

User Manual & Specifications

Customer's Part Number:

MOONS' Part Number:

4696355000196

Model:

GPT4GHP93

P/N:

A8625-01

CUSTOMER'S APPROVAL STAMP

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Please sign back after your approval. The specifications will come into force when we receive purchase order.

DWG.	CHK.	STANDARD	APPD.

Subject to change without notice

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History Version

Rev.	Date	Contents	ECO No.	DWG.	CHK.	APPR.
A0	2024-09-09	The first version		Jiabin.gu	Wanghui.yan	Yiping.lai
A1	2025-12-04	Modify the description of the power interface and the WPAN antenna	ECO25-1284DE	Jiabin.gu	Wanghui.yan	Yiping.lai

Subject to change without notice

1 DESCRIPTIONS

This wireless gateway connects the CMS (Central Management System) and node controllers, to enable versatile lighting control functionality includes on/off, dimming, scenes, scheduling, cloud-based and monitoring capabilities.

Flexible uplink communication options: Supports cellular network, Ethernet and Wi-Fi connections for communication.

With Sub-GHz wireless downlink communication, it ensures stable and reliable operation.

Display screen: a display screen allows seamless control of all lights with pre-set dimming levels for convenience and watch the configurations and status of gateway.

RGB support: support RGB scenes as well as dynamic scenes. Preloaded default scenes allow plug-and-play functionality without configuration.

Weather-Resistant Design: Built to withstand outdoor environments, ensuring reliability in all conditions.

In conjunction with an intuitive APP on Android or IOS can easily configure and trigger scenes for node controllers.



1.1 FEATURES

- Power Adapter Wide voltage input: 100-240VAC
- Operating temperature:-20 to +60°C.
- Power consumption <20W.
- Transfer data between control center and nodes.
- An Ethernet interface for uplink data.
- A cellular RF module for data uplink.
- Built-in WIFI module for data uplink.
- An accord IEEE802.15.4-sub 1GHz standard wireless module for data downlink.
- Built-in Bluetooth module for configuration.
- Embedded communication encryption mechanism.
- Protection class: IP66.
- Built-in mini-SIM (2FF) slot
- Support carrier bands around the world
- Warranty: 5 years standard.

2 CHARACTERISTICS

2.1 OPERATING CONDITIONS

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Operating temperature		-20	/	+60	°C
Storage temperature	Indoor dry, well-ventilated place	-20	/	+70	°C
Relative humidity	No frost	10	/	95	%
Vibration		/	/	1	G
Packaging Impact	Drop	/	1	/	M
Ingress protection	Not Installed	/	IP66	/	
Warranty		/	5	/	Years

2.2 EMC

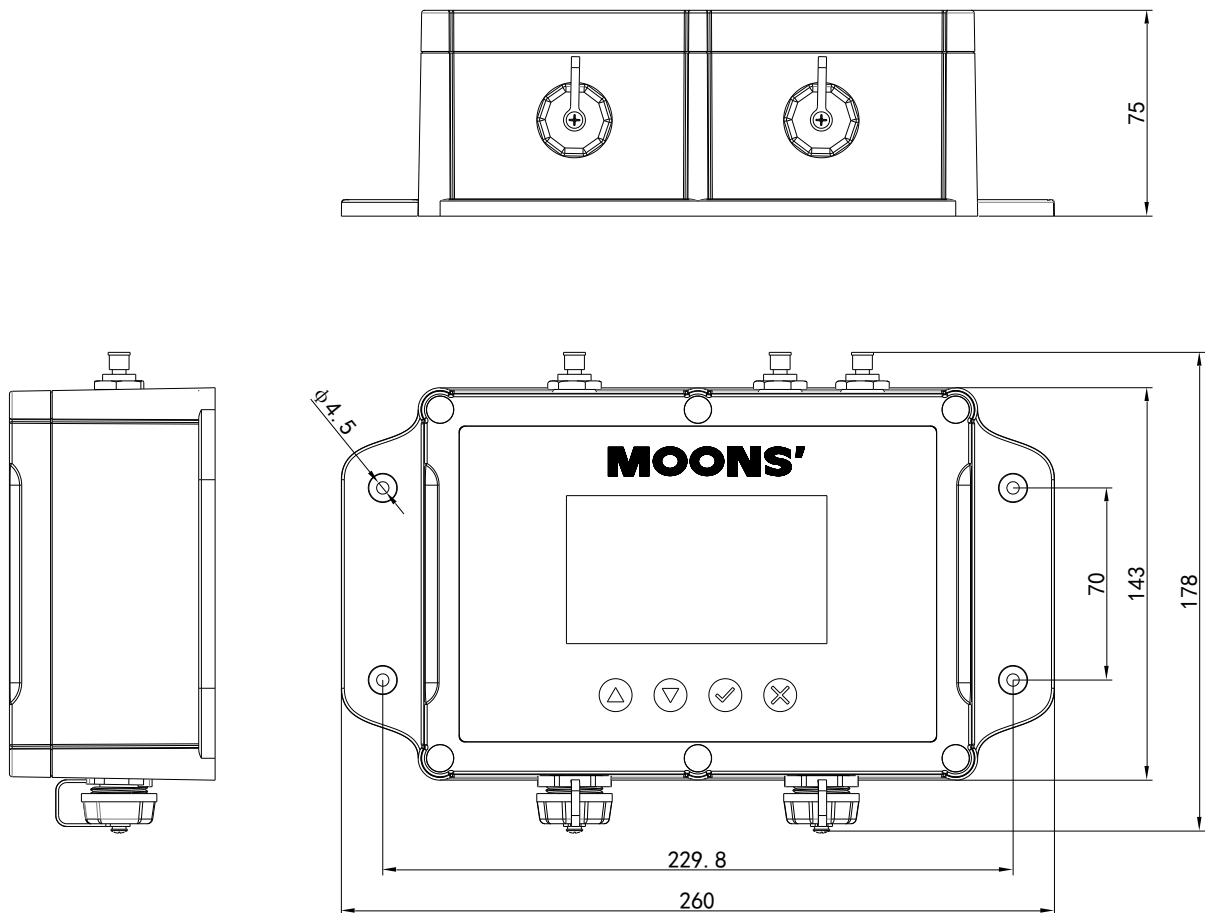
TYPE	Standard	Test level
Electrostatic discharge immunity	IEC61000-4-2	Level 2
RFEMS	IEC61000-4-3	Level 2
Electrical fast transient burst immunity	IEC61000-4-4	Level 3
Surge Immunity	IEC61000-4-5	Level 2
Conducted disturbances induced by RF field immunity	IEC61000-4-6	Level 2

2.3 CERTIFICATION

TYPE	Standard
Safety certification	UL 62368 (only for power adapter) ;
Electromagnetic interference characteristics certification	FCC ID: 2BRS4-GPT4GHP93 FCC Title 47 CFR Part 15.B FCC Title 47 CFR Part 15.C FCC Title 47 CFR Part 22H, Part 24E, Part 27 and Part 90 FCC 15 Class B (For AC adapter)

3 MECHANICAL DATA

3.1 DIMENSIONS



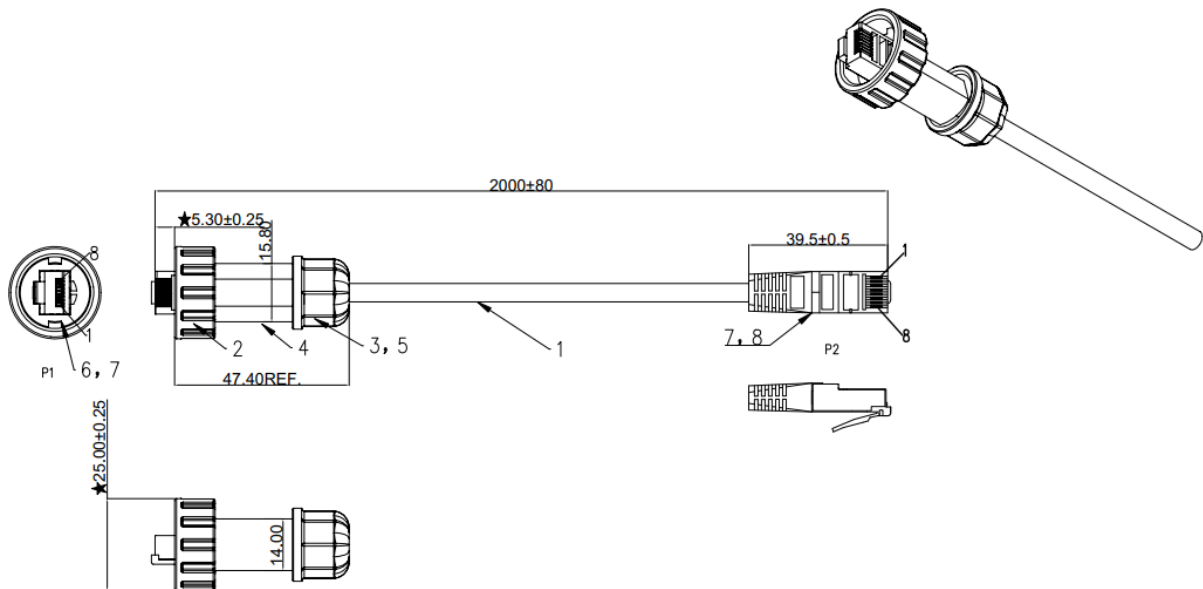
3.2 DCIN INTERFACE & WIRING



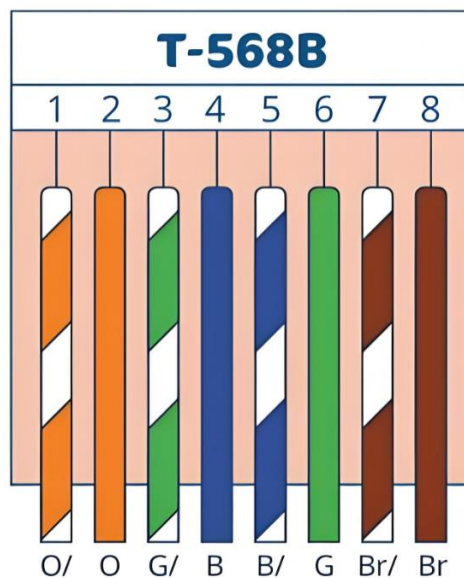
Wiring Description

NO.	Color	Description
1	RED	DC INPUT V+
2	BLACK	DC INPUT V-

3.3 ETHERNET WIRING (RJ45)

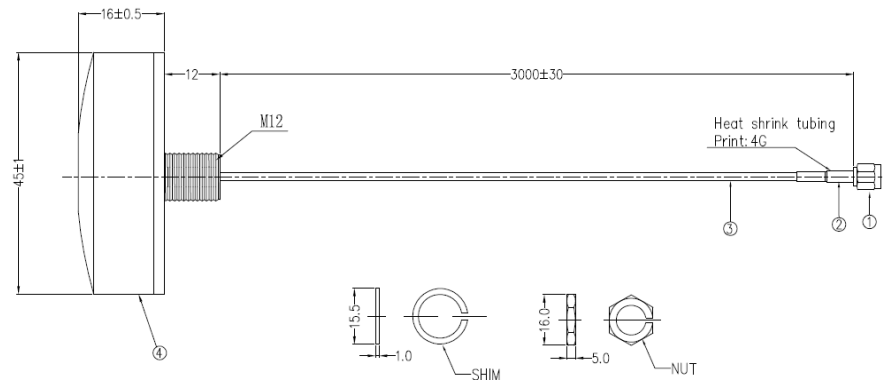


Waterproof Ethernet cable (optional accessory)

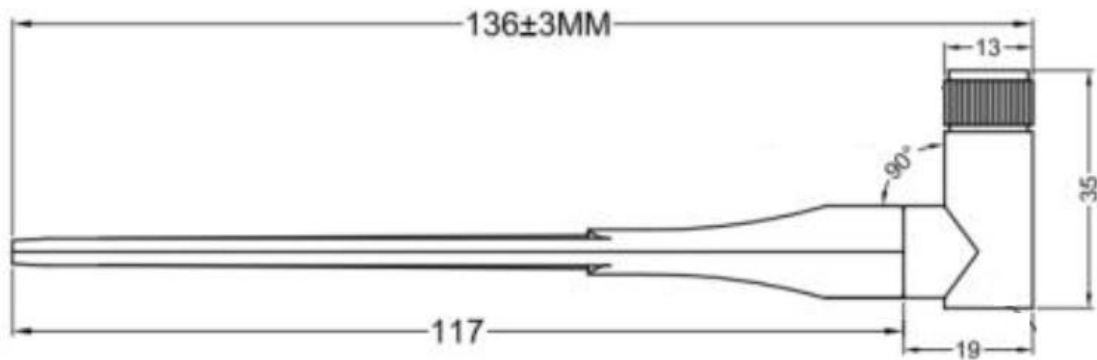


Customer's recommended wire sequence for self-selected Ethernet cable

3.4 4G ANTENNA

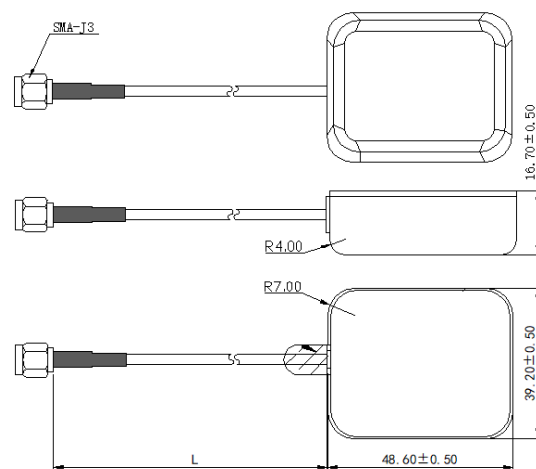


3.5 WPAN ANTENNA



Right Angle Whip Antenna (RP-SMA connect)

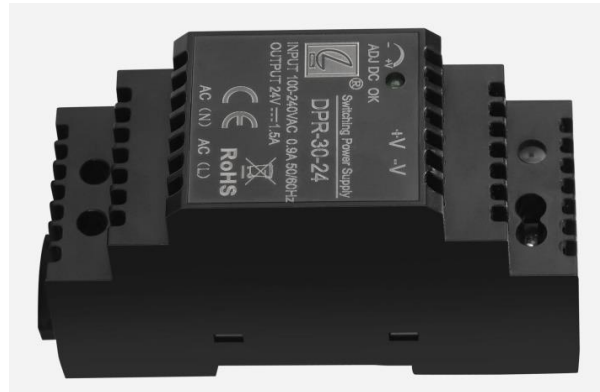
3.6 GNSS ANTENNA



4 INTERFACE

4.1 POWER SUPPLY

- The power adapter included in the packaging
- Power Adapter Wide voltage input: 100-240VAC
- A waterproof power cord is provided within the packaging.



Report



Report

CB

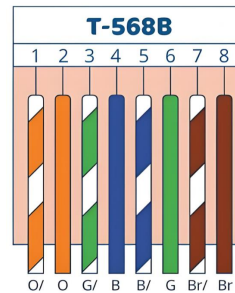


UL62368-1 EN62368-1 BS EN62368-1 IEC62368-1 EN IEC62368-1

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Adapter input voltage	AC (50/60Hz)	100	/	240	VAC
Adapter output power	DC	/	/	36	W
Adapter output voltage		23.5	24.0	24.5	V
Adapter output current	@24V	/	/	1.5	A
Gateway input voltage	DC	12	24	30	VDC
Gateway input current	RMS 12V	100	/	1000	mA
Gateway Power Consumption	24V	0.25	2.5	12	W

4.2 ETHERNET

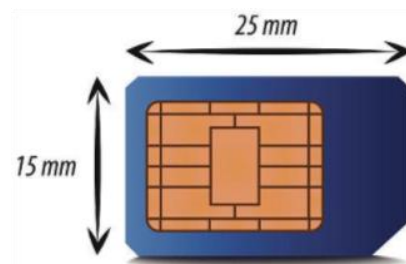
- RJ45 (8pin)
- TCP / IP protocol
- 100M/10M adaptive
- It is recommended to use T-568B RJ45 cables.
- Optional waterproof Ethernet cable



PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Transmission rate		10	/	100	Mbps
Transmission voltage	100Mbps	-1.05	/	+1.05	V
Transmission voltage	10M	-2.8	/	+2.8	V
Isolation Voltage	PE, DCIN to LAN		1500		VAC

4.3 Cellular Network

- Support LTE 4G FDD Cat.4
- 4G interface : SMA
- Built-in MINI-SIM card slot
- Uplink up to 50 Mbps; Downlink up to 150 Mbps
- Compliant with FCC certification
- Output power: Class 3 (0.2 W, 23 dBm) @ LTE
- LTE FDD bands:
B1,2,3,4,5,7,8,12,13,18,19,20,25,26, 28,
- LTE TDD bands: 38,39,40,41



MINI SIM

4.4 GNSS

- Support of GPS, Glonass, Beidou, Galileo.
- Used for product positioning and timing.

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Sensitivity	Tracking	-157			dBm
Time To First Fix	Cold reset	35			s
Accuracy	@CEP50			2.5	m
Navigation update rate			1		Hz

4.5 BLUETOOTH

- Bluetooth LE: Bluetooth 5.3.
- Data transfer rate: 1 Mbps, 2 Mbps
- Maximum transmit power: 10dBm
- Minimum receiving sensitivity: -97dBm
- Built-in 2.4GHz Bluetooth antenna.
- Connect the mobile APP through Bluetooth for configuration and on-site debugging.

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNIT
RF transmission distance	Within visual distance	/	/	50	m
RF band		2400	/	2483.5	MHz
RF receiver sensitivity		-97	/	/	dBm
RF transmitter power		/	/	10	dBm

4.6 WIFI

- Built-in WIFI module for uplink.
- IEEE Wi-Fi 802.11b/g/n/ax –compliant.
- Center frequency range of operating channel: 2412 ~ 2484 MHz.
- Supports 20 MHz, 40 MHz bandwidth in 2.4 GHz band.
- Maximum transmit power: 16dBm.
- Minimum receiving sensitivity: -98dBm.
- Built-in 2.4GHz WIFI antenna.
- The maximum data transfer rate is 229.4Mbps
- WIFI security supports: WPS/WEP/WPA/WPA2/WPA3.

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNIT
RF transmission distance	Within visual distance	/	/	30	m
RF band		2400	/	2483.5	MHz
RF receiver sensitivity		-98	/	/	dBm
RF transmitter power		/	/	16	dBm

4.7 WPAN

- An accord IEEE802.15.4-915 MHz standard wireless module for data downlink;
- Self-building network;
- Self-healing network;
- Embedded communication encryption mechanism.

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNIT
RF transmission distance	2dBi antenna	/	/	300	m
RF band	915MHz	904	/	926	MHz
RF receiver sensitivity		-102	/	/	dBm
RF transmitter power		/	/	20	dBm

5 DATA PROCESSING AND STORAGE

5.1 PROCESSOR

- With ARM cortex-A7 core processor, Clocked at 800MHz.

5.2 MEMORY

- DDR RAM 512MB.
- eMMC 8GB.
- Data saved more than 10 years.

5.3 RTC

- RTC can continue to work after a power failure for more than 10 years.

6 HMI

6.1 KEYS

NAME	Action	Feature
↑	Press the button	Move the cursor up/turn the page up.
↓	Press the button	Move the cursor down/turn the page down.
✓	Press the button	Confirm changes.
×	Press the button	Cancel changes/cursor exit.

Special combination keys:

Hold ↑ + × for more than 5 seconds for system reset.;

Hold ↓ + × for more than 5 seconds for the device will restore factory Settings and reset.

6.2 DISPLAY

It is used to display the basic information of the machine, the network information of the machine and the working status of the machine. Customers can also use the display and keys to debug the Node Controller locally.

7 ORDERING

DESCRIPTION	ORDERING CODE
GPT4GHP93 Wireless Gateway	4696355000196

FCC Warning

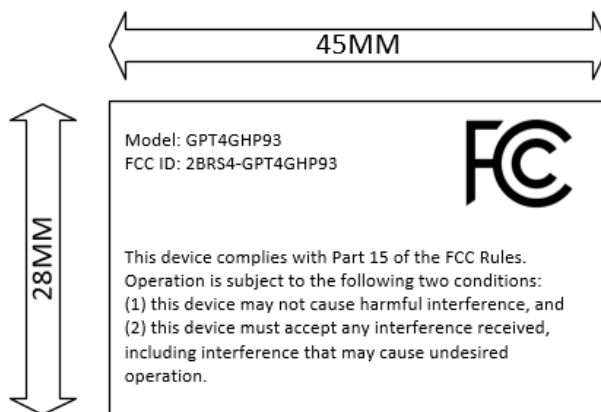
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Caution: The user is cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

FCC RF Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and any part of your body.



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