DTECH®

Guangzhou DTECH Electronics Technology Co., Ltd.

Product Specification

Model：SW101G/SW102G/SW104G/SW108G

Product Name：Full Gigabit Industrial Fiber Media Converter



Reliable Connectivity

Secure & Stable

Industrial-Grade Design

Wide Compatibility

DTECH®

Industrial Gigabit Fiber Media Converter
SW101G / SW102G / SW104G / SW108G Series

Standard Wiring Stable Communication

Suitable for control cabinet wiring, device interconnection, fiber conversion, and industrial on-site network access.



01 Control Cabinet Wiring

Suitable for internal wiring in industrial control cabinets and device interconnection.



02 Fiber Conversion

Supports fiber uplink and RJ45 port access for more flexible networking.



03 Terminal Power Input

DC 12–52V wide-voltage input with dual power redundancy for more stable operation.



04 On-Site Deployment

DIN-rail installation, neat wiring, and more efficient maintenance.



05 Smart Water Management

Suitable for pumping stations, water treatment facilities, environmental monitoring, and other industrial data transmission.



06 Petrochemical Industry

Suitable for network interconnection in petrochemical plants, industrial control systems, and equipment monitoring.

Industrial-Grade Stable Transmission · More Standardized Wiring · More Efficient Networking

Clear Wiring | Easy Installation | Stable Communication | Industrial Protection

Product Series Overview

The SW100G Series Gigabit Industrial Ethernet Switches include four models: SW101G (1 Fiber Port + 1 Ethernet Port), SW102G (1 Fiber Port + 2 Ethernet Ports), SW104G (1 Fiber Port + 4 Ethernet Ports), and SW108G (1 Fiber Port + 8 Ethernet Ports). Designed for industrial applications, this series provides reliable Gigabit fiber-optic network transmission.The devices feature rugged IP40-rated metal enclosures with fanless cooling and support a wide operating temperature range of -40°C to +85°C. With comprehensive EMC protection and power supply lightning and surge protection, they are well-suited for harsh industrial environments, including factories, outdoor installations, and control cabinets.Supporting both DIN rail and wall mounting, the switches feature a compact design for flexible installation and easy deployment.

EMC Level 3 Protection

-40℃~+85℃

Fanless Design

MTBF ≥ 300,000 Hours

5-Year Warranty





SW101G-SFP-2D
Gigabit Industrial 1F1E Fiber Media Converter

- Ensures reliable data transmission and long service life.
- Supports full-duplex and half-duplex modes with auto-negotiation.
- Supports automatic MDI/MDI-X detection.
- Built-in store-and-forward mechanism with support for multiple protocols.
- Industrial-grade design with MTBF ≥ 300,000 hours.
- Power Input: DC 12–52V with reverse polarity protection.
- Optional built-in SC/FC/ST fiber optic interfaces.
- Power Surge Protection: 5000A (8/20μs).

Detailed Product Specifications

Protocol Standards

IEEE 802.3 10BASE-T

IEEE 802.3i 10BASE-T

IEEE 802.3u 100BASE-TX/FX

IEEE 802.3ab 1000BASE-T

IEEE 802.3z 1000BASE-X

IEEE 802.3x

Interfaces

RJ45 Port: 1 × 10/100/1000Base-T(X) auto-negotiation, full/half duplex, Auto MDI/MDI-X, optional PoE support

Fiber Port: 1 × SFP (1000Base-FX), optional built-in SC/FC/ST fiber optic interface

LED Indicators: PWR power indicator; Ethernet and fiber port Link/ACT indicators

Switch Properties

Transmission Mode: Store-and-Forward

MAC Address Table: 2K

Backplane Bandwidth: 14 Gbps

Buffer Memory: 1.2 Mbit

Switching Latency: <10 μs

Power Input

Input Voltage: 12/24/48 VDC (10.8–52.8 VDC)

Power Connector: 6-Pin Phoenix Terminal Block

Power Consumption: ≤3 W

Supports Dual Redundant Power Inputs

Built-in 4.0 A Overcurrent Protection

Reverse Polarity Protection

Mechanical Characteristics

Enclosure: IP40-rated metal housing

Weight: 321 g

Installation: 35 mm DIN Rail Mounting

Cooling Method: Natural Cooling, Fanless Design

Dimensions: 118 × 85.7 × 33.5 mm

Operating Environment

Operating Temperature: -40°C to +85°C

Storage Temperature: -40°C to +85°C

Relative Humidity: 5%–95% (Non-condensing)

Industrial Standards

EMI: FCC Part 15 Subpart B Class A, EN 55022 Class A

EMS:

IEC (EN) 61000-4-2 (ESD): ±8 kV Contact Discharge, ±12 kV Air Discharge

IEC (EN) 61000-4-3 (RS): 10 V/m (80–1000 MHz)

IEC (EN) 61000-4-4 (EFT): Power Line: ±4 kV; Data Line: ±2 kV

IEC (EN) 61000-4-5 (Surge): Ethernet Port: ±4 kV CM / ±2 kV DM

IEC (EN) 61000-4-6 (Conducted RF): 3 V (10 kHz–150 kHz), 10 V (150 kHz–80 MHz)

IEC (EN) 61000-4-16 (Common-Mode Conducted Disturbances): 30 V Continuous, 300 V for 1 s

IEC (EN) 61000-4-8 (Power Frequency Magnetic Field Immunity)

Shock: IEC 60068-2-27

Free Fall: IEC 60068-2-32

Vibration: IEC 60068-2-6



SW102G-SFP-2D
Gigabit Industrial 1F2E Fiber Media Converter

- Ensures reliable data transmission and long service life.
- Supports full-duplex and half-duplex modes with auto-negotiation.
- Supports automatic MDI/MDI-X detection.
- Built-in store-and-forward mechanism with support for multiple protocols.
- Industrial-grade design with MTBF ≥ 300,000 hours.
- Power Input: DC 12–52V with reverse polarity protection.
- Optional built-in SC/FC/ST fiber optic interfaces.
- Power Surge Protection: 5000A (8/20μs).

Detailed Product Specifications

Protocol Standards

IEEE 802.3 10BASE-T

IEEE 802.3i 10BASE-T

IEEE 802.3u 100BASE-TX/FX

IEEE 802.3ab 1000BASE-T

IEEE 802.3z 1000BASE-X

IEEE 802.3x

Interfaces

RJ45 Port: 2 × 10/100/1000Base-T(X) auto-negotiation, full/half duplex, Auto MDI/MDI-X, optional PoE support

Fiber Port: 1 × SFP (1000Base-FX), optional built-in SC/FC/ST fiber optic interface

LED Indicators: PWR power indicator; Ethernet and fiber port Link/ACT indicators

Switch Properties

Transmission Mode: Store-and-Forward

MAC Address Table: 2K

Backplane Bandwidth: 14 Gbps

Buffer Memory: 1.2 Mbit

Switching Latency: <10 μs

Power Input

Input Voltage: 12/24/48 VDC (10.8–52.8 VDC)

Power Connector: 6-Pin Phoenix Terminal Block

Power Consumption: ≤3 W

Supports Dual Redundant Power Inputs

Built-in 4.0 A Overcurrent Protection

Reverse Polarity Protection

Mechanical Characteristics

Enclosure: IP40-rated metal housing

Weight: 330 g

Installation: 35 mm DIN Rail Mounting

Cooling Method: Natural Cooling, Fanless Design

Dimensions: 118 × 85.7 × 33.5 mm

Operating Environment

Operating Temperature: -40°C to +85°C

Storage Temperature: -40°C to +85°C

Relative Humidity: 5%–95% (Non-condensing)

Industrial Standards

EMI: FCC Part 15 Subpart B Class A, EN 55022 Class A

EMS:

IEC (EN) 61000-4-2 (ESD): ±8 kV Contact Discharge, ±12 kV Air Discharge

IEC (EN) 61000-4-3 (RS): 10 V/m (80–1000 MHz)

IEC (EN) 61000-4-4 (EFT): Power Line: ±4 kV; Data Line: ±2 kV

IEC (EN) 61000-4-5 (Surge): Ethernet Port: ±4 kV CM / ±2 kV DM

IEC (EN) 61000-4-6 (Conducted RF): 3 V (10 kHz–150 kHz), 10 V (150 kHz–80 MHz)

IEC (EN) 61000-4-16 (Common-Mode Conducted Disturbances): 30 V Continuous, 300 V for 1 s

IEC (EN) 61000-4-8 (Power Frequency Magnetic Field Immunity)

Shock: IEC 60068-2-27

Free Fall: IEC 60068-2-32

Vibration: IEC 60068-2-6



SW104G-SFP-2D
Gigabit Industrial 1F4E Fiber Media Converter

- Ensures reliable data transmission and long service life.
- Supports full-duplex and half-duplex modes with auto-negotiation.
- Supports automatic MDI/MDI-X detection.
- Built-in store-and-forward mechanism with support for multiple protocols.
- Industrial-grade design with MTBF ≥ 300,000 hours.
- Power Input: DC 12–52V with reverse polarity protection.
- Optional built-in SC/FC/ST fiber optic interfaces.
- Power Surge Protection: 5000A (8/20μs).

Detailed Product Specifications

Protocol Standards

IEEE 802.3 10BASE-T

IEEE 802.3i 10BASE-T

IEEE 802.3u 100BASE-TX/FX

IEEE 802.3ab 1000BASE-T

IEEE 802.3z 1000BASE-X

IEEE 802.3x

Interfaces

RJ45 Port: 4 × 10/100/1000Base-T(X) auto-negotiation, full/half duplex, Auto MDI/MDI-X, optional PoE support

Fiber Port: 1 × SFP (1000Base-FX), optional built-in SC/FC/ST fiber optic interface

LED Indicators: PWR power indicator; Ethernet and fiber port Link/ACT indicators

Switch Properties

Transmission Mode: Store-and-Forward

MAC Address Table: 2K

Backplane Bandwidth: 14 Gbps

Buffer Memory: 1.2 Mbit

Switching Latency: <10 μs

Power Input

Input Voltage: 12/24/48 VDC (10.8–52.8 VDC)

Power Connector: 6-Pin Phoenix Terminal Block

Power Consumption: ≤3 W

Supports Dual Redundant Power Inputs

Built-in 4.0 A Overcurrent Protection

Reverse Polarity Protection

Mechanical Characteristics

Enclosure: IP40-rated metal housing

Weight: 335 g

Installation: 35 mm DIN Rail Mounting

Cooling Method: Natural Cooling, Fanless Design

Dimensions: 118 × 85.7 × 33.5 mm

Operating Environment

Operating Temperature: -40°C to +85°C

Storage Temperature: -40°C to +85°C

Relative Humidity: 5%–95% (Non-condensing)

Industrial Standards

EMI: FCC Part 15 Subpart B Class A, EN 55022 Class A

EMS:

IEC (EN) 61000-4-2 (ESD): ±8 kV Contact Discharge, ±12 kV Air Discharge

IEC (EN) 61000-4-3 (RS): 10 V/m (80–1000 MHz)

IEC (EN) 61000-4-4 (EFT): Power Line: ±4 kV; Data Line: ±2 kV

IEC (EN) 61000-4-5 (Surge): Ethernet Port: ±4 kV CM / ±2 kV DM

IEC (EN) 61000-4-6 (Conducted RF): 3 V (10 kHz–150 kHz), 10 V (150 kHz–80 MHz)

IEC (EN) 61000-4-16 (Common-Mode Conducted Disturbances): 30 V Continuous, 300 V for 1 s

IEC (EN) 61000-4-8 (Power Frequency Magnetic Field Immunity)

Shock: IEC 60068-2-27

Free Fall: IEC 60068-2-32

Vibration: IEC 60068-2-6



SW108G-SFP-2D
Gigabit Industrial 1F8E Fiber Media Converter

- Ensures reliable data transmission and long service life.
- Supports full-duplex and half-duplex modes with auto-negotiation.
- Supports automatic MDI/MDI-X detection.
- Built-in store-and-forward mechanism with support for multiple protocols.
- Industrial-grade design with MTBF ≥ 300,000 hours.
- Power Input: DC 12–52V with reverse polarity protection.
- Optional built-in SC/FC/ST fiber optic interfaces.
- Power Surge Protection: 5000A (8/20μs).

Detailed Product Specifications

Protocol Standards

IEEE 802.3 10BASE-T

IEEE 802.3i 10BASE-T

IEEE 802.3u 100BASE-TX/FX

IEEE 802.3ab 1000BASE-T

IEEE 802.3z 1000BASE-X

IEEE 802.3x

Interfaces

RJ45 Port: 8 × 10/100/1000Base-T(X) auto-negotiation, full/half duplex, Auto MDI/MDI-X, optional PoE support

Fiber Port: 1 × SFP (1000Base-FX), optional built-in SC/FC/ST fiber optic interface

LED Indicators: PWR power indicator; Ethernet and fiber port Link/ACT indicators

Switch Properties

Transmission Mode: Store-and-Forward

MAC Address Table: 8K

Backplane Bandwidth: 20 Gbps

Buffer Memory: 2 Mbit

Switching Latency: <10 μs

Power Input

Input Voltage: 12/24/48 VDC (10.8–52.8 VDC)

Power Connector: 6-Pin Phoenix Terminal Block

Power Consumption: ≤8 W

Supports Dual Redundant Power Inputs

Built-in 4.0 A Overcurrent Protection

Reverse Polarity Protection

Mechanical Characteristics

Enclosure: IP40-rated metal housing

Weight: 585 g

Installation: 35 mm DIN Rail Mounting

Cooling Method: Natural Cooling, Fanless Design

Dimensions: 143.7 x 104 x 47.7mm

Operating Environment

Operating Temperature: -40°C to +85°C

Storage Temperature: -40°C to +85°C

Relative Humidity: 5%–95% (Non-condensing)

Industrial Standards

EMI: FCC Part 15 Subpart B Class A, EN 55022 Class A

EMS:

IEC (EN) 61000-4-2 (ESD): ±8 kV Contact Discharge, ±12 kV Air Discharge

IEC (EN) 61000-4-3 (RS): 10 V/m (80–1000 MHz)

IEC (EN) 61000-4-4 (EFT): Power Line: ±4 kV; Data Line: ±2 kV

IEC (EN) 61000-4-5 (Surge): Ethernet Port: ±4 kV CM / ±2 kV DM

IEC (EN) 61000-4-6 (Conducted RF): 3 V (10 kHz–150 kHz), 10 V (150 kHz–80 MHz)

IEC (EN) 61000-4-16 (Common-Mode Conducted Disturbances): 30 V Continuous, 300 V for 1 s

IEC (EN) 61000-4-8 (Power Frequency Magnetic Field Immunity)

Shock: IEC 60068-2-27

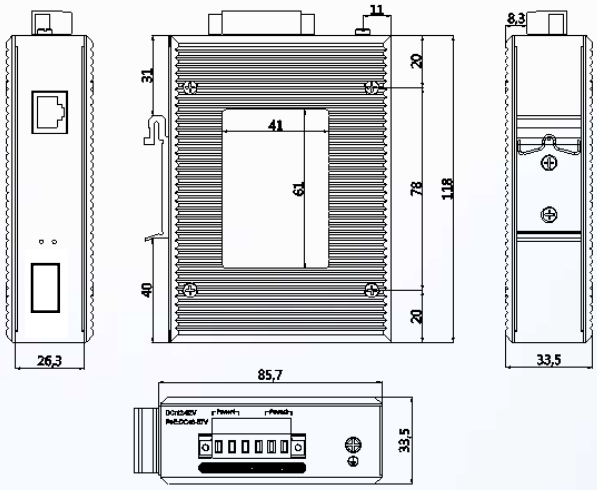
Free Fall: IEC 60068-2-32

Vibration: IEC 60068-2-6

Product Dimensions and Specifications

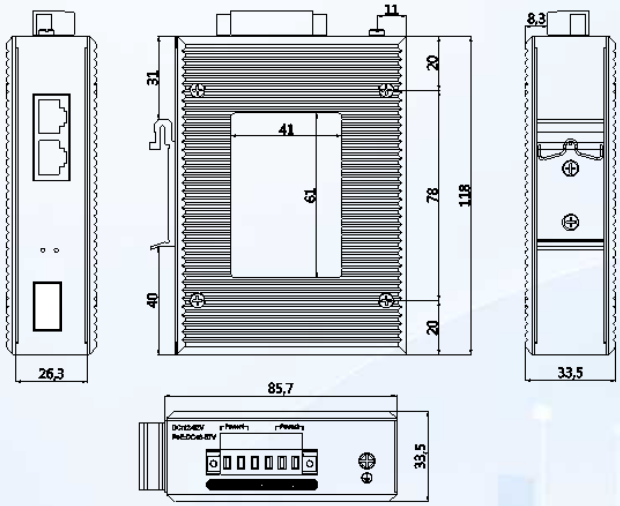


SW101G-SFP-2D
118×85.7×33.5mm



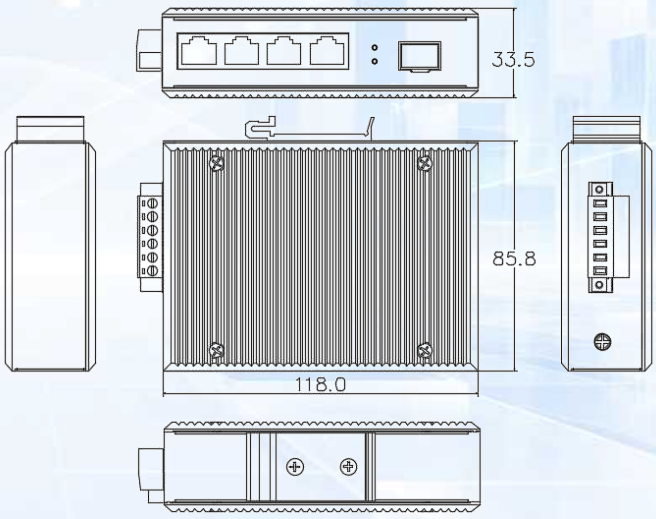


SW102G-SFP-2D
118×85.7×33.5mm



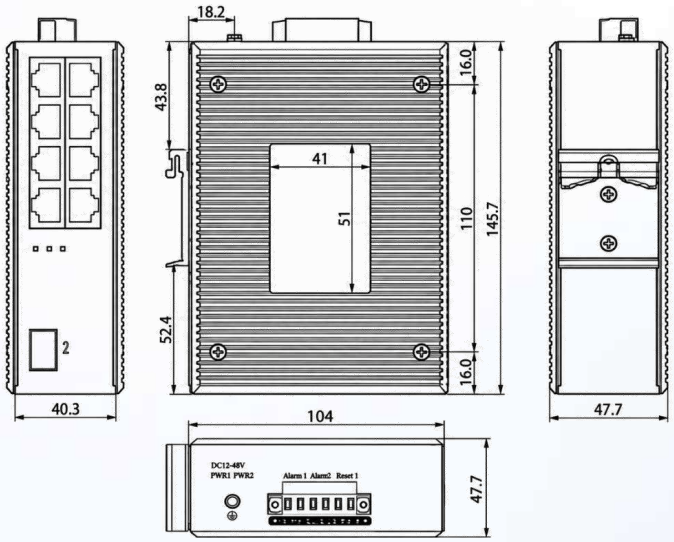


SW104G-SFP-2D
118×85.7×33.5mm





SW108G-SFP-2D
143.7 x 104 x 47.7mm



Ordering Information

Model	Product Name	Interfaces	PoE Support	Input Voltage
SW101G-SFP-2D	Full Gigabit Industrial Fiber Media Converter (1 Fiber + 1 Ethernet)	1 × 10/100/1000Base-T(X) 1 × 1000Base-FX SFP	Not Supported	10.8–52.8 VDC
SW101GP-SFP-2D	Full Gigabit Industrial PoE Fiber Media Converter (1 Fiber + 1 PoE Ethernet)	1 × 10/100/1000Base-T(X) 1 × 1000Base-FX SFP	Supported	48–52.8 VDC
SW102G-SFP-2D	Full Gigabit Industrial Fiber Media Converter (1 Fiber + 2 Ethernet)	1 × 10/100/1000Base-T(X) 1 × 1000Base-FX SFP	Not Supported	10.8–52.8 VDC
SW102GP-SFP-2D	Full Gigabit Industrial PoE Fiber Media Converter (1 Fiber + 2 PoE Ethernet)	1 × 10/100/1000Base-T(X) 1 × 1000Base-FX SFP	Supported	48–52.8 VDC
SW104G-SFP-2D	Full Gigabit Industrial Fiber Media Converter (1 Fiber + 4 Ethernet)	1 × 10/100/1000Base-T(X) 1 × 1000Base-FX SFP	Not Supported	10.8–52.8 VDC
SW104GP-SFP-2D	Full Gigabit Industrial PoE Fiber Media Converter (1 Fiber + 4 PoE Ethernet)	1 × 10/100/1000Base-T(X) 1 × 1000Base-FX SFP	Supported	48–52.8 VDC
SW108G-SFP-2D	Full Gigabit Industrial Fiber Media Converter (1 Fiber + 8 Ethernet)	1 × 10/100/1000Base-T(X) 1 × 1000Base-FX SFP	Not Supported	10.8–52.8 VDC
SW108GP-SFP-2D	Full Gigabit Industrial PoE Fiber Media Converter (1 Fiber + 8 PoE Ethernet)	1 × 10/100/1000Base-T(X) 1 × 1000Base-FX SFP	Supported	48–52.8 VDC