PLANET Networking & Communication

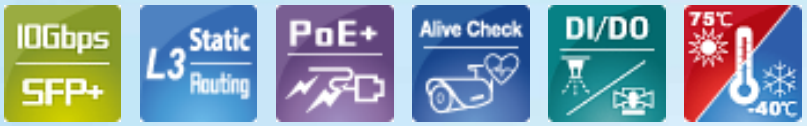
Pioneer of IP Innovation

TAIWAN EXCELLENCE 2017

L2+ Industrial 8-Port 10/100/1000T + 2-Port 100 /1000X SFP + *2-Port 10G SFP+* Managed Ethernet Switch

IGS-5225-8T2S2X

IGS-5225-8P2S2X



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Outlines

- Product Positioning
- Product Overview
- Product Benefits
- Product Features
- Applications
- Appendix

TAIWAN EXCELLENCE 2017

IGS-5225-8T2S2X

IGS-5225-8P2S2X

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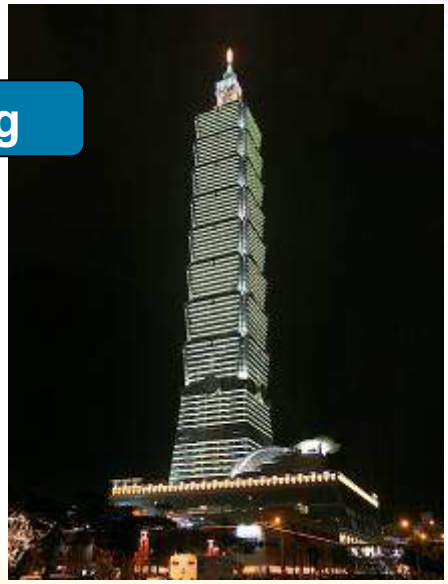
Product Positioning

Modes of Application Overview

Factory

Building



Transportation

Overview


10x Data Rate Speed
1x Data Rate Speed
Almighty Industrial Managed Power Consuming
PDs w/Fiber Extension
10Gbps SFP+
100/1000X SFP
IPv4/v6 L3 Routing
8-port PoE+
48~56V DC Input
IP Camera
10G Fiber
PoE+
Wireless AP
5GHz Wireless
Data Center

IGS-5225 DIN-rail Series
Industrial Managed Switch

PoE Switches

IGS-5225-8P2S2X
- 8 1G RJ45 PoE+
- 2 1G fiber
- 2 10G fiber
- -40~75 degrees C
- 240W PoE budget
- 48~56V DC

IGS-5225-8P2S
- 8 1G RJ45 PoE+
- 2 1G fiber
- -40~75 degrees C
- 240W PoE budget
- 48~56V DC

IGS-5225-8P4S
- 8 1G RJ45 PoE+
- 4 1G fiber
- -40~75 degrees C
- 240W PoE budget
- 48~56V DC

IGS-5225-4UP1T2S
- 4 1G RJ45 Ultra PoE
- 1 1G RJ45
- 2 1G fiber
- -40~75 degrees C
- 240W PoE Budget
- 48~56V DC

Switches

IGS-5225-8T2S2X
- 8 1G RJ45
- 2 1G fiber
- 2 10G fiber
- -40~75 degrees C
- 12~48V DC

IGS-5225-4T2S
- 4 1G RJ45
- 2 1G fiber
- -40~75 degrees C
- 12~48V DC

Planning
Developing
New Phase-in
Available

10G Uplink

Gigabit

L2+ Industrial Gigabit Managed Switch
(DIN-rail Type)

Model	 IGS-5225-8T2S2X	 IGS-5225-4T2S	 IGS-12040MT	 IGS-10020MT
RJ45 Port	8	4	8	8
SFP Slot	2	2	4	2
SFP+ Slot	2	No	No	No
Switch Fabric	60Gbps	12Gbps	24Gbps	20Gbps
Operating Temperature	-40~75 degrees C	-40~75 degrees C	-40~75 degrees C	-40~75 degrees C
Power Input	Dual 12~48V DC 24V AC	Dual 12~48V DC	Dual 12~72V DC 24V AC	Dual 12~48V DC 24V AC
E.R.P.S	Future feature	Yes	Yes	Yes
DI/DO	Yes	No	Yes	No
L3 Static Routing	Yes	Yes	Yes	No

L2+ Industrial Gigabit PoE+ Managed Switch

(DIN-rail Type)

Model	 IGS-5225-8P2S2X	 IGS-5225-8P4S	 IGS-5225-8P2S	 IGS-10020HPT
RJ45 Port	8 PoE+	8 PoE+	8 PoE+	8 PoE+
SFP Slot	2	4	2	2
SFP+ Slot	2	No	No	No
Max. PoE Budget	240 watts	240 watts	240 watts	240 watts
Operating Temperature	-40~75 degrees C	-40~75 degrees C	-40~75 degrees C	-40~75 degrees C
Power Input	Dual 48~56V DC	Dual 48~56V DC	Dual 48~56V DC	Dual 48V DC
E.R.P.S	Future feature	Yes	Yes	Yes
DI/DO	Yes	Yes	Yes	Yes
L3 Static Routing	Yes	Yes	Yes	Yes

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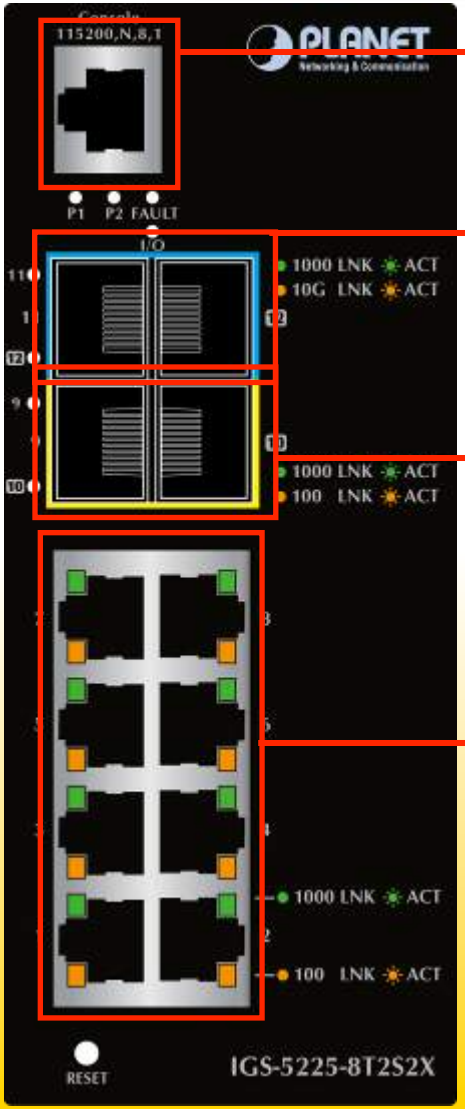
Product Overview

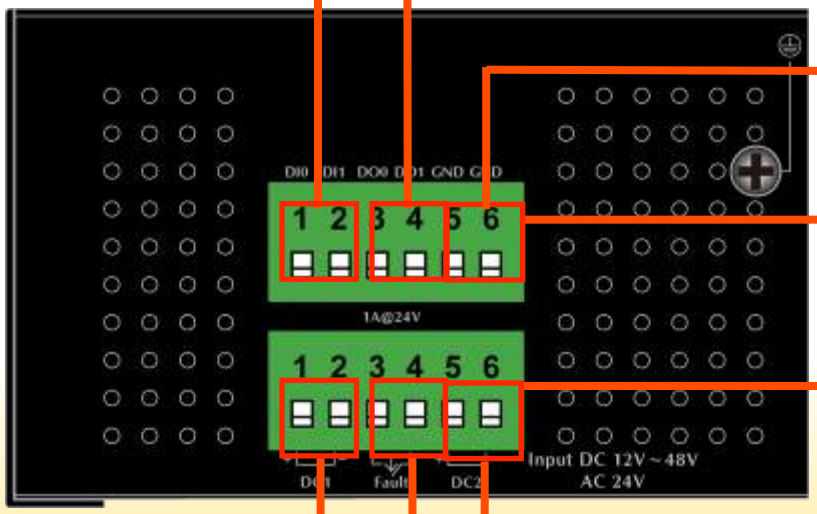
Product Overview



- ✓ **RS232-to-RJ45 Console Interface**
  - Management and setup
- ✓ **2 10G SFP+ Slots**
  - Compatible with 1000BASE-X SFP transceiver
  - SFP-DDM (Digital Diagnostic Monitor)
- ✓ **2 100/1000X SFP Slots**
  - Compatible with 100BASE-FX SFP transceiver
  - SFP-DDM (Digital Diagnostic Monitor)
- ✓ **8 10/100/1000BASE-T RJ45 Ports**
  - 8 ports of IEEE 802.3/802.3u/802.3ab compliant

Product Overview

- Top View of IGS-5225-8T2S2X



1 Digital Input Pin

2 Digital Output Pin

3 DI/DO Grounding Pin

A Pin Removable Terminal Block/ Digital Input/Digital Output Interface

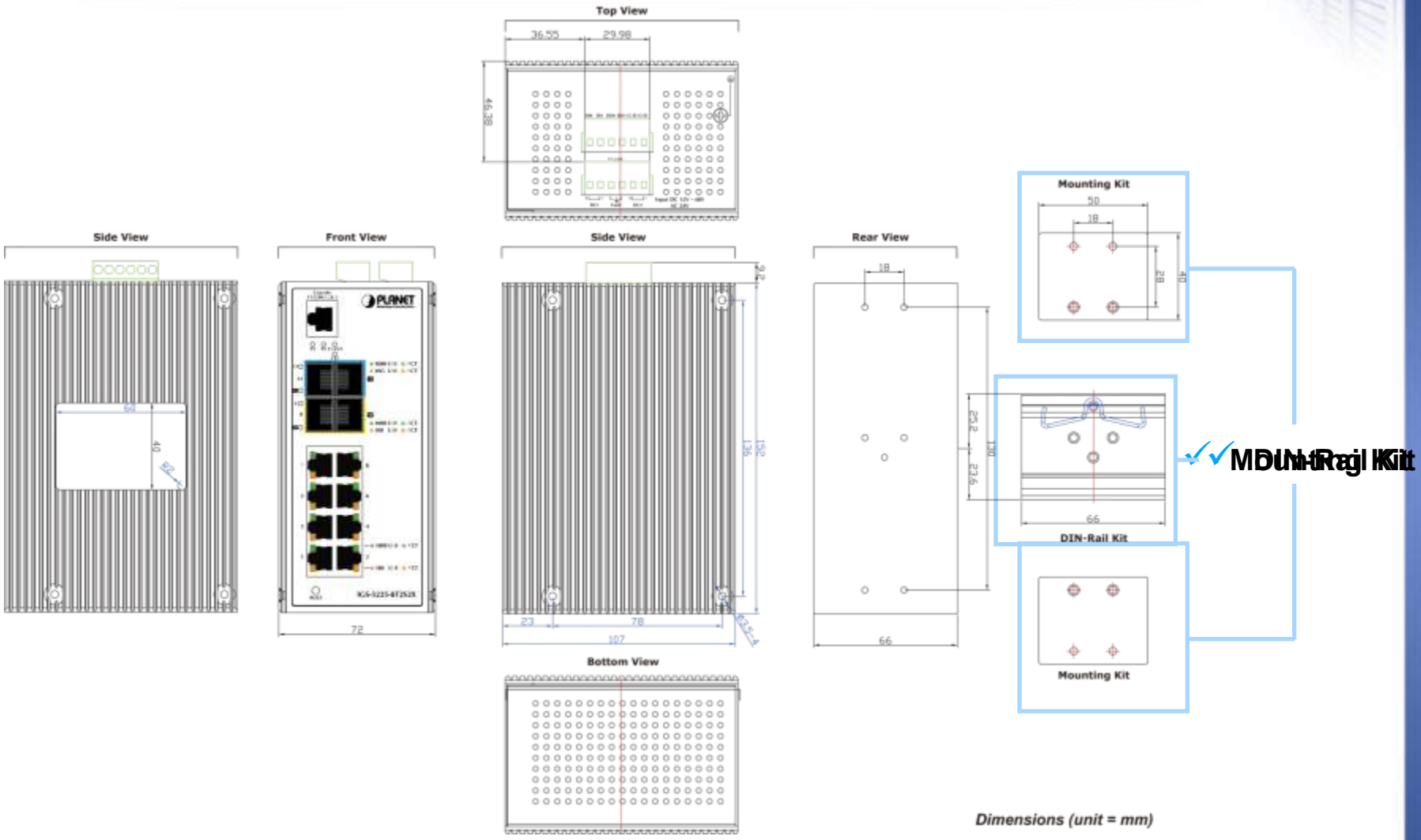
B Pin Removable Terminal Block/ Redundant 12~48V DC/24V AC Power Input

4 12~48V DC/24V AC Power 2 Input Pins

5 Fault Alarm Pin

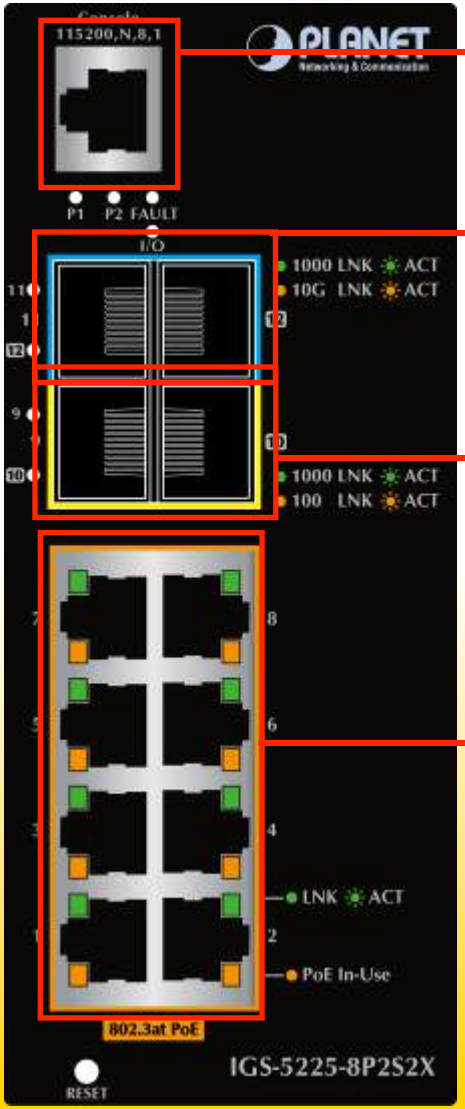
6 12~48V DC/24V AC Power 1 Input Pin

Product Overview



- ✓ DIN-Rail Kit
- ✓ Mounting Kit

Product Overview



- ✓ **RS232-to-RJ45 Console Interface**
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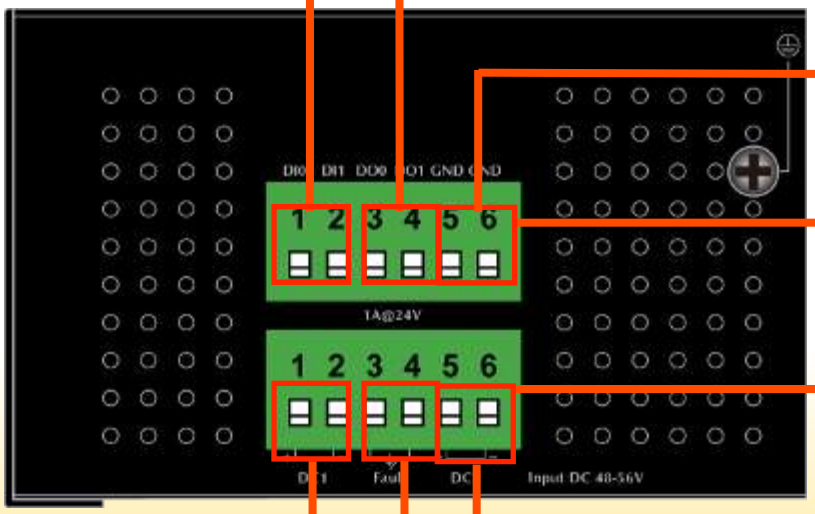
- ✓ **2 100/1000X SFP Slots**
  - Compatible with 100BASE-FX SFP transceiver
  - SFP-DDM (Digital Diagnostic Monitor)
- ✓ **8 10/100/1000BASE-T RJ45 Ports**
  - 8 ports of IEEE 802.3af/IEEE 802.3at compliant
  - Supports PoE power up to 36 watts for each PoE port

Product Overview

- Top View of IGS-5225-8P2S2X



1 Digital Input Pin

2 Digital Output Pin

3 DI/DO Grounding Pin

A Pin Removable Terminal Block/ Digital Input/Digital Output Interface

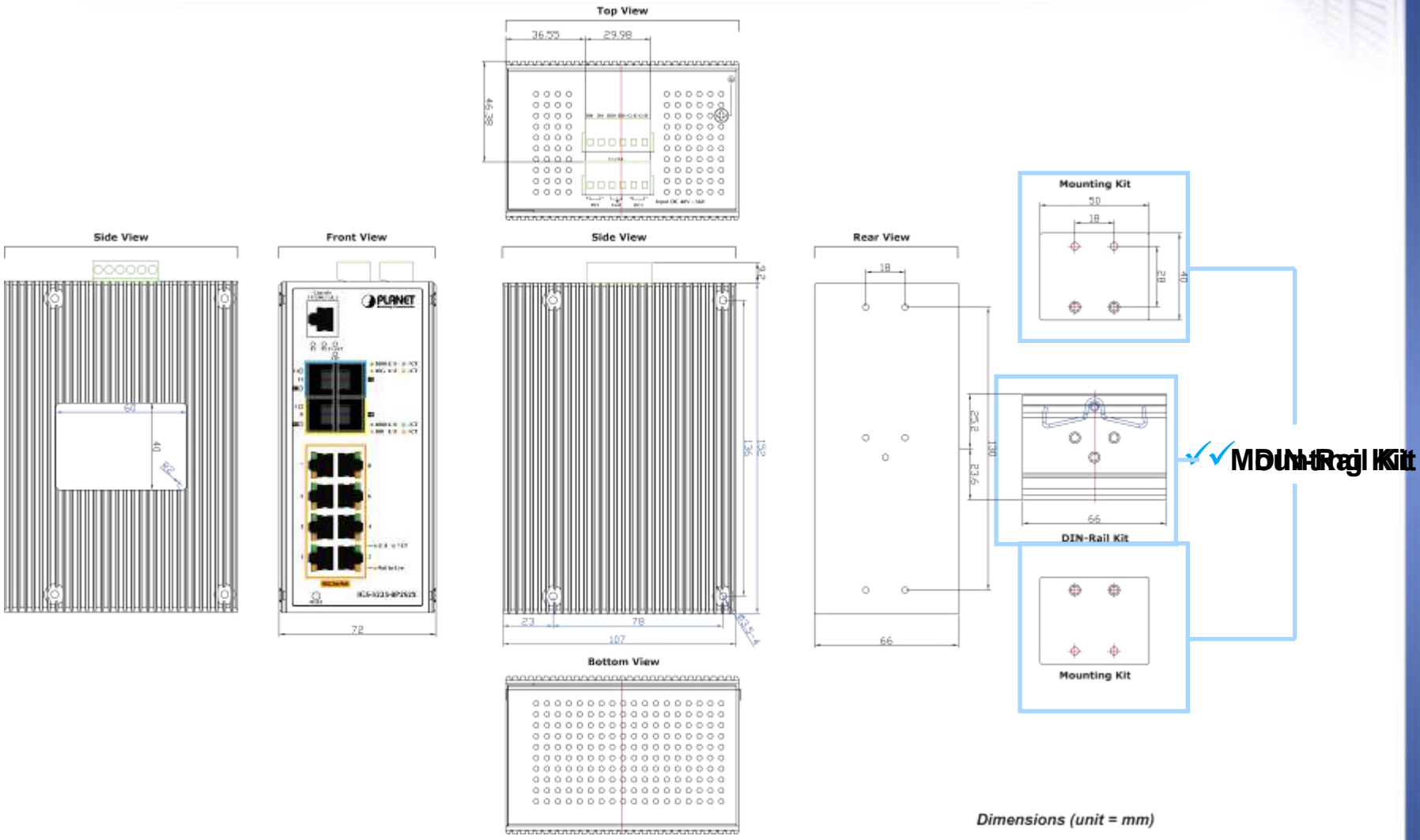
B Pin Removable Terminal Block/ Redundant 48~56V DC Power Input

4 48~56V DC Power 2 Input Pins

5 Fault Alarm Pin

6 48~56V DC Power 1 Input Pin

Product Overview



- ✓ DIN-Rail Kit
- ✓ Mounting Kit

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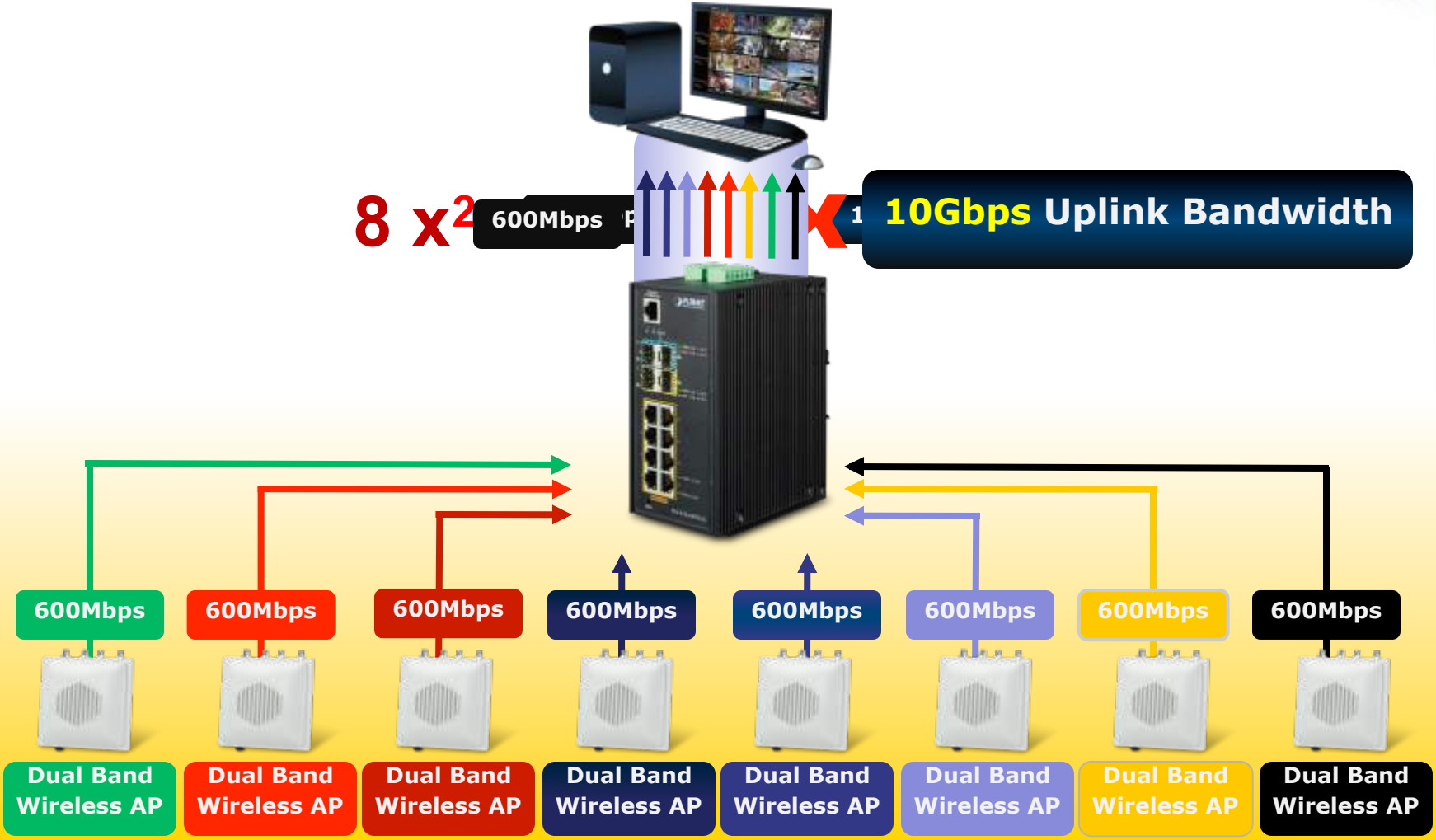
Product Benefits

Product Benefits

- **Why need 10G uplink port?**



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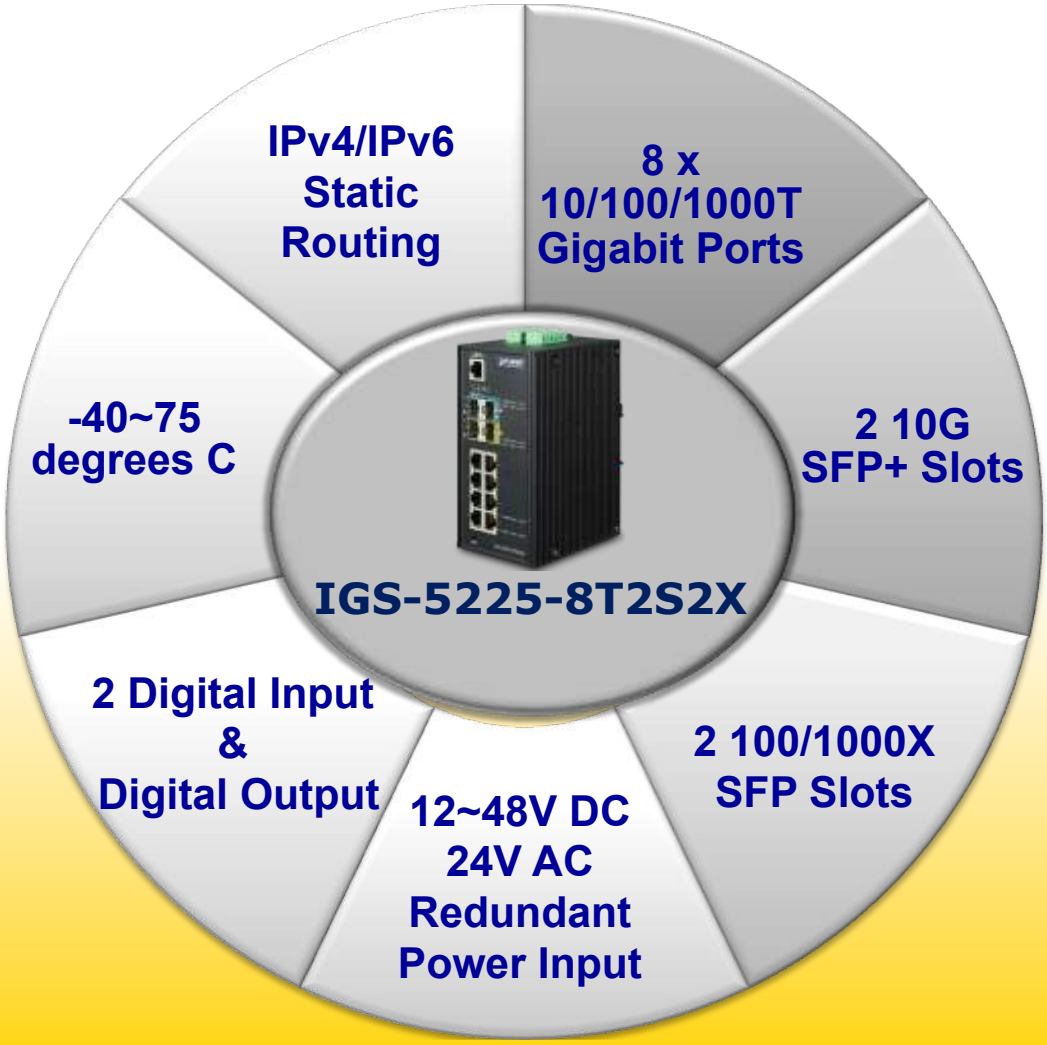
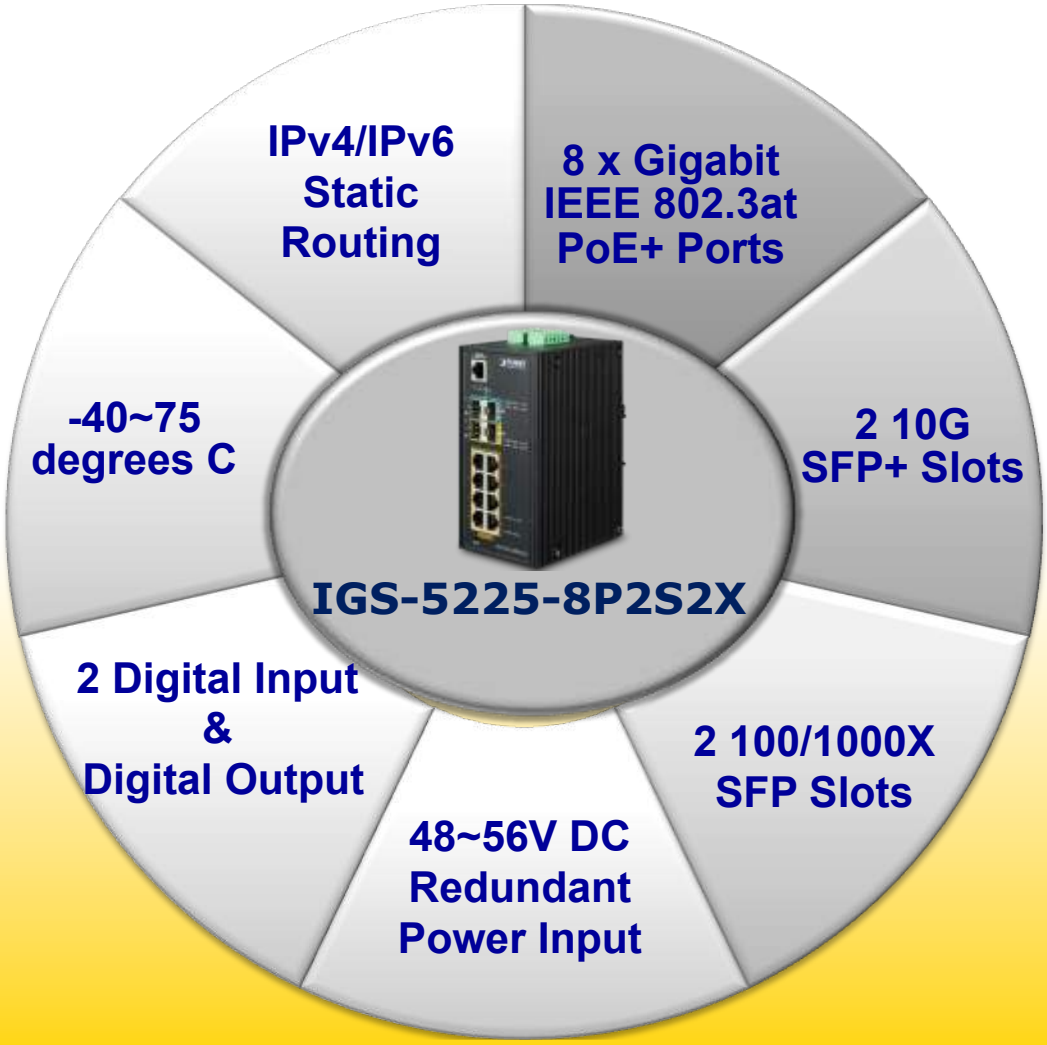
Product Features

Key Feature


IPv4/IPv6
Static
Routing
8 x
10/100/1000T
Gigabit Ports
-40~75
degrees C
2 10G
SFP+ Slots
IGS-5225-8T2S2X
2 Digital Input
&
Digital Output
12~48V DC
24V AC
Redundant
Power Input
2 100/1000X
SFP Slots

Key Feature


IPv4/IPv6
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IGS-5225-8P2S2X
2 Digital Input
&
Digital Output
2 100/1000X
SFP Slots
48~56V DC
Redundant
Power Input

Intelligent PoE Management Functions

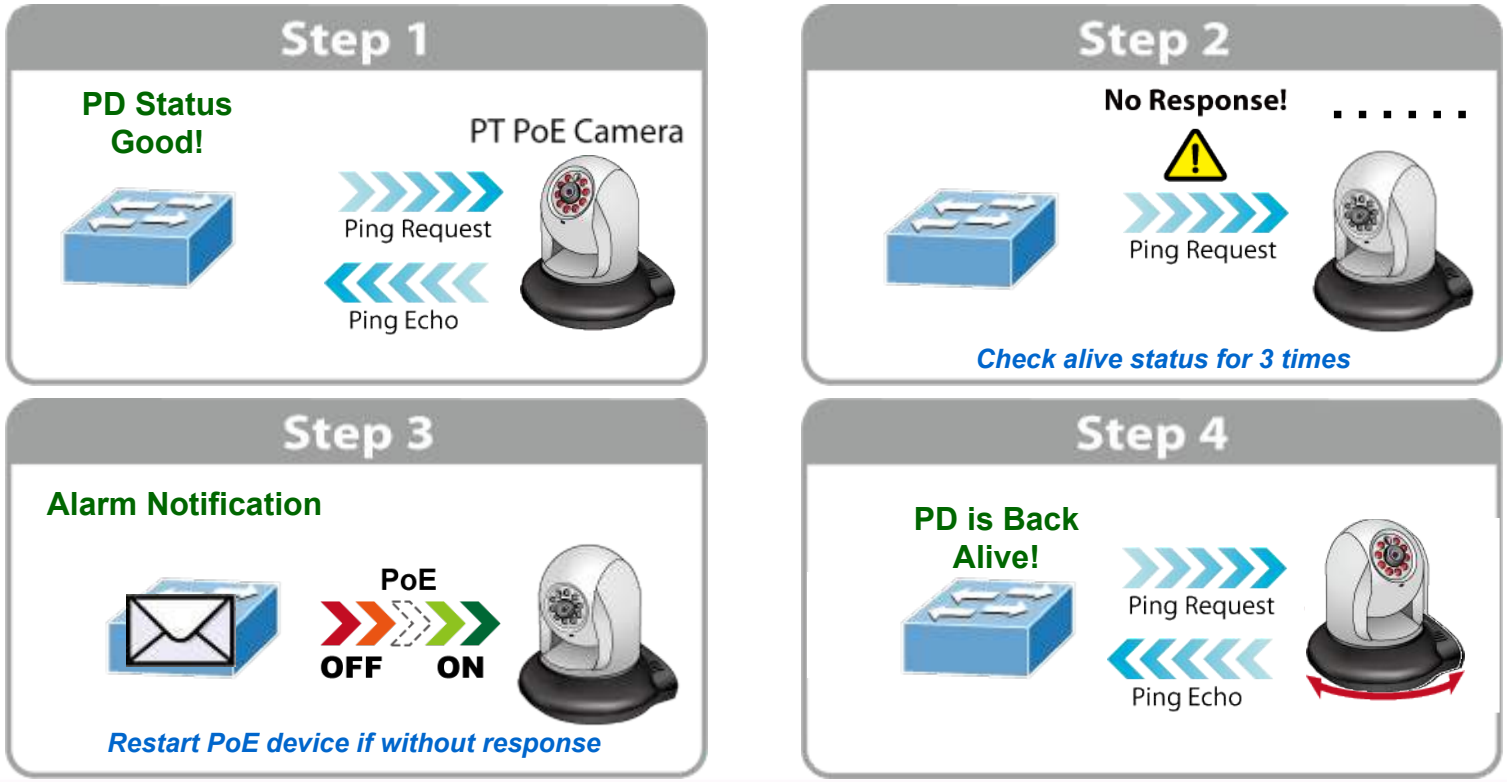
Advanced Intelligent Power/PD Management Functions

- PD Alive Check
- Scheduled Power Recycling
- E-mail/SNMP Trap Event Alert
- PoE Power Schedule
- PoE Port Sequence
- PoE Usage Status Graphics

PD Alive Check

Intelligent Powered Device Alive-Check

- ✓ The IGS-5225-8P2S2X can be configured to **monitor connected PD (Powered Device) status in real time** via ping action.
- ✓ Once the PD stops working and responding, the IGS-5225-8P2S2X will resume the PoE port power automatically and bring the PD back to work.

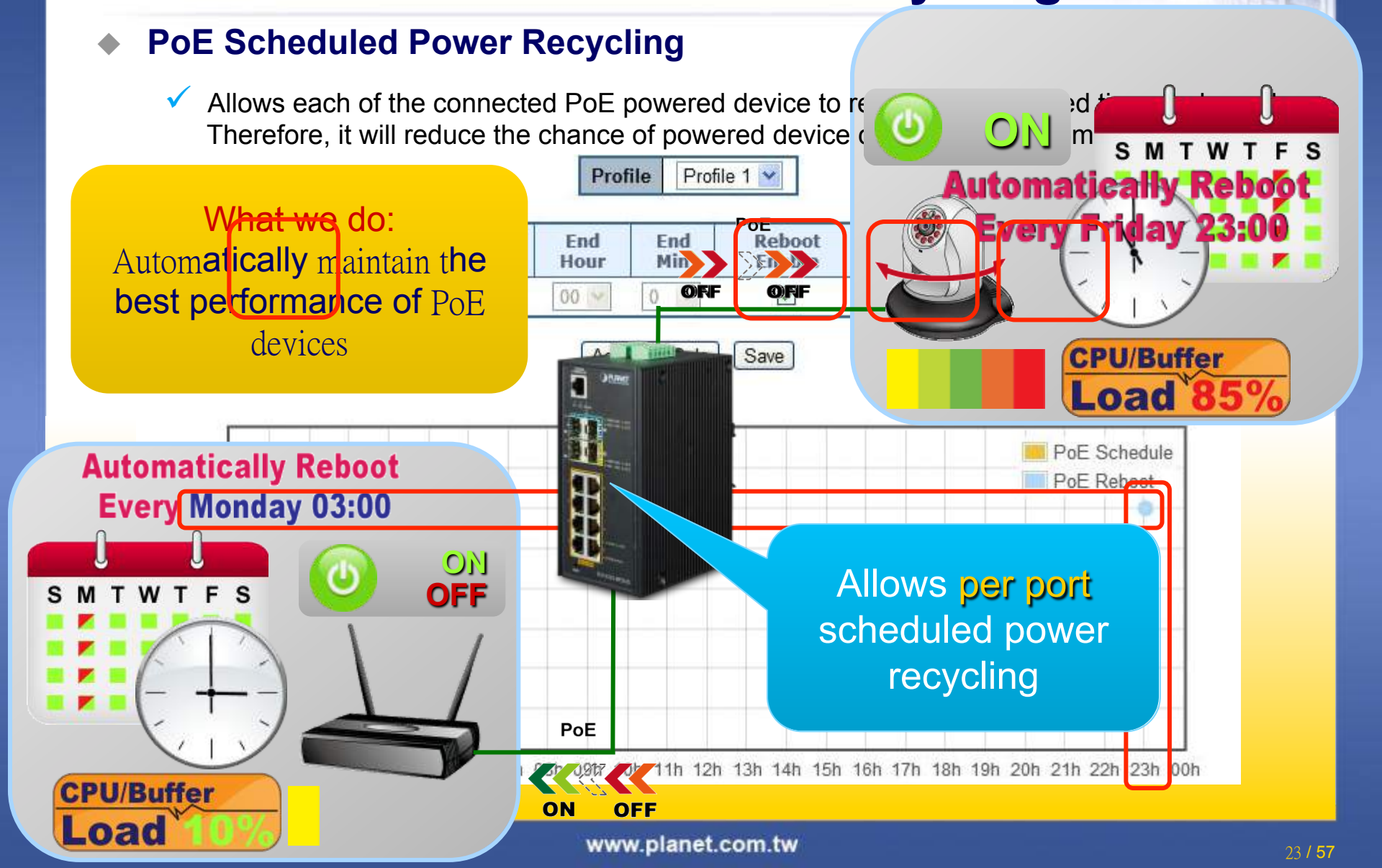


Scheduled Power Recycling

PoE Scheduled Power Recycling

- Allows each of the connected PoE powered device to re ed
  Therefore, it will reduce the chance of powered device c m

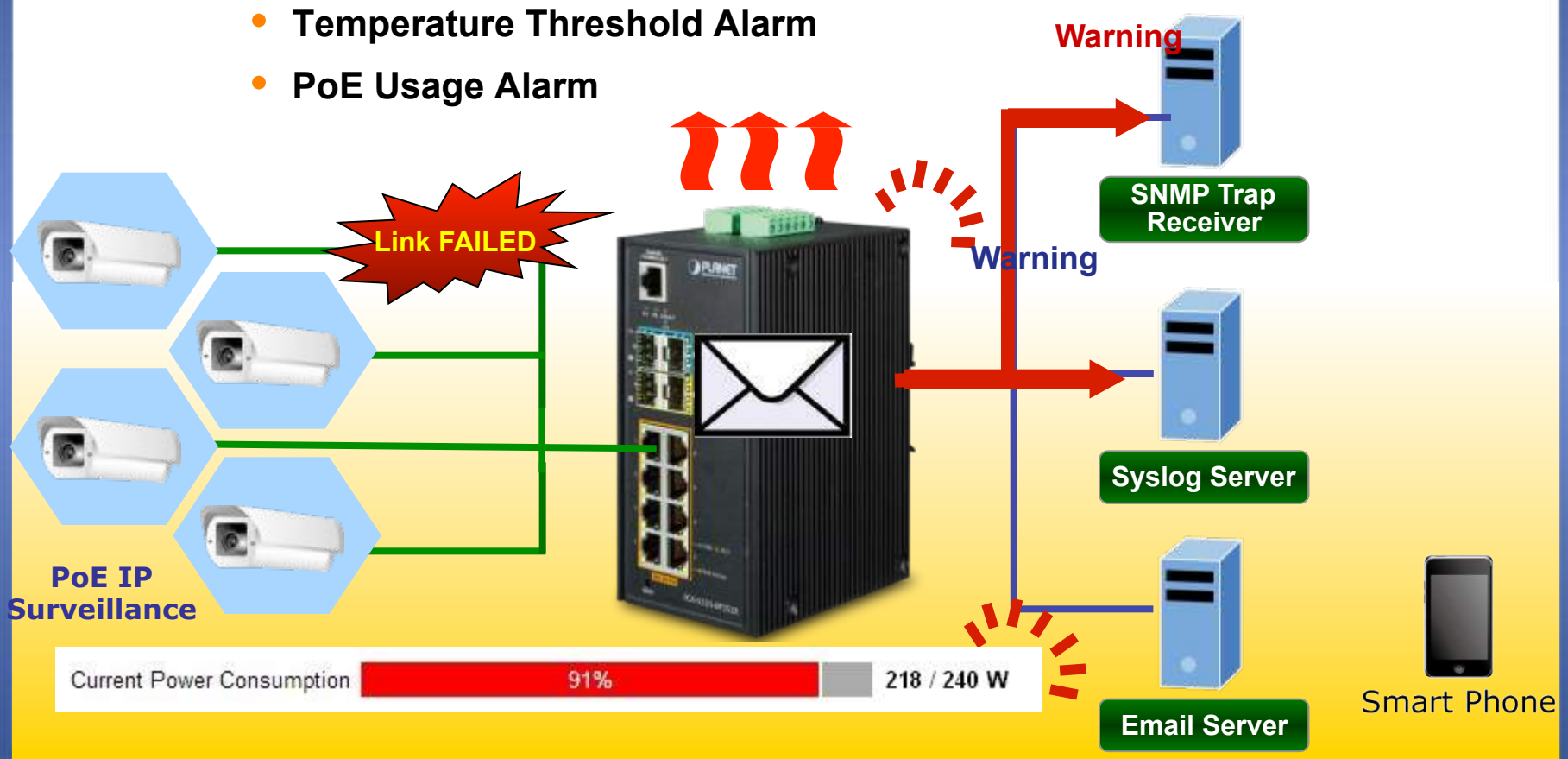
What we do:
Automatically maintain the best performance of PoE devices



Allows per port scheduled power recycling

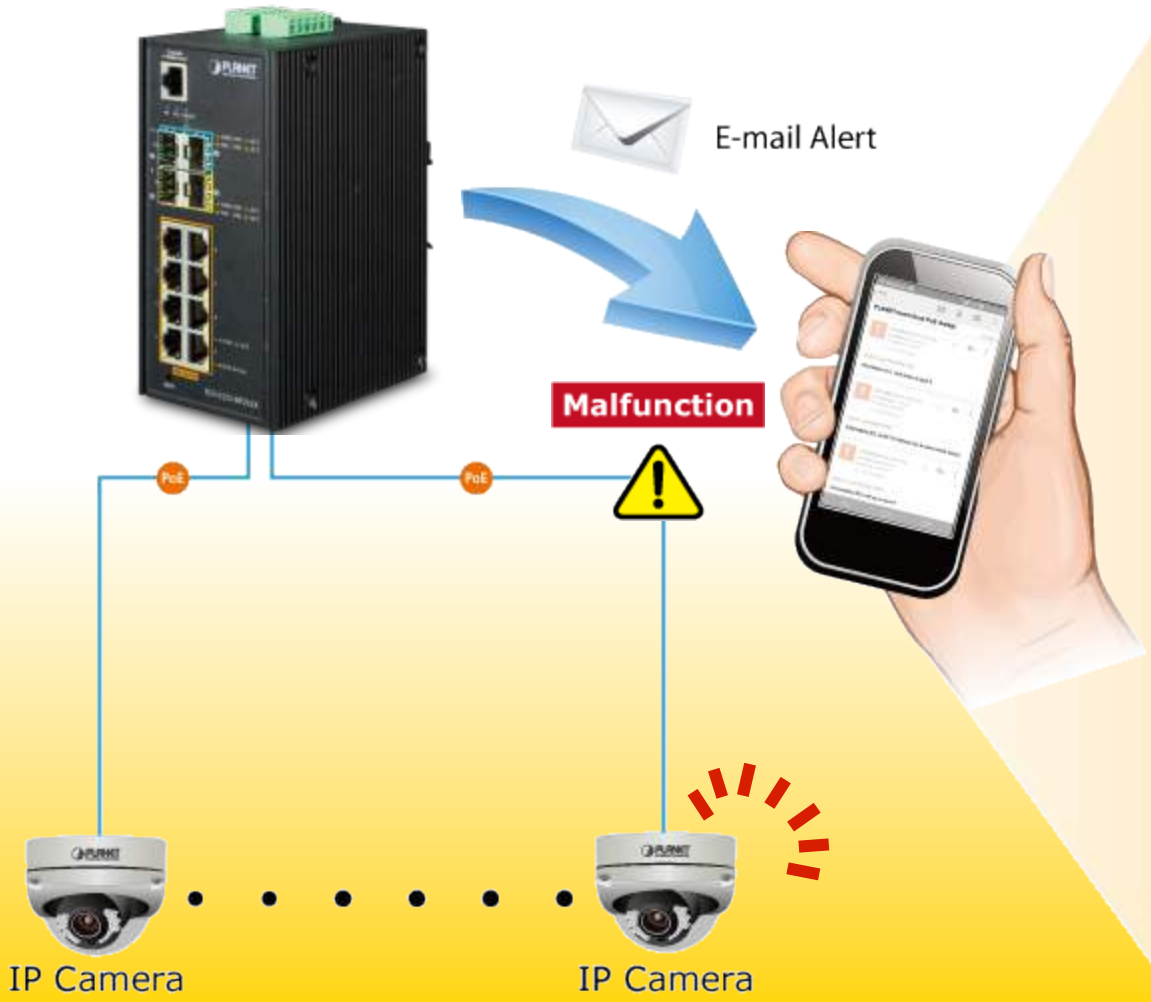
Event Alarm

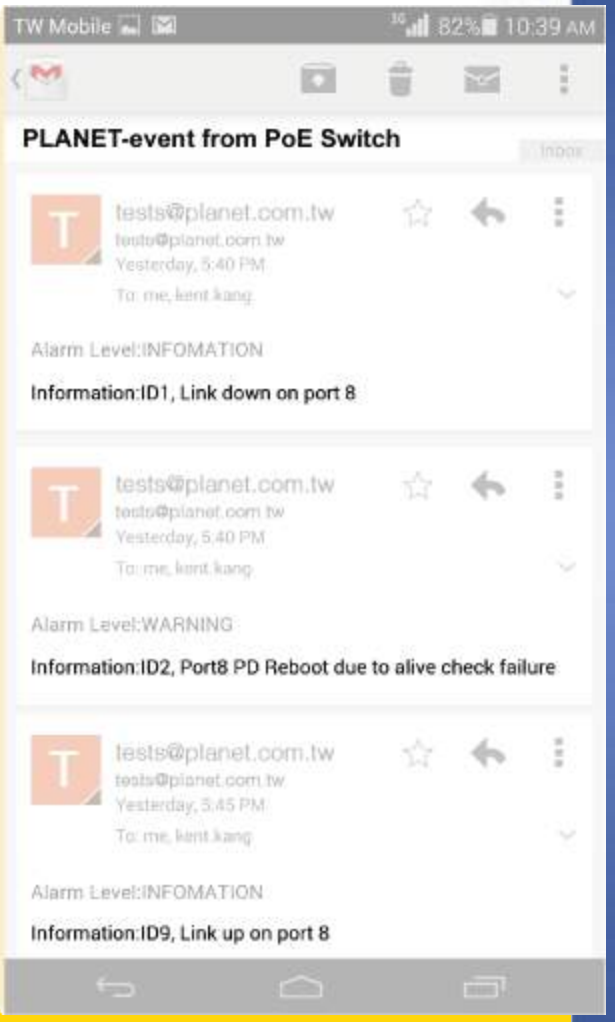
- **Real-time Event Alarm**
  - ✓ **SNMP Trap/Syslog/Email notification**
    - **PoE Port Link Fault Alarm**
    - **Temperature Threshold Alarm**
    - **PoE Usage Alarm**



Event Alarm

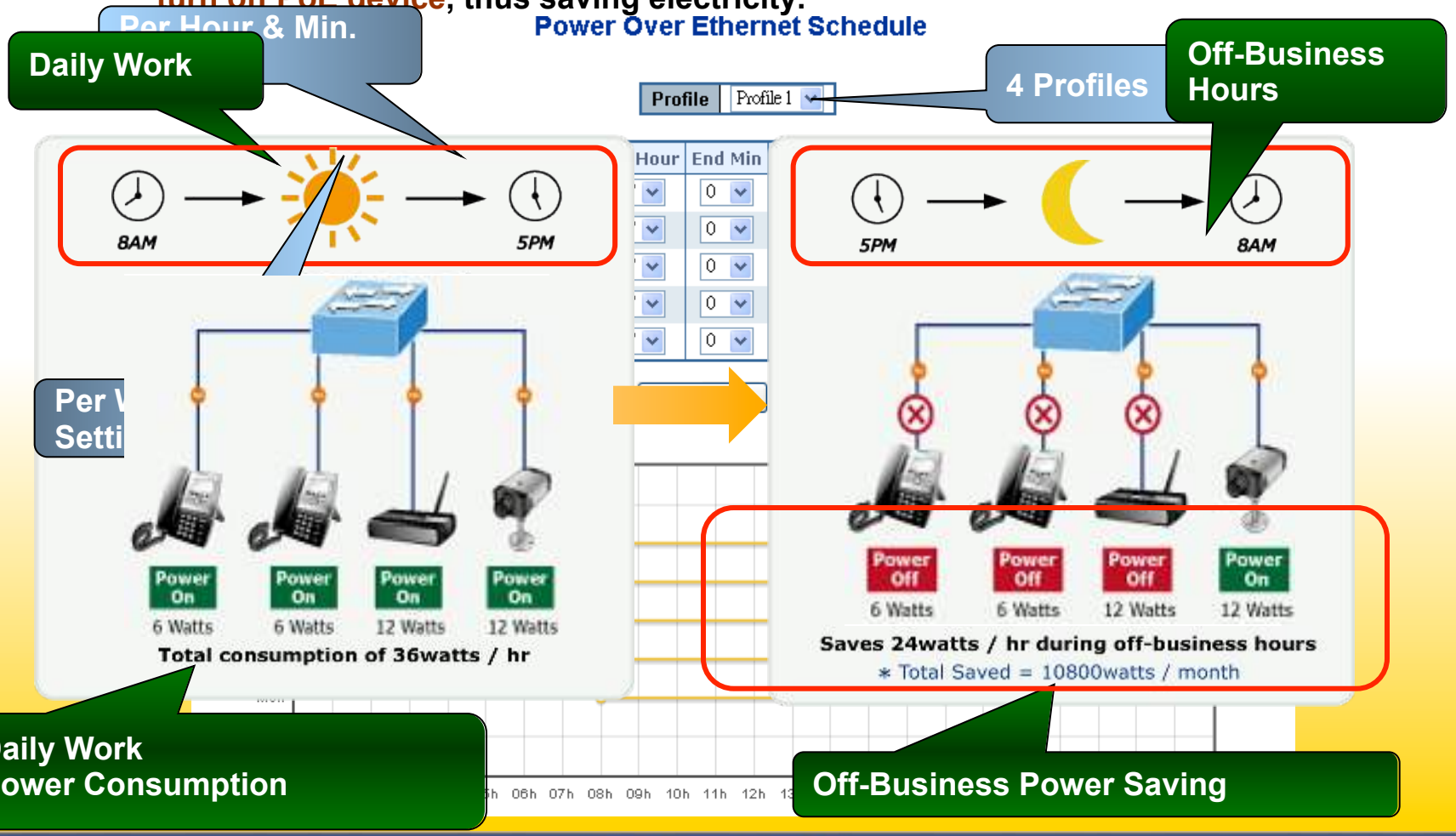
- **SMTP/SNMP Trap Event Alert**





PoE Schedule

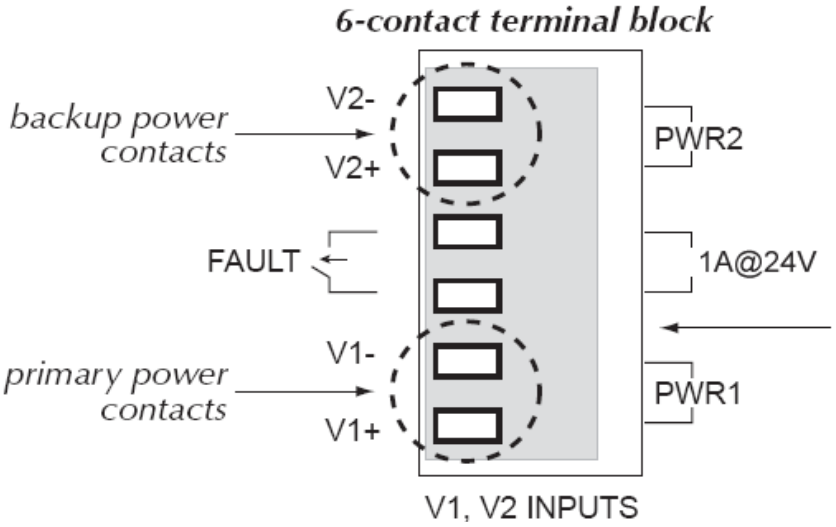
- **PoE Schedule**
  - ✓ PoE Schedule is a PoE management function for administrator to turn on or turn off PoE device, thus saving electricity.



Power Input

Redundant Power Design

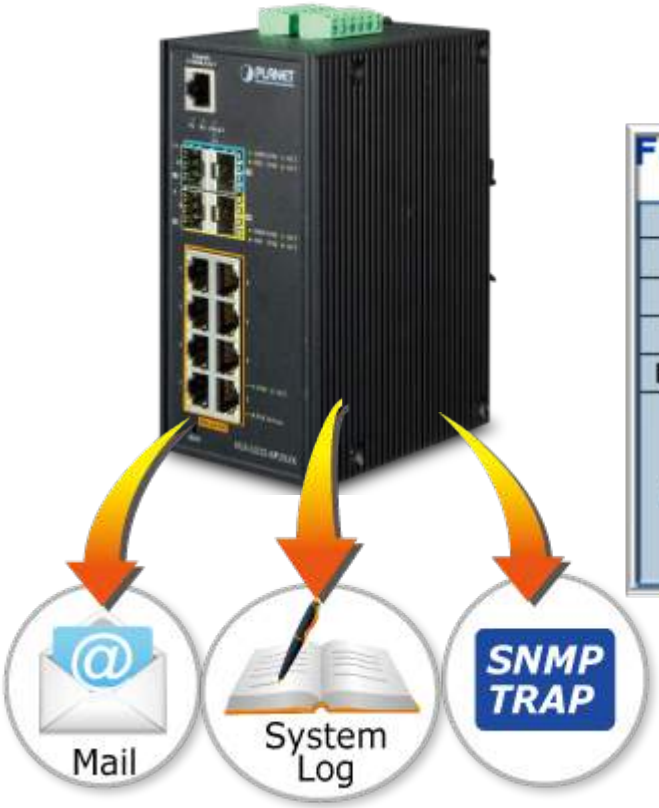
- ✓ PWR1 & PWR2 **12V~48V DC/24V AC or 48V~56V DC** redundant power input
- ✓ 1A@24V relay alarm for power down and port down
- ✓ Reverse power polarity protection
- ✓ Connective removable terminal block for primary and backup power



The screws to secure the wire are located on the side of the terminal block.

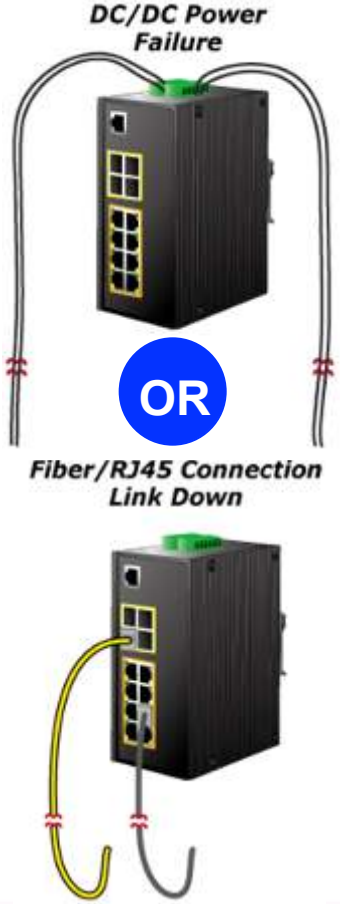
Fault Alarm

- The IGS-5225-8T2S2X & IGS-5225-8P2S2X support a **Fault Alarm** feature which can alert the users when there is something wrong with the switches. With this ideal feature, the users would not have to waste time to find where the problem is. It will help to save time and human resource.



Fault Alarm Control Configuration

Fault Alarm Output	
Enable	☑ Enable
Record	☑ System Log ☑ SNMP Trap
Action	☐ Port Fail ☑ Power Fail
Power Alarm	☑ DC 1 ☑ DC 2
Port Alarm	1 2 3 4 5 6 7 8 9 10 11 12



Digital Input & Digital Output

Digital Input Configuration

Digital Input/Output Control Configuration

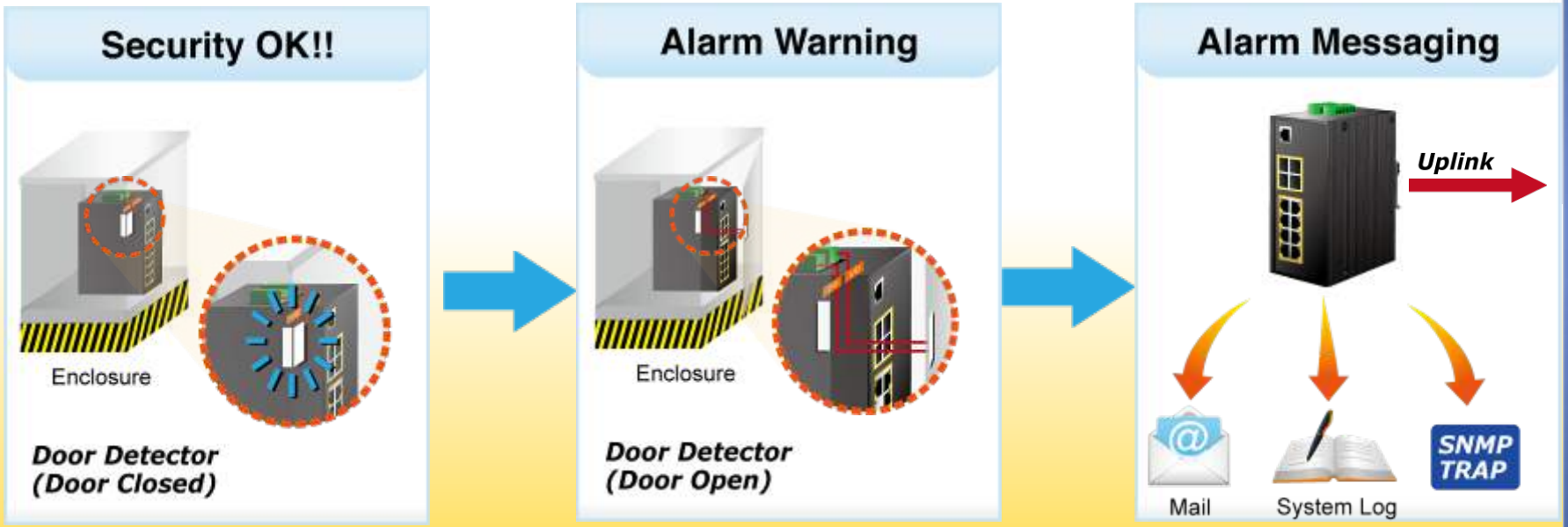
Digital Input 0		Digital Input 1	
Enable	☑ Enable	Enable	☑ Enable
Condition	High to Low ▼	Condition	High to Low ▼
Event Description	Customize DI0 Message.	Event Description	Customize DI1 Message.
Event	☑ System Log ☑ SNMP Trap	Event	☑ System Log ☑ SNMP Trap

Digital Output 0		Digital Output 1	
Enable	☑ Enable	Enable	☑ Enable
Event	☑ Power Fail ☑ Port Fail ☑ DI 0 ☑ DI 1	Event	☑ Power Fail ☑ Port Fail ☑ DI 0 ☑ DI 1
Condition	High to Low ▼	Condition	High to Low ▼
Power Alarm	☑ DC 1 ☑ DC 2	Power Alarm	☑ DC 1 ☑ DC 2
Port Fail Alarm	1 2 3 4 5 6 7 8 ☑ ☑ ☑ ☑ ☑ ☑ ☑ ☑ 9 10 11 12 ☑ ☑ ☑ ☑	Port Fail Alarm	1 2 3 4 5 6 7 8 ☑ ☑ ☑ ☑ ☑ ☑ ☑ ☑ 9 10 11 12 ☑ ☑ ☑ ☑

Digital Output Configuration

Digital Input

- Digital Input offers detection of device status via sensing login signal from **high to low** or from **low to high**, and then system is going to log message to **local**, **remote log server**, or alarm message via **SNMP trap** or **SMTP** with customized error message.



Digital Output

- Digital Output offers detection of IGS-5225-8T2S2X and IGS-5225-8P2S2X **power failure** or **port failure**, and then output logic signal to trigger the performance of the external device.

Dual-speed SFP

MTB/MGB-Series

10GBASE-LR/SR
SFP +Transceiver

1000BASE-X SFP support

MGB/MFB-Series

1000BASE-SX/LX
SFP Transceiver

100BASE-FX SFP support

Dual-speed SFP/SFP+

IGS-5225-8T2S2X
IGS-5225-8P2S2X

SFP DDM

*Digital Diagnostic Monitor **(DDM)***

CLI Benefits

- **Console command is Cisco-like, which allows users to make it work more easily.**

```
Switch# configure terminal
Switch(config)# interface vlan 1
Switch(config-if-vlan)# ip address 192.168.1.254 255.255.255.0
Switch(config-if-vlan)# exit
Switch(config)# exit
Switch#
Switch# show ip interface brief
Vlan Address                    Method   Status
---- -------------------- -------- ------
   1 192.168.1.254/24     Manual   DOWN
Switch#
Switch#
```

```
Switch# configure terminal
Switch(config)# vlan 2
Switch(config-vlan)# exit
Switch(config)# interface GigabitEthernet 1/1-5
Switch(config-if)# switchport access vlan 2
Switch(config-if)#
```

Product Features

Hardware

- **8 10/100/1000BASE-T** RJ45 auto MDI/MDIX ports
- **8 ports** with **IEEE802.3at /IEEE 802.3af PoE injector** function (IGS-5225-8P2S2X)
- **Two 10Gbps** mini-GBIC/**SFP+** slots, **two 100/1000BASE-X** mini-GBIC/**SFP** slots
- **60Gbps/non-blocking** switch fabric
- **Dual 12V~48V DC/24V AC** redundant power (IGS-5225-8T2S2X)
- **Dual 48V~56V DC** redundant power (>52V DC for PoE+ output recommended) (IGS-5225-8P2S2X)
- Maximum **240-watt PoE budget** (IGS-5225-8P2S2X)
- Supports PoE power up to **36 watts** for each PoE port (IGS-5225-8P2S2X)
- 2 digital input and digital output
- **IP30** aluminum case protection
- **-40 to 75 degrees C** operating temperature
- **10K** bytes jumbo frame
- **16K** MAC address entries
- DIN rail kit and wall-mount kit

Management Features

Full Management

- ✓ **IPv4/IPv6** dual stack
- ✓ **IPv6** IP address/NTP/DNS management
- ✓ Standard-based management
  - Web-based
  - Telnet
  - SNMP v1 and v2c
  - Console Command Line
- ✓ **Security Authentication** for Secure Management
  - **SSH**
  - **SSL**
  - **SNMPv3**
- ✓ SNMP RMON 1 and 2 for in/out network traffic and event monitoring
- ✓ SNMP trap for device Link Up/Link Down status monitoring
- ✓ **User Privilege** levels control

Layer 2 Features

VLAN

- IEEE 802.1Q tagged VLAN
- Up to 255 VLAN groups, out of 4095 VLAN IDs
- Provider Bridging (VLAN **Q-in-Q**) support (IEEE 802.1ad)
- **Private VLAN** Edge (PVE)
- **MAC-based/Protocol-based VLAN/Voice VLAN**

Spanning Tree Protocol

- STP, IEEE 802.1D (Spanning Tree Protocol)
- **RSTP**, IEEE 802.1w (Rapid Spanning Tree Protocol)
- **MSTP**, IEEE 802.1s Multiple Spanning Tree Protocol
- **BPDU Guard** and **BPDU Filtering** enhance switch network reliability, manageability and security

Layer 2 Features

Quality of Service

- **8** priority queues on all switch ports
- Traffic Classification by:
  - 802.1p CoS
  - IP TOS/**DSCP**/Precedence of IPv4/IPv6 packets
  - **IP TCP/UDP** port number
  - Typical network applications
- **Ingress Shaper** and **Egress Rate Limit** per port bandwidth control
- **Strict Priority** and **Weighted Round Robin (WRR)** CoS policies
- Traffic-policing policies on the switch port
- **DSCP Remarking**

Layer 2 Features

Multicast

- Supports IGMP snooping v1, v2 and **v3**
- Supports MLD snooping v1 and **v2**
- Querier mode support
- IGMP snooping filtering
- MLD snooping filtering
- MVR (Multicast VLAN Registration)

Supports Link Aggregation

- IEEE 802.3ad Link Aggregation Control Protocol (LACP)
- Cisco ether-channel (static trunk)
- 6 trunk groups, up to 4 ports per trunk group

Security Features

Security

- **Network Access Authentication Mechanism**
  - IEEE 802.1x Port-based authentication for user identity control
  - **MAC-based** authentication for easy deployment
  - RADIUS/**TACACS+**/Local profile
- **Access Control List (ACL)**
  - IP-based filtering to permit or deny traffic
  - MAC-based filtering to permit or deny traffic
- Management **Source MAC/IP address binding** to prevent unauthorized intruder
- **DHCP Snooping** to filter untrusted DHCP messages
- **Dynamic ARP Inspection** discards ARP packets with invalid MAC address to IP address binding
- **IP Source Guard** prevents IP spoofing attacks

Management Tool Features

Management Tools

- Four RMON groups (history, statistics, alarms and events)
- IPv6 IP Address/NTP/DNS management
- Built-in Trivial File Transfer Protocol (TFTP) client
- Firmware upload/download via HTTP/TFTP
- DHCP Relay
- DHCP Option82
- User Privilege levels control
- NTP (Network Time Protocol)
- Link Layer Discovery Protocol (LLDP)
- **SFP-DDM** (Digital Diagnostic Monitor)
- **Cable Diagnostic** technology provides the mechanism to detect and report potential cabling issues
- PLANET **Smart Discovery** Utility for deployment management

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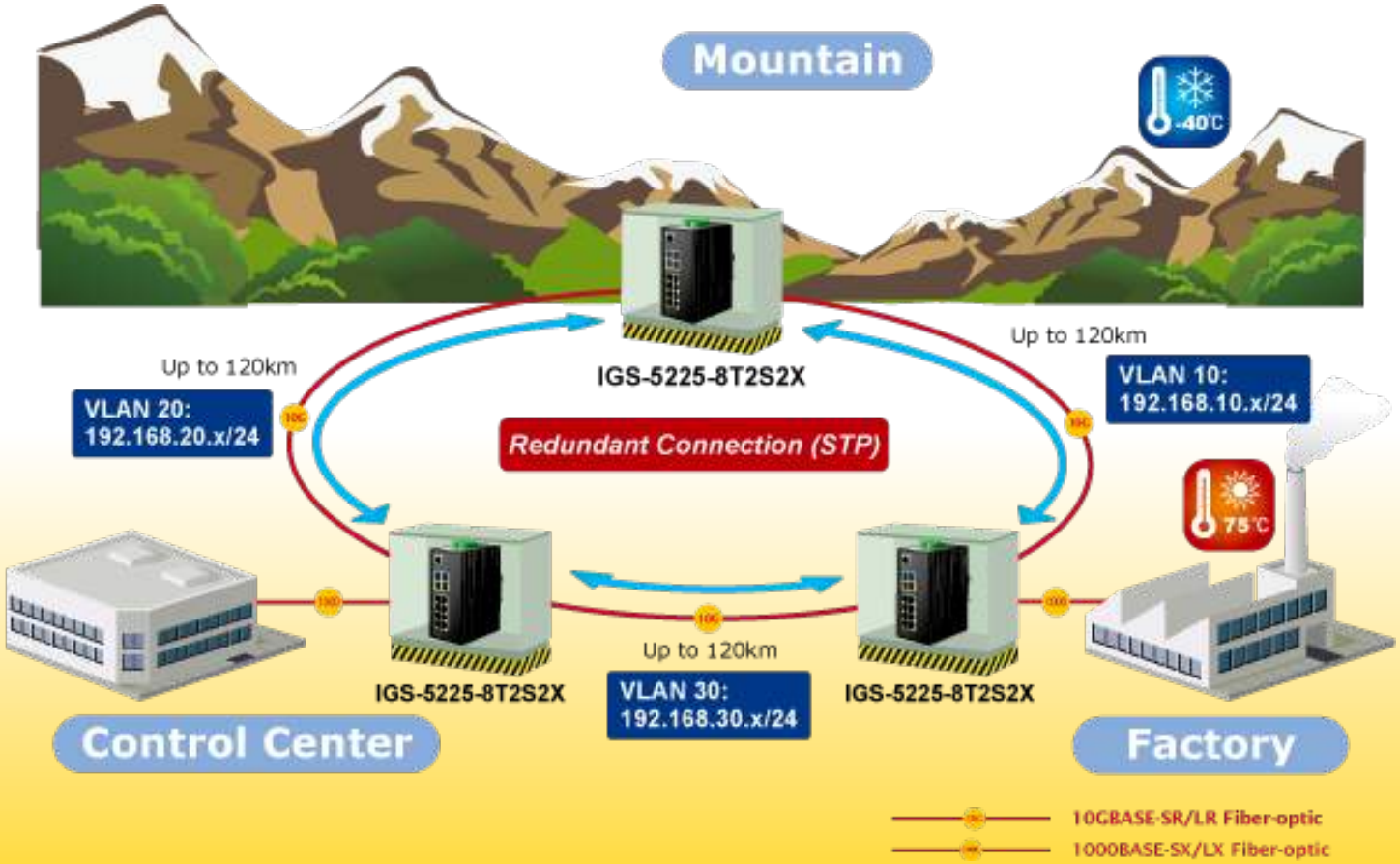
Applications

Applications

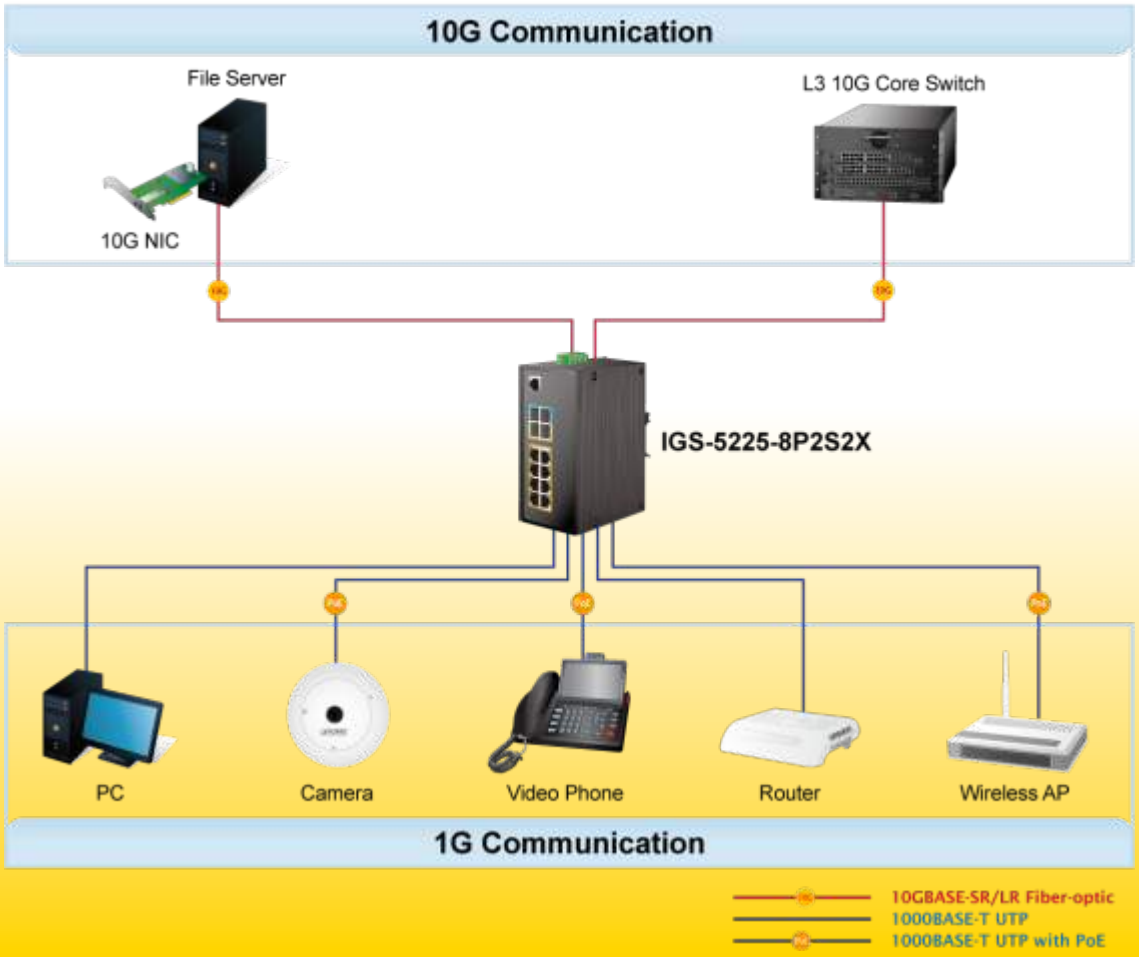
- Layer 3 VLAN Routing and 10G Uplink Application



Applications

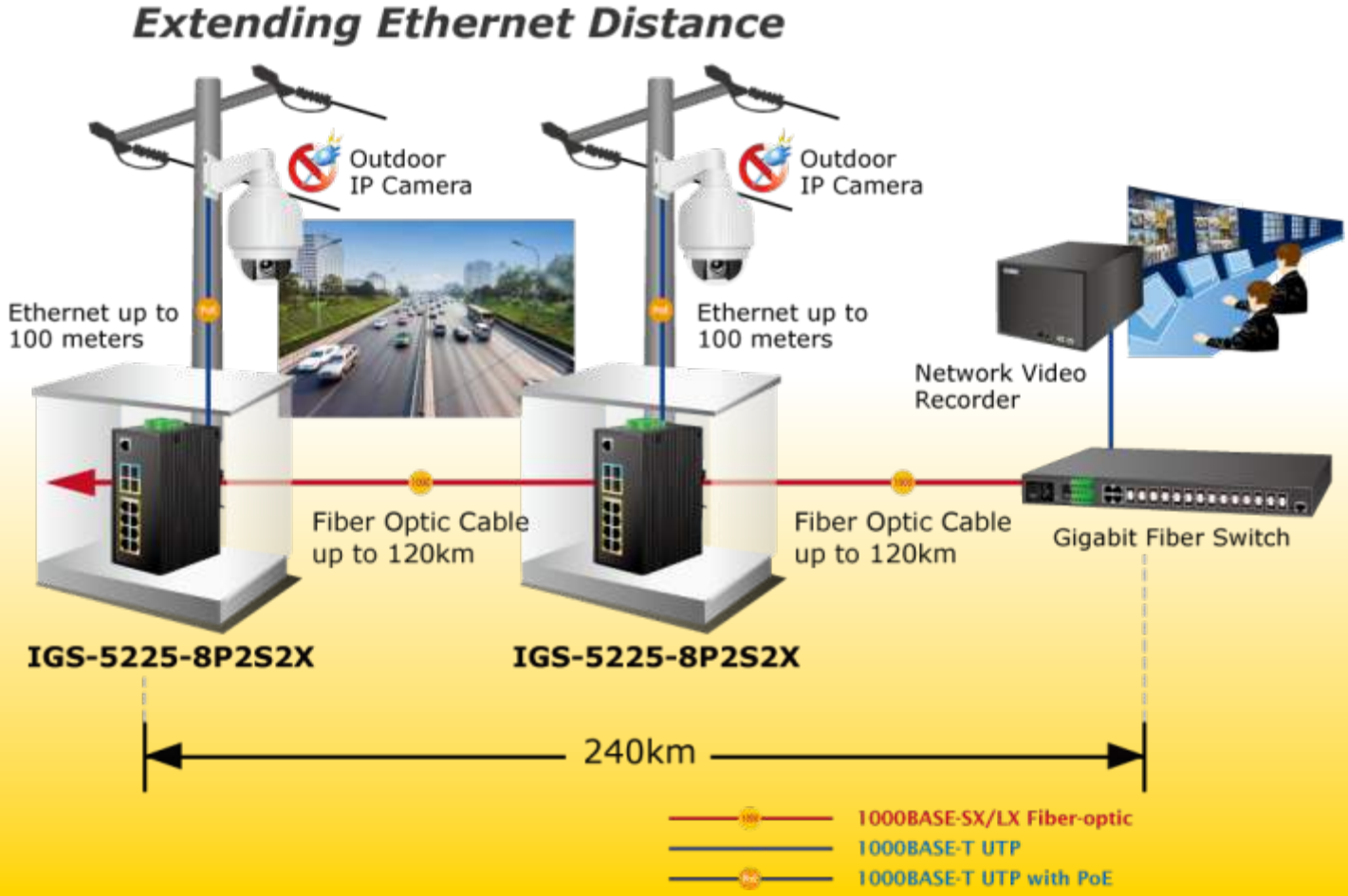
- Excellent 10Gbps High Bandwidth Solution to Core Network.

High Performance Server Service



Applications

- Providing up to 8 PoE+ to make the installation of IP cameras or wireless AP easier and more efficient.



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Appendix

Appendix

Related IP Surveillance PoE Products:

Model Name		Description
ICA-E3550V		5 Mega-pixel Bullet IR PoE IP Camera with *Extended Support*
ICA-E5550V		5 Mega-pixel Vandalproof IR PoE IP Camera *with Extended Support*
ICA-M3380P		*H.265* 3 Mega-pixel Bullet IR IP Camera with Remote Focus and Zoom
ICA-M4320P		*H.265* 3 Mega-pixel IR IP Camera with Remote Focus and Zoom
ICA-M5380P		*H.265* 3 Mega-pixel Vandalproof IR IP Camera with Remote Focus and Zoom

Appendix

- **Related Wireless PoE Products:**

Model Name		Description
WDAP-W7200AC		1200Mbps 802.11ac Wall-mount Wireless Access Point
WDAP-C7200AC		1200Mbps 802.11ac Ceiling-mount Wireless Access Point
WNAP-6350		2.4GHz 802.11n 300Mbps Wireless LAN Outdoor AP/ Router with Industrial IP67 Enclosure (2 x N-type Connector)
WNAP-7350		5GHz 802.11a/n 300Mbps Wireless LAN Outdoor AP/ Router with Industrial IP67 Enclosure (2 x N-type Connector)
WNAP-8350		600Mbps 802.11n Dual Band Outdoor Wireless CPE (IP66, 802.3at PoE, 4 x N-type Connector)

Appendix

Related PoE Extender and Splitter Products

Model Name		Description
POE-E101		IEEE 802.3af Power over Ethernet Extender
POE-E201		IEEE 802.3at Power over Gigabit Ethernet Extender
IPOE-E202		Industrial 1-Port 802.3at PoE+ to 2-Port 802.3af PoE Extender
POE-162S		IEEE 802.3at High Power over Ethernet Splitter (12V & 24V)
IPOE-162S		Industrial IEEE 802.3at High Power over Ethernet Splitter (12V & 24V)

Appendix

Available 10 Gigabit Ethernet Fiber Optic SFP Modules:

✓ 10 Gigabit Ethernet Transceiver (10GBASE-X SFP+)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (nm)	Operating Temp.
MTB-LR	10000	LC	Single Mode	10km	1310nm	0 ~ 60 degrees C
MTB-SR	10000	LC	Multi Mode	300m	850nm	0 ~ 60 degrees C
MTB-TLR	10000	LC	Single Mode	10km	1310nm	-40 ~ 75 degrees C
MTB-TSR	10000	LC	Multi Mode	300m	850nm	-40 ~ 75 degrees C

Available 10 Gigabit Ethernet Fiber Optic SFP Modules:

✓ 10 Gigabit Ethernet Transceiver (10GBASE-X, Single Fiber Bi-directional SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (TX)	Wavelength (RX)	Operating Temp.
MTB-LA20 MTB-LB20	10000	WDM (LC)	Single Mode	20km	1270nm	1330nm	0 ~ 60 degrees C
					1330nm	1270nm	
MTB-LA40 MTB-LB40	10000	WDM (LC)	Single Mode	40km	1270nm	1330nm	0 ~ 60 degrees C
					1330nm	1270nm	
MTB-LA60 MTB-LB60	10000	WDM (LC)	Single Mode	60km	1270nm	1330nm	0 ~ 60 degrees C
					1330nm	1270nm	

Appendix

Available Gigabit Ethernet Fiber Optic SFP Modules:

- ✓ Gigabit Ethernet Transceiver (1000BASE-X SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (nm)	Operating Temp.
MGB-GT	1000	Copper	--	100m	--	0 ~ 60 degrees C
MGB-SX	1000	LC	Multi Mode	550m	850nm	0 ~ 60 degrees C
MGB-SX2	1000	LC	Multi Mode	2km	1310nm	0 ~ 60 degrees C
MGB-LX	1000	LC	Single Mode	10km	1310nm	0 ~ 60 degrees C
MGB-L30	1000	LC	Single Mode	30km	1310nm	0 ~ 60 degrees C
MGB-L50	1000	LC	Single Mode	50km	1550nm	0 ~ 60 degrees C
MGB-L70	1000	LC	Single Mode	70km	1550nm	0 ~ 60 degrees C
MGB-L120	1000	LC	Single Mode	120km	1550nm	0 ~ 60 degrees C
MGB-TSX	1000	LC	Multi Mode	550m	850nm	-40 ~ 75 degrees C
MGB-TLX	1000	LC	Single Mode	10km	1310nm	-40 ~ 75 degrees C
MGB-TL30	1000	LC	Single Mode	30km	1310nm	-40 ~ 75 degrees C
MGB-TL70	1000	LC	Single Mode	70km	1550nm	-40 ~ 75 degrees C

Appendix

Available Gigabit Ethernet Fiber Optic SFP Modules:

✓ Gigabit Ethernet Transceiver (1000BASE-BX, Single Fiber Bi-directional SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (TX)	Wavelength (RX)	Operating Temp.
MGB-LA10 MGB-LB10	1000	WDM (LC)	Single Mode	10km	1310nm	1550nm	0 ~ 60 degrees C
					1550nm	1310nm	
MGB-LA20 MGB-LB20	1000	WDM (LC)	Single Mode	20km	1310nm	1550nm	0 ~ 60 degrees C
					1550nm	1310nm	
MGB-LA40 MGB-LB40	1000	WDM (LC)	Single Mode	40km	1310nm	1550nm	0 ~ 60 degrees C
					1550nm	1310nm	
MGB-LA60 MGB-LB60	1000	WDM (LC)	Single Mode	60km	1310nm	1550nm	0 ~ 60 degrees C
					1550nm	1310nm	
MGB-TLA10 MGB-TLB10	1000	WDM (LC)	Single Mode	10km	1310nm	1550nm	-40 ~ 75 degrees C
					1550nm	1310nm	
MGB-TLA20 MGB-TLB20	1000	WDM (LC)	Single Mode	20km	1310nm	1550nm	-40 ~ 75 degrees C
					1550nm	1310nm	
MGB-TLA40 MGB-TLB40	1000	WDM (LC)	Single Mode	40km	1310nm	1550nm	-40 ~ 75 degrees C
					1550nm	1310nm	
MGB-TLA60 MGB-TLB60	1000	WDM (LC)	Single Mode	60km	1310nm	1550nm	-40 ~ 75 degrees C
					1550nm	1310nm	

Appendix

Available Fast Ethernet Fiber Optic SFP Modules:

Fast Ethernet Transceiver (100BASE-X SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (nm)	Operating Temp.
MFB-FX	100	LC	Multi Mode	2km	1310nm	0 ~ 60 degrees C
MFB-F20	100	LC	Single Mode	20km	1310nm	0 ~ 60 degrees C
MFB-F40	100	LC	Single Mode	40km	1310nm	0 ~ 60 degrees C
MFB-F60	100	LC	Single Mode	60km	1310nm	0 ~ 60 degrees C
MFB-F120	100	LC	Single Mode	120km	1310nm	0 ~ 60 degrees C
MFB-TFX	100	LC	Multi Mode	2km	1310nm	-40 ~ 75 degrees C
MFB-TF20	100	LC	Single Mode	20km	13100nm	-40 ~ 75 degrees C

Fast Ethernet Transceiver (100BASE-BX, Single Fiber Bi-directional SFP)

Model	Speed (Mbps)	Connector Interface	Fiber Mode	Distance	Wavelength (TX)	Wavelength (RX)	Operating Temp.
MFB-FA20	100	WDM(LC)	Single Mode	20km	1310nm	1550nm	0 ~ 60 degrees C
MFB-FB20	100	WDM(LC)	Single Mode	20km	1550nm	1310nm	0 ~ 60 degrees C
MFB-TFA20	100	WDM(LC)	Single Mode	20km	1310nm	1550nm	-40 ~ 75 degrees C
MFB-TFB20	100	WDM(LC)	Single Mode	20km	1550nm	1310nm	-40 ~ 75 degrees C
MFB-TFA40	100	WDM(LC)	Single Mode	40km	1310nm	1550nm	-40 ~ 75 degrees C
MFB-TFB40	100	WDM(LC)	Single Mode	40km	1550nm	1310nm	-40 ~ 75 degrees C

Appendix

- **Available DIN-rail Power Supplies for IGS-5225-8T2S2X:**
  - ✓ **PWR-40-24** **40W** 24V DC Industrial DIN-rail Power Supply (Voltage Adj. Range: 24~30V)
  - ✓ **PWR-60-24** **60W** 24V DC Industrial DIN-rail Power Supply (Voltage Adj. Range: 24~30V)
  - ✓ **PWR-75-24** **75W** 24V DC Industrial DIN-rail Power Supply (Voltage Adj. Range: 24~30V)

Appendix

- **Available DIN-rail Power Supplies for IGS-5225-8T2S2X/IGS-5225-8P2S2X:**
  - ✓ **PWR-75-48** **75W** 48V DC Industrial DIN-rail Power Supply (Voltage Adj. Range: 48~56V)
  - ✓ **PWR-120-48** **120W** 48V DC Industrial DIN-rail Power Supply (Voltage Adj. Range: 48~56V)
  - ✓ **PWR-240-48** **240W** 48V DC Industrial DIN-rail Power Supply (Voltage Adj. Range: 48~56V)
  - ✓ **PWR-480-48** **480W** 48V DC Industrial DIN-rail Power Supply (Voltage Adj. Range: 48~56V)