

Datasheet

Solar Powered PoE Switch

WI-PS306GF-UPS-15A

Hardware version: V2

Software version: V1.34

New Upgrade: RS-485 for WI-IOT100 to Cloud Management!



Overview

Wi-Tek Solar Powered PoE Switch Serial is designed for CCTV surveillance and wireless network. Based on its green energy, it can be charged by the inexhaustible and natural source of energy – solar power. It can conserve green energy economically and power the remote IP cameras and wireless AP, especially used for expansive applications such as dams, forests, deserts, national parks, and highways.

Features

Built-in MPPT (Maximum Power Point Tracking) Controller

The MPPT (Maximum Power Point Tracker) controller can detect the voltage of the solar panel in real-time, track the highest power, and convert the high voltage DC output of the solar panel to the low voltage required for effective charging so that the system can charge the battery at the maximum power. It is the brain of the photovoltaic system that coordinates with solar panels, batteries, and loads in the solar photovoltaic system.

Zero-carbon, Green, and Stable Power Supply

During the day, solar energy can power the communication system and charge the battery, and at night, the battery uses the excess electricity generated by solar energy during the day to power the communication system, which builds a zero-carbon, green, and stable communication system without any external energy.

Easy and Intelligent Photovoltaic Power and Battery Status Monitoring

The dashboard in the Wi-Tek cloud makes it easy to monitor real-time solar power and battery status, receive battery capacity and charge status alarms, and track power generation, power consumption, and battery data.

Wi-Tek Cloud Management

The photovoltaic power and battery status and data can be quickly configured, visual management, and remote access in the Wi-Tek through Cloud IoT Controller, which is easy to operate and maintain.

Specifications



Products	WI-PS306GF-UPS-15A
Hardware Version	V2
Hardware Features	
Interface	<p>1*10/100/1000Mbps PoE++ RJ45 port</p> <p>2*10/100/1000Mbps PoE+ RJ45 ports</p> <p>2*10/100/1000Mbps 24V(passive)/48V(af/at) PoE RJ45 ports</p> <p>1*1000Mbps SFP</p>
Serial Port	1*2-PIN 3.81mm RS-485 (Data A, B) terminal blocks
Power Input Port	<p>6-PIN 5.08mm terminal blocks:</p> <p>2*2-PIN Solar input in parallel (compliant DC input but cannot be connected at the same time with solar input to avoid damage to the device)</p> <p>1*2-PIN Battery charging & discharging</p> <p>Max. wire diameter: 2.5mm²/12AWG</p>
LED Indicator	<p>Front panel:</p> <p>1*PW, Power indicator</p> <p>1*BIN, Battery charging status indicator</p> <p>1*BOT, Battery discharging status indicator</p> <p>4*Port PoE status indicators</p> <p>1*SFP port indicator</p> <p>Rear panel:</p> <p>1*CPU, System indicator</p> <p>1*VOT, Power output indicator</p> <p>1*BIN, Battery charging status indicator</p> <p>1*BOT, Battery discharging status indicator</p> <p>1*SIN, Power input indicator</p> <p>1*BS, Battery status indicator</p>
DIP Switch	<p>Front panel:</p> <p>PoE watchdog mode, all PoE ports enable the PoE watchdog function, which can detect and reboot the offline compliant PoE powered devices automatically.</p> <p>VLAN mode, all downlink ports are isolated from each other, but can communicate with uplink ports.</p> <p>Extend mode, the data and PoE transmission distance of port 1~5 can be up to 250m.</p> <p>Port 4 and 5 PoE mode, switch 24V passive PoE mode or af/at PoE mode of ports 4&5.</p> <p>Rear panel:</p> <p>Switch the power on and off.</p> <p>12V/24V lead acid, 11.1V(Working voltage: 9~12.6V)/22.2V(Working voltage: 18~25.2V) lithium, 12.8V(Working voltage: 10~14.6V)/25.6V(Working voltage: 20~29.2V) LiFePO4 battery type selection.</p>
Power Consumption	<5W (Without PoE)

Products	WI-PS306GF-UPS-15A
Hardware Version	V2
Hardware Features	
Dimensions(W*D*H)	197*144*35mm
Weight	0.83kg
Package Dimensions	270*220*67mm
Package Weight	1.08kg
Installation	Wall/Desktop mounted
Fan Quantity	Fan-less
Material	Metal shell
Color	Black
PoE	
PoE Port	Port 1-5
PoE Standard	Port 1: IEEE 802.3bt (Type 4) Port 2-3: IEEE 802.3af/at Port 4-5: IEEE 802.3af/at or 24V passive PoE
PoE Pin Assignment	Port 1: 1/2/4/5 (+), 3/6/7/8 (-) Port 2-3: 1/2(+), 3/6(-) Port 4-5: 1/2(+), 3/6(-) @IEEE 802.3af/at PoE or 4/5(+), 7/8(-)@24V passive PoE
PoE Port Power	90W max for port 1, 30W max for port 2-3, 30W max@ IEEE 802.3af/at or 24W max @24V passive PoE for port 4-5
PoE Power Budget	120W max for the whole switch PoE power budget
Switch Property	
Standards and Protocols	IEEE 802.3, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3z, IEEE 802.3af, IEEE 802.3at, IEEE 802.3bt
Forwarding Mode	Store and forward
MAC Address Table	2K
Switching Capacity	12Gbps
Packet Forwarding Rate	8.94Mpps
Packet Buffer Memory	2.4Mb
Jumbo Frame	10240Bytes
Reliability	
ESD Protection	6kV
Surge Immunity	6kV
Operating Environment	-20°C to 65°C, 10%~90% (non-condensation)
Storage Environment	-40°C to 70°C, 5%~90% (non-condensation)
Other Features	
Cloud Management	The photovoltaic power, battery status, and data can be quickly configured, visual management, and remote access in the Wi-Tek cloud through a Cloud IoT Controller (Solar mode of the serial port).

MPPT Specifications

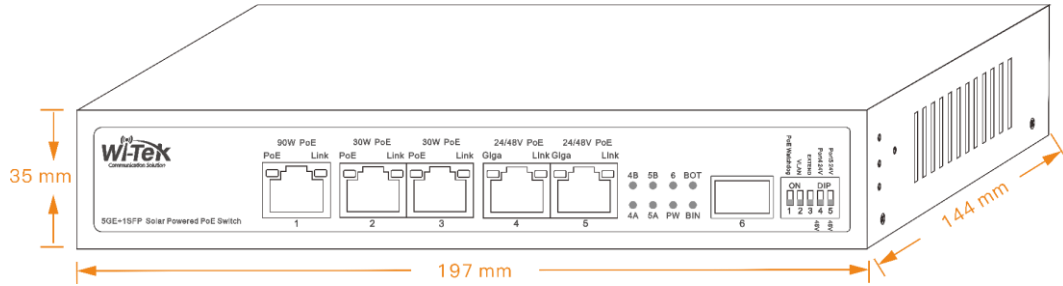
Products		WI-PS306GF-UPS-15A					
Hardware Version		V2					
Software Version		V1.34 and later					
Solar Controller							
Battery Type	Lead acid		Lithium		LiFePO4		
Battery Nominal Voltage	12V	24V	11.1V	22.2V	12.8V	25.6V	
Battery Working Voltage	-		9~12.6V	18~25.2V	10~14.6V	20~29.2V	
Battery Capacity	<500Ah						
Charging Mode	MPPT						
Consumable Supplement	Support						
Consumable Detection Voltage	<12.6V	<24.8V	<12.2V	<24.4V	<14.2V	<28.8V	
Max. Charging Voltage	14.7V	29.6V	12.6V	25.2V	14.6V	29.2V	
Rated Charging Current	15A max.						
Float Voltage	13.7V	27.4V	-				
Float Current	50mA~1000mA		-				
Float Time	3hours		-				
Discharge Cut-off Voltage	10.2V	20.4V	9V	18V	10V	20V	
Rated Discharging Current	6.5A	3.6A	8.5A	4A	6.5A	4A	
Battery Unidentified Voltage	<8.5V	<16V	<8.5V	<16V	<8.5V	<17V	
User-defined Battery	The user-defined battery is supported through a Cloud IoT Controller in the Wi-Tek cloud, setting the charge voltage, floating charge voltage, discharge cut-off voltage, and charge current.						
Power input							
Recommend Photovoltaic Peak Power Input (Pmax)	<440W	<880W	<380W	<720W	<440W	<880W	
Recommend Photovoltaic Open Circuit Voltage (Voc)	<32V	<57V	<32V	<57V	<32V	<57V	
Recommend Photovoltaic Max Power Voltage (Vmp)	18~26V	30~52V	18~26V	30~52V	18~26V	30~52V	
Wide Voltage Charging	This function can be enabled through a Cloud IoT Controller on the Wi-Tek cloud. After this function is enabled, the solar panels with an operating voltage of 30 to 52V (>36V is recommended) can charge a 12V battery system more efficiently.						
Compatible DC Input	Recommend 18/24V DC@12V battery, 240W input max., 36/48V DC@24V battery, 480W input max. *Solar and DC Power can't be connected simultaneously to avoid damage to the device.						
Protection							
Protection	Over-current protection, short-circuit protection, reverse connection protection, PoE overload protection, over-charging protection, over-discharging protection, delay start, switch over-temperature protection, battery over-temperature protection (with temperature sensor)						

* The solar input cannot supply power to the switch independently without the battery connected.

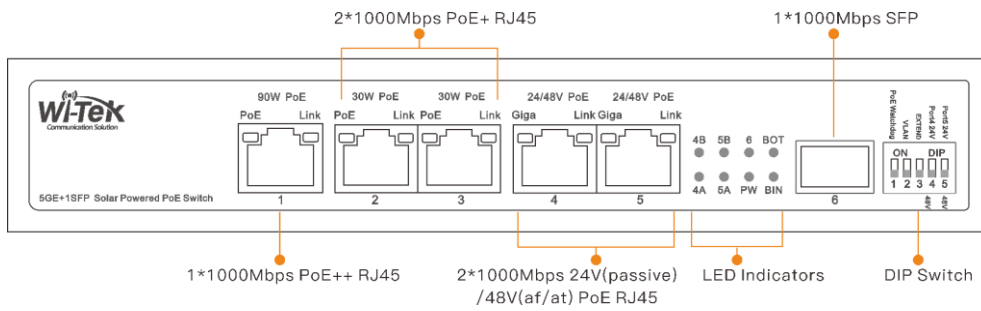
Appearances and Dimensions

WI-PS306GF-UPS-15A

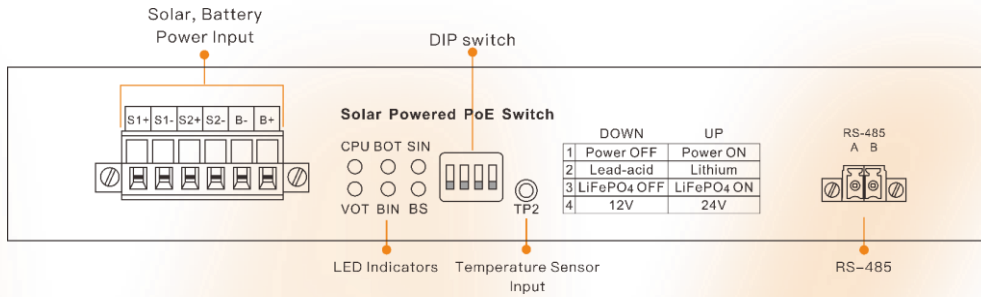
Dimensions



Front Panel



Rear Panel



* Solar and DC power can't be connected simultaneously to avoid damage to the device.
The solar input cannot supply power to the switch independently without the battery connection.

Package Content

Welcome to order our products. After purchasing, you will receive:

Item	Quantity
Switch	1 pcs
Mounting Accessories (L-shape bracket, Screw, Screwdriver, Mat)	1 pcs
Quick Installation Guide	1 pcs



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Technical Support



Cloud Management



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