IGP-1271
12-Port L3 Lite Managed Gigabit PoE Industrial Switch

Quick Installation and

Initial Configuration

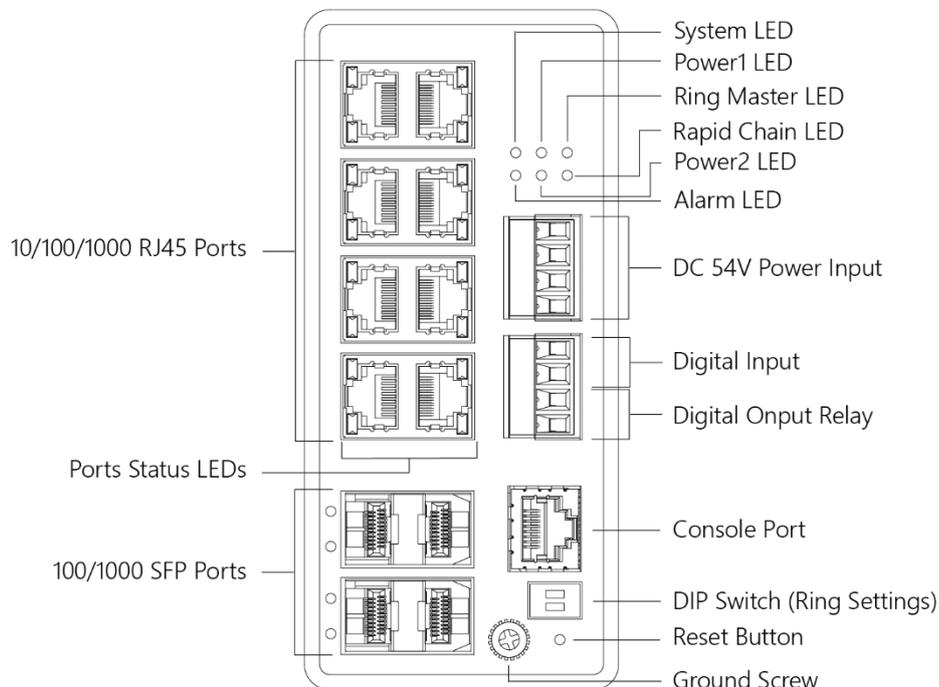# Contents

Chapter 1 Introduction

Overview

This user guide describes how to install, configure, and troubleshoot the IGP-1271, 12-Port L3 Lite Managed Gigabit PoE Industrial Switch.

By reading this user guide, users can perform the following tasks:

- To check the switch status by reading the LED behavior

- To reset the switch or to restore the switch to factory defaults

- To install the switch

- To use a Web browser to initially configure the switch

- To troubleshoot the switch

Front View of the Switch

System LED
Power1 LED
Ring Master LED
Rapid Chain LED
Power2 LED
Alarm LED

10/100/1000 RJ45 Ports

DC 54V Power Input

Digital Input
Digital Onput Relay

Ports Status LEDs

100/1000 SFP Ports

Console Port

DIP Switch (Ring Settings)
Reset Button
Ground Screw

Figure 1: Front panel of the switch

Rear View of the Switch
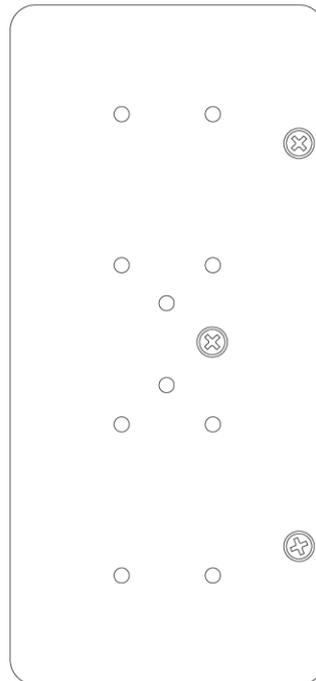
Figure 2: Rear panel of the switch

LED Descriptions

The LEDs on the front panel provide users with switch status checking and monitoring. There are three types of LEDs as follows:

- **Power LEDs**

    indicates if the switch is powered up correctly or not.

- **System LED**

    indicates if the system is ready or not.

- **Alarm LED**

    indicates if the system is normal or not.

- **Ring Master and Rapid Chain LED**

    indicates if the Rapid Ring is ready or not.

- **Port Status LEDs**

indicates the current status of each port. Users can check these LEDs to understand the port status.

The following table details the functions and descriptions of various LED indicators.

Table 1: Power LEDs

LED	Color	State	Description
Power1	Green	On	The switch is powered ON correctly.
		Off	The switch is not receiving power from power1.
Power2	Green	On	The switch is powered ON correctly.
		Off	The switch is not receiving power from power2.

Table 2: System LED

LED	Color	State	Description
System	Green	On	The switch is ready.
		Off	The switch is not ready.

Table 3: Alarm LED

LED	Color	State	Description
Alarm	Red	On	An abnormal state, such as temperature, voltage or DC power1/2, has been detected in the switch.
		Off	The system is normal.

Table 4: Ring Master and Rapid Chain LED

LED	Color	State	Description
RM (Ring Master)	Green	On	Ring Master has been detected in the switch.
	Amber	On	Ring Member has been detected in the switch.
	--	Off	Disable
RC (Rapid Chain)	Green	On	Rapid Chain has been detected in the switch. (Active path)

	Amber	On	Rapid Chain has been detected in the switch. (Backup path)
		Blinking	Error: There is no correspondent Rapid Chain Switch found.
	--	Off	Disable

Users can check the port status by reading the LED behaviors per the table below.

Table 5: Port Status LEDs

LED	Color	State	Description
RJ45 Ports UP	Green	On	The port is enabled and established a link to connected device, and the connection speed is 1000Mbps.
	Green	Blinking	The port is transmitting/receiving packets, and the connection speed is 1000Mbps.
	Amber	On	The port is enabled and established a link to connected device, and the connection speed is 10/100Mbps.
	Amber	Blinking	The port is transmitting/receiving packets, and the connection speed is 10/100Mbps.
	--	Off	The port has no active network cable connected, or it is not established a link to connected device. Otherwise, the port may have been disabled through the switch user interface.
RJ45 Ports Down	Green	On	The port is enabled and supplying power to connected device.
	Amber	On	An abnormal state, such as overload status, has been detected in the switch.
	--	Off	The port has no active network cable connected, or it is not connected a PoE PD device. Otherwise, the port may have been disabled through the switch user interface.
SFP Ports	Green	On	The port is enabled and established a link to connected device, and the connection speed is 1000Mbps.
	Green	Blinking	The port is transmitting/receiving packets, and the connection speed is 1000Mbps.
	Amber	On	The port is enabled and established a link to connected device, and the connection speed is 100Mbps.
	Amber	Blinking	The port is transmitting/receiving packets, and the connection speed is 100Mbps.

	--	Off	The port has no active network cable connected, or it is not established a link to connected device. Otherwise, the port may have been disabled through the switch user interface.

DIP Switch

By configure the DIP Switch, users can perform the Rapid Ring tasks.

Detail setting can refer to Rapid Ring User Manual.

Reset Button

By pressing the Reset Button for certain period of time, users can perform the following tasks.

- **Reset the Switch**

  to reboot and get the switch back to the previous configuration settings saved.

- **Restore the Switch to Factory Defaults**

  to restore the original factory default settings back to the switch.

Note:

According to the table below, users can easily judge which task is being performed by reading the LED behaviors while pressing the Reset button. **Once the LED behaviors are correctly displayed, users may just release the button.**

Table 6: Reset Button Descriptions

| Task to be Performed	Time Period of Pressing Button	SYS LED Behavior	Port Status LED Behavior
Reset the Switch	2 ~ 7 seconds	Blinking Green	ALL LEDs Light OFF
Restore to Defaults	7 ~ 12 seconds	Blinking Green	ALL LEDs Stay ON

Chapter 2　　Installing the Switch

Package Contents

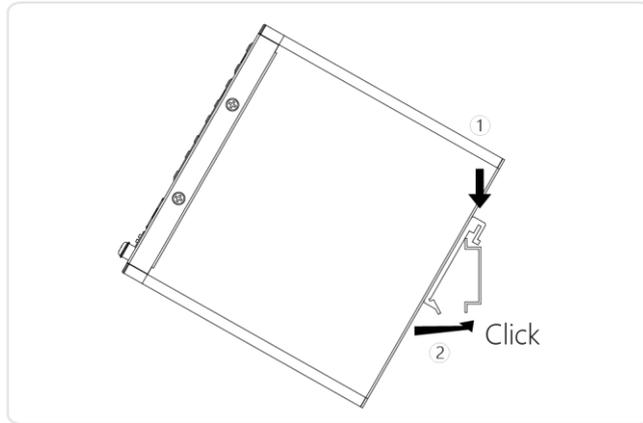- IGP-1271
- Console Cable
- Installation Guide
- Mounting kit

Mounting the Switch on a DIN Rail

Step 1: Attach the DIN Rail mounting kit to rear panel of the chassis. Insert screws and tighten then with a screwdriver to secure the kit.
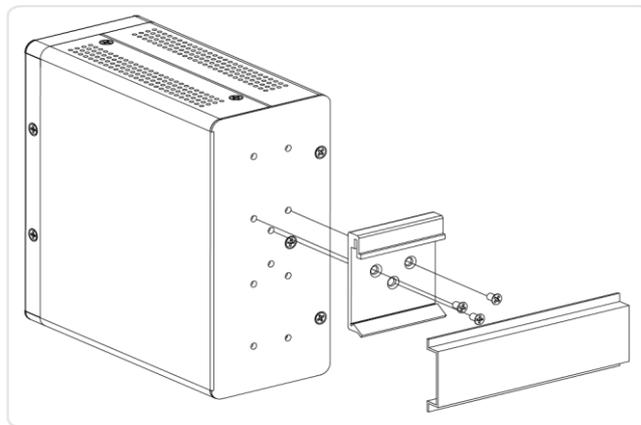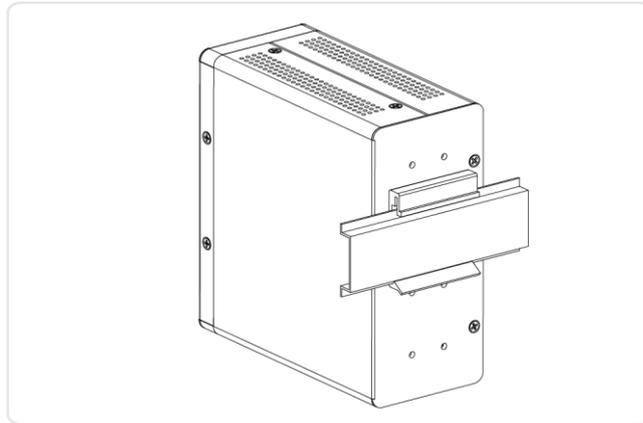

Figure 3: Attaching DIN Rail Kit to the Switch

Step 2: Insert the upper lip of the DIN rail into the DIN-rail mounting kit. And press the switch towards the DIN rail until it snaps into place.
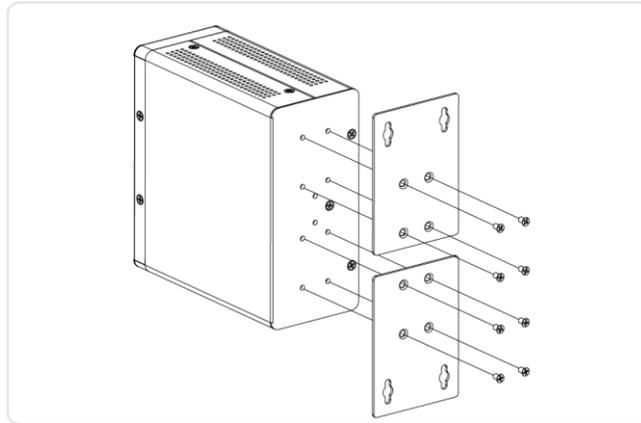
Figure 4: Insert switch to the DIN Rail

Step 3: Make sure that the switch is attached securely to DIN Rail.
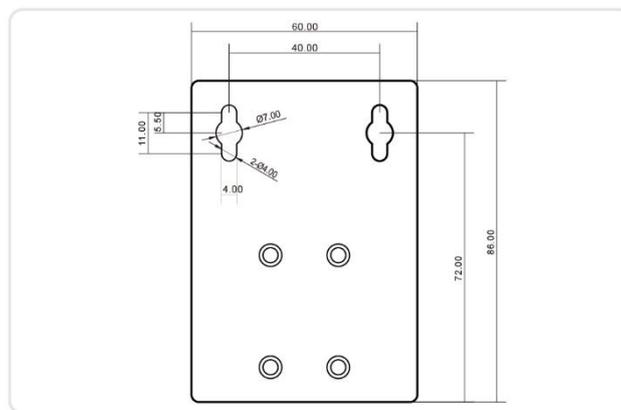

Figure 5: The switch is attached to DIN Rail

Mounting the Switch on Wall (Optional)

Step 1: Attach the wall mounting plates to rear panel of the chassis. Insert screws and tighten then with a screwdriver to secure the plates.

Figure 6: Attaching Wall Mounting Plates to the Switch

Figure 7: The Dimension of Wall Mounting Plates

Step 2: Install user-supplied screws on the appropriate location on the wall.

Step 3: Make sure that the switch is attached securely to wall.
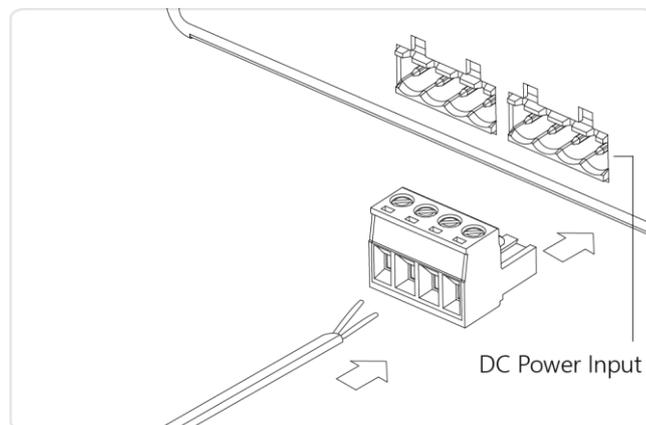
Connecting the DC Power Cord

Step 1: Insert the negative/positive DC 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.
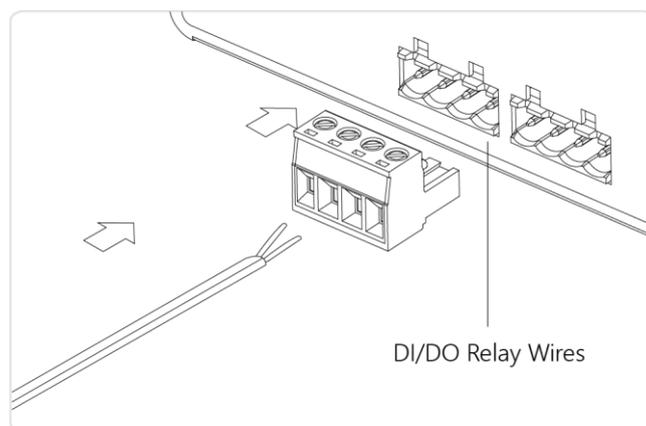
Step 3: Insert the terminal block connector prongs into the terminal block receptor.

Step 4: Check the SYS LED. If it is ON, the power connection is correct.

DC Power Input

Figure 8: Connecting DC power cord

Connecting the DI/DO Relay Wires

DI/DO Relay Wires

Figure 9: Connecting DI/DO Relay Wires

STEP 1: Insert the negative (ground)/positive DI/DO Relay wires into the +/- terminals, respectively.

STEP 2: To keep the DI/DO Relay wires from pulling loose, use a small flat-blade screwdriver to tighten the wire-clamp screws on the front of the terminal block connector.

STEP 3: Insert the terminal block connector prongs into the terminal block receptor.

Note:

Digital output (relay): 24VDC/1A

Digital input: level 0(Low) -> 0V to 6V, level 1 (High) -> 10V to 24V

FAULT:

The two contacts of the terminal block connector are used to detect user-configured events. The two wires attached to the fault contacts form an open circuit when a user-configured event is triggered. If a user-configured event does not occur, the fault circuit remains closed.

Installing SFP Modules
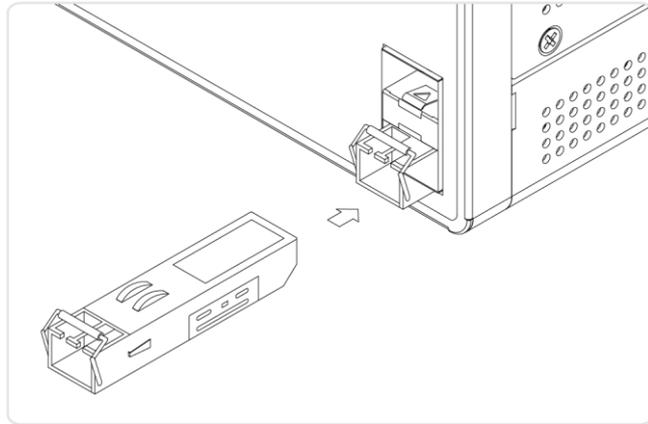
You can install or remove a mini-GBIC SFP module from a SFP port without having to power off the switch.

Step 1: Insert the module into the SFP port.

Step 2: Press firmly to ensure that the module seats into the connector.

Figure 10: Installing a SFP Module into a SFP Port

Note:

The SFP ports should use UL Listed Optional Transceiver product, Rated 3.3Vdc, Laser Class 1.

Chapter 3   Initial Configuration of Switch

Initial Switch Configuration Using Web Browsers

After powering up the switch for the first time, you can perform the initial switch configuration using a web browser. For managing other switch features, please refer to the Web interface user guide for details.

To begin with the initial configuration stage, you need to reconfigure your PC's IP address and subnet mask so as to make sure the PC can communicate with the switch. After changing PC's IP address (for example, 192.168.1.250), then you can access the Web interface of the switch using the switch's default IP address as shown below.

The initial switch configuration procedure is as follows:

Note:

The factory default IP address of the switch is 192.168.1.1

The factory default Subnet Mask of switch is 255.255.255.0

Initial Switch Configuration Procedure

The initial switch configuration procedure is as follows:

1. Power up the PC that you will use for the initial configuration. Please make sure the PC has the Ethernet RJ45 connector to be connected to the switch via standard Ethernet LAN cable.

2. Reconfigure the PC's IP address and Subnet Mask as below, so that it can communicate with the switch. The method to change the PC's IP address, for example, for a PC running Windows® 7/8.x/10, is as follows:

    Step 1: Type "*network and sharing*" into the **Search box** in the **Start Menu**

Step 2: Select **Network and Sharing Center**

Step 3: Click on **Change adapter settings** on the left of PC screen

Note:

Users can also skip step 1 to 3, by pressing **WinKey**+**R** and type "*ncpa.cpl*" command to get to step 4 directly.

Step 4: Right-click on your local adapter and select **Properties**

Step 5: In the **Local Area Connection Properties** window highlight **Internet Protocol Version 4 (TCP/IPv4)** then click the **Properties** button.

Note:

Be sure to record all your PC's current IP settings to be able to restore them later.

Step 6: Select the radio button **Use the following IP address** and enter in the IP for the PC (e.g. any IP address not in use, and in between *192.168.1.2* and *192.168.1.254*), Subnet mask (e.g. *255.255.255.0*), and Default gateway that corresponds with your network setup. Then enter your Preferred and Alternate DNS server addresses.

Step 7: Click **OK** to change the PC's IP address.

3. Power up the switch to be initially configured, and wait until it has finished its start-up processes.

4. Connect the PC to any port on the switch using a standard Ethernet cable, and check the port LED on the switch to make sure the link status of the PC's is OK.

5. Run your Web browser on the PC, enter the factory default IP address, so as to access the switch's Web interface.

If your PC is configured correctly, you will see the login page of the switch as shown by Figure 9 below.
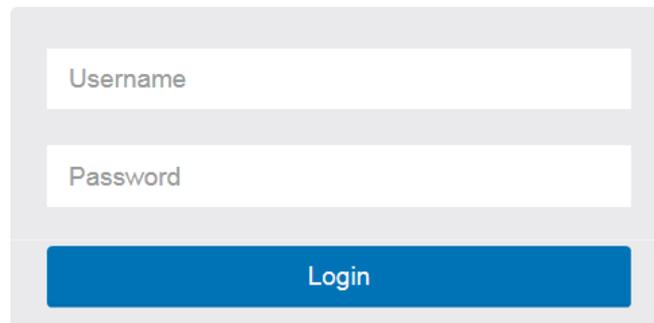
Figure 11: Web Interface login page

If you do not see the above login page, please perform the following steps:

- Refresh the web page.

- Check to see if there is an IP conflict issue.

- Clean browser cookies and temporary internet files.

- Check your PC settings again and repeat step 2.

6. Enter the factory default username and password in login page.

   Click "Login" to log into the switch.

Note:

The factory default Username of the switch is **admin**.

The factory default Password of the switch is **admin**.

Chapter 4   Troubleshooting

The following table provides information for users to easily troubleshoot problems by taking actions based on the suggested solutions within.

Table 7: Troubleshooting Table

Symptoms	Possible Causes	Suggested Solutions
SYSTEM LED is Off	The switch is not receiving power.	1. Check if correct power cord is connected firmly to the switch and to the DC outlet socket. 2. Perform power cycling the switch by unplugging and plugging the power cord back into the switch. 3. If the LED is still off, try to plug power cord into different DC outlet socket to make sure correct DC source is supplied.
Port Up Status LED is Off	The port is not connected or the connection is not working.	1. Check if the cable connector plug is firmly inserted and locked into the port at both the switch and the connected device. 2. Make sure the connected device is up and running correctly. 3. If the symptom still exists, try different cable or different port, in order to identify if it is related to the cable or specific port. 4. Check if the port is disabled in the configuration settings via WEB user interface .
Port Down Status LED is Off	The port is not supplying power	1. Check if the cable connector plug is firmly inserted and locked into the port at both the switch and the connected device. 2. Make sure the correct Ethernet cables are used. 3. If the symptom still exists, try different cable or different port, in order to identify if it is related to the cable or specific port. 4. Check if the port is disabled in the configuration settings via WEB user interface .

$C\,\epsilon$

Declaration of Conformity

We, the undersigned, Digital Data Communications GmbH
Address   Hohe Straße 1, 44139 Dortmund, Germany

Certify and declare under our sole responsibility that the following apparatus
Type   Ethemet switch
Brandname   LevelOne
Product   IGP-1271/IGP-1221/IGP-0871/IGU-1271

Conforms with the essential requirements of the EMC Directive 2014/30/EU, based on the following specifications applied:

EU harmonised standards
- European Standard EN55032:2012/AC:2013 Class A
- EN 61000-3-2:2014,EN 61000-3-3:2013 and EN55024:2010
- IEC 61000-4-2 Edition 2.0 2008-12
- IEC 61000-4-3 Edition 3.2 2010-04
- IEC 61000-4-4 Edition 3.0 2012-04
- IEC 61000-4-5 Edition 2.0 2005-11
- IEC 61000-4-6 Edition 4.0 2013-10
- IEC 61000-4-8 Edition 2.0 2009-09
- IEC 61000-4-11 Edition 2.0 2004-03
- AS/NZS CISPR 32:2013 Class A

and therefore complies with the essential requirements and provisions of the EMC Directive.

$C\,\epsilon$

The symbol confirms that this product conforms to the above named standards and regulations.

Amanda(Shu-Wen) Chen	Geschäftsführerin
Name (Full Name)	Title/ Department
2017/06/1	
Date	Legal Signature

$\mathsf{C}\,\mathsf{E}$

Declaración de Conformidad

El fabricante   **Digital Data Communications GmbH**
Dirección: Hohe Straße 1, 44139 Dortmund, Germany

Declara mediante este documento que el producto
Tipo   Ethemet switch
Producto   IGP-1271/IGP-1221/IGP-0871/IGU-1271
Marca   LevelOne

Cumple con las siguientes directivas:
- Directiva EMC 2014/30/EU

El producto cumple asimismo con las siguientes normas:
- European Standard EN55032:2012/AC:2013 Class A
- EN 61000-3-2:2014,EN 61000-3-3:2013 and EN55024:2010
- IEC 61000-4-2 Edition 2.0 2008-12
- IEC 61000-4-3 Edition 3.2 2010-04
- IEC 61000-4-4 Edition 3.0 2012-04
- IEC 61000-4-5 Edition 2.0 2005-11
- IEC 61000-4-6 Edition 4.0 2013-10
- IEC 61000-4-8 Edition 2.0 2009-09
- IEC 61000-4-11 Edition 2.0 2004-03
- AS/NZS CISPR 32:2013 Class A

$\mathsf{C}\,\mathsf{E}$

Este producto ha sido diseñado para su uso sólo en interiores.
La marca CE certifica que este producto se adecua a las especificaciones y regulaciones arriba mencionadas.

Este producto es adecuado para todos los países de la UE.

Amanda(Shu-Wen) Chen	Geschäftsführerin
Name (Full Name)	Title/ Department
2017/06/1	
Date	Legal Signature

C ϵ
Konformitätserklärung

Der Hersteller   **Digital Data Communications GmbH**
Adresse   Hohe Straße 1, 44139 Dortmund, Germany

erklärt hiermit, dass das Produkt
Typ   Ethemet switch
Produkt   IGP-1271/IGP-1221/IGP-0871/IGU-1271
Markenname   LevelOne

den folgenden Richtlinien entspricht:
▪ 2014/30/EU

Für die Beurteilung der Einhaltung der Konformität angewandte Normen:
▪ European Standard EN55032:2012/AC:2013 Class A
▪ EN 61000-3-2:2014,EN 61000-3-3:2013 and EN55024:2010
▪ IEC 61000-4-2 Edition 2.0 2008-12
▪ IEC 61000-4-3 Edition 3.2 2010-04
▪ IEC 61000-4-4 Edition 3.0 2012-04
▪ IEC 61000-4-5 Edition 2.0 2005-11
▪ IEC 61000-4-6 Edition 4.0 2013-10
▪ IEC 61000-4-8 Edition 2.0 2009-09
▪ IEC 61000-4-11 Edition 2.0 2004-03
▪ AS/NZS CISPR 32:2013 Class A

C ϵ

Das Zeichen bestätigt, dass dieses Produkt oben aufgeführte Normen und Bestimmungen erfüllt.

Amanda(Shu-Wen) Chen   Geschäftsführerin
Name (Full Name)   Title/ Department

2017/06/1
Date   Legal Signature

CE

Déclaration de Conformité

Nous, les soussignés   **Digital Data Communications GmbH**
Adresse   Hohe Straße 1, 44139 Dortmund, Germany
Certifie et déclare sous sa seule responsabilité que le produit suivant
Type   Ethemet switch
Produit   IGP-1271/IGP-1221/IGP-0871/IGU-1271
Enseigne   LevelOne

En conformité avec les exigences essentielles de la directive CEM 2014/30/EU, sur la base des normes suivantes:

Les normes harmonisées d' EU
- European Standard EN55032:2012/AC:2013 Class A
- EN 61000-3-2:2014,EN 61000-3-3:2013 and EN55024:2010
- IEC 61000-4-2 Edition 2.0 2008-12
- IEC 61000-4-3 Edition 3.2 2010-04
- IEC 61000-4-4 Edition 3.0 2012-04
- IEC 61000-4-5 Edition 2.0 2005-11
- IEC 61000-4-6 Edition 4.0 2013-10
- IEC 61000-4-8 Edition 2.0 2009-09
- IEC 61000-4-11 Edition 2.0 2004-03
- AS/NZS CISPR 32:2013 Class A

CE

Le symbole confirme que ce produit répond aux normes et règlements ci-dessus ..

Amanda(Shu-Wen) Chen	Geschäftsführerin
Name (Full Name)	Title/Department
2017/06/1	
Date	Legal Signature

CE

Dichiarazione di conformità

In fabbricante   **Digital Data Communications GmbH**
Indirizzo   Hohe Straße 1, 44139 Dortmund, Germany

Dichiara qui di seguito che il prodotto
Tipo   Ethemet switch
Prodotto   IGP-1271/IGP-1221/IGP-0871/IGU-1271
Nome marca   LevelOne

Risulta in conformità a quanto previsto dalle seguenti direttive comunitarie:

- 2014/30/EU

Sono stati applicati i seguenti standard per assicurarne la conformità:
- European Standard EN55032:2012/AC:2013 Class A
- EN 61000-3-2:2014,EN 61000-3-3:2013 and EN55024:2010
- IEC 61000-4-2 Edition 2.0 2008-12
- IEC 61000-4-3 Edition 3.2 2010-04
- IEC 61000-4-4 Edition 3.0 2012-04
- IEC 61000-4-5 Edition 2.0 2005-11
- IEC 61000-4-6 Edition 4.0 2013-10
- IEC 61000-4-8 Edition 2.0 2009-09
- IEC 61000-4-11 Edition 2.0 2004-03
- AS/NZS CISPR 32:2013 Class A

CE

Il simbolo CE conferma che questo prodotto è conforme ai suddetti standard e regolamentazioni.

Amanda(Shu-Wen) Chen	Geschäftsführerin
Name (Full Name)	Title/ Department
2017/06/1	
Date	Legal Signature

$\mathsf{C}\,\mathsf{E}$

Declaração de Conformidade

O fabricante Digital Data Communications GmbH

Morada   Hohe Straße 1, 44139 Dortmund, Germany

Declara que o produto

Tipo   Ethemet switch

Produto   IGP-1271/IGP-1221/IGP-0871/IGU-1271

Cumpre as seguintes directivas:

- 2014/30/EU

Os seguintes standards foram consultados para avaliar a conformidade:

- European Standard EN55032:2012/AC:2013 Class A
- EN 61000-3-2:2014,EN 61000-3-3:2013 and EN55024:2010
- IEC 61000-4-2 Edition 2.0 2008-12
- IEC 61000-4-3 Edition 3.2 2010-04
- IEC 61000-4-4 Edition 3.0 2012-04
- IEC 61000-4-5 Edition 2.0 2005-11
- IEC 61000-4-6 Edition 4.0 2013-10
- IEC 61000-4-8 Edition 2.0 2009-09
- IEC 61000-4-11 Edition 2.0 2004-03
- AS/NZS CISPR 32:2013 Class A

$\mathsf{C}\,\mathsf{E}$

O símbolo confirma que este produto está conforme os padrões e regulamentações acima referidos.

Amanda(Shu-Wen) Chen	Geschäftsführerin
Name (Full Name)	Title/ Department
2017/06/1	
Date	Legal Signature