

Quick Installation Guide

ITPS-141TX-T1L

Industrial Unmanaged Gigabit PoE Switch

Introduction

The ITPS-141TX-T1L is an ideal solution for factory and process automation infrastructure. The new single-pair Ethernet technology can be easily integrated into an existing Ethernet infrastructure, simplifying layout and reducing the cost of cabling.

The ITPS-141TX-T1L features 4x10Base-T1L ports with PoDL and 1x10/100 Base-T(X) port. Its wide operating temperature range, from -40°C to 70°C, can satisfy most operating environments.

Features

- > Supports SPE(Single Paire Ethernet) 10Base-T1L compliant with IEEE 802.3cg standard
- > Long distances point to point transmission up to 1000m
- > Supports SCCP PoDL(Power over Data Line) PSE Types compliant with IEEE 802.3bu standard
- > PoDL up to 50 Watts/1A per port
- > Supports PoDL legacy mode
- > Supports wide range 20-30VDC power input
- > Supports QoS and flow control
- > Rugged IP-30 housing design

Package Contents

The device is shipped with the following items. If any of these items is missing or damaged, please contact your customer service representative for assistance.

Contents	Pictures	Number
IGPS-1080-24V		X 1
DIN-rail Kit		X 1
QIG		X 1
2-pin terminal block		X 1

Preparation

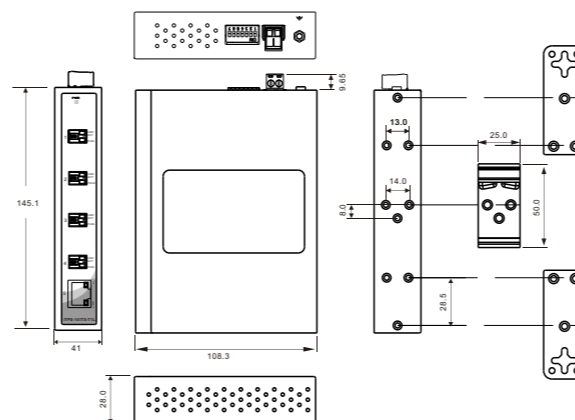
Before you begin installing the switch, make sure you have all of the package contents available and a PC with Microsoft Internet Explorer 6.0 or later, for using web-based system management tools.

Safety & Warnings

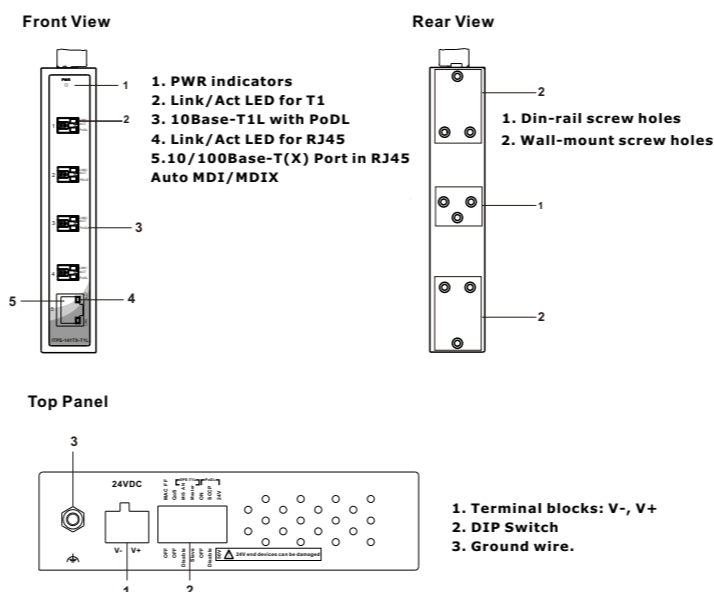
- Elevated Operating Ambient:** If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient. Therefore, consideration should be given to installing the equipment in an environment compatible with the maximum ambient temperature (T_{ma}) specified by the manufacturer.

- Reduced Air Flow:** Installation of the equipment in a rack should be such that the amount of air flow required for safe operation of the equipment is not compromised.
- Mechanical Loading:** Mounting of the equipment in the rack should be such that a hazardous condition is not achieved due to uneven mechanical loading.
- Circuit Overloading:** Consideration should be given to the connection of the equipment to the supply circuit and the effect that overloading of the circuits might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

Dimension Unit =mm (Tolerance ±0.5mm)



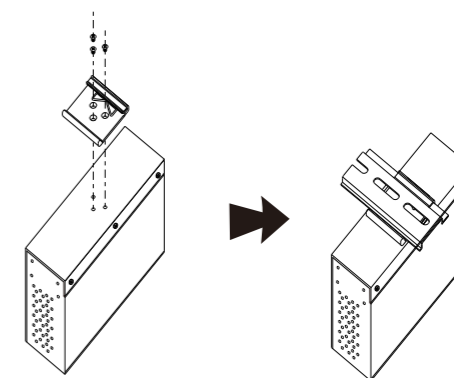
Panel Layouts



Installation

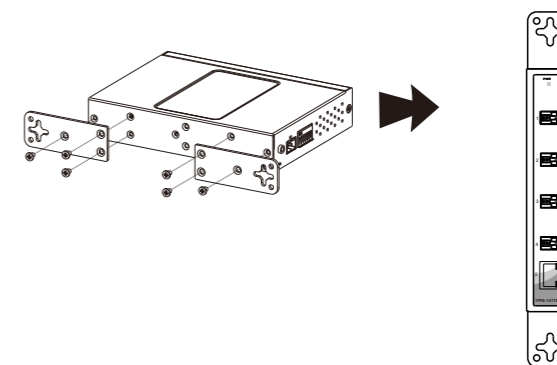
DIN-rail Installation

- Step 1:** Slant the switch and screw the Din-rail kit onto the back of the switch, right in the middle of the back panel.
- Step 2:** Slide the switch onto a DIN-rail from the Din-rail kit and make sure the switch clicks into the rail firmly.



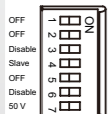
Wall-mounting

- Step 1:** Screw the wall-mount kit onto the rear panel of the switch. A total of six screws are required, as shown below.
- Step 2:** Use the switch, with wall mount plates attached, as a guide to mark the correct locations of the four screws.
- Step 3:** Insert a screw head through the large parts of the keyhole-shaped apertures, and then slide the switch downwards. Tighten the screws for added stability.



DIP Switch Setting

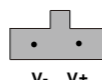
No.	Function	Default	Setting															
1	MAC frame filtering (MAC FF)	off	on: Enables MAC FF to drop range of 01-80-C2-00-00-02 to 01-80-C2-00-00-0F off: Disables MAC FF															
2	Quality of service (QoS)	on	on: Enables QoS <table border="1"> <tr> <td>COS (1P)</td> <td>0, 1, 2, 3, 4</td> <td>5</td> <td>6</td> <td>7</td> </tr> <tr> <td>Priority</td> <td>lowest</td> <td>third highest</td> <td>second highest</td> <td>highest</td> </tr> <tr> <td>Queues</td> <td>0</td> <td>1</td> <td>2</td> <td>3</td> </tr> </table> off: Disables QoS	COS (1P)	0, 1, 2, 3, 4	5	6	7	Priority	lowest	third highest	second highest	highest	Queues	0	1	2	3
COS (1P)	0, 1, 2, 3, 4	5	6	7														
Priority	lowest	third highest	second highest	highest														
Queues	0	1	2	3														
SPE 10Base-T1L																		
3	M/SAN	off	on: Enables master/slave auto-negotiation off: Disables master/slave auto-negotiation															
4	Master/Slave	off	No effect, if DIP switch 3 is on. on: Master off: Slave															
SPE 10Base-T1L PoDL																		
5	PoDL ON/OFF	off	on: Enables PoDL (Power over data line) off: Disables PoDL															
6	SCCP	off	No effect, if DIP switch 5 is off. Active SCCP (Serial Communication Classification Protocol) ensures full operating voltage is applied by the Power Sourcing Equipment (PSE) when a valid powered device (PD) is connected. Only valid for devices that support SCCP. on: Enables SCCP off: Disables SCCP, enables force mode PoDL without classification Hot plugging is not supported before enabling force mode.															
7	24/50 V	off	No effect, if DIP switch 5 is off or 6 is on (force mode only). on: Enables 24 V output (Classes 10- 12) off: Enables 50 V output (Classes 13 - 15)															



Wiring

Power inputs

The switch supports one power supply, the input is 24VDC
STEP 1: Insert the negative/positive wires into the V-/V+ terminals, respectively.
STEP 2: To keep the DC wires from pulling loose, use a small flat-blade screwdriver to tighten the wire-clamp screws on the front of the terminal block connector.



Grounding

Grounding and wire routing help limit the effects of noise due to electromagnetic interference (EMI). Run the ground connection.

Configurations

LED Anzeige / LED indicator

PWR	green	PWR 1 supply voltage OK
10/100TX Port	Upper LED	
	green	10/100 Mbps link active
	off	10/100 Mbps link inactive
	Lower LED	
	green	100 Mbps link active
	yellow	10 Mbps link active
10Base-T1L SPE Port	Upper LED	
	green	100 Mbps link active
	off	100 Mbps link inactive
	Lower LED	
	yellow	PoDL PD device is enabled
	off	PoDL PD device is disabled

Specifications

ORing Switch Model	ITPS-141TX-T1L
Physical Ports	
10Base-T1L with PoDL	4
10/100Base-T(X) Port in RJ45. Auto MDI/MDIX	1
Technology	
Ethernet Standards	IEEE 802.3 for 10Base-T IEEE 802.3u for 100Base-TX IEEE 802.3x for Flow control IEEE 802.3cg for 10Base-T1L IEEE 802.3bu for PoDL
MAC Table	1K MAC addresses
Processing	Store-and-Forward
LED Indicators	
Power indicator	Green : Power LED
10Base-T1L indicator	Green for port Link/Act.
PoDL indicator	Amber for PoDL PD device is connected
10/100Base-T(X) RJ45 port indicator	Green for port Link/Act. Amber for 10Mbps/ Green for 100Mbps indicator
PoDL	
SCCP	
24v	Class 10~12, up to 20W
50v	Class 13~14, up to 30W
Force mode	Up to 50W/1A
PoDL Dip switch	
PoDL	On : Enable PoDL OFF: Disable PoDL
SCCP mode	Turn on SCCP-based classification ensures full operating voltage is applied by the Power Sourcing Equipment (PSE) when a valid PD is connected
Force mode	Force enable PoDL without classification * Does NOT support hot plugging before enabling Force mode
Power	
Power Input	DC input 24VDC (20~30VDC)
Power consumption (Typ.)	Max.3.47A
PoE Power Budget	80Watts
Overload current protection	Present
Reverse polarity protection	Present
Physical Characteristic	
Enclosure	IP-30 (non UL certified)
Dimension (W x D x H)	28 (W) x 108.3 (D) x 145.1(H) mm
Weight (g)	530 g
Environmental	
Storage Temperature	-40 to 85°C (-40 to 185°F)
Operating Temperature	-40 to 75°C (-40 to 167°F)
Operating Humidity	5% to 95% Non-condensing
Regulatory Approvals	
EMI	FCC Part 15, CISPR (EN55032) class A
EMS	EN61000-4-2 (ESD), EN61000-4-3 (RS), EN61000-4-4 (EFT), EN61000-4-5 (Surge), EN61000-4-6 (CS), EN61000-4-8, EN61000-4-11
Shock	IEC 60068-2-27

Free Fall	IEC60068-2-32
Vibration	IEC60068-2-6
Warranty	5 years

Note : HW version 5.0



Warning [AVERTISSEMENT]

Take into consideration the following guidelines before wiring the device [Tenez compte des directrices suivantes avant de câbler l'appareil.]
 1. Terminal block is mating with Plug and suitable for 12-18AWG. Torque value 4.5 lb-in. [Le bornier est compatible avec les connecteurs et convient pour 12-18AWG. Valeur de couple 4,5 lb-in.]
 2. The temperature rating of the input connection cable should higher than 105°C [La température de service nominale du câble d'entrée doit être supérieure à 105 °C]
 3. Use Copper Conductors Only. [Utilisez uniquement des conducteurs en cuivre.]

- * Indoor use and pollution degree II, it must be wiped with a dry cloth for clean up the device and label.
- * Utilisation en intérieur et degré de pollution II, il faut l'essuyer avec un chiffon sec pour nettoyer l'appareil et son étiquette.
- * Do not block air ventilation holes.
- * Ne blochez pas les orifices de ventilation.
- * If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired."
- * Si l'appareil est utilisé d'une manière non spécifiée par le fabricant, la protection qu'il apporte peut se voir diminuée."
- * Shall be mounted in the Industrial Control Panel and ambient temperature is not exceed 70 degree C
- * doit être monté dans le panneau de commande industriel et la température ambiante ne doit pas dépasser 70 degrés C



Warning. Hot Surface
AVERTISSEMENT : SURFACE(S) CHAUDE(S)

Contact for maintenance and repair service:

ORing

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