ADAM-6541 Series

Ethernet to FiberOptic Converters

Features

- Provides 1 x 10/100 Mbps Ethernet port with RJ45 connector
- Provides 1 x 100 Mbps multi-mode fiber optic port
- Supports full/half duplex flow control and internal jumper for setting
- Supports store and forward transmission
- Supports auto-negotiation
- Supports MDI/MDI-X auto crossover
- Provides surge protection (EFT) 3,000 V_{DC} for power line
- Provides 4,000 V_{DC} Ethernet ESD protection
- Supports +10 ~ 30 V_{DC} power input
- Provides flexible mounting : DIN-rail, Panel Mounting, Piggy-back
- Supports operating temperature from 0 ~ 60°C

Introduction

ADAM-6541 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-6541 is an ideal solution for “fiber to building” applications at central offices or local sites.

ADAM-6541 supports 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. This assures data can be transmitted properly.

ADAM-6541 is extremely compact and can be mounted in three different ways: DIN-rail, Wall and Stack. ADAM-6541 can work normally from 0 ~ 60°C and accepts a wide voltage range from +10 ~ 30 V_{DC}. Besides, it also provides 3,000 V_{DC} surge (EFT) protection against over-voltage, so it is suitable for harsh operating environments.

Specifications

Communications

- **Standard** IEEE 802.3, 802.3u, 802.3x
- **LAN** 10/100Base-TX, 100Base-FX
- **Transmission Distance**
  - Ethernet : Up to 100 m
  - Fiber: Multi-mode : Up to 2 km
    Single-mode : Up to 20 km
- **Transmission Speed** Up to 100 Mbps

Interface

- **Connectors** 1 x RJ-45
  1 x SC type fiber connector (ADAM-6541) or 1 x ST type fiber connector (ADAM-6541/ST)
  2-pin removable screw terminal (power)
- **LED Indicators** ADAM-6541, ADAM-6541/ST : Power, Full/Link (100BASE-FX), 100/10M (Ethernet)

Power

- **Power Consumption** ADAM-6541, ADAM-6541/ST : Max. 3W
- **Power Input** 1 x Unregulated 10 ~ 30 VDC

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 Vrms
- **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

Certification

- **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

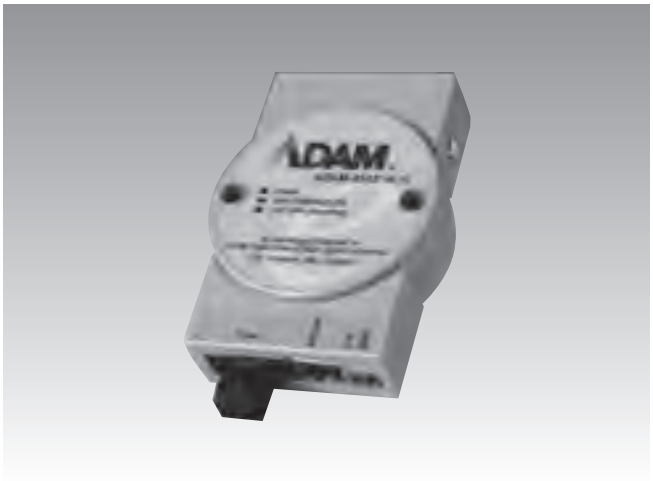
Ordering Information

- **ADAM-6541** Ethernet to Multi-mode SC Type Fiber Optic Converter
- **ADAM-6541/ST** Ethernet to Multi-mode ST Type Fiber Optic Converter

Date updated: 2-Mar-2015

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)

EKI-2541M/MI
EKI-2541S/SI

10/100T (X) to Multi-Mode SC Type Fiber Optic Industrial Media Converter

10/100T (X) to Single-Mode SC Type Fiber Optic Industrial Media Converter

Features

- Provides 1 x 10/100 Mbps Ethernet port with RJ45 connector
- Provides 1 x 100 Mbps Multi-mode/Single-mode SC type fiber port
- Provides internal jumper for Link Fault Pass-through (LFP) setting
- Supports full/half duplex flow control
- Supports store and forward transmission
- Supports Auto-negotiation
- Supports MDI/MDI-X auto-crossover
- Supports redundant 12-48 V_{DC} power input
- Provides flexible mounting: DIN-rail and Panel mount
- Supports wide operating temperatures from -40 to 75°C (EKI-2541MI/SI)

Introduction

The EKI-2541M/2541S is designed to convert Ethernet networks to fiber networks by transparently converting Ethernet signals to optic signals. The advantages of fiber optics are wide bandwidth, EMI immunity and long-distance transmissions.Therefore, the EKI-2541M/2541S is an ideal solution for "fiber to building" applications at central offices or local sites. EKI-2541M/2541S supports MDI/MDIX auto detection, so you don't need to use crossover wires. Furthermore, the EKI-2541M/2541S can work normally from -10 to 60°C and accepts a wide voltage range from 12 ~ 48 V_{DC}. Besides, it also provides 3,000 V_{DC} surge (EFT) protection against over-voltage, so it is suitable for harsh operating environments.

Link Fault Pass-Through (LFP)

The EKI-2541M/2541S is an enhanced Ethernet to fiber-optic converter. Aside from its standard features, the versatile the EKI-2541M/2541S also has the LFP (Link Fault Pass-through) feature. When one side of the link fails, the other side continues transmitting packets, and waiting for a response that never arrives from the disconnected side. Use the internal jumper to enable the LFP function, then the EKI-2541M/2541S will force the link to shut down as soon as noticed that the other link has failed, giving the application software a chance to react to the situation.

Specifications

Communications

Standard	IEEE 802.3, 802.3u, 802.3x
LAN	10/100Base-T (X), 100Base-FX
Transmission Distance	Ethernet: Up to 100 m Fiber: Multi-mode: up to 2 km Fiber: Single-mode: up to 30 km
Transmission Speed	Up to 100 Mbps
Optical Fiber	
Multi-mode (EKI-2541M/MI)	Wavelength: 1310 nm Tx Power: -14/-20 dBm Rx Sensitivity: -31 dBm Parameters: 50/125 um,62.5/125 um
Single-mode (EKI-2541S/SI)	Wavelength: 1310 nm Tx Power: -8/-15 dBm Rx Sensitivity: -34 dBm Parameters: 9/125 um

Interface

Connectors	1 x RJ45 1 x SC type fiber connector 6-pin removable screw terminal (power)
LED Indicators	P1, P2, P-Fail Ethernet: 10/100 m, LNK/ACT Fiber: HDX/FDX, LNK/ACT
DIP Switch	Port/Power Alarm, LFP Fiber: HDX/FDX, Converter/Switch

Power

Power Consumption	Max. 2.7 W
Power Input	12 ~ 48 V_{DC}, redundant dual inputs

Mechanism

Dimensions (W x H x D)	37 x 140 x 95 mm (1.46" x 5.51" x 3.74")
Mounting	DIN-rail, Wall
Enclosure	IP30, Metal shell with solid mounting

Protection

Power Reverse	Present
Overload current	Present

Environment

Operating Temperature	-10 ~ 60°C (14 ~ 140°F)
Wide Temp. model	-40 ~ 75°C (-40 ~ 167°F)
Storage Temperature	-40 ~ 85°C (-40 ~ 185°F)
Operating Humidity	5 ~ 95% (non-condensing)
Storage Humidity	0 ~ 95% (non-condensing)
MTBF	577,175 hours

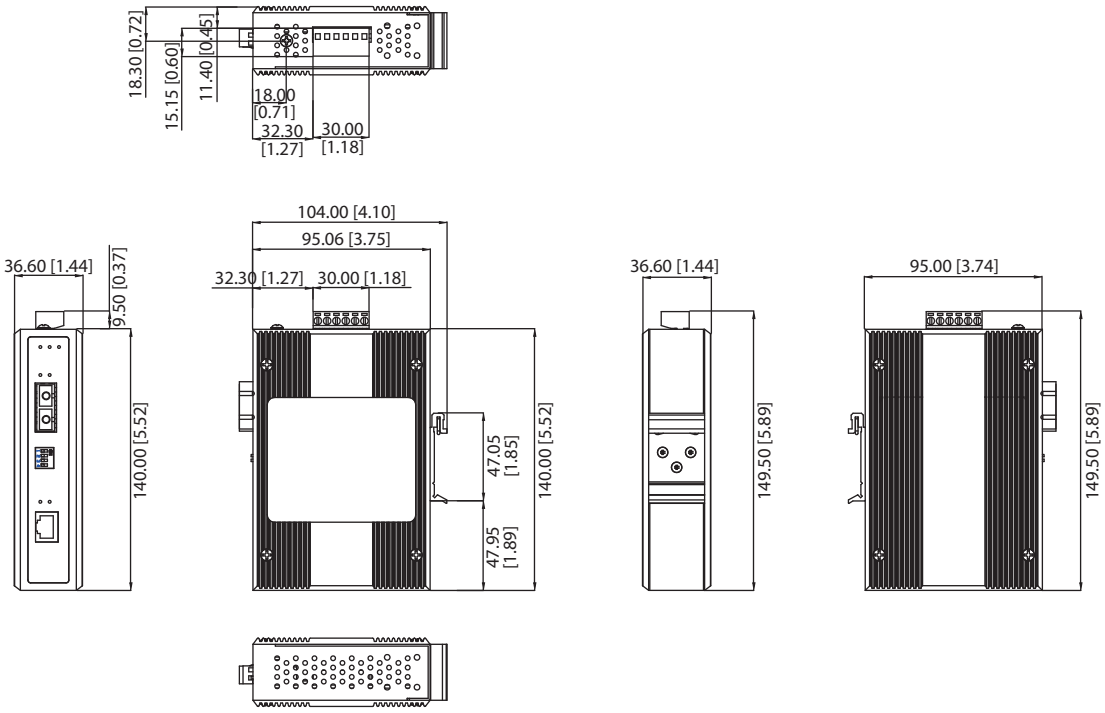
Certification

Safety	UL 60950-1, CAN/CSA-C22.2 No.60950
EMI	FCC Part 15 Subpart B Class A, EN 55022 Class A
EMS	EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5 EN 61000-4-6 EN 61000-4-8
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6

Last updated : 5-May-2015

Dimensions

Unit: [mm]



Panel Cut-out Dimensions: 104 x 140 x 36.6 mm (4.1" x 5.52" x 1.44")

Ordering Information

- **EKI-2541M** Ethernet to Multi-mode Fiber Converter
- **EKI-2541MI** Ethernet to Multi-mode Fiber Converter w/ Wide Temp.
- **EKI-2541S** Ethernet to Single-mode Fiber Converter
- **EKI-2541SI** Ethernet to Single-mode Fiber Converter w/ Wide Temp.

EKI-2711HPI

IEEE 802.3af/at Gigabit 60W PoE+ Injector with Wide Temperature

Features

- Supports 10/100/1000Base-T (X) for PoE+ OUT and Data IN
- IEEE 802.3af/at compliant
- Power input 48 V_{DC}, Inject power up to 60W
- Provides slim size and DIN-rail/Wall mount with IP31 metal mechanism
- Supports operating temperatures from -40 to 75°C

Introduction

With the technology of PoE (Power over Ethernet), we can transfer both data and electrical power to Ethernet-enabled devices using a standard CAT5 cable. EKI-2711HPI is compliant IEEE 802.3af/at and inject up to 60W for PD device. This product can operate in a wide range of Temp. between -40 to 75°C.

Specifications

Communications

- **Standard** IEEE 802.3, 802.3u, 802.3x, 802.3af/at, 802.3ab
- **LAN** 10/100/1000Base-T (X)
- **Transmission Distance** Ethernet: Up to 100 m
- **Transmission Speed** Up to 1000 Mbps

Interface

- **Connectors** PoE OUT: RJ45
  DATA IN: RJ45
  2-pin removable screw terminal
- **LED Indicators** PWR, PoE Status, Link/Activity

Power

- **Power Consumption** Max. 63.5 W (Full load PoE+)
- **Power Input** 48 V_{DC} (Single input)
- **Power Output** 60W

Mechanism

- **Dimensions (W x H x D)** 36.7 x 108.4 x 103.5 mm (1.44" x 4.27" x 4.07")
- **Enclosure** IP31, Metal shell with solid mounting kits
- **Mounting** DIN-rail, Wall

Protection

- **Power Reverse** Present
- **Overload current** Present

Environment

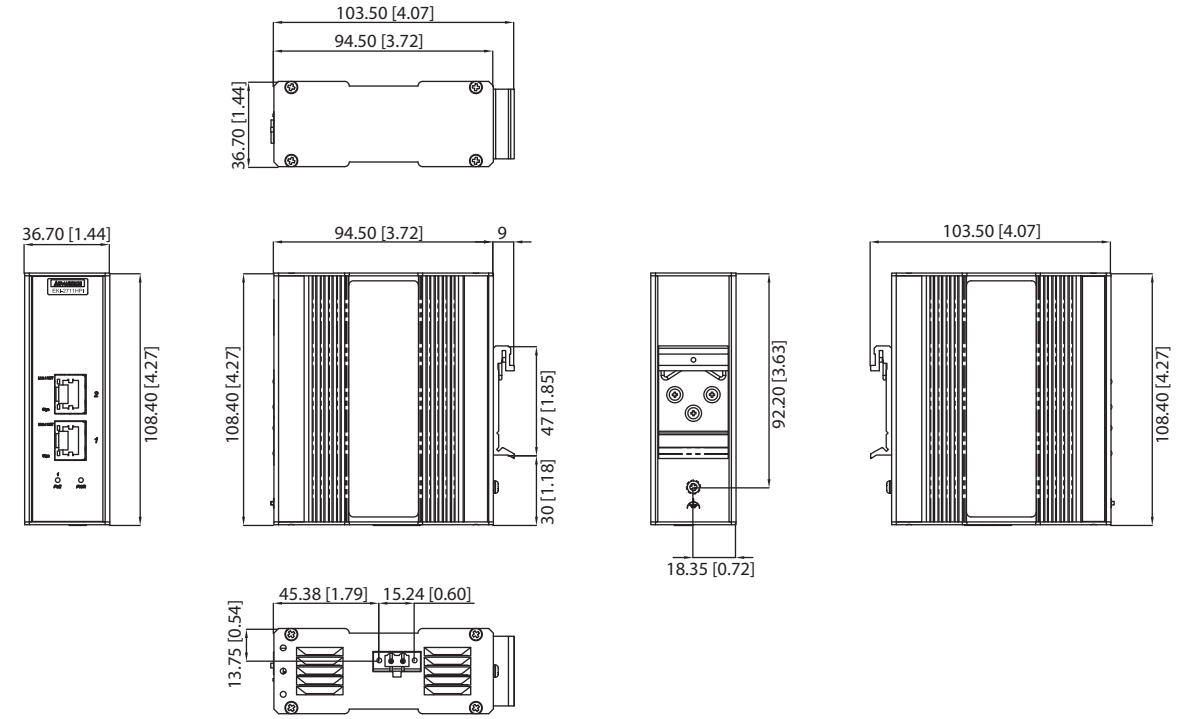
- **Operating Temperature** -40 ~ 75°C (-40 ~ 167°F)
- **Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)
- **Operating Humidity** 10 ~ 95% (non-condensing)
- **Storage Humidity** 0 ~ 95% (non-condensing)
- **MTBF** 730,337 hours

Certification

- **Safety** UL/cUL 508 Class I, Division 2, Groups A, B, C and D
- **EMI** FCC Part 15 Subpart B Class A, EN 55022 Class A
- **EMS** EN 61000-4-2
  EN 61000-4-3
  EN 61000-4-4
  EN 61000-4-5
  EN 61000-4-6
  EN 61000-4-8
- **Shock** IEC 60068-2-27
- **Freefall** IEC 60068-2-32
- **Vibration** IEC 60068-2-6
- **Patent** http://www.advantech.com/legal/patent

Dimensions

Unit: mm [inch]



Panel Cut-out Dimensions: 36.7 x 108.4 x 103.5 mm (1.44" x 4.27" x 4.07")

Ordering Information

- **EKI-2711HPI** PoE+ Injector, support power up to 60W

EKI-2741FPI
EKI-2742FPI

Industrial Grade IP31 Gigabit Media Converter Series

Features

- Supports multi-rate for SFP slot
- IEEE 802.3af/at compliant
- Power input 48 V_{DC}, supply 30W per port
- Provides slim size and DIN-rail/Wall mount with IP31 metal mechanism
- Supports operating temperatures from -40 to 75°C

Introduction

With the technology of PoE (Power over Ethernet), we can transfer both data and electrical power to Ethernet-enabled devices using a standard CAT5 cable. EKI-2741FPI / EKI-2472FPI are compliant IEEE 802.3af/at and supply to 30W for PD device. This product can operate in a wide range of Temp. between -40 to 75°C.

Specifications

Communications

- **Standard** IEEE 802.3, 802.3u, 802.3x, 802.3af/at, 802.3ab
- **LAN** 10/100/1000Base-T (X)
- **Transmission Distance** Ethernet: Up to 100 m
- **Transmission Speed** Up to 1000 Mbps

Interface

- **Connectors** 100/1000Base-X (SFP)
  10/100/1000Base-T/TX
  2-pin removable screw terminal
- **LED Indicators** PWR, PoE Status, Link/Activity

Power

- **Power Consumption** EKI-2471FPI: Max. 34 W (Full load PoE+)
  EKI-2472FPI: Max. 63.5 W (Full load PoE+)
- **Power Input** 48 V_{DC} (Single input)
- **Power Output** 30W

Mechanism

- **Dimensions (W x H x D)** 36.7 x 108.4 x 103.5 mm (1.44" x 4.27" x 4.07")
- **Enclosure** IP31, Metal shell with solid mounting kits
- **Mounting** DIN-rail, Wall

Protection

- **Power Reverse** Present
- **Overload current** Present

Environment

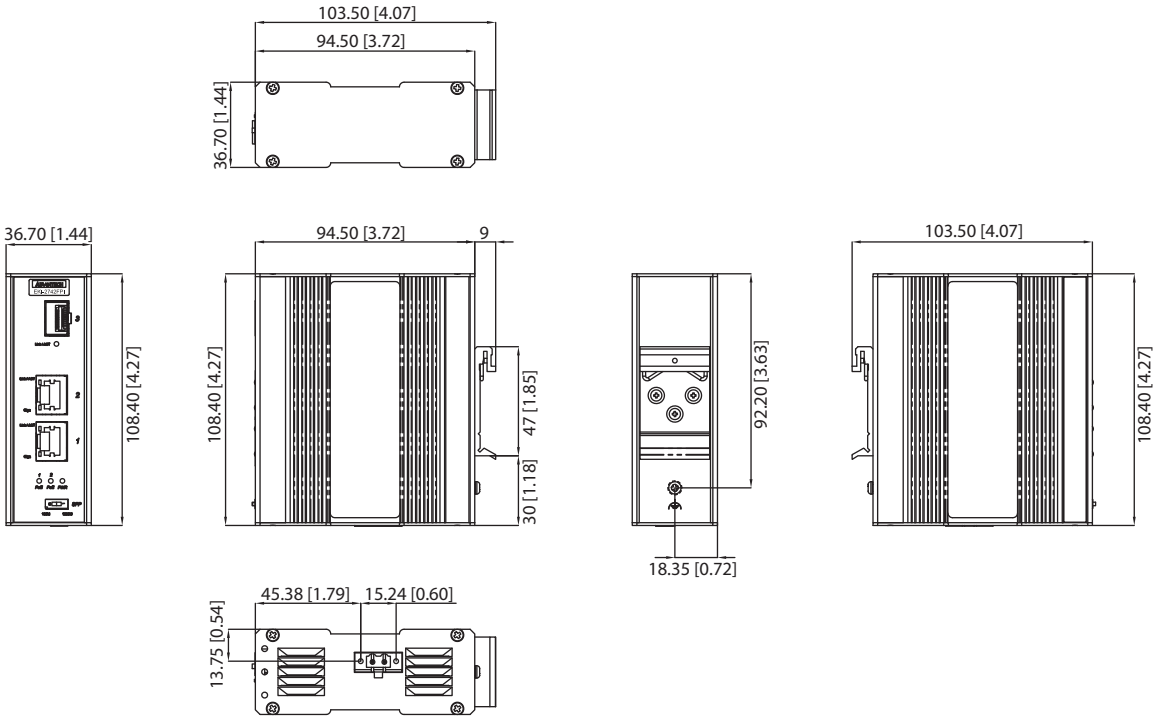
- **Operating Temperature** -40 ~ 75°C (-40 ~ 167°F)
- **Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)
- **Operating Humidity** 10 ~ 95% (non-condensing)
- **Storage Humidity** 0 ~ 95% (non-condensing)
- **MTBF** 743,594 hours (EKI-2741FPI)
  717,339 hours (EKI-2742FPI)

Certification

- **Safety** UL/cUL 508 Class I, Division 2, Groups A, B, C and D
- **EMI** FCC Part 15 Subpart B Class A, EN 55022 Class A
- **EMS** EN 61000-4-2
  EN 61000-4-3
  EN 61000-4-4
  EN 61000-4-5
  EN 61000-4-6
  EN 61000-4-8
- **Shock** IEC 60068-2-27
- **Freefall** IEC 60068-2-32
- **Vibration** IEC 60068-2-6
- **Patent** http://www.advantech.com/legal/patent

Dimensions

Unit: mm [inch]



Panel Cut-out Dimensions: 36.7 x 108.4 x 103.5 mm (1.44" x 4.27" x 4.07")

Ordering Information

- **EKI-2741FPI** Gigabit Media Converter SFP with 1x PoE 802.3at
- **EKI-2742FPI** Gigabit Media Converter SFP with 2x PoE 802.3at

EKI-2741 Series

10/100/1000T (X) to Fiber Optic Gigabit Industrial Media Converters

Features

- Provides 1 x 1000 Mbps Ethernet port with RJ45 connector
- Provides 1 x 1000 Mbps fiber port with SC or SFP (mini-GBIC) type connector for 1000Base-SX/LX device
- Provides DIP switch for full/half duplex setting
- Supports MDI/MDI-X auto crossover
- Supports Auto-Negotiation
- Supports redundant 12 ~ 48 V_{DC} power input
- Provides flexible mounting: DIN-rail and Wall mount
- Provides Link Fault Pass-through (LFP)
- Jumbo Frame: 9K bytes

Introduction

The EKI-2741 is designed to convert Gigabit Ethernet networks to Gigabit fiber networks by transparently converting Ethernet signals to optic signals. Therefore, the EKI-2741 is an ideal solution for "fiber to building" applications at central offices or local sites. EKI-2741 supports MDI/MDIX auto detection, so you don't need to use crossover wires. Furthermore, the EKI-2741 accepts a wide voltage range from 12 ~ 48 V_{DC}. Besides, it also provides 3,000 V_{DC} surge (EFT) protection against over-voltage, so it is suitable for harsh operating environments.

EKI-2741 is an enhanced gigabit Ethernet to fiber optic converter. Aside from its standard features, the versatile the EKI-2741 also has the LFP (Link Fault Pass-through) feature. When one side of the link fails, the other side continues transmitting packets, and waiting for a response that never arrives from the disconnected side. EKI-2741 will force the link to shut down as soon as noticed that the other link has failed, giving the application software a chance to react to the situation.

Specifications

Communications

Standard	IEEE 802.3, 802.3u, 802.3ab, 802.3x, IEEE 802.3z
LAN	10/100/1000Base-T (X), 1000Base-SX or 1000Base-LX
Transmission Distance	Ethernet: Up to 100 m Fiber: Multi-mode: Up to 550 m Single-mode: Up to 10 km (EKI-2741LX) or up to 110 km (EKI-2741F) SFP: Up to 110 km (EKI-2741F)
Transmission Speed	Up to 1000 Mbps
Optical Fiber	
Multi-mode (EKI-2741SX)	Wavelength: 850 nm Tx Power: -4/-9.5 dBm Rx Sensitivity: -18 dBm Parameters: 50/125 um, 62.5/125 um
Single-mode (EKI-2741LX/LXI)	Wavelength: 1310 nm Tx Power: -3/-9.5 dBm Rx Sensitivity: -20 dBm Parameters: 9/125 um

Interface

Connectors	1 x RJ45 1 x SC type fiber connector (EKI-2741SX/LX) or 1 x SFP type fiber connector (EKI-2741F) 6-pin removable screw terminal (power & relay)
LED Indicators	P1, P2, P-Fail Fiber: LNK/ACT Ethernet: 1000M, LNK/ACT
DIP Switch	Port Alarm, LFP

Power

Power Consumption	5.28 W (EKI-2741F/FI) 5.18 W (EKI-2741SX/SXI) 5.30 W (EKI-2741LX/LXI)
Power Input	12 ~ 48 V_{DC}, redundant dual inputs

Mechanism

Dimensions (W x H x D)	37 x 140 x 95 mm (1.46" x 5.51" x 3.74")
Enclosure	IP30, Metal shell with solid mounting kits
Mounting	DIN-rail, Wall

Protection

Power Reverse	Present
Overload current	Present

Environment

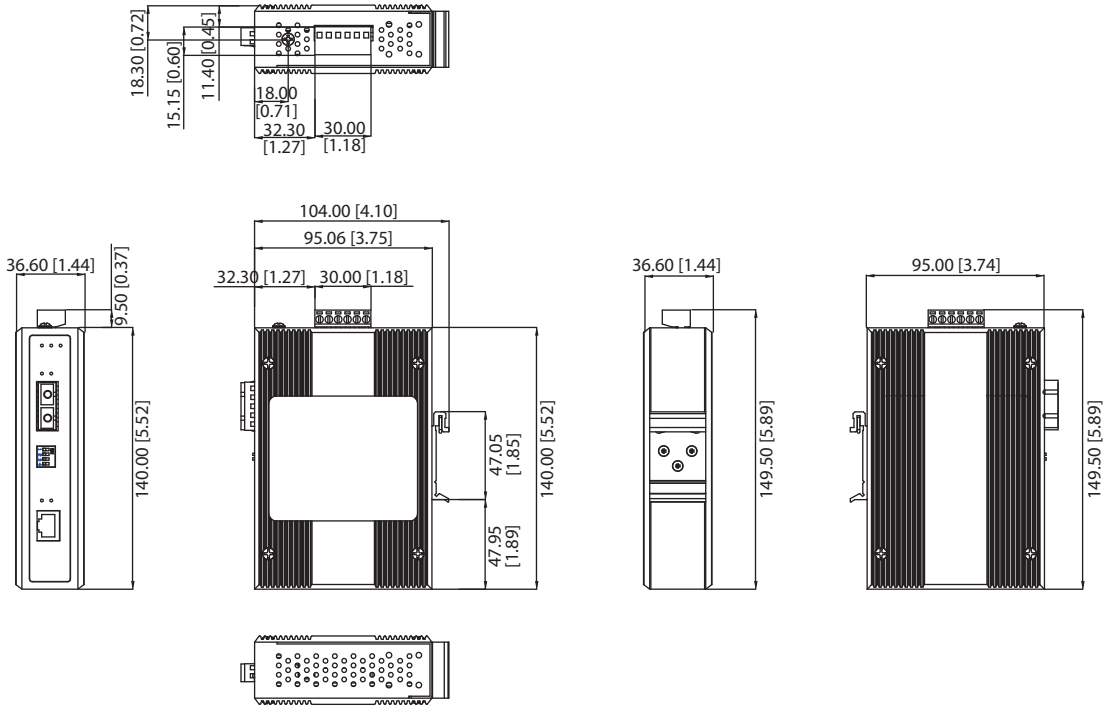
Operating Temperature	-10 ~ 60°C (14 ~ 140°F)
Wide Temp Model	-40 ~ 75°C (-40 ~ 167°F)
Storage Temperature	-40 ~ 85°C (-40 ~ 185°F)
Operating Humidity	5 ~ 95% (non-condensing)
Storage Humidity	0 ~ 95% (non-condensing)
MTBF	515,600 hours (EKI-2741F/FI) 525,300 hours (EKI-2741SX/SXI/LX/LXI)

Certification

Safety	UL 60950-1, CAN/CSA-C22.2 No.60950
EMI	FCC Part 15 Subpart B Class A, EN 55022 Class A
EMS	EN 61000-4-2 EN 61000-4-3 EN 61000-4-4 EN 61000-4-5 EN 61000-4-6 EN 61000-4-8
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32
Vibration	IEC 60068-2-6

Dimensions

Unit: [mm]



Panel Cut-out Dimensions: 104 x 140 x 36.6 mm (4.1" x 5.52" x 1.44")

Ordering Information

- **EKI-2741F** Giga Ethernet to SFP Fiber Converter
- **EKI-2741FI** Giga Ethernet to SFP Fiber Converter with Wide Temp.
- **EKI-2741SX** Giga Ethernet to 1000Base-SX Fiber Converter
- **EKI-2741SXI** Giga Ethernet to 1000Base-SX Fiber Converter with Wide Temp.
- **EKI-2741LX** Giga Ethernet to 1000Base-LX Fiber Converter
- **EKI-2741LXI** Giga Ethernet to 1000Base-LX Fiber Converter with Wide Temp.

EKI-2741FHPI

Industrial Grade IP31 Gigabit High Power 60W PoE Media Converter

Features

- Supports multi-rate for SFP slot
- IEEE 802.3af/at compliant
- Power input 48 V_{DC}, supply 60W per port
- Provides slim size and DIN-rail/Wall mount with IP31 metal mechanism
- Supports operating temperatures from -40 to 75°C

Introduction

With the technology of PoE (Power over Ethernet), we can transfer both data and electrical power to Ethernet-enabled devices using a standard CAT5 cable. EKI-2741FHPI is compliant IEEE 802.3af/at and supply to 60W for PD device. This product can operate in a wide range of Temp. between -40 to 75°C.

Specifications

Communications

- **Standard** IEEE 802.3, 802.3u, 802.3x, 802.3af/at, 802.3ab
- **LAN** 10/100/1000Base-T (X)
- **Transmission Distance** Ethernet: Up to 100 m
- **Transmission Speed** Up to 1000 Mbps

Interface

- **Connectors** 100/1000Base-X (SFP)
10/100/1000Base-T/TX
2-pin removable screw terminal
- **LED Indicators** PWR, PoE Status, Link/Activity

Power

- **Power Consumption** Max. 63.5 W (Full load PoE+)
- **Power Input** 48 V_{DC} (Single input)
- **Power Output** 60W

Mechanism

- **Dimensions (W x H x D)** 36.7 x 108.4 x 103.5 mm (1.44" x 4.27" x 4.07")
- **Enclosure** IP31, Metal shell with solid mounting kits
- **Mounting** DIN-rail, Wall

Protection

- **Power Reverse** Present
- **Overload current** Present

Environment

- **Operating Temperature** -40 ~ 75°C (-40 ~ 167°F)
- **Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)
- **Operating Humidity** 10 ~ 95% (non-condensing)
- **Storage Humidity** 0 ~ 95% (non-condensing)
- **MTBF** 730,083 hours

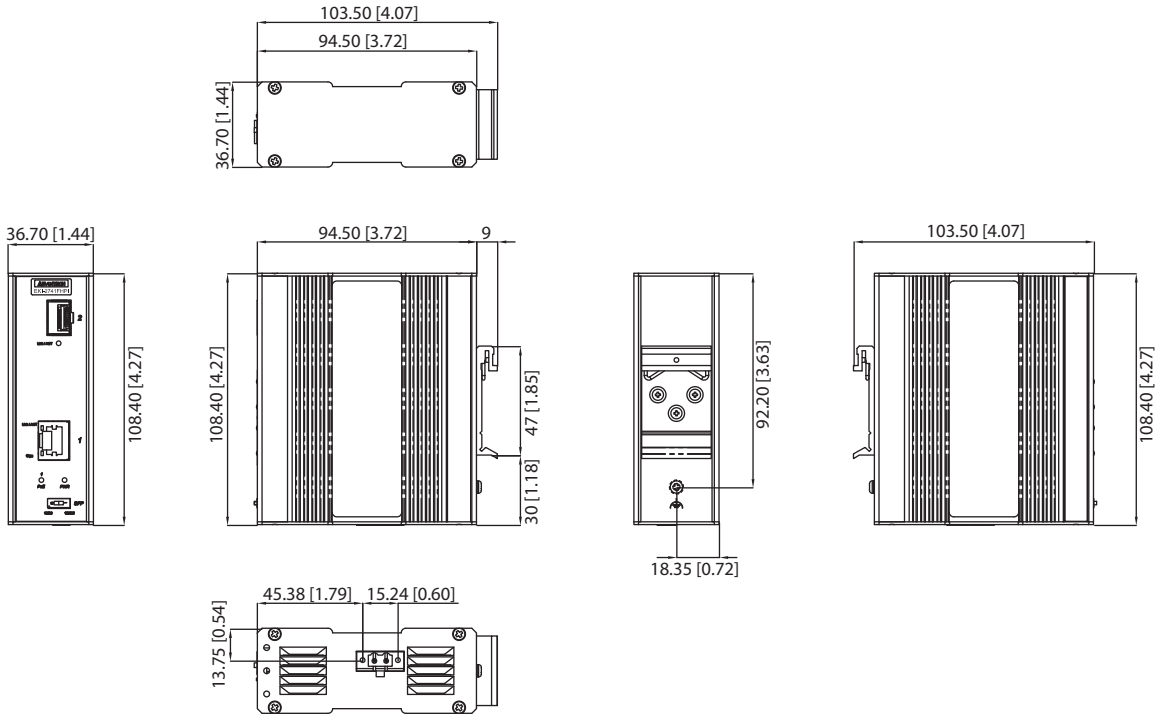
Certification

- **Safety** UL/cUL 508 Class I, Division 2, Groups A, B, C and D
- **EMI** FCC Part 15 Subpart B Class A, EN 55022 Class A
- **EMS** EN 61000-4-2
EN 61000-4-3
EN 61000-4-4
EN 61000-4-5
EN 61000-4-6
EN 61000-4-8
- **Shock** IEC 60068-2-27
- **Freefall** IEC 60068-2-32
- **Vibration** IEC 60068-2-6
- **Patent** http://www.advantech.com/legal/patent

Last updated : 23-Aug-2016

Dimensions

Unit: mm [inch]



Panel Cut-out Dimensions: 36.7 x 108.4 x 103.5 mm (1.44" x 4.27" x 4.07")

Ordering Information

- **EKI-2741FHPI** Gigabit Media Converter SFP with 1x PoE 60W

EKI-3541M
EKI-3541S

10/100T (X) to Multi-Mode SC Type Fiber Optic Industrial Media Converter

10/100T (X) to Single-Mode SC Type Fiber Optic Industrial Media Converter

Features

- Provides 1 x 10/100 Mbps Ethernet port with RJ45 connector
- Provides 1 x 100 Mbps Multi-mode/Single-mode SC type fiber port
- Supports Link Fault Pass-through (LFP) function
- Supports full/half duplex flow control
- Supports store and forward transmission
- Supports Auto-Negotiation
- Supports MDI/MDI-X auto crossover
- Supports redundant 12-48 V_{DC} power input
- Provides flexible mounting: DIN-rail and Wall mount

Introduction

EKI-3541M/3541S is designed to convert Ethernet networks to fiber networks by transparently converting Ethernet signals to optic signals. The advantages of fiber optics are wide bandwidth, EMI immunity and long-distance transmissions.Therefore, EKI-3541M/3541S is an ideal solution for "fiber to building" applications at central offices or local sites. EKI-3541M/3541S supports MDI/MDIX auto detection, so you don't need to use crossover wires. Furthermore, the EKI-3541M/3541S can work normally from -10 to 60°C and accepts a wide voltage range from 8.4 ~ 52.4 V_{DC}. Besides, it also provides 4,000 V_{DC} surge (EFT) protection against over-voltage, so it is suitable for harsh operating environments.

Link Fault Pass-Through (LFP)

EKI-3541M/3541S is an enhanced Ethernet to fiber-optic converter. Aside from its standard features, the versatile EKI-3541M/3541S also has the LFP (Link Fault Pass-through) feature. When one side of the link fails, the other side continues transmitting packets, and waiting for a response that never arrives from the disconnected side. Use the internal jumper to enable the LFP function, then EKI-3541M/3541S will force the link to shut down as soon as noticed that the other link has failed, giving the application software a chance to react to the situation.

Specifications

Communications

Standard	IEEE 802.3, 802.3u, 802.3x
LAN	10/100Base-T (X), 100Base-FX
Transmission Distance	Ethernet: Up to 100 m Fiber: Multi-mode: up to 2 km Fiber: Single-mode: up to 30 km
Transmission Speed	Up to 100 Mbps
Optical Fiber	
Multi-mode (EKI-3541M)	Wavelength: 1310 nm Tx Power: -14/-20 dBm Rx Sensitivity: -31 dBm Parameters: 50/125 um,62.5/125 um
Single-mode (EKI-3541S)	Wavelength: 1310 nm Tx Power: -8/-15 dBm Rx Sensitivity: -34 dBm Parameters: 9/125 um

Interface

Connectors	1 x RJ45 1 x SC type fiber connector 6-pin removable screw terminal (power)
LED Indicators	P1, P2, P-Fail LFP, LNK/ACT (FX), FDX/COL (FX)
DIP Switch	T(X):Speed and HDX/FDX, LFP Fiber: HDX/FDX, T(X):Auto-Negociation

Power

Power Consumption	Max. 2.4 W
Power Input	12 ~ 48 V_{DC}, redundant dual inputs

Mechanism

Dimensions (W x H x D)	28.5 x 120 x 85.3 mm (1.02" x 4.73" x 3.35")
Mounting	DIN-rail, Wall
Enclosure	IP40, plastic and metal shell with solid mounting kits

Protection

Power Reverse	Present
Overload current	Present

Environment

Operating Temperature	-10 ~ 60°C (14 ~ 140°F)
Storage Temperature	-40 ~ 85°C (-40 ~ 185°F)
Operating Humidity	5 ~ 95% (non-condensing)
Storage Humidity	0 ~ 95% (non-condensing)
MTBF	597,488 hours (EKI-3541M and EKI-3541S)

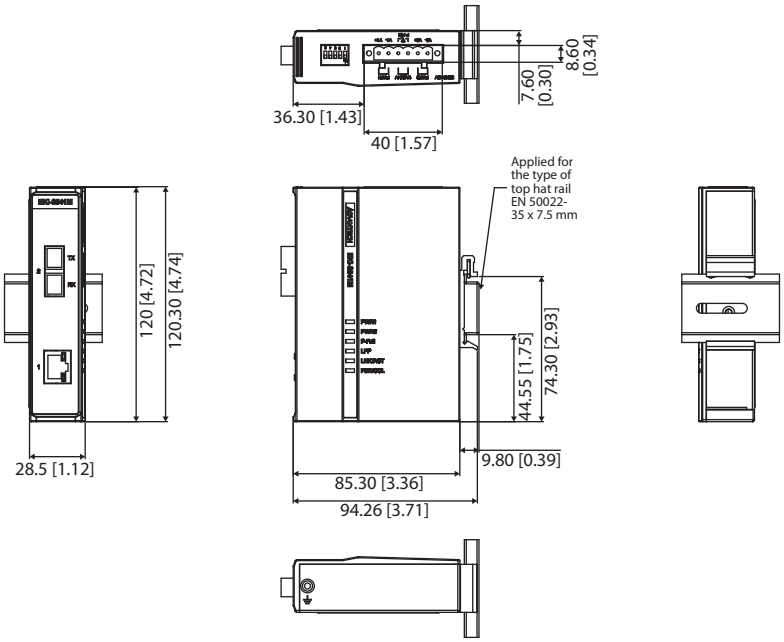
Certification

Safety	UL 60950-1, CAN/CSA-C22.2 No.60950
EMI	FCC Part 15 Subpart B Class A, EN 55011/55022 Class A
EMS	EN 61000-4-2 (Level 3) EN 61000-4-3 (Level 3) EN 61000-4-4 (Level 4) EN 61000-4-5 (Level 3) EN 61000-4-6 (Level 3) EN 61000-4-8 (Level 4)
Shock	IEC 60068-2-27
Freefall	IEC 60068-2-32

Dimensions

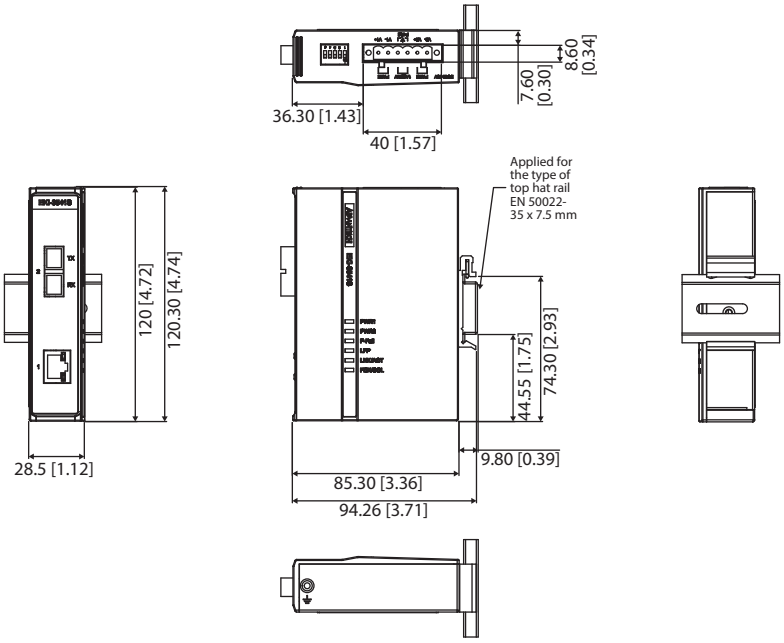
Unit: mm [inch]

EKI-3541M



Panel Cut-out Dimensions: 94.26 x 120.30 x 28.5 mm (3.71" x 4.74" x 1.44")

EKI-3541S



Panel Cut-out Dimensions: 94.26 x 120.30 x 28.5 mm (3.71" x 4.74" x 1.44")

Ordering Information

- **EKI-3541M** 10/100T (X) to Multi-Mode SC Type Fiber Optic Industrial Media Converter
- **EKI-3541S** 10/100T (X) to Single-Mode SC Type Fiber Optic Industrial Media Converter