unmanaged 2x 10/100/1000Base-T RJ45 to 2x 100/1000Base-X SFP Slot Gigabit Ethernet Media Converter

Further Information

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