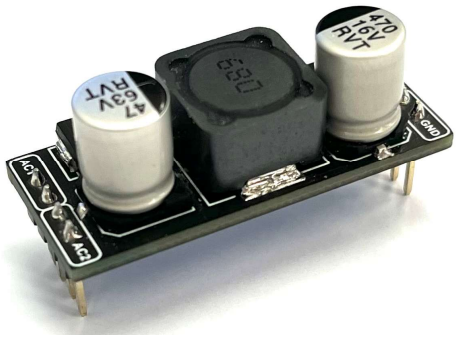
WIZPoE-S1

(Normal Version)



Document Revision History

Version	Date	Remarks
V1.0	2023/11/6	Initial release

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For more information, please visit: https://www.wizse.com/

Product Description:

1. WIZnet PoE module is a non-isolated, high-performance PoE module that complies with IEEE802.3af standards and has a product size of 38*16*12mm. The output power can meet the power consumption requirements of more than 90% of the market's wireless network access points; network video phones; and network advertising systems.
2. WIZnet PoE module requires an external network transformer for data communication.
3. PoE Protocol：IEEE802.3af
4. PoE Power：8W （5V/1.6A）
5. PoE Transmission：1,2+/3,6- and 4,5+/7,8- adaptive, the transmission distance can reach up to 100 meters.
6. The chip input withstand voltage can reach up to 100V, effectively preventing the main chip from burning out due to excessive voltage.

Product application:

1. IP Camera
2. Access Point
3. IP phone
4. Surveillance System
5. Security System
6. NAS
7. Internet STB BOX
8. Advertisement System

Product appearance and size: (unit: mm)

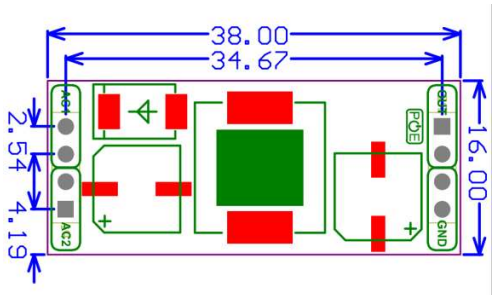


Figure 1-1 WIZPoE-S1 dimension - top view

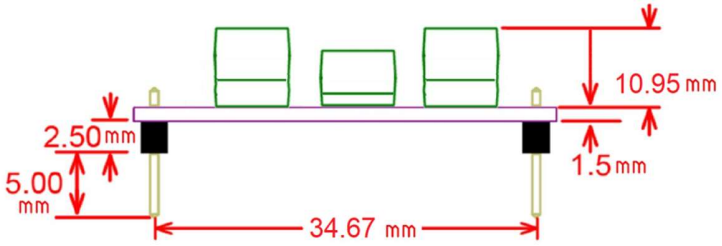


Figure 1-2 WIZPoE-S1 dimension - side view

Absolute Maximum Rating:

Parameter	Symbol	Min	Max	Units
DC Supply Voltage	VCC	41	61	V
Storage Temperature	TS	-30	80	^{O}C

Electrical parameter technical standards:

Indicator type	Min	Typical	Max	Output Ripple	Efficiency
Input voltage	42Vdc	48Vdc	55Vdc	200mV Max	80%
The output voltage	4.75V	5V	5.25V		
Output current	1.6A	1.8A	1.9A		
Short circuit protection	When the output is short-circuited to ground, the product automatically turns off the output. When short-circuit is relieved, the product will return to normal when the power is turned on again.				

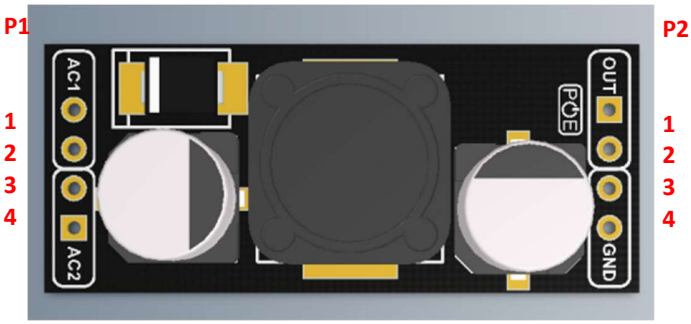
Environment/humidity requirements:

1. Operating temperature and humidity requirements: At an altitude of ≤10,000 feet, the low-temperature operating lower limit is -25°C, the high-temperature operating upper limit is +45°C, and the relative humidity is 20%RH ~ 80%RH.
2. Storage temperature and humidity requirements: At an altitude of ≤30,000 feet, the lower limit of low-temperature storage is -30°C (freezing environment); the upper limit of high-temperature storage is +80°C, and the relative humidity is 10%RH ~ 90%RH.

DC Electrical Characteristics:

DC Characteristic	Symbol	Min	Typical	Max	Units
Nominal Output Voltage	+VDC	4.75	5	5.25	V
Output Current (V_{IN} = 48)	PWR	0.2	-	1.8	A
Line Regulation	VLINE	2.5	-	7.5	%
Load Regulation	VLOAD	2.5	-	7.5	%
Output Ripple and Noise	VRN	20	100	200	mVp-p
Minimum Load	RLOAD	150	200	250	mA
Efficiency @80% Load	EFF	70	80	90	%

PIN definition:



PIN		Name	Description	
P1	1	VC 1 (+)	PoE Switch	RX Input (1). This input pin is used in conjunction with VC1 (-) and connects to the center tap of the transformer connected to pins 1&2 of the RJ45 connector (RX) - it is not polarity sensitive. WIZPoE this pin is direct Input +. This pin connects to the positive (+) output of the input bridge rectifier.
	2	VC 1 (-)		TX Input (2). This input pin is used in conjunction with VC1 (+) and connects to the center tap of the transformer connected to pins 3&6 of the RJ45 connector (TX) - it is not polarity sensitive. WIZPoE this pin is direct Input -. This pin connects to the negative (-) output of the input bridge rectifier
	3	VC 2 (+)		Direct Input (1). This input pin is used in conjunction with VC2 (-) and connects to pin 4 & 5 of the RJ45 connector - it is not polarity sensitive. WIZPoE this pin is direct Input +. This pin connects to the positive (+) output of the input bridge rectifier.
	4	VC 2 (-)		Direct Input (2). This input pin is used in conjunction with VC2 (-) and connects to pin 7 & 8 of the RJ45 connector - it is not polarity sensitive. WIZPoE this pin is direct Input -. This pin connects to the negative (-) output of the input bridge rectifier
P2	1	Output 1	POE Voltage Output	5V Voltage Output
	2	Output 2		
	3	GND 1	Ground Pin	
	4	GND 2		