

## Industrial Grade Media Converter

### 1-port 10/100Mbps Ethernet+ 1-port 100Mbps SFP Fiber

#### (DF-1FE-1EI)

#### Overview

Distance Extension with High Performance and Steady Network Communication

The DF-1FE-1EI series is specifically equipped with durable components and strong housing case to operate reliably in electrically harsh and climatically demanding environments

The industrial level media converter provides a high level of immunity to electromagnetic interference and heavy electrical surges which are usually found on plant floors or traffic control cabinets on sidewalk. Being able to operate under the temperature range from -40℃ to 85℃ allows the DF-1FE-1EI series to be placed in almost any difficult environment.

DF-1FE-1EI 10/100Base-TX to 100Base-FX Industrial Media Converter series efficiently converts data between 10/100Base-TX and 100Base-FX network. The DF-1FE-1EI series provides the flexibility to all kinds of 10/100Mbps Ethernet Media on RJ-45 port and performs highly stable fiber performance.

The DF-1FE-1EI series is packaged in a compact IP40 case that allows either DIN rail or panel mounting to have efficient usage of cabinet space. It provides an integrated power supply with a wide range of voltages for worldwide operation. It also offers dual-redundant, reversible polarity 12V DC to 52V DC power supply inputs for high availability applications requiring dual or backup power inputs.



## Features

### Interface

- 1-port 10/100Base-T x RJ-45 with auto negotiation and auto-MDI/ MDI-X function
- 1-port 100Base-Fx interface, SC/FC/ST/SFP
- Multi-Mode up to 2km
- Single-Mode up to 20km/40km/60km/80km

### Industrial Conformance

- 12V to 52V DC, redundant power input
- -40℃ to 85℃ operating temperature
- IP40 metal case
- Supports 6KV DC Ethernet ESD protection
- Supports 6KV DC EFT protection for power line
- Free Fall, Shock and Vibration Stability
- DIN-rail and wall-mountable hardware design

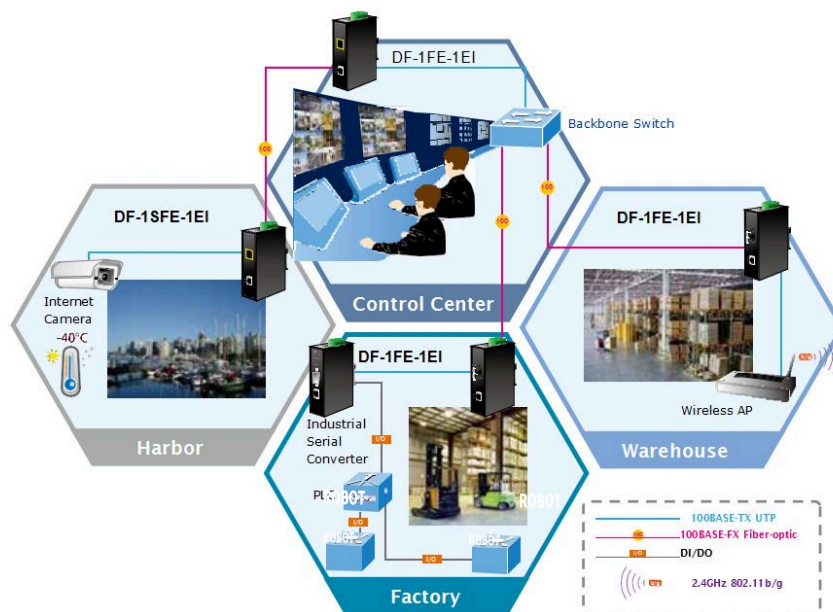
### Layer 2 Features

- Complies with the IEEE 802.3, IEEE 802.3u Fast Ethernet standard
- Auto-MDI / MDI-X detection
- Store-and-Forward Switching Architecture
- Features Store-and-Forward mode
- Automatic (half-duplex) and (full-duplex)
- Supports packet size of up to 1522bytes
- Automatic source address learning and aging

## Applications

### Transport Networking

Industrial Media Converter, DF-1FE-1EI series, offers high reliability and security to guarantee the continuous industrial operation in harsh environments such as control cabinet of transportation, factory floors or and environments with extremely low or high temperature. In the industrial networking environments, each networked device is required to keep running continuously in the hazardous status. If industrial equipment fails to connect to the network, it might influence the entire operation of industrial systems and thus cause incredibly financial loss. With the DF-1FE-1EI Industrial Media Converter, which complies with all the requirements of industrial applications, customers may enjoy high reliability, fast recovery capability, and safe Ethernet network operation.



### Fiber-optic Networking for Enterprises, and Homes

With stable performance of data transmission and easy installation, the DF-1FE-1EI Industrial Media Converter series can build network solution of FTTH (Fiber to the Home), FTTC (Fiber to the Curb) , or FTTB (Fiber to the Building) for enterprises with small office network environment.

## Specifications

Product	DF-1SFE-1EI-SC2 / DF-1SFE-1EI-SC20 / DF-1FE-1EI
10/100Base-TX Port	1 RJ-45 auto-MDI / MDI-X port
100Base-FX Port	DF-1SFE-1EI-SC2: 1 SC interface DF-1SFE-1EI-SC20: 1 SC Interface DF-1FE-1EI: 1 SFP Slot
Fiber Port Type	DF-1SFE-1EI-SC2: SC / multi-mode ,up to distance 2km ; DF-1SFE-1EI-SC20: SC / single-mode ,up to distance 20km ; DF-1FE-1EI: Vary on module
Optical Frequency	DF-1SFE-1EI-SC2: 1310nm DF-1SFE-1EI-SC20: 1310nm DF-1FE-1EI: Vary on module
Performance Specification	Bandwidth: 2Gbps Packet Buffer Memory:512K Packet Forwarding Rate:148800pps/port MAC Address Table: 1K
Installation	DIN rail kit and wall mount ear
Maximum Frame Size	1522bytes packet size
Flow Control	Back pressure for half duplex, IEEE 802.3x pause frame for full duplex
Enclosure	IP40 slim type metal case
LED Indicator	Power: Red Fiber: Link 2 (Green) Ethernet: Yellow POE: Green
Power Input	12 to 52V DC redundant power
Power Consumption	3 watts / 10BTU (maximum)
Protection	ESD (Ethernet): 6KVDC Surge (Power): 6KVDC
Network Protocols	IEEE802.3 10BASE-T; IEEE802.3i 10Base-T; IEEE802.3u;100Base-TX/FX; IEEE802.3ab 100Base-T; IEEE802.3z 100Base-X; IEEE802.3x;
Network cables	10BASE-T: Cat3,4,5 UTP(≤100 meter) 100BASE-TX: Cat5 or later UTP(≤10meter)
Industry Standard	FCC CFR47 Part 15,EN55022/CISPR22, Class A EMS: IEC61000-4-2 (ESD): ±8kV (contact), ±15kV (air) IEC61000-4-3 (RS): 10V/m (80MHz-2GHz) IEC61000-4-4 (EFT): Power Port: ±4kV; Data Port: ±2kV IEC61000-4-5 (Surge): Power Port: ±2kV/DM, ±4kV/CM; Data Port: ±2kV

	IEC61000-4-6 (CS): 3V (10kHz-150kHz); 10V (150kHz-80MHz) IEC61000-4-16 (Common mode conduction): 30V (cont.), 300V (1s)
Certification	CE,RoHS,FCC
Dimensions (W x D x H)	118 x 86 x 39 mm
Weight	Product Weight: 0.36KG Packing Weight: 0.46KG
Working Environment	Working temperature: -40~85℃ ; Storage temperature: -40~85℃ Relative Humidity: 5%~95 %( no condensation)
Warranty	5-years

## Ordering Information

DF-1SFE-1EI-SC2	10/100Base-TX to 100Base-FX ,Multi-Mode (1310nm) ,Duplex,SC , 2km
DF-1SFE-1EI-SC20	10/100Base-TX to 100Base-FX ,Single-Mode (1310nm) ,Dual,SC , 20km
DF-1SFE-1EI-SC20/A	10/100Base-TX to 100Base-FX ,Single-Mode (Tx1310nm/Rx1550) ,Single,SC , 20km
DF-1SFE-1EI-SC20/B	10/100Base-TX to 100Base-FX ,Single-Mode (Tx1550nm/Rx1310) ,Single,SC , 20km
DF-1FE-1EI	10/100Base-TX to 100Base-FX (SFP Slot)

## Dimensions

