ADAM-6542 Series

Ethernet to WDM Fiber Optic Converters

Features

- Supports 1-port 100 Mbps single strand fiber optic (ADAM-6542)
- Supports full/half duplex flow control
- Supports Integrated Loop-up engine
- Supports MDI/MDI-X auto crossover
- Provides broadcast storm protection
- Supports +10~ 30 V_{DC} voltage power input
- Provides surge (EFT) protection 3,000 V_{DC} for power line
- Provides flexible mounting: DIN-rail, Wall, Stack
- Supports operating temperatures from -10 ~ 65° C
- Embedded a switch controller-supports auto-negotiation
- Embedded a memory buffer-supports store and forward transmission

CE FCC

Introduction

ADAM-6542 is designed to convert Ethernet networks to fiber networks. It does so by transparently converting Ethernet signals to optic signals. The advantages of fiber optics are wide bandwidth, EMI immunity and long-distance transmission capability. Therefore,ADAM-6542 is the ideal solution for "fiber to building" applications at central offices or local sites.

ADAM-6542 uses WDM (Wavelength Division Multiplexing) technology, which increases the information-carrying capacity of fiber by multiplex transmission and reception of signals at different wavelengths on a singles strand cable. WDM technology is implemented in couples. One site uses an ADAM-6542/W15 where the transmission channel is 1550 nm and the reception channel is 1310nm. The other site installs an ADAM6542/W13 where the transmission channel is 1310nm and the reception channel is 1550nm. Both the transmission and reception channels of ADAM-6542/W15 and ADAM-6542/W13 are multiplexed to a single strand cable. This means that cabling costs are halved when you use ADAM-6542/W15 and ADAM-6542/W13 instead of a dual fiber converter.

ADAM-6542 support MDI/MDIX auto detection, so you don't need to use crossover wires. It also includes a switch controller that can sense the transmission speed (10/100 Mbps) automatically. Both the Ethernet port and the fiber port have memory buffers that support store-and-forward mechanisms.

Specifications

Communications

- **Standard** IEEE 802.3, 802.3u, 802.3x
- **LAN** 10/100Base-TX, 100Base-FX
- **Transmission Distance** Ethernet : Up to 100 m
Fiber: Up to 20 km
- **Transmission Speed** Up to 100 Mbps

Interface

- **Connectors** 1 x RJ-45
1 x SC type fiber connector
2-pin removable screw terminal (power)
- **LED Indicators** Power, Link (100Base-FX),
100/10 M (Ethernet)

Power

- **Power Consumption** Max. 3 W
- **Power Input** 1 x Unregulated 10 ~ 30 V_{DC}

Mechanism

- **Dimensions (W x H x D)** 70 x 112 x 27 mm
- **Enclosure** IP30, ABS+PC with solid mounting kits
- **Mounting** DIN 35 rail, Wall, Stack

Protection

- **ESD (Ethernet)** 4,000 V_{DC}
- **Isolation (Ethernet)** 1,500 V_{rms}
- **Surge (EFT for power)** 3,000 V_{DC}

Environment

- **Operating Temperature** 0 ~ 60° C (32 ~ 140° F)
Stack : 0 ~ 55° C (32 ~ 131° F)
- **Storage Temperature** -10 ~ 70° C (-14 ~ 158° F)
- **Operating Humidity** 20 ~ 95% (non-condensing)
- **Storage Humidity** 0 ~ 95% (non-condensing)
- **MTBF** 550,000 hrs

Certifications

- **Safety** UL 60950-1, CAN/CSA-C22.2 No.60950
- **EMC** U.S.A.: FCC Part 15 CISPR 22
EU: EN55011, EN61000-6-4
EN55022 Class A,
EN61000-3-2/3
EN55024
IEC61000-4-2/3/4/5/6/8/11
EN61000-6-2

Ordering Information

- **ADAM-6542/W15** Ethernet to WDM Single Strand Fiber Optic Converter (Tx : 1550 nm, Rx : 1310 nm)
- **ADAM-6542/W13** Ethernet to WDM Single Strand Fiber Optic Converter (Tx : 1310 nm, Rx : 1550 nm)