

Outdoor Waterproof Industrial PoE Solution

WI-PCES310GF-FO: WI-PCES310GF-F + WI-IOTBOXNANO + WI-FP150W-56V
WI-PCES318GF-FO: WI-PCES318GF-F + WI-IOTBOXNANO + WI-FP150W-56V



Overview

Wi-Tek has launched two product bundles of outdoor waterproof industrial PoE solution: WI-PCES310GF-FO and WI-PCES318GF-FO. At its core is the IOTBOX, an IP55-rated intelligent enclosure engineered for all-weather protection, featuring waterproof, dustproof, heat dissipation, anti-ultraviolet, anti-theft, anti-rust, acid and alkali corrosion, anti-electromagnetic interference (anti-lightning EMP).

To ensure stable energy delivery, the bundle includes a high-efficiency 56V/150W flat power adapter with a 90-264V universal input and comprehensive circuit protection, featuring over-load protection, over-voltage protection, over-temperature protection and short circuit protection, etc.

A key highlight is the flat PoE switch, featuring an innovative magnetic and wall-mount design that perfectly fits within the enclosure space. Specific port delivers 802.3bt 90W PoE++ output, effortlessly powering high-demand devices such as PTZ dome cameras and Wi-Fi 7 APs. With Standard temperature/humidity sensors and integrated Relay interface, the system enables seamless local and cloud-based alarm linkage, providing a definitive answer to outdoor power supply, cooling, and protection challenges.

Features

IP55 Ingress Protection

Outstanding dustproof and waterproof design protects the equipment inside the box in the outdoor.

Advanced Outdoor Protection

Made of aluminum alloy or 304 stainless steel connecting mounting parts, Electrostatic powder spraying main body, can anti-aging, gas corrosion resistance, UV damage resistance, acid and alkali corrosion resistance, salt spray moisture resistance.

Universal AC input/ Full range

Wide voltage design, can support 90–264V AC voltage input, adapt to the global mains voltage, to meet the needs of various environments.

Multiple protection mechanisms

Support Short Circuit/Over-load/Over-voltage/Over-temperature protection to ensure long-term stable equipment operation.

Support Wi-Tek Cloud Management

ONVIF cameras and Wi-Tek cloud management devices can be remotely managed through the Wi-Tek cloud platform/mobile APP, making CCTV network projects truly intelligent and easy to maintain. You can easily access and manage your cameras from your phone or computer anytime, anywhere.

Fusion of Temperature Sensor and Cloud

The temperature sensor can sense the temperature of the project site in real time and upload it to the cloud platform, which you can monitor remotely in real time. The remote alarm function can effectively prevent risks, such as device faults caused by overtemperature.

Specifications



Model	WI-PCES310GF-F	WI-PCES318GF-F
Hardware Specifications		
Interfaces		
Downlink Ports	8 *10/100/1000Mbps RJ45 Ports	16 *10/100/1000Mbps RJ45 Ports
Uplink Ports	2 *1000Mbps SFP Slots	2 *1000Mbps SFP Slots
PoE		
PoE Port	Port 1-8	Port 1-16
PoE Standard	Port 1-2: IEEE802.3 af/at/bt Port 3-8: IEEE802.3 af/at	Port 1-4: IEEE802.3 af/at/bt Port 5-16: IEEE802.3 af/at
PoE Pin Assignment	1/2(+), 3/6(-), 4/5(+), 7/8(-)	
PoE Power	90W Max. for port1-2 30W Max. for port3-8 145W Max. for PoE power budget	90W Max. for port 1-4 30W Max. for port 5-16 235W Max. for PoE power budget
Performance		
Flash Memory	4 MB	
Switch Property		
Standards and Protocols	IEEE 802.3, IEEE 802.3u, IEEE 802.3ab, IEEE 802.3z, IEEE 802.3x, IEEE 802.1x,	IEEE 802.1q, IEEE 802.1p, IEEE 802.3af, IEEE 802.3at, IEEE 802.3bt
Forwarding Mode	Store and Forward	
Switching Capacity	20 Gbps	36Gbps
Packet Forwarding Rate	14.88 Mpps	26.78Mpps
MAC Address Table	2k	8k
Packet Buffer Memory	1.5Mbit	4.1Mbit
Jumbo Frame	9216 Bytes	10kB
Power Supply		
Input Power	DC 48-57V/6A Max	DC 48-57V/8A Max

Model		WI-PCES310GF-F	WI-PCES318GF-F
Power Consumption		Idle: 5 W 100% Traffic Rate with PoE: 150W	Idle: <5 W 100% Traffic Rate with PoE: 240W
Physical Characteristics			
Switch Dimension (W*D*H)		180*140*25 mm	230*148*24.4 mm
Package Dimension		247*215*47 mm	263*238*48 mm
Weight		Net Weight: 0.68 kg	Net Weight: 1.0 kg
		Package Weight: 0.95 kg	Package Weight: 1.2 kg
Installation		DIN-rail, wall-mount and magnetic-mount	
Environmental			
Reliability	Surge Immunity	IEC 61000-4-5 Common mode 6kV Differential mode 2kV	
	ESD Protection	IEC 61000-4-2 Contact discharge 6kV Air discharge 8kV	
Operating Temperature		-40°C to 75°C(-40°F to 167°F)	-30°C to 65°C(-22°F to 149°F)
Operating Humidity		10%~90% RH no condensation	
Storage Temperature		-40°C to 80°C(-40°F to 176°F)	
Storage Humidity		10%~90% RH no condensation	
Certification			
Certification		CE, FCC, RoHS, UKCA, RCM	

Model	WI-PCES310GF-F	WI-PCES318GF-F
Software Features		
System Settings	Device Info	
	IP Settings	
	User Management	
	Firmware Upgrade	
	Configuration Backup	
	Reset	
	Save Configuration	
	Reboot	
Switch Settings	Port Settings	
	Port Statistics	
	Storm Control	
	Port Mirroring	
	Port Isolation	
	Port Bandwidth Control	
	Link Aggregation	
	Loop Guard	
	MAC Search	
	Static MAC	
	MAC Table	
	Alarm	
VLAN Settings	VLAN Member	
	VLAN Settings	
PoE Management	PoE Settings	
ONVIF	Onvif Detect	
Cloud Settings	MQTT Client	
	Wi-Tek Devices Discovery Table	

Specifications



Products	WI-IOTBOXNANO
Hardware Version	V1
Hardware Features	
Overall Dimensions (W*H*D)	300*400*148mm (Include mounting slot) 300*400*133mm
Inner Dimensions (W*H*D)	296*396*95mm
Weight(kg)	?
Package Dimensions (W*H*D)	460*360*190mm
Package Weight(kg)	?
Thickness	1.2mm
Materia	SPCC
Color	Light Grey + Grey
Surface Treatment	Electrostatic Spraying
Installation	Pole/Wall(optional)/Floor mounted
Door	1
Lock Hole	1
Detachable Side Plate	2 (1 on each side panel)
M25 Waterproof Connector	2 (1 on each side inner panel)
Aluminum Alloy Chute	2 (on the rear panel)
Bottom Cable Entry	1 (at the bottom)
Water Outlet Holes	4 (at the bottom, can be blocked with rubber plugs)
Microswitch	1 (on the upper right inside)
Fan	1 (on the right inner panel)
Insect Net	2 (1 on the upper right inside , between the fan and the waterproof louver, 1 on the upper left inside, between the back bracket and the waterproof louver)
Equipment Installation	2*250mm DIN-Rail
Protection	IP55
Application	
Application	Junction, Distribution, Electrical, Battery, Control, Monitoring etc. Outdoor waterproof Enclosure Box

Specifications



Model	WI-FP150W-56V
Output	
DC Voltage	56V
Rated Current(Max.)	2.67A
Current Range	0-2.67A
Rate Power(Max.)	150W
Ripple & Noise(Max.)	200mVp-p
Volatge ADJ. Range	47.5-58V
Voltage Tolerance	± 1.0%
Link Regulation	± 0.5%
Load Regulation	± 0.5%
Setup, Rise Time	1.0s,30ms/230VAC(at full load); 1.0s,30ms/115VAC(at full load)
Hold Up Time (Typ.)	40ms/230VAC(at full load); 12ms/115VAC(at full load)
Input	
Voltage Range	90~264VAC 127~370VDC [DC input by connecting AC/L(+),AC/N(-)]
Frequency Range	47~63Hz
Efficiency	89.5%
AC Current (Typ.)	3.1A/115VAC; 1.8A/230VAC
Leakage Current	<1.5mA/240VAC
Inrush Current	Cold Start 120A/1000µs at 230VAC 50Hz Cold Start 60A/800µs at 115VAC 50Hz

Model	WI-FP150W-56V
Protection	
Over Load	110%~140% rated output power Protection type: Hiccup mode, recovers automatically after fault condition is removed
Over Voltage	115~150% Rated Output Voltage Shut down o/p voltage, re-power on to recover
Over Temperature	Shut down o/p voltage, re-power on to recover
Short Circuit	Hiccup mode, recovers automatically after fault condition is removed
Environment	
Working Environment	-30°C~+70°C(Please refer to “Derating Curve” section); 20 ~ 95% RH Non-condensing
Storage Environment	-40°C~+85°C; 10 ~ 95% RH Non-condensing
Other	
Product Dimension(W.H.D)	159*97*30mm
Product Weight	415g
Installation	Chassis Mount

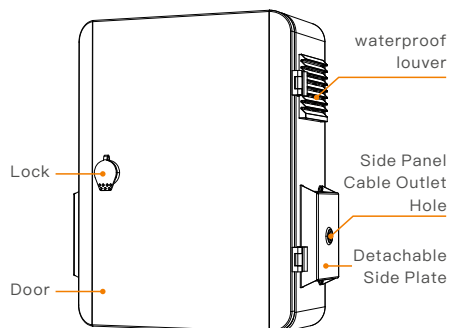
Note:

- 1.All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
- 2.Ripple&noise are measured at 20MHz of bandwidth by using a 12” twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Length of set up time is measured at cold first start. Turning ON/OFF the power supply very quickly may lead to increase of the set up time.
- 4.The ambient temperature derating of 3.5 °C/1000m with fanless models for operating altitude higher than 2000m(6500ft).

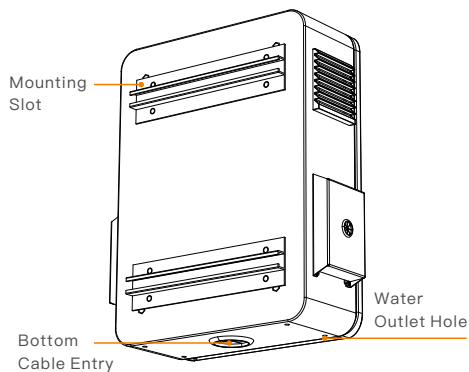
Appearances and Dimensions

WI-IOTBOXNANO

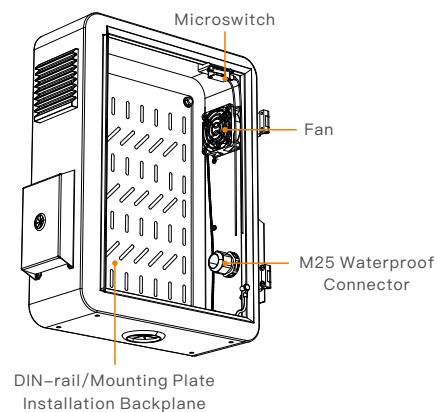
Front Overview



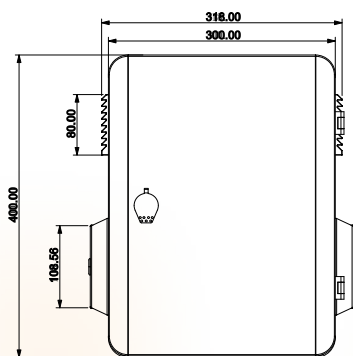
Rear Overview



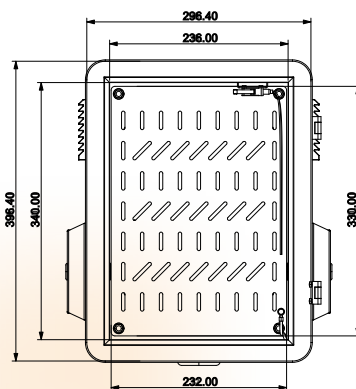
Inner Overview



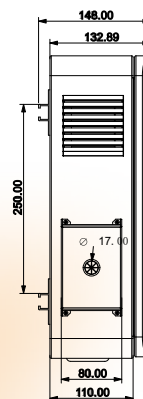
Front



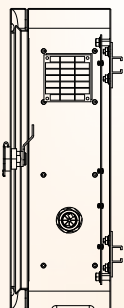
Inner Front



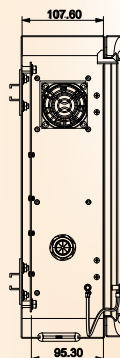
Left Side



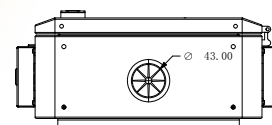
Inner left



Inner right

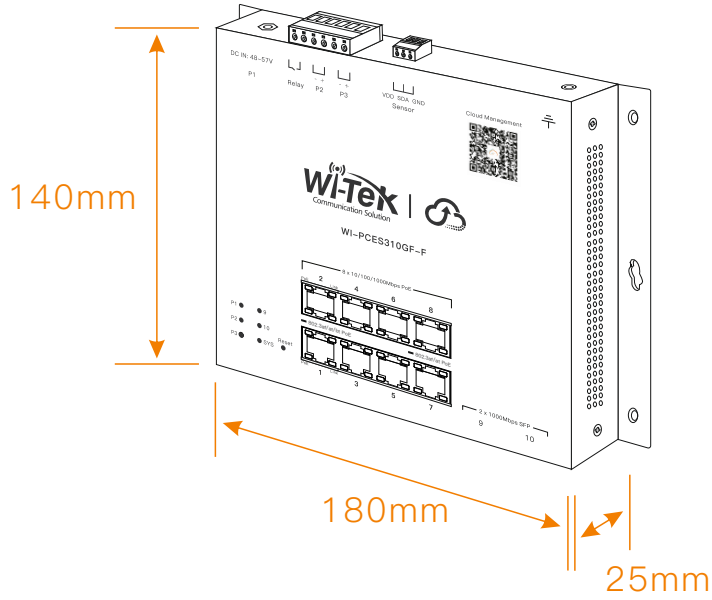


Bottom

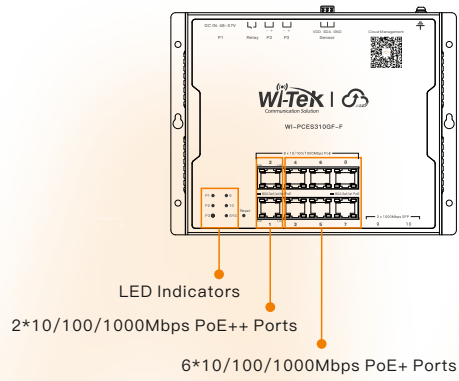


WI-PCES310GF-F

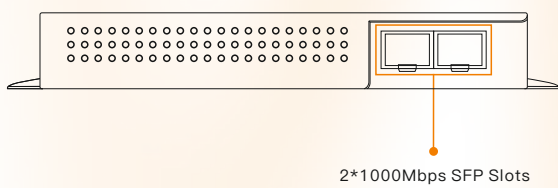
Dimensions (mm)



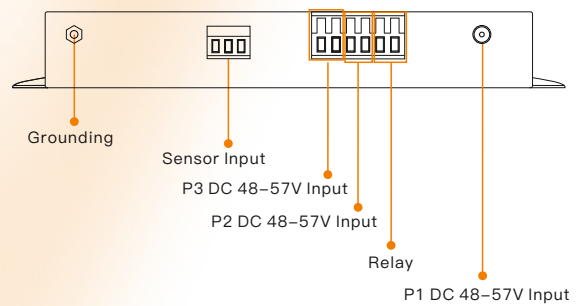
Front Panel



Bottom Panel

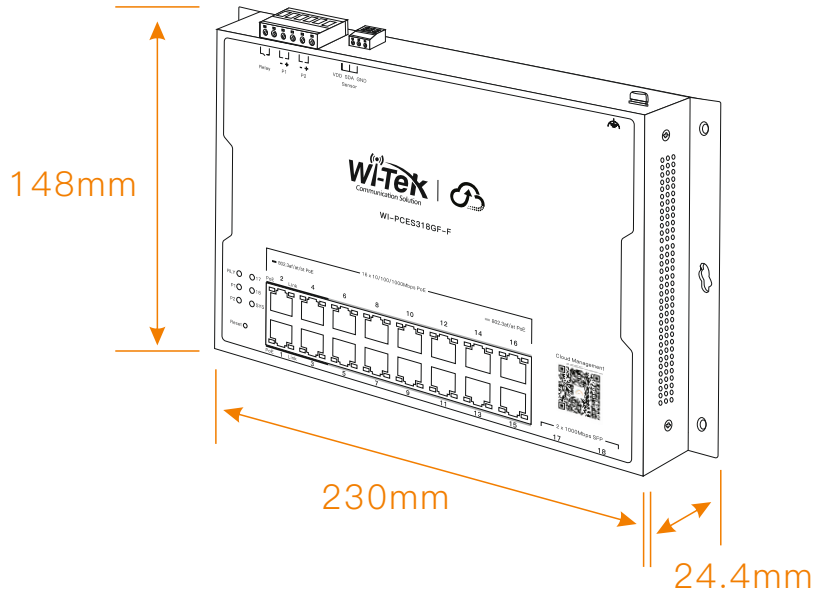


Top Panel

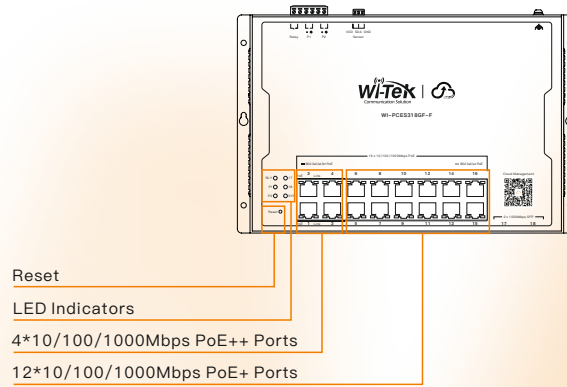


WI-PCES318GF-F

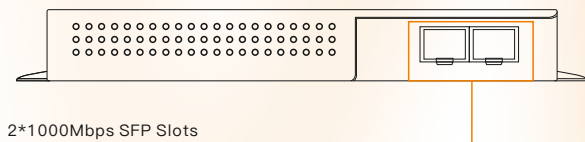
Dimensions (mm)



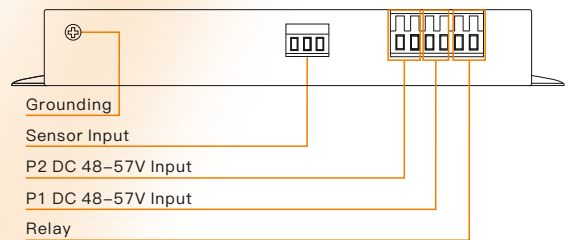
Front Panel



Bottom Panel

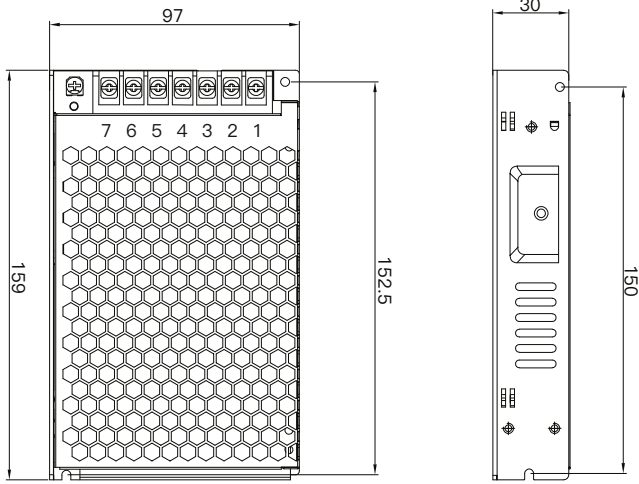


Top Panel



WI-FP150W-56V

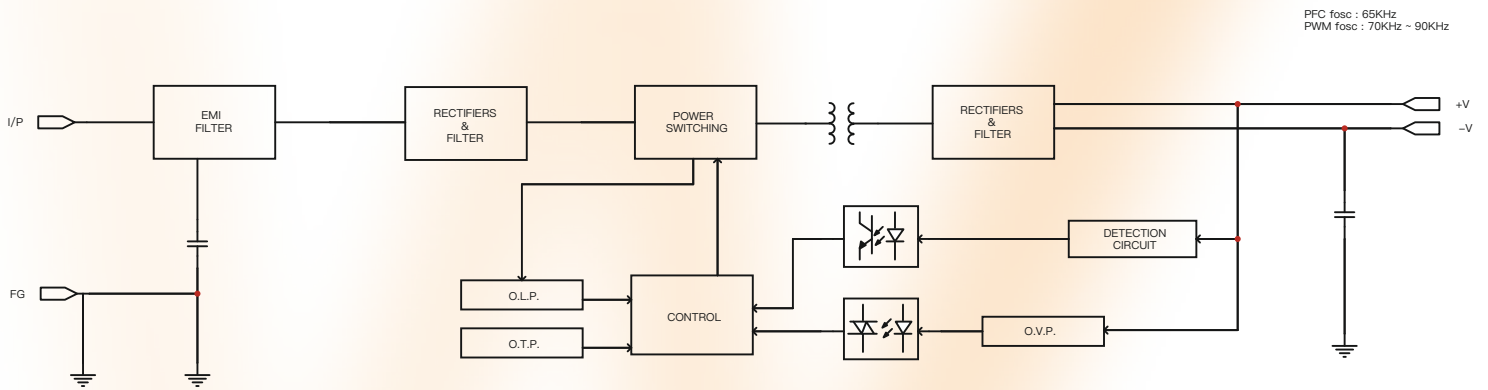
Mechanical Specification



Terminal Pin No. Assignment

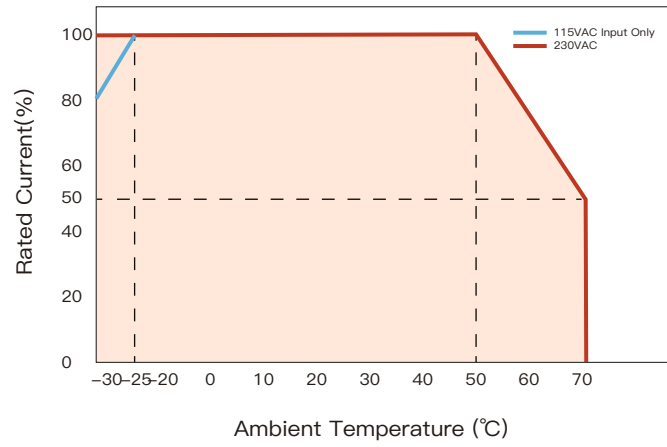
Pin No.	Assignment
1	AC/L
2	AC/N
3	PE
4	DC OUTPUT -V
5	DC OUTPUT -V
6	DC OUTPUT +V
7	DC OUTPUT +V

Block Diagram

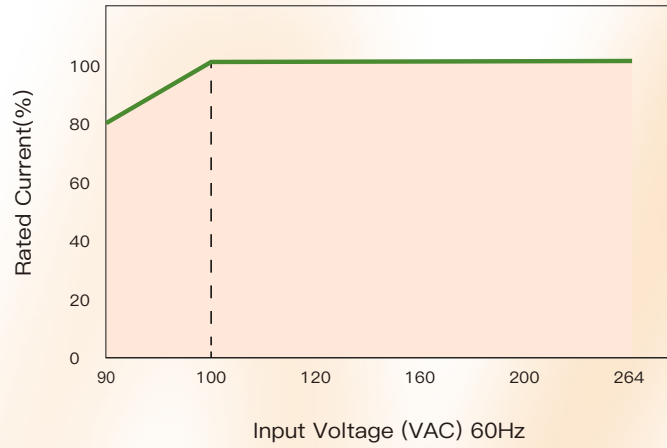


WI-FP150W-56V

Derating Curve



Static Characteristics



Package Contents

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

Items	Quantity
Switch(WI-PCES310GF-F or WI-PCES318GF-F)	1 pcs
Temperature and humidity sensor	1 pcs
Magnetic accessories	1 pcs
Rail mounting accessories	1 pcs
BOX (WI-IOTBOXNANO)	1 pcs
Pole Mounting Accessories	1 pcs
Key	2 pcs
Power Adapter(WI-FP150W-56V)	1 pcs
Quick installation guide	2 pcs



Wireless-Tek Technology Limited

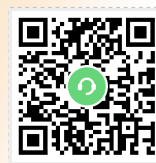
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Technical Support



Cloud Management



Company Website