# Industrial 10G Switch:1x10G SFP+ and 1x10G RJ45 PoE+802.3bt, without SFP+ module, without Power supply

### Features

- ➤ One 10G/5G/2.5G/1G/100M Base-T RJ45 interface with IEEE 802.3bt PoE++ injector function
- ➤ One 10GBASE-X SFP+ slot interface
- ➤ Complies with IEEE 802.3bt PoE++ Type-4 PSE
- ➤ Supports PoE Power up to 90 watts for PoE port
- ➤ 44~57V DC redundant power with reverse polarity protection
- ➤ Supports DIN-Rail and Wall-Mount installation
- Compact fanless design avoids overheating
- > IP40 rugged high-strength metal case
- $\rightarrow$  -40°C to 80°C (-40°F to 176°F) operating

Temperature



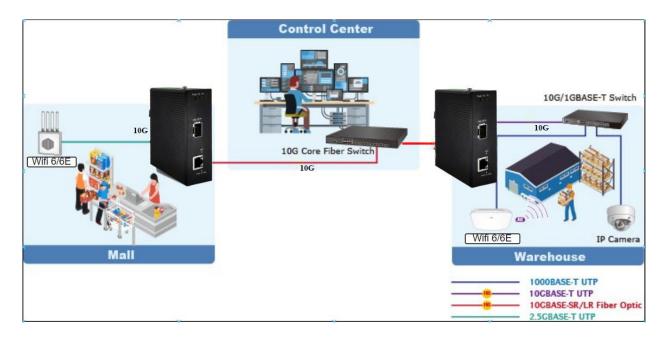
#### Overview

The HDIS-1XS1XT Media Converter is the smallest industrial-grade 10G Ethernet media converter (from 10000Base-X SFP+ to 10G/5G/2.5G/1G/100M Base-T Copper) with 802.3bt Power over Ethernet Plus Plus (PoE++) injector function to deliver up to 90W of power output and high data transmission speed to PDs (powered devices) installed in a remote area where sufficient and reliable power input is required, providing non-blocking wire-speed performance and great flexibility for 10G Ethernet extension in harsh industrial environment. It is equipped with one 10G/5G/2.5G/1G/100M Base-T RJ45 copper interface and one 10GBase-X SFP+ fiber optic interface delivered in an IP40 rugged but compact sized strong case with redundant power system (44~57VDC).

Customers who are planning for Wi-Fi 6, point-to-point wireless links, and other bandwidth-demanding technologies are looking for connectivity solutions that can grow with them as their technology needs evolve. These customers – universities, commercial buildings, campus environments, stadiums, senior living communities, resorts, and the like – need both 10G speeds and 90W PoE++ (PoE) power output. However, current media converter options in the market are expensive and limited. E-link is solving for more bandwidth and more power at the edge with the industry's first PoE 10G media converter solution.

It is Ideal for wide range of applications from copper to fiber media conversion wherever up-to-10GE bandwidth is required in climatically demanding environments with wide temperature ranges.

## Application



#### **Technical Indexes**

| Ethernet                  |  |
|---------------------------|--|
| Standards:                | IEEE 802.3u 100BASE-TX                       |
|                           | IEEE 802.3ab 1000BASE-T                      |
|                           | IEEE 802.3bz 2.5G/5GBASE-T                   |
|                           | IEEE 802.3an 10GBASE-T                       |
|                           | IEEE 802.3ae 10Gbps Ethernet                 |
|                           | IEEE 802.3x full-duplex flow control         |
|                           | IEEE 802.3az Energy Efficient Ethernet (EEE) |
|                           | IEEE 802.3bt 4-pair Power over Etherne       |
|                           | IEEE 802.3at Power over Ethernet Plus PSE    |
|                           | IEEE 802.3af Power over Ethernet Plus        |
| Forward & Filtering Rate: | 100Mbps                                      |
|                           | 1000Mbps                                     |

|                        | 2.5Gbps   |
|------------------------|---|
|                        | 5Gbps   |
|                        | 10Gbps  |
|                        | 10G/5G/2.5G/1G/100M BASE-T:                                     |
|                        | 10G – Cat 6A/7  |
|                        | 5G – Cat 6/6A/7   |
| N. 1611                | 1G/2.5G – Cat 5e/6/6A/7   |
|                        | 100M – Cat 5/5e/6/6A/7  |
| Network Cables:        | Cat 5/5e/6/6A/7 UTP cable (100 meters, max.)                    |
|                        | EIA/TIA-568 100-ohm STP (100 meters, max.)                      |
|                        | 10GBASE-LR/SR/BX:   |
|                        | 50/125μm or 62.5/125μm multi-mode fiber optic cable, up to 300m |
|                        | 9/125μm single-mode fiber optic cable, up to 80km               |
| Processing Type:       | Store-and-Forward   |
| Fabric:                | 20Gbps  |
| Jumbo Frame:           | 16K   |
| Address Table:         | 9K entries, automatic source address learning and aging         |
| Interface              |   |
| Connector:             | 1 x 10GE RJ45   |
| Optical Port:          | 1 x 10G SFP+  |
| PoE (Power over Ether  | net)  |
|                        | IEEE 802.3af Power over Ethernet                                |
| Standard:              | IEEE 802.3at Power over Ethernet Plus                           |
|                        | IEEE 802.3bt Power over Ethernet Plus Plus                      |
| Port:                  | RJ45  |
| PoE Power Output:      | 802.3bt PoE++ : 90W   |
| PoE Power Supply Type  | : End-span + mid-span   |
| Power Pin Assignment:  | End-span: 1/2 (-), 3/6 (+);                                     |
| 1 ower 1 m Assignment. | mid-span: 4/5 (+), 7/8 (-)                                      |
| PoE Power Budget:      | 90 watts@44~57V DC input  |
| Environmental          | <u> </u>  |
|                        |   |

| Storage Temperature:   | Operating                 | -40°C to 80°C (-40°F to 176°F)           |  |
|--|---------------------------|--|--|
| Relative Humidity: 5% to 95% non-condensing  MTBF > 100,000 hrs  Electrical and Mechanical  Input Power: 44~57VDC (Terminal Block)  Power Consumption: System ON without loading: 48V DC: 4.36W Full loading with PoE++: 48V DC: 98W  Protection:  Power Input Overload: Automatic Resettable Reverse Polarity: Present  LED Indicators:  PWR: Power Status  L/A: Link/Activity at Ethernet Port  TP: Ethernet Status  FX: SFP+ Fiber Port Status  Dimensions (WxDxH): 95 x 70 x 30 mm  Weight: 0.25Kg  Casing: Aluminum Case  Mounting Options: DIN-Rail/Wall-mount  Regulatory Approvals  ISO9001, CE, RoHS, FCC  EN55022:2010+AC: 2011, Class A  EN 61000-3-3: 2013  EN55024:2010 | Temperature:              | , , , ,                                  |  |
| MTBF   > 100,000 hrs   |                           |  |  |
| Input Power:   | Relative Humidity:        | 5% to 95% non-condensing                 |  |
| Input Power:   | MTBF                      | > 100,000 hrs                            |  |
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| Reverse Polarity:   Present  | Protection:               |  |  |
| LED Indicators:           PWR:         Power Status           L/A:         Link/Activity at Ethernet Port           TP:         Ethernet Status           FX:         SFP+ Fiber Port Status           Dimensions (WxDxH):         95 x 70 x 30 mm           Weight:         0.25Kg           Casing:         Aluminum Case           Mounting Options:         DIN-Rail/Wall-mount           Regulatory Approvals           ISO9001, CE, RoHS, FCC           EN55022:2010+AC: 2011, Class A           EN 61000-3-2: 2006+A1: 2009+A2: 2009           EN 61000-3-3: 2013           EN55024:2010  | Power Input Overload:     | Automatic Resettable                     |  |
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| L/A: Link/Activity at Ethernet Port  TP: Ethernet Status  FX: SFP+ Fiber Port Status  Dimensions (WxDxH): 95 x 70 x 30 mm  Weight: 0.25Kg  Casing: Aluminum Case  Mounting Options: DIN-Rail/Wall-mount  Regulatory Approvals  ISO9001, CE, RoHS, FCC  EN55022:2010+AC: 2011, Class A  EN 61000-3-2: 2006+A1: 2009+A2: 2009  EN 61000-3-3: 2013  EN55024:2010  | LED Indicators:           |  |  |
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| Regulatory Approvals  ISO9001, CE, RoHS, FCC  EN55022:2010+AC: 2011, Class A  EN 61000-3-2: 2006+A1: 2009+A2: 2009  EN 61000-3-3: 2013  EN55024:2010   | Casing:                   | Aluminum Case                            |  |
| ISO9001, CE, RoHS, FCC  EN55022:2010+AC: 2011, Class A  EN 61000-3-2: 2006+A1: 2009+A2: 2009  EN 61000-3-3: 2013  EN55024:2010   | Mounting Options:         | DIN-Rail/Wall-mount                      |  |
| EN55022:2010+AC: 2011, Class A  EN 61000-3-2: 2006+A1: 2009+A2: 2009  EN 61000-3-3: 2013  EN55024:2010   | Regulatory Approvals      |  |  |
| EN 61000-3-2: 2006+A1: 2009+A2: 2009 EN 61000-3-3: 2013 EN55024:2010   | ISO9001, CE, RoHS, FC     | C  |  |
| EN 61000-3-3: 2013<br>EN55024:2010   | EN55022:2010+AC: 201      | EN55022:2010+AC: 2011, Class A           |  |
| EN55024:2010   | EN 61000-3-2: 2006+A1     | : 2009+A2: 2009                          |  |
|  | EN 61000-3-3: 2013        |  |  |
| IEC 61000-4-2: 2008 (ESD)  | EN55024:2010              |  |  |
|  |                           |  |  |
| IEC 61000-4-3: 2010 (RS)   |                           |  |  |
| IEC 61000-4-4: 2012 (EFT)  |                           |  |  |
| IEC 61000-4-5: 2014 (Surge)  |                           |  |  |

| IEC 61000-4-6: 2013 (CS)   |  |
|----------------------------|--|
| IEC 61000-4-8: 2009 (PFMF) |  |

## Ordering Information

| Model               | Description   |
|---------------------|---|
| HDIS-1XS1XT         | Industrial 10G Switch:1x10G SFP+ and 1x10G RJ45 PoE+ 802.3bt, without SFP+ module ,without Power supply |
| SFP Options         | ► SFP+ option. Please select your SFP+ on our SFP+ Options Page (Industrial SFP).                       |
|                     | ➤ SFP+ module is to be purchased separately.  |
| Mounting<br>Options | ▶ Default DIN-Rail Bracket installed; Wall Mount Bracket is included.                                   |
| Power Options       | ► Open Wire for Terminal Block  |
|                     | ▶ Default DIN-Rail Bracket installed; Wall Mount Bracket is included.                                   |
|                     | ▶ Power Supply is to be purchased separately.   |