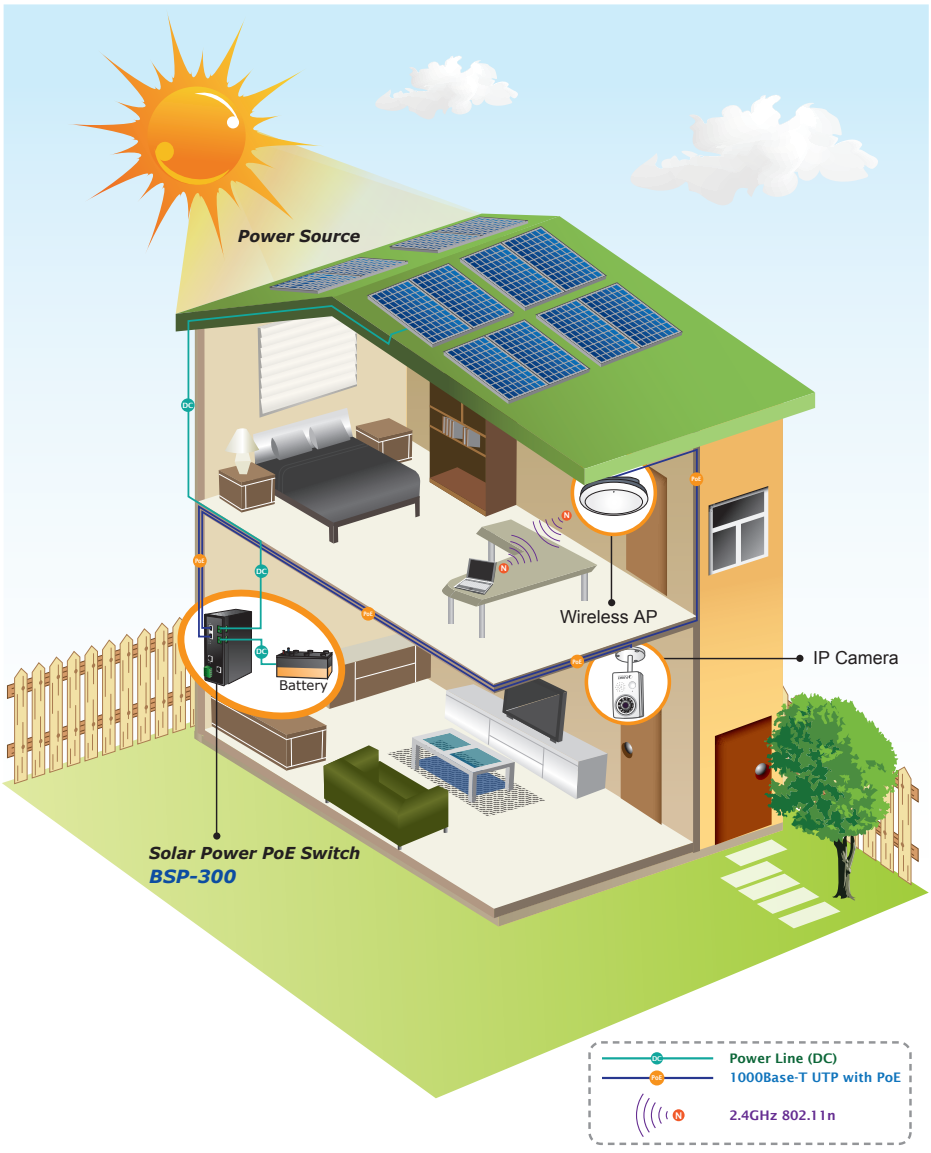
Industrial Solar Power PoE Switch

TAIWAN EXCELLENCE 2013

Industry-leading integration of PoE technology and Solar Power System

For the increasing demand of network installation anywhere, the PLANET BSP-300 Industrial Solar Power PoE Switch now provides the ideal solution. Powered by Zero-Carbon emission source - the sun light, the BSP-300 incorporates Pulse Width Modulated (PWM) charge controllers to effectively force the solar panels to operate at the same voltage as the battery bank during charging. The BSP-300 can empower the high power PoE network devices anywhere without any obstacles of geographical barrier.

With the integration of IEEE 802.3at PoE technology and solar power system, the BSP-300 provides hassle-free and maintenance-free solution for those in need for fast connectivity that require great flexibility and reliability, such as remote monitoring and long distance wireless communication. The BSP-300 makes the network deployment more easily and reliably.



Plug and Play High Power PoE Network Deployment

Through its two IEEE 802.3at Gigabit High Power PoE interface delivering power to wireless access points and IP cameras, the BSP-300 makes it easy to realize far-reaching data transmission and IP surveillance in remote areas. Just simple **Plug and Play**, the 802.3at / 802.3af PoE wireless LAN and IP surveillance system can be constructed easily without additional wiring.

Zero-Carbon and Stable Power Supply

The BSP-300 utilizes the solar power sourcing and co-works with common Nickel-cadmium battery or Lead-acid battery to form an independent solar power supply system for outdoor network system. The BSP-300 delivers zero-carbon and uninterruptible power supply for continuous outdoor wireless and IP surveillance applications without the need of any cabling. This system saves 100% power loss for users. It can power the client devices and charging at the same time during the day and continuing the operation in the right with the co-working battery.

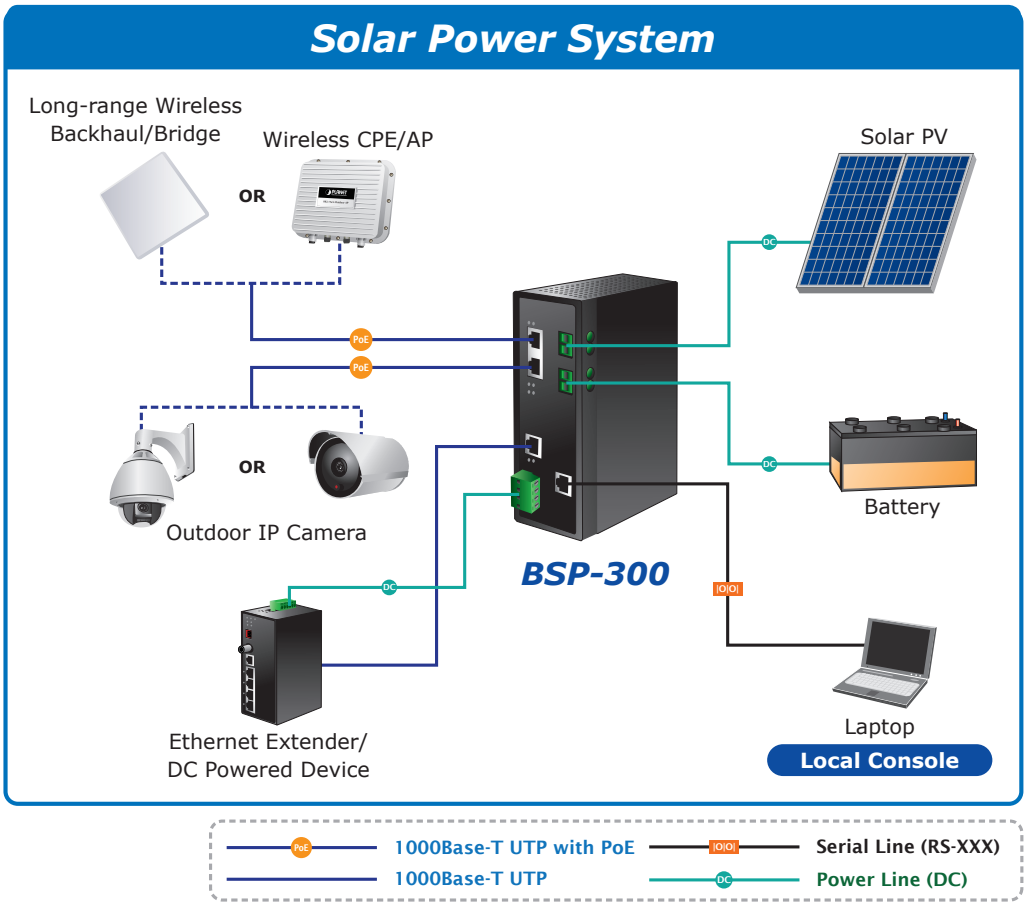
Application Site

- Forest / National Park Monitoring
- Public Surveillance / Public Wireless LAN System
- Telecom / ISP Wireless Extension
- Hospital / Remote Health Care
- Village / Resort
- Harbor / Oil rig / Mine industry
- Instant Network Infrastructure for Critical Mission

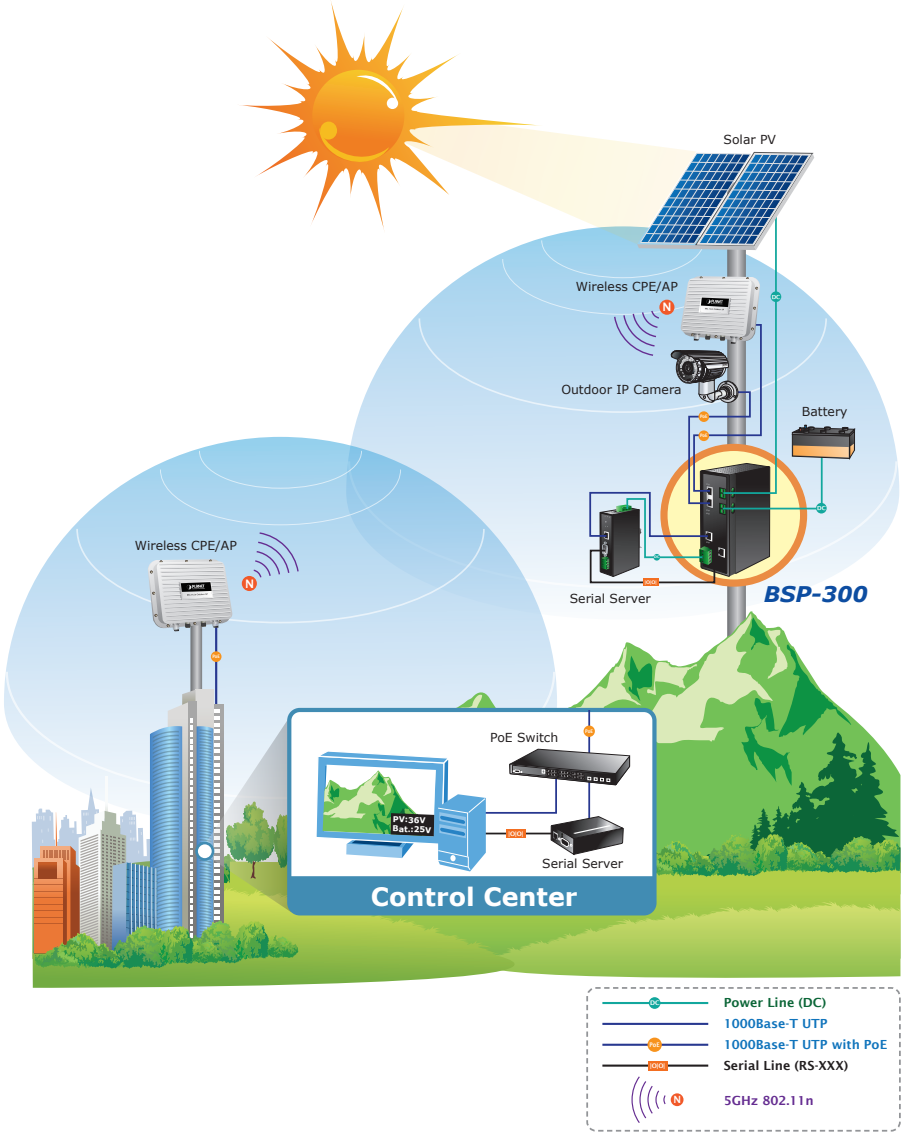
Applications

Solar PoE Power Supply for Long Distance Wireless Surveillance Solution

Provides Plug-and-Play instant Internet Service, the BSP-300 can be deployed anywhere in the city where there is need of Wireless Internet Connection. With the two 802.3at / 802.3af PoE interfaces, the BSP-300 enables you to install the PoE Access Point such as PLANET WAP-7350 and WSG-500 in any place of the city where there is no direct AC electricity. Just connect the PoE wireless access points or IP cameras to the BSP-300, the wireless LAN or Surveillance system can be deployed immediately.



By working with a pair of serial over Ethernet Media Converter and the Wireless transmission, the BSP-300 Industrial Solar Power PoE Switch can be efficiently managed from remote monitor center.



Key Features

HARDWARE

- Dual IEEE802.3at / 802.3af Power over Ethernet interfaces
  - Free the wiring for networking system installation, up to 100 meters distance for both power and data transmission
  - Enables flexible installation of dual PoE Wireless Access Point, Hot-spot Gateway or Surveillance system.
- Pulse Width Modulation (PWM) Protection
  - Reverse current protection to prevent the current circuits from flowing back to the PV panel
  - Over-current and Over-temperature protection
  - Reverse polarity protection (for battery and charging electrodes)
  - PWM voltage output control at power load

SYSTEM

- Smart Power Management System
  - Co-working with 300 watts solar PV kit and battery, the BSP-300 empowers the connected PoE devices in the day time and charging the battery stably.
  - In the night time, the smart power system monitors and empower the client devices and helps to extend the battery life from charging and discharging.
  - Easy diagnose of the system operating status via LED indicator
  - Parameter settings can be remotely configured through the computer
- Installation
  - Integrates with solar PV and battery for easy installation of PoE devices and enabling client devices Plug-and-Play
  - Battery type options: Nickel-cadmium battery, Lead-acid battery

SPECIFICATION

Product	Industrial Solar Power PoE Switch
Model	BSP-300
Hardware Specification	
Network Connector	3-Port RJ-45 for 10/100/1000Base-T (2-Port with 802.3at / 802.3af PoE injector function)
Console Port	1 x RS-232 RJ-45 serial port
Power Output	1 x DC out 24@ 2A maximum (two-pin terminal block) 2 x PoE out DC 52V; max. 30 Watts per PoE port
LED	**System** ● System (Green) ● Fault (Green) **Per PoE Port (Port 1 / Port 2)** ● Link / Active (Green) ● PoE In-Use (Orange) **LAN Port (Port 3)** ● 1000 Link / Active (Green) ● 10/100 Link / Active (Green) **Per PoE Interface** ● Power LNK/ACT (Green) ● PoE In-Use (Orange)
Power over Ethernet	
Standard	IEEE802.3at / IEEE802.3af
Port	Port 1, Port 2
Power pin	RJ-45 Pin# 4/5 (+); Pin# 7/8 (-); PSE Mid-span
Power voltage injecting	DC 52V
Consumption	30 watts max.; PoE Class 4
Electrical Characteristics	
System voltage ratings	DC 24V
Maximum charging current	15A
Max. solar array Voc	DC 60V
Max. operating voltage	DC 45V
Total current consumption	While operating -32Ma At idle -11mA
High temperature shutdown	100 Degree C disconnect solar and load 80 Degree C reconnect solar and load
Overload Capacity	Over 15 Amp will cut off output load
Battery Charging Characteristics	
Charge algorithm	Bulk charge (constant current), Absorption charge (constant voltage) and Floating charge. Absorption and Floating charge with PWM protection.
Maximum output current	15A
Nickel-cadmium battery	± 40 mV/Degree Celsius for NiCad type batteries, Charge cut-off @ 55 Degree C (Temperature compensation Baseline@ 25 Degree C)
Lead-acid battery (Default Setting)	± 60 mV/Degree Celsius for lead acid type batteries, Charge cut-off @ 55 Degree C (Temperature compensation Baseline@ 25 Degree C)
Float charge voltage	DC 27.2V (26.0~30.0V)
Absorption charge voltage	DC 29.2V (28.0~32.0V)
LVD (Low Voltage Disconnection)	DC 22.2V (21.0~25.0V)
LVR (Low Voltage Reconnection)	DC 24.8V (23.0~27.0V)
Standards Conformance	
Network Interface	IEEE 802.3 10Base-T IEEE 802.3u 10/100Base-TX IEEE 802.3ab 10/100/1000Base-T IEEE 802.3at / 802.3af for PoE (Power over Ethernet) devices
Regulation Compliance	CE, FCC
System Unit	
Operating Temperature	-20 ~ 60 Degree C
Storage Temperature	-40 ~ 90 Degree C
Operating humidity	20% ~ 80%
Dimension (W x D x H)	107.2 x 152 x 65.7 mm
Weight	0.79kg
Installation	DIN Rail Kit and Wall Mount Kit
Software Utility	Device detect / diagnostic, Windows XP / Win 7

Ordering Information

BSP-300	Industrial Solar Power PoE Switch

Related Products

WNAP-7350	802.11a/n Wireless Outdoor Access Point
WSG-500	300Mbps Hotspot Wireless Subscriber Gateway
IAP-2000PE	IEEE 802.b/g/n Industrial Access Point
ICA-3350V	3 Mega-Pixel Vari-Focal Bullet IR IP Camera
ICA-5350V	3 Mega-Pixel Vandal Proof IR IP Camera
ICA-HM620	2 Mega-Pixel PoE Plus Speed Dome Internet Camera
IPOE-162S	Industrial IEEE 802.3at High Power over Ethernet Splitter
ISW-504PT	5-Port 10/100Mbps with 4-Port PoE Industrial Ethernet Switch - Wide Temperature
ISW-514PT	4-Port 10/100Mbps with PoE + 1-Port 100FX Industrial Ethernet Switch – Wide Temperature
IVC-2004PT	4-Port 10/100Base-TX with PoE + 1-Port BNC / RJ-11 Industrial Ethernet Extender
ICS-2100	Industrial RS-232/ RS-422/ RS-485 over Ethernet Media Converter
ICS-100	RS-232 over Fast Ethernet Media Converter
ELA-100	Lightning Arrest Box