MICRO System

User Manual

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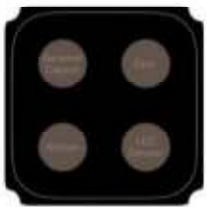
1. System compoments

CCP3



WMSP4

CRS17

BS1210

RSE

M12-30-S

Table 1 Component list of MICRO system

No.	Component	Descrption	Qty	Unit
1	CCP3	LED control panel	1	PC
2	WMSP4	Wireless switch panel with 4 buttons	1	PC
3	CRS17	Load module with 7 outputs	1	PC
4	BS1210	Smart battery charger, 12V10A output	1	PC
5	RSE	Capacitive water tank sensor	1	PC
6	M12-30-S	Lithium battery, 12V30AH	1	PC

2. Wiring diagram

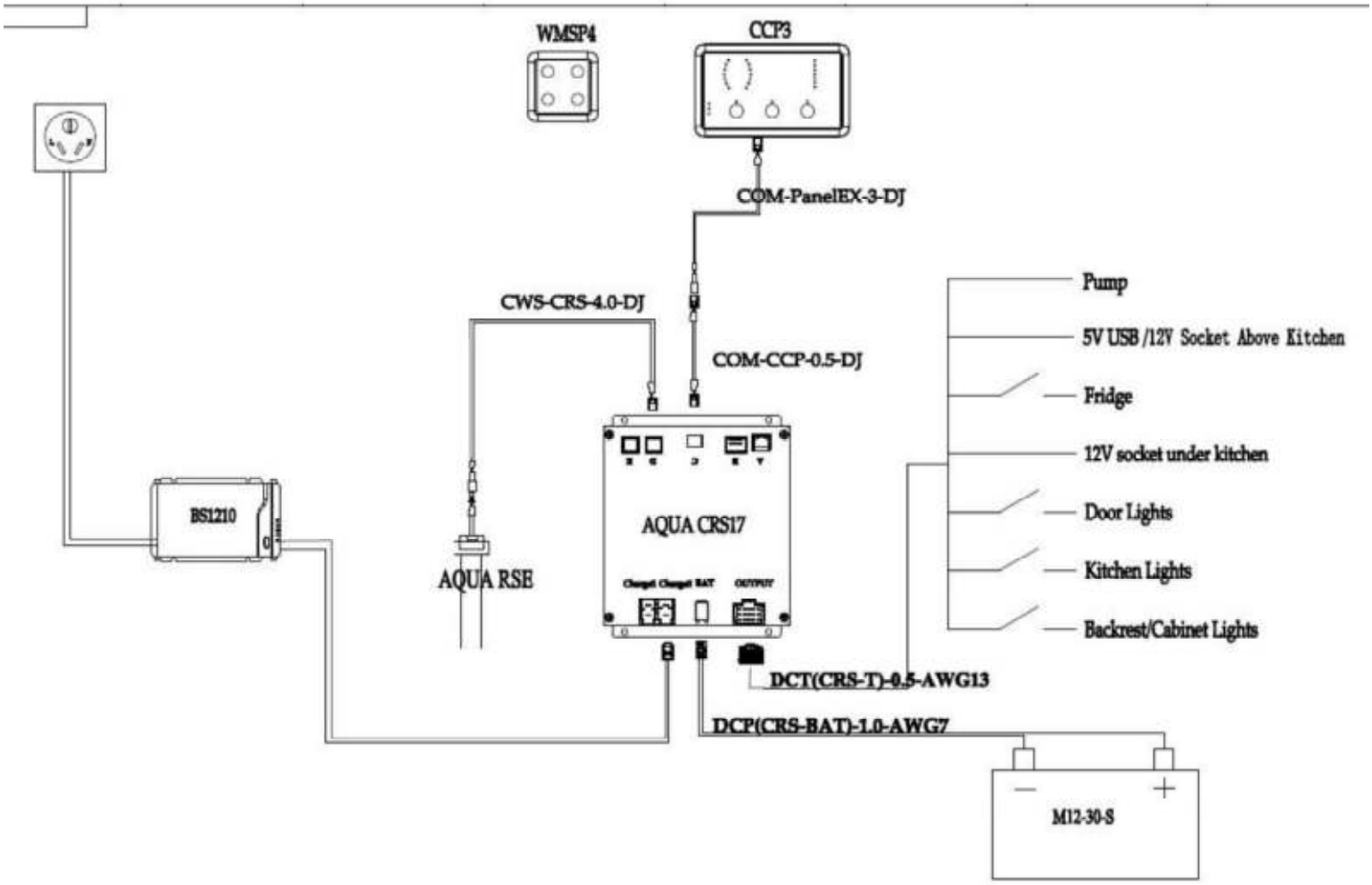


Figure 1 System diagram of MICRO system

3. Panels and pairing operation

3.1 Wireless switch panel WMSP4

Before using WMSP4 please confirm the dip switch is correct. The position of dip switch is shown as below picture

Figure 2 The right dip switch setting of WMSP4

Remarks: There has to be 2pcs CR2032 cell battery to power WMSP4 (See below Picture)

2pcs CR2032 cell battery

Figure 3 Two pieces cell batteries are required to power WMSP4

3.2 LED control panel CCP3

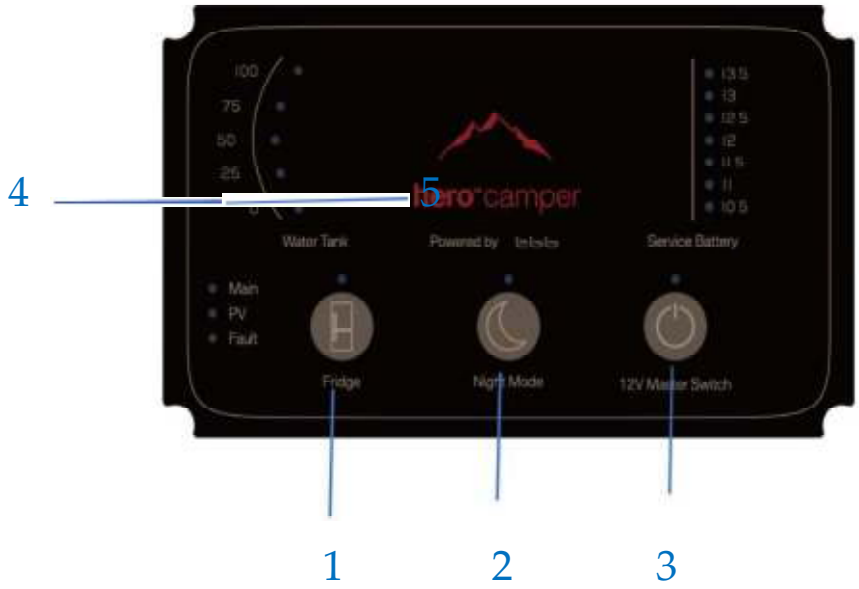


Figure 4 LED control panel CCP3

Table 2 Function description of CCP3

No.	Labeling	Type	Description
1	Fridge	ON/OFF control	Power ON/OFF fridge
2	Night Mode	Scene Mode	All the indicator of CCP3 will be turned OFF except "Night Mode"
3	12V Master Switch	DC load control	To turn ON/OFF all DC loads
4	Water Tank	LED display	Display the water tank information
8	Service Battery	LED display	Display the voltage of Service Battery

3.3 Pair WMSP4 with load module CRS17

Remarks: Double confirm the dip switch is at the correct position as above before paring

A) Long press "Night Mode" button on CCP3 for 5 seconds to enter Pairing Mode (The indicator of Night Mode will be flashing when it enters into paring mode)

B) Press the any button of the WMSP4. The corresponding output will be active means pairing successfully

C) It will quit from paring mode automatically 5 seconds after pairing is finished

D) Repeat step A) to C) to pair next WMSP4 with CRS17. Up to 5pcs WMSP4 can be paired with one CRS17

Remarks: Please make sure only one paring process being conducted in a same area

4. Smart battery charger operation and setting

4.1 Front panel of smart battery charger BS1210

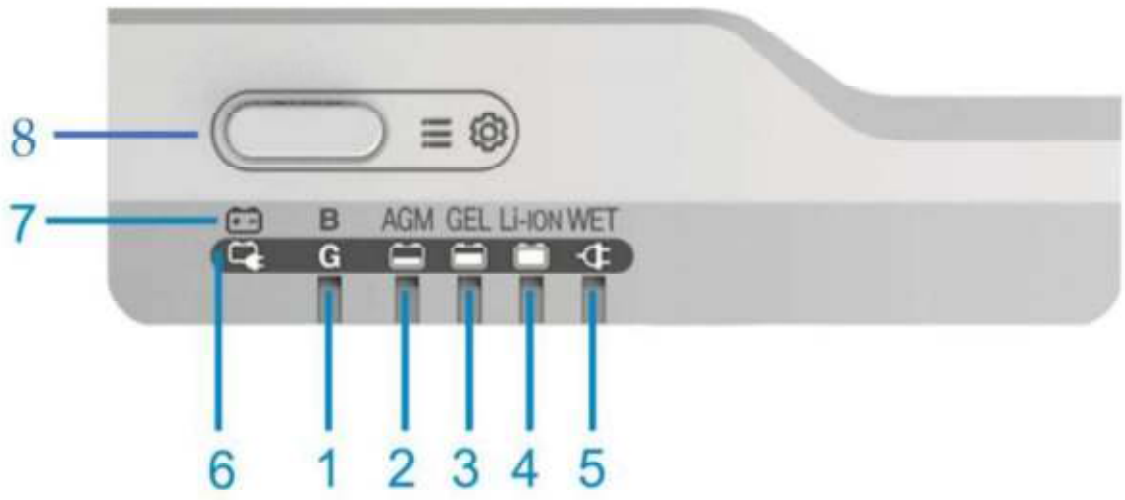


Figure 5 Front panel of BS1210

Table 3 Descripton of front panel BS1210

No.	Description	Remarks
1	LED1	Three status: - Blue for battery type - Green for charging stages - Flashing for faulty
2	LED2	
3	LED3	
4	LED4	
5	LED5	
6	LED of charging status	
7	LED of battery type	
8	Main button	

4.2 Operation

Short press main button, the LED 1 will be cycle display as Blue, Green and Red flashing:

- Blue: Display battery type. LED2 to LED5 represents battery type of AGM, GEL, Li-ion and WET

- Green: Display charging stages. LED2 to LED4 represents charging stages of Bulk, Absorption and Float
- Red flashing: Faulty of charging

4.3 Setting

4.3.1 Battery type setting

When LED1 stays at Blue, long press main button for 5 seconds to enter into battery type setting; and then short press main button to select battery type as:

- LED2 for AGM battery
- LED3 for GEL battery
- LED4 for Li-ion battery
- LED5 for WET battery

Long press main button for 5 seconds again to confirm battery type selection

4.3.2 Working mode setting

When LED1 stays at Green, long press main button for 5 seconds to enter into working mode setting:

- LED5 OFF is Charger mode
- LED5 ON is Power Supply mode

Long press main button for 5 seconds again to confirm working mode selection

5. Specification

5.1 Specification of load module CRS17

Table 4 Specification of load module CRS17

Electrical Specifications (CRS 17)			
Input voltage			10.5~16V
Charger channel	Numbers		2
	Nominal Charging current		30A
	Max charging current		50A
Fused Outputs	For Relay	Numbers	3
		Rated current	15A
	For lights	Numbers	2
		Rated current	15A
LED Dimmable	Numbers		2
	Rated current		5A
Battery disconnect(LVD)	Disconnect		10.5V
	Delay off time		5mins < 10.5V
	Reconnect voltage		11.5V
Protection	Short circuit		Fuse blown or shut down output
Learning Mode			Support
Physical Specifications			
Connector	For Battery		（THB-936619-2）(Max cable:10mm ²)
	For Charger 1		（THB-0514101）6mm ²
	For Charger 2		（THB-0514103）6mm ²
Protection category			IP20

5.2 Specification of smart battery charger BS1210

Table 5 Specification of smart battery charger BS1210

Model	**BS1210**
Electrical	
Output voltage (PS mode) (VDC)	13.5V±0.27
Max Output current (A)	10
Nominal input voltage (VAC)	85-265VAC,50/60Hz
Charge algorithms	5 steps. soft start, bulk, absorption, float, recycle
Temperature compensation	Automatically
Absorption voltage(VDC)	AGM:14.4V,GEL:14.1V,LFP:14.4V,WET:14.7V
Floating voltage (VDC)	AGM:13.5V,GEL:13.5V,LFP:13.5V,WET:13.7V
Charging current (A)	10
Min battery voltage (VDC)	2
Efficiency	88%
Input connector	Cable of 1.5 meter with CEE 7/7 plug
Output connector	Fixed cable,2.5mm², 1 meter
Output	1
Ripple noise	≤200mVp-p
Regulation Accuracy	≤2%
Cooling	Self cooling
Working Temperature	-20℃ ~ 60℃（40℃~60℃ reduce the current）
Protection	
Short circuit	Shutdown output, automatically restart when short circuit is removed
Reverse polarity	No charging
Charger over temp	Shut down the charger
Battery over temp	Shut down the charger
Structure	
Out case	Aluminum + plastic
Dimension(mm)	175*114*53
Weight(kg)	1.0
IP class	IP20

6. Dimensions and Connection

6.1 Load module CRS17

6.1.1 Dimension of CRS17

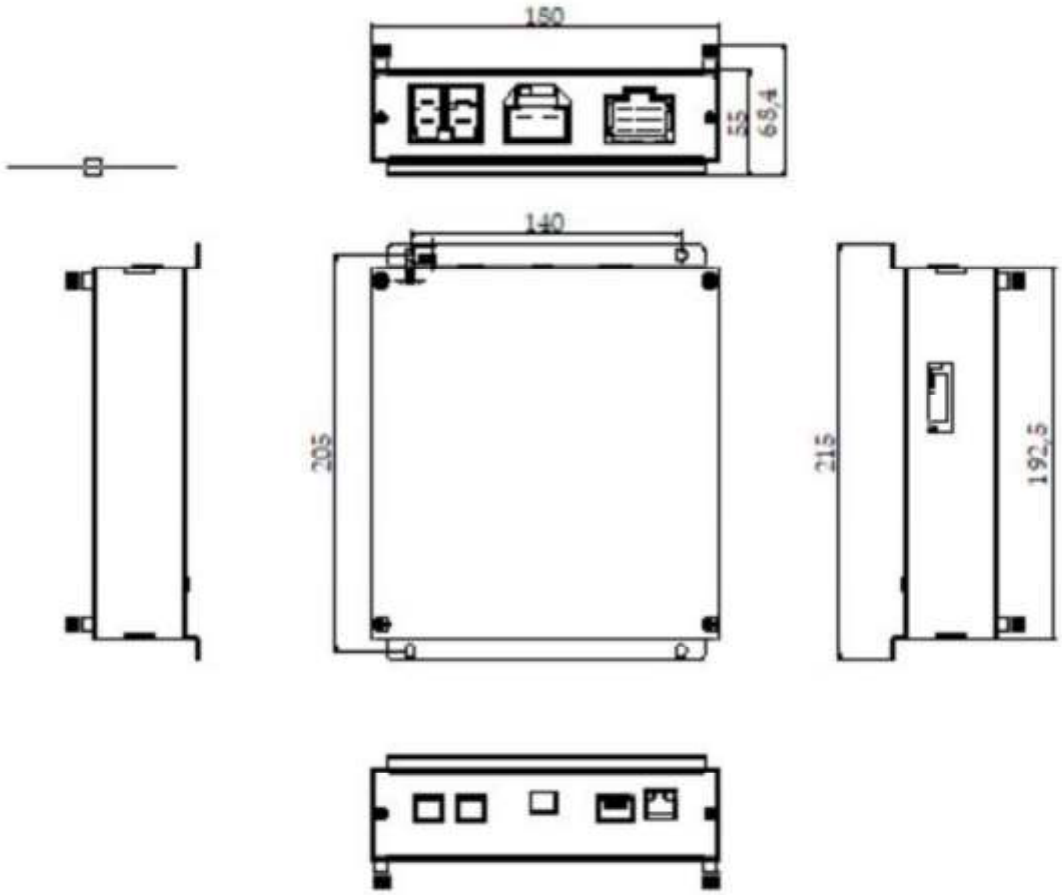


Figure 6 Dimension of CRS17 (Unit: mm)

6.1.2 Connectors of CRS17

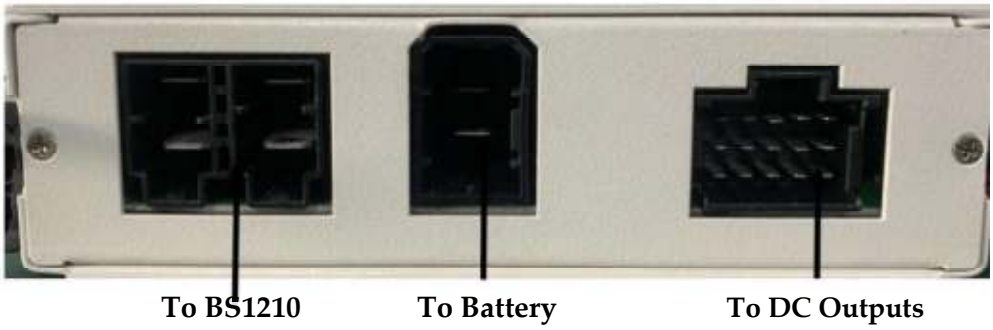


Figure 7 Connectors of CRS17

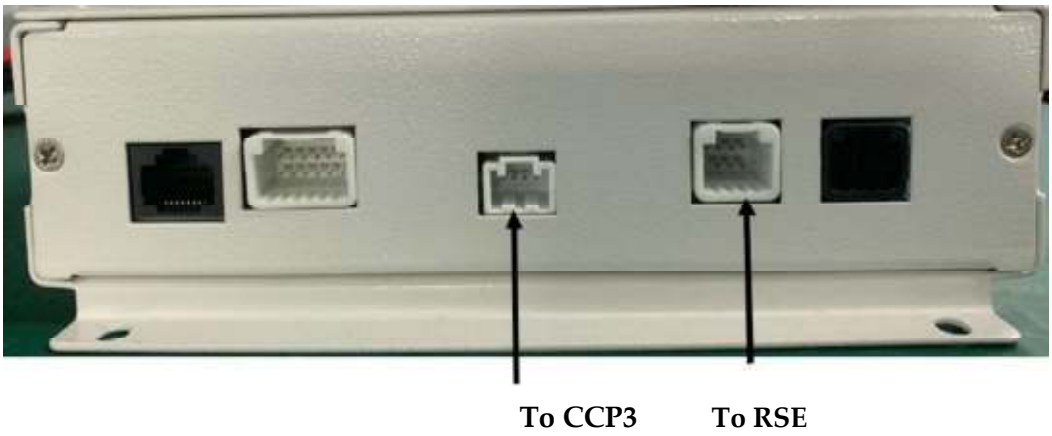


Figure 8 Connectors of CRS17

6.2 Dimension of LED control panel CCP3

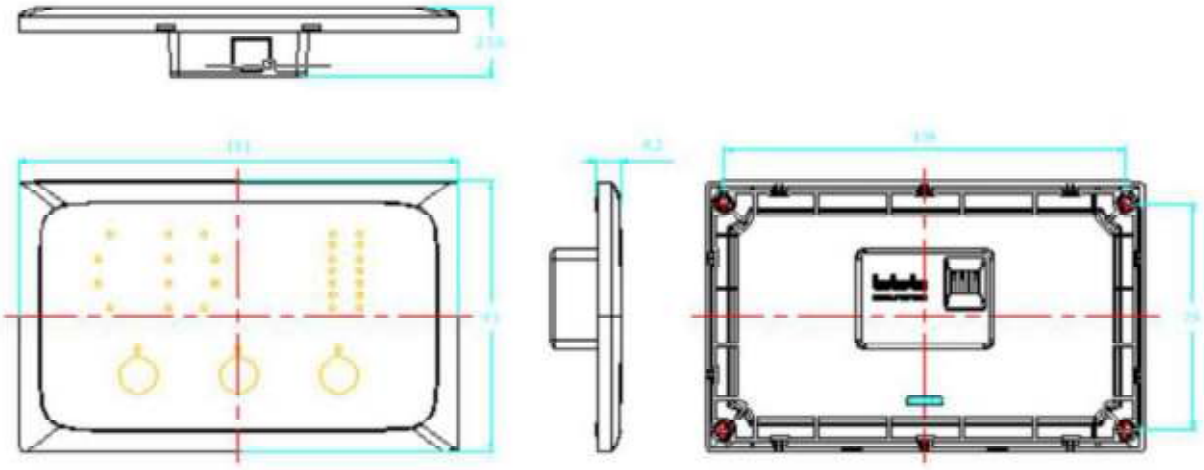


Figure 9 Dimension of CCP3 (Unit: mm)

6.3 Dimension of Wireless switch panel WMSP4

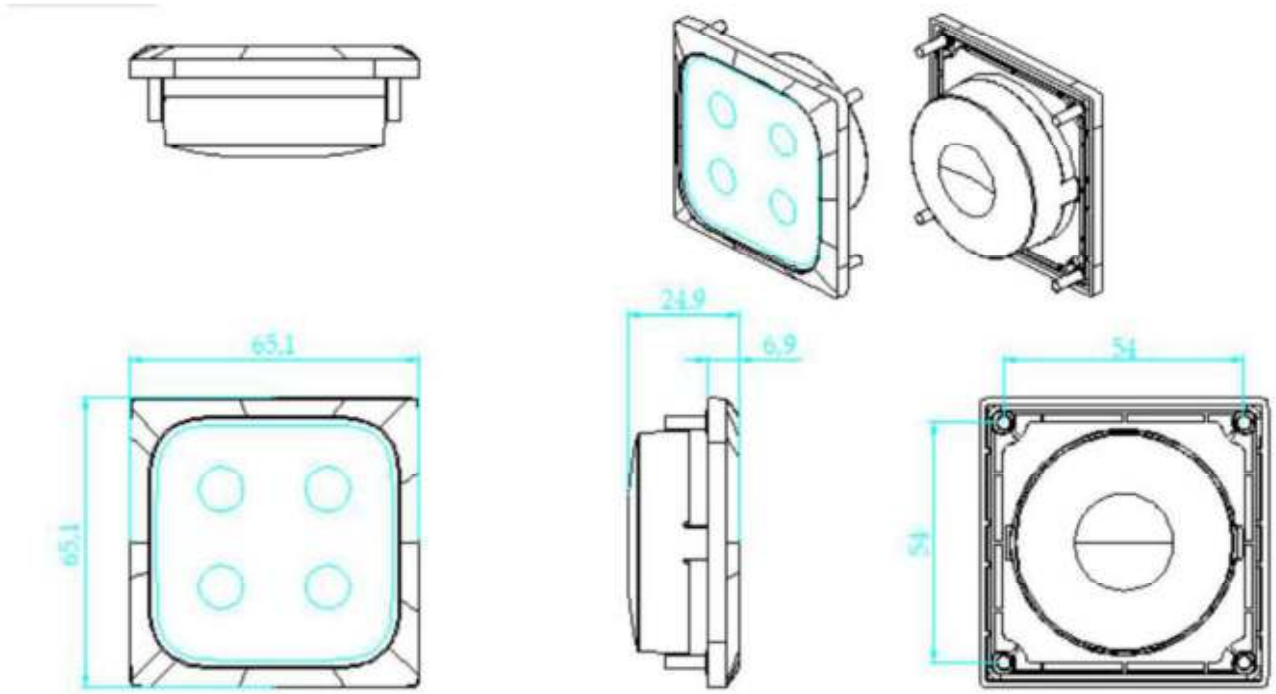


Figure 10 Dimension of WMSP4 (Unit: mm)

6.4 Dimension of Smart battery charger BS1210

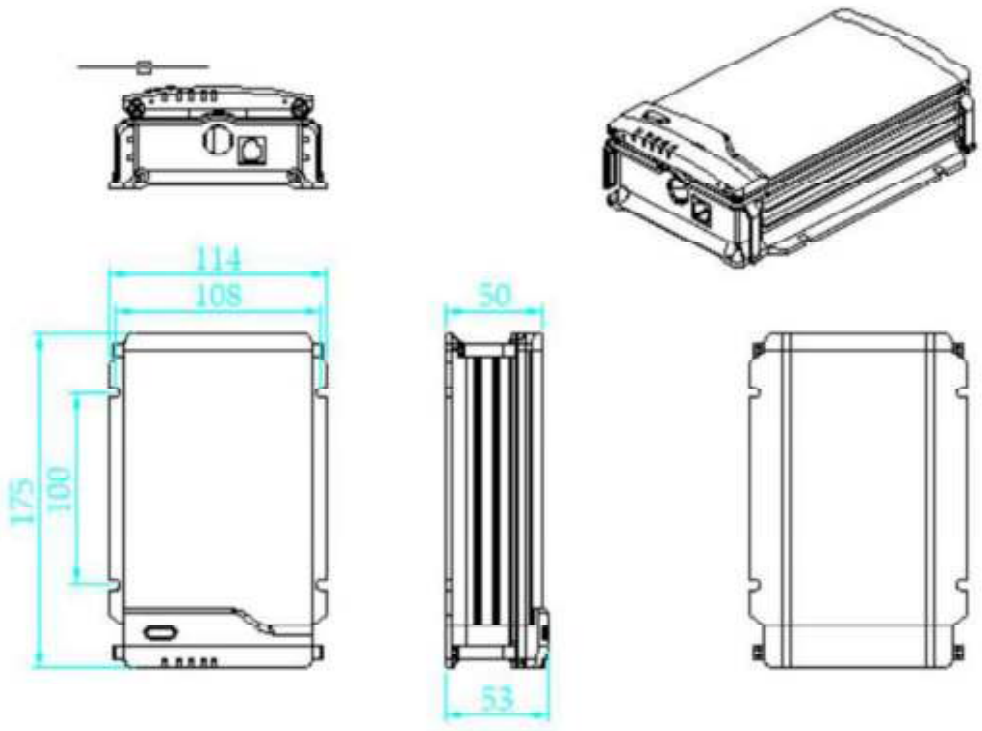


Figure 11 Dimension of BS1210 (Unit: mm)