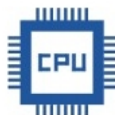


HEMS Energy Management Terminal UB_Box 300 Product Manual



RK3568

High-Performance Processor



Self-Designed

Ultra-High Quality



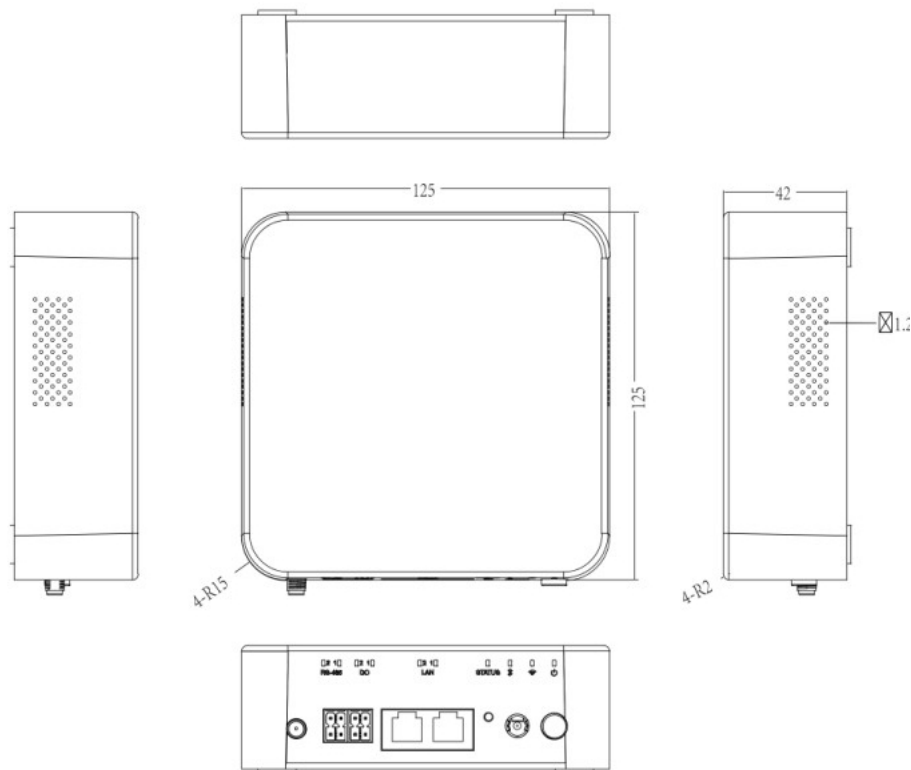
**Highly Reliable
Operation**

7 Days a Week, 24 Hours a Day



The UB_Box 300 features a RK-3568 processor, 2 GB of onboard memory, and fully isolated interfaces. It includes supercapacitor-based power loss protection for enhanced reliability, making it a smart energy management device specifically designed for energy storage applications.

structure size

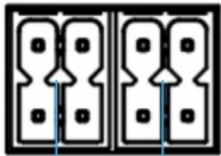


产品参数

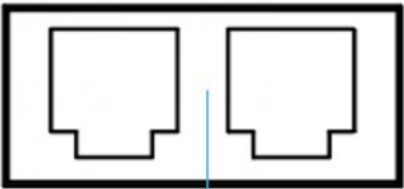
Specifications	Model	HEMS UB BOX 300 Energy Management Terminal
System	Processor	RK3568 Quad-Core ARM Cortex-A55 (MAX 2.0GHz)
	Internal storage	2 GB onboard (4 GB available)
	Memory	EMMC: 32 GB (64 GB available)
	GPU	ARM G522EE
	NPU	1TOPS
	Operating system	Ubuntu20.04
Peripheral interface	Internet access	2×RJ45 Realtek 8111H (10/100/1000 Mbps)
	Port	2×RS-485
	D0	2×D0
	Push-button	1×Reset Button、1×Power Button
	Pilot lamp	2×RS-485_LED、2×D0_LED、2×LAN_LED、1×STATUS_LED、 1×Power_LED
	STATUS	Node Path: /sys/class/leds/power/brightness
Internal Expansion	Extension Interface	1×miniPCle slot
	SIM Card	1×Nano SIM Socket for 4G/5G Module
	Show	1×HDMI:max resolution Up to 4096×2160@30Hz
	DEBUG	1×DEBUG
	USB	2×USB2.0 (1×OTG)
	Push-button	1×Recover Button
Source	Power input	DC5~12V 1A
	Supercapacitor	Supports supercapacitor power loss protection
Structure	Pigment	Matte matte black
	Material quality	PC+ABS hybrid material
	Way to install	Desk-Mount
	Size	125×125×42mm
	Weight	0.25Kg
Environment	Working temperature	-20~60℃
	Storage Temperature	-30~70℃
	Humidity	5% to 95%, non-condensing state
	Random vibration	5~500Hz, 2Grms (SSD) operation
	Sinusoidal vibration	5~500Hz, 2G Non-operation

State Indicator Light

☐ 2100210	☐ 210	0	D Mo unt ain
RS-485 DO	LAN	STATUS	



DO RS-48



LA



Reset

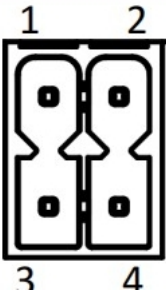


DC



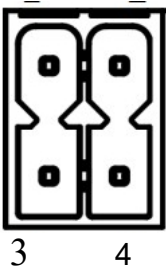
Power

▶ interface specification

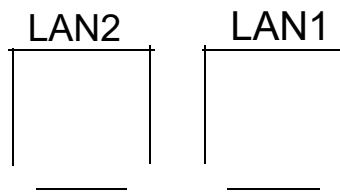


DO Interface						
Pin Number	Pin Definition	Defined declaration	Pin Number	Pin Definition	Defined declaration	GPIO order number
1	D01_+	Relay output 1 positive	2	D01_-	Relay output 1 negative	D01
3	D02_+	Relay Output 2 Positive	4	D02_-	Relay output 2 negative	D02

Note: The path for the D01 controllable node is /sys/class/leds/do1/brightness;
the path for the D02 controllable node is /sys/class/leds/do2/brightness.



RS-485 Interface						
Pin Number	Pin Definition	Defined declaration	Pin Number	Pin Definition	Defined declaration	Linux Node
1	RS-485_A1	Serial Port 1 _Positive	2	RS-485_B1	Serial Port 1 _Negative	/dev/ttyS0
3	RS-485_A2	Serial Port 2 _Positive	4	RS-485_B2	Serial Port 2 _Negative	/dev/ttyS3



LAN internet access		
Network Port Name	Node Name	IP address
LAN1	eth3	192. 168. 2. 100/24
LAN2	eth0	192. 168. 1. 100/24