

F3600-US Product Manual

V1.0

版本管理

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1 Definition Of Product

1.1 Application scenarios

Application scenario 1:

Used as an outdoor mobile energy storage power source. Supports input methods such as AC charging, photovoltaic charging, and vehicle charging. Supports DC output such as USB, DC12V, DC24V, and AC output. Can be moved and stacked for use.

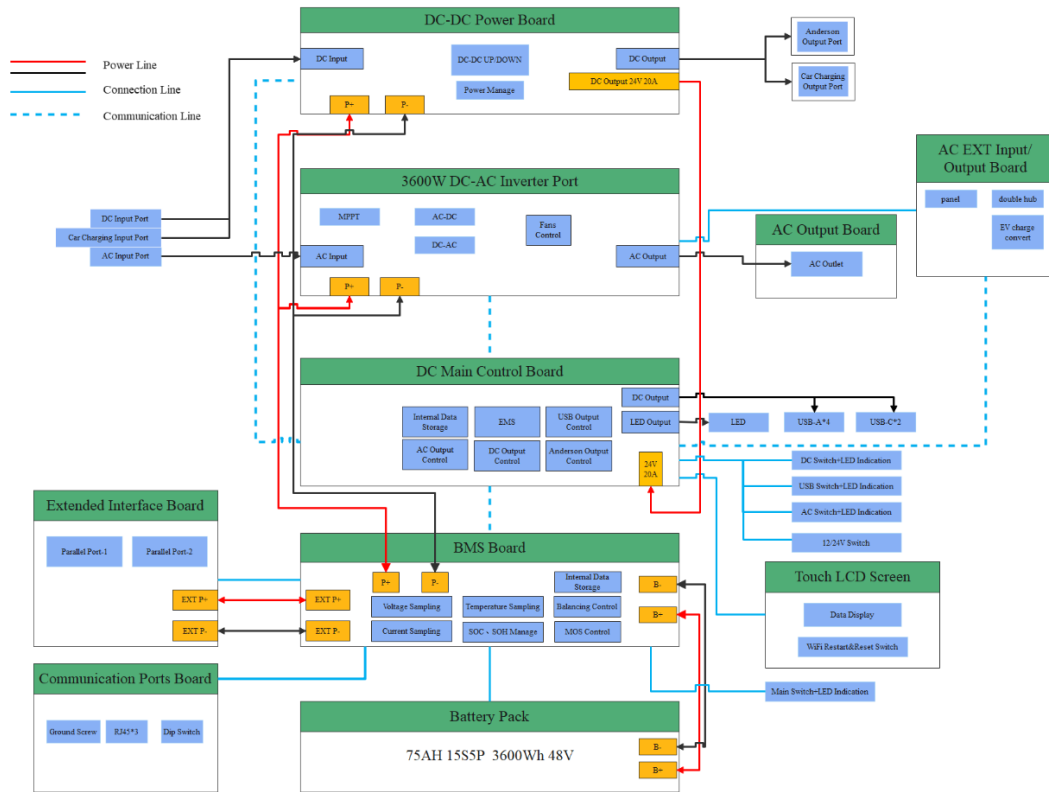
Application scenario 2:

As a backup application for UPS households. Home power grid connected to RUNHOOD system application: It serves as a UPS for the home power grid, with two sets of hosts and battery packs.

Application scenario 3:

Home energy storage grid connected application. The RUNHOOD battery in the home photovoltaic energy storage system can replace (or be newly installed) the battery part of the energy storage system:

1.2 System block diagram



1.3 F3600 Residential ESS & Portable Power Station

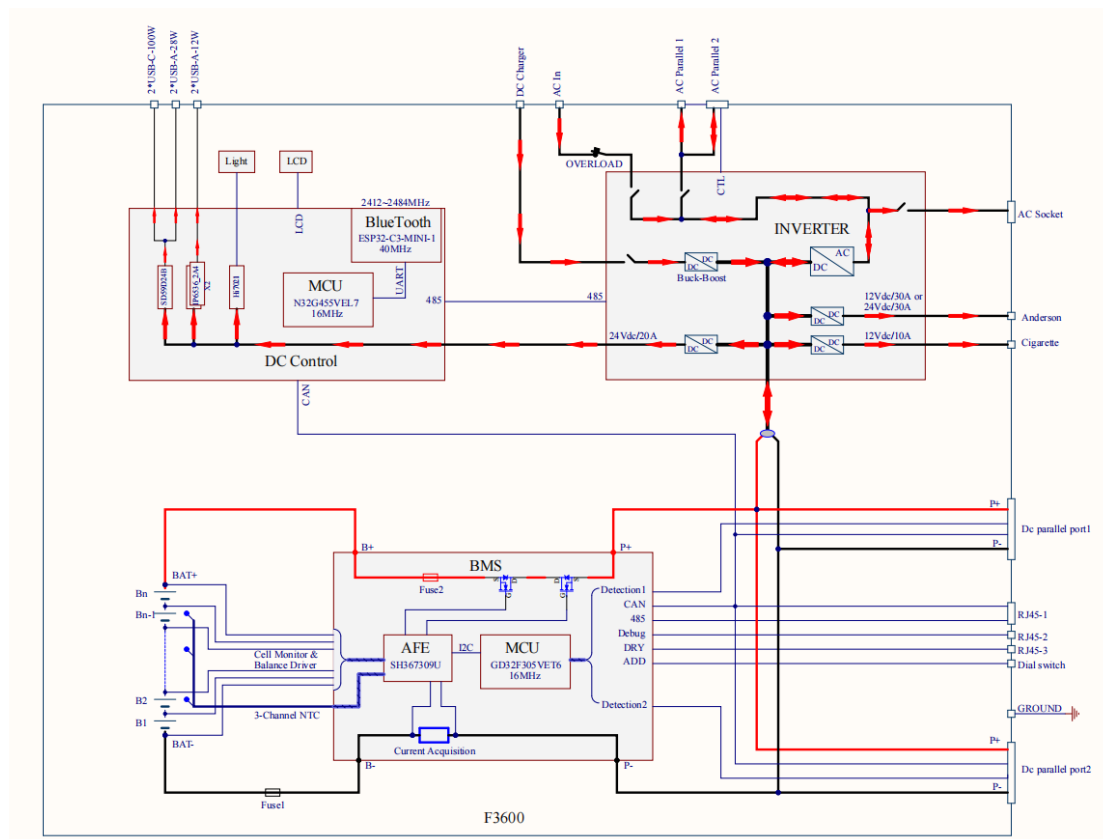
Composed of battery pack, inverter, DC interface, parallel interface, etc.

1.3.1 Product appearance



Note: The type of AC socket varies in each country and region, and the actual product shall prevail.

1.3.2 Principle block diagram



1.3.3 Specification parameters

F3600		
Battery	Cell	LiFePO4 (32140, 15Ah)
	Burst mode	5P15S
	Quantity electricity	3600Wh (48V, 75Ah)
	Current range	充电: 55A Max; 放电: 140A Max
	Voltage range	38-53V
	Temperature range	充电: 2°C~50°C; 放电: -28°C~50°C
	Cycles	6000 cycles to 80%+ capacity
LCD Screen	LCD	Support (Touch Screen)
Lamp	LED	Support
Wifi/Bluetooth		Support
Key	Key1	Main Power switch on/off
	Key2	AC out on/off

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	Key3	DC out on/off
	Key4	USB-A/C out on/off
DC	Input Ports	12-150V 25A Max, 2400W Max,
		Car Charger, 12/24V 8.5A Max
	Output Ports	USB-A 12W Max * 2
		USB-B 28W Max * 2
		USB-C 100W Max * 2
		Anderson 12/24V 30A Max
		Car Charger 12V 10A
AC	Input Ports	F3600-US 110V~120Vac, 60Hz, 15A Max, 1800W Max
		F3600-JP 100Vac, 50/60Hz, 15A Max, 1500W Max
		F3600-EU、F3600-UK、F3600-AU 230Vac, 50Hz, 10A Max, 2300W Max
	Output Ports	F3600-US 120VAC, 60Hz, 3600W (7200W Surge), 20A Max * 4, 30A Max * 1
EV INPUT	AC	3400W Max
BACK -UP OUTPUT	AC	3600W Max
Extra Battery Port (*2)		Power and Communications
External communication		RJ45 *3 Com1: Debug port Com2: Debug port Com3: Reserve
Grounding point		Earthing mark
Dip switch		Address coding & terminal resistance
Weight		48kg
Dimensions (LxWxD)		58.8cm*40cm*42.4cm
Certification		Europe: IEC62619、IEC62477、CE (RED) 、IEC60730 North America: UL2743、UL1973、UL9540、UL9540A、FCC ID

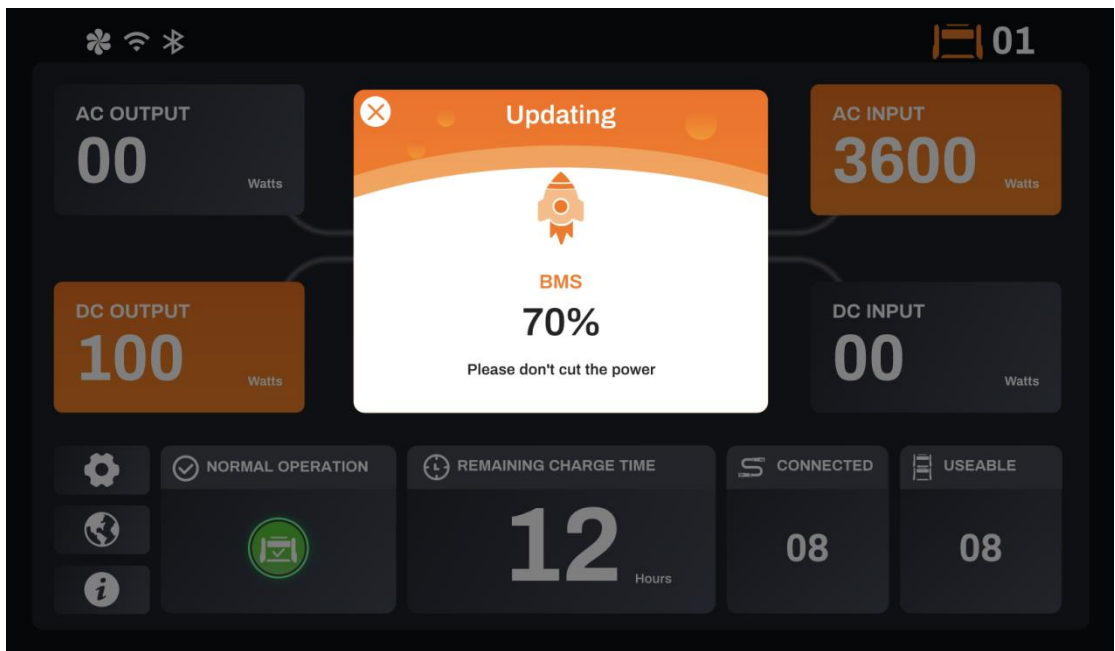
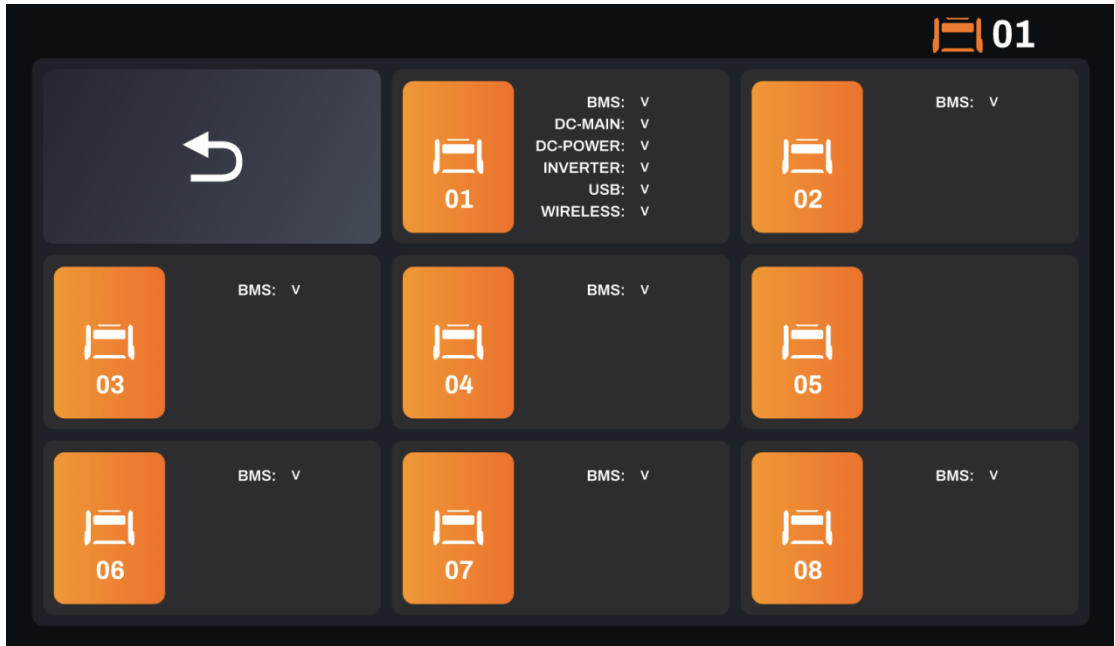
1.3.4 Function description

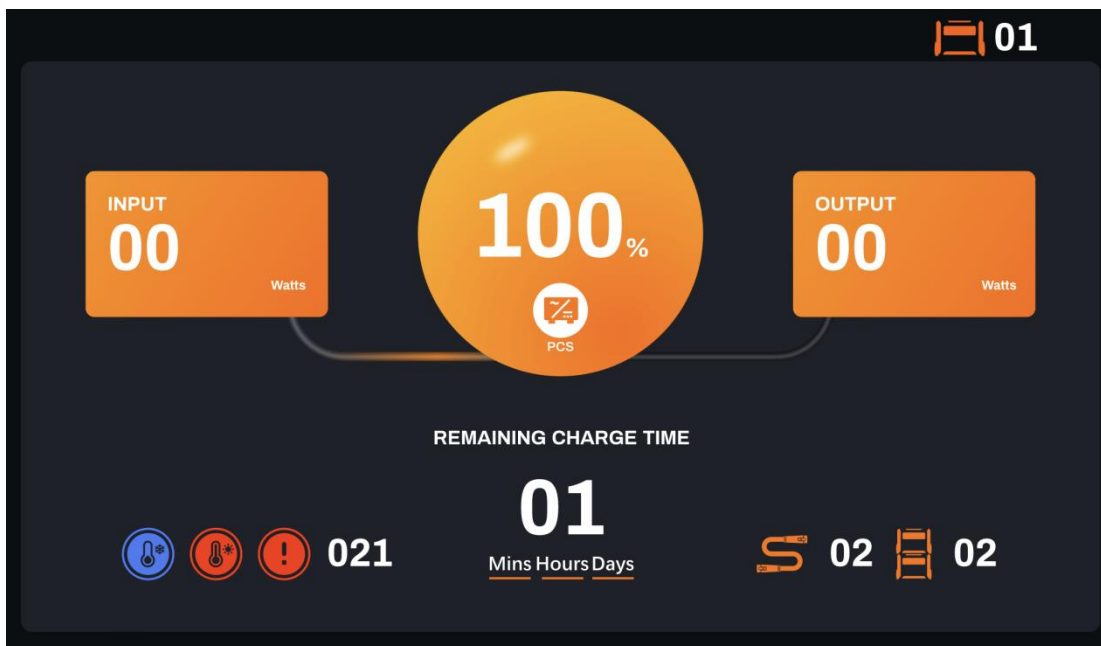
1. LCD display screen

Display product's battery level and usage status prompts.















Icon	Information	Prompt explanation
	current address	The current ID of the host or battery product
	No. of system connections	The system supports expansion, and this icon indicates the number of battery packs connected to the system for expansion
	No. of online work in the system	After system expansion, parallel operation will be carried out based on the battery pack situation, and this icon indicates the current number of parallel operations
	voltage frequency	Level voltage frequency
	External PCS indication	The system supports the use of external grid connected inverters. At this time, the product can be used as a home storage battery pack. This icon prompts when the system is connected to an external PCS
	Charging gun	When inserting the charging gun for charging, this icon prompts.

	<p>High temperature alarm</p>	<p>The high temperature icon has a warning buzzer, indicating that the battery temperature is too high. When the high temperature icon is lit, the buzzer will intermittently sound for a short time, and the system will limit current charging; The buzzer sounds rapidly and briefly, and the system does not allow charging or discharging. Please place the product in a ventilated area, wait for the equipment to cool down and automatically reset. If the device does not reset, please contact our product expert service@runhoodpower.com.</p>
	<p>Low temperature alarm</p>	<p>The low temperature icon comes with a warning buzzer, indicating that the battery temperature is too low. When the low temperature icon is displayed, the buzzer will intermittently sound for a short time, and the system will limit current charging; The buzzer will sound suddenly and briefly, and the system will not allow charging or discharging. The product will automatically reset after reaching the working temperature. If the device does not reset, please contact our product expert service@runhoodpower.com.</p>
	<p>Important faults</p>	<p>When this icon prompts, it indicates a serious malfunction. Check for strong static or magnetic interference, and then restart the device. If the device fails to work again, please contact our product experts service@runhoodpower.com.</p>
	<p>fan status</p>	<p>When the host temperature overheats, the system will turn on the</p>

		fan and light up the fan icon. If a fan icon appears but the fan is not working, please check if the fan is blocked. Before reusing, please turn off the device and carefully clean and vacuum all ventilation openings around it. If the device cannot operate, please contact our product experts service@runhoodpower.com
	Home storage mode status	When the host is connected to the home energy storage backup mode, the system will light up the icon. If the icon does not appear after connection, please check if the connection line is connected correctly. If unable to resolve, please contact our product experts service@runhoodpower.com
	HUB mode status	When the host is connected to HUB, the system will light up the icon. If the icon does not appear after connection, please check if the connection line is connected correctly. If unable to resolve, please contact our product experts service@runhoodpower.com

2. AC output switch (hold down to turn on or off) AC output indicator light

The AC power button controls the AC power output of F3600. To enable AC power, click the AC power button. When the AC power supply of F3600 is enabled, the AC indicator light will light up. When Overload occurs or the battery level is 0%, the AC output and AC indicator lights will turn off. When the battery level returns to above 2%, the AC output can return to normal.

3. AC output socket

Power devices such as laptops, televisions, mini refrigerators, vacuum cleaners, etc. through communication sockets. Supports the use of 3600W electrical appliances for power reduction (does not support all excess appliances, needs to be tested and confirmed to be usable to avoid affecting your work and life).

4. LED lights

The use of LED lights adopts a flip type. Flip up and turn on the light. The light intensity can be adjusted through the touch screen.

5. Main power button

Press and hold the power button to turn on or off B3600. Power on: short press for 1.5 seconds. Power off: long press for 3 seconds. Forced power off: long press for 10 seconds.

When F3600 is turned on, the power indicator light shows a breathing state and the display screen lights up; After F3600 is idle for more than 2 minutes, the backlight of the F3600 screen will be turned off, but the host is still running; After F3600 is idle for more than 5 minutes, the F3600 host will automatically shut down.

6. DC charging input port

Specification XT60EW-M, can be charged to the power supply through the dedicated connection cable of RUNHOOD's built-in car charging port, and can be charged to the power supply through a photovoltaic panel.

Supports input of 12V/24V maximum 8.5A in car power supply (make sure to start the car when using it to avoid battery depletion and inability to start).

Supports solar panel series parallel input, voltage range: 15-150Vdc, current: 25A Max, power: 2400W Max, supports MPPT.

7. DC output switch key (vehicle charging output port, 2 Anderson output ports) and DC output port indicator light

Press and hold the DC switch to turn on or off the F3600 DC power output, while lighting up the indicator light for the DC output. This button controls the DC output of the F3600 car charging port and two Anderson DC outputs.

When there is an overload alarm prompt on the DC side output, pressing this button can clear the alarm prompt.

8. Car charging output port

The car charging port supports a maximum current output of 10A and can be used for general on-board appliances.

9. Anderson output port

Provide power to various high-power DC power devices, such as car mounted DC refrigerators. At the same time, it can also charge 12V lead-acid batteries for cars or 24V lead-acid batteries for trucks (must be operated under the guidance of professionals).

10. USB output switch (USB-A output port and USB-C output port) and USB output port indicator light

Press and hold the USB switch to turn on or off the USB output of F3600, while also lighting up the USB output indicator light. This button controls the USB-A and USB-C outputs of F3600.

When there is an overload alarm prompt on the USB output, pressing this button can clear the alarm prompt.

11. USB-A output port

Charge various devices, such as iPhone, tablet, GoPro, speakers, or any other device that charges through the USB-A port.

12. Fast charging 100W USB-C output port

Output: USB-C can charge devices including MacBook Pro, Android phones, and any other USB-C port.

13. Ventilation and heat dissipation holes

The heat dissipation hole can prevent F3600 from overheating.

14. Buzzer output

The system comes with a buzzer for reminders when turning on and off.

15. Parallel interface

The parallel interface is divided into an upper connection port (Port-1) and a lower connection port (Port-2). The specific interface information is shown in the table below.

Description of the upper port (Port-1) Pins

Serial	Content	Describe
1	P+	Power +

2	P-	Power -
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Serial	Content	Describe
1	CAN0_H	CAN0_H
2	CAN0_L	CAN0_L
3	M_TX	Uplink sending signa
4	M_RX	Uplink receive signa
5	GND	Ground wire
6	M_DET	Uplink judgment signal
7	SYN_ON	System start signal
8	GND	Ground wire

Description of the Lower Port (Port-2) Pins

Serial	Content	Describe
1	P+	Power +
2	P-	Power -

Serial	Content	Describe
1	CAN0_H	CAN0_H
2	CAN0_L	CAN0_L
3	S_RX	Downlink receive signa
4	S_TX	Downlink sending signa
5	S_DET	Downlink judgment signal
6	SYN_ON	System start signal
7	GND	Ground wire
8	GND	Ground wire

16. Communication Interface

The RJ45 interface includes three interfaces: the communication port for the extended inverter (COM1), the debugging port (COM2), and the wet dry port (COM3). The specific information is shown in the table below.

RJ45-1 (COM1) Debugging port pin description

Serial	Content	Describe
1	NC	/
2	NC	/
3	NC	/
4	CAN1_H	CAN1_H
5	CAN1_L	CAN1_L
6	NC	/
7	RS485_A	RS485 Signal
8	RS485_B	RS485 Signal

RJ45-2 (COM2) Debugging port pin description

Serial	Content	Describe
1	CAN0_H	CAN0_H
2	CAN0_L	CAN0_L
3	GND	Ground wire
4	RS485_B1	RS485_B1
5	RS485_A1	RS485_A1
6	ACT	Wake up
7	GND	Ground wire
8	RESET	Reset

RJ45-3 (COM3) Description of dry and wet port pins

Serial	Content	Describe
1	NO1	Output signals 1
2	COM1	Output signals 1(COM)

3	NO2	Output signals 2
4	COM2	Output signals 2(COM)
5	DIN+	lutput signals 1+
6	DIN1	lutput signals 1
7	DIN+	lutput signals 2+
8	DIN2	lutput signals 2

17. DIP switch

6-digit DIP switch, 1-4 is the address DIP switch, 5 is reserved, and 6 is the communication terminal resistor 120 Ω access switch. The effective address of the address dial switch is 1-8, and 9-15 is temporarily an invalid address.

When multiple battery packs are working in parallel, it is necessary to encode the addresses of each main control module. The encoding method and instructions are shown in the table below.

Schematic diagram of dial switch

coding site				Add.
1	2	3	4	
ON	OFF	OFF	OFF	(1)
OFF	ON	OFF	OFF	(2)
ON	ON	OFF	OFF	(3)
OFF	OFF	ON	OFF	(4)
ON	OFF	ON	OFF	(5)
OFF	ON	ON	OFF	(6)
ON	ON	ON	OFF	(7)
OFF	OFF	OFF	ON	(8)

2 Appendix

2.1 Disclaimer

The length of all external cables shall not exceed 3m.

2.2 FCC Caution

a、 § 15.19 Labeling requirements.

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.

b、 § 15.21 Changes or modification warning.

Any Changes or modifications not expressly approved by the party responsible for

compliance could void the user's authority to operate the equipment.

c、 § 15.105 Information to the user.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a

residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

*RF warning for Mobile device:

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