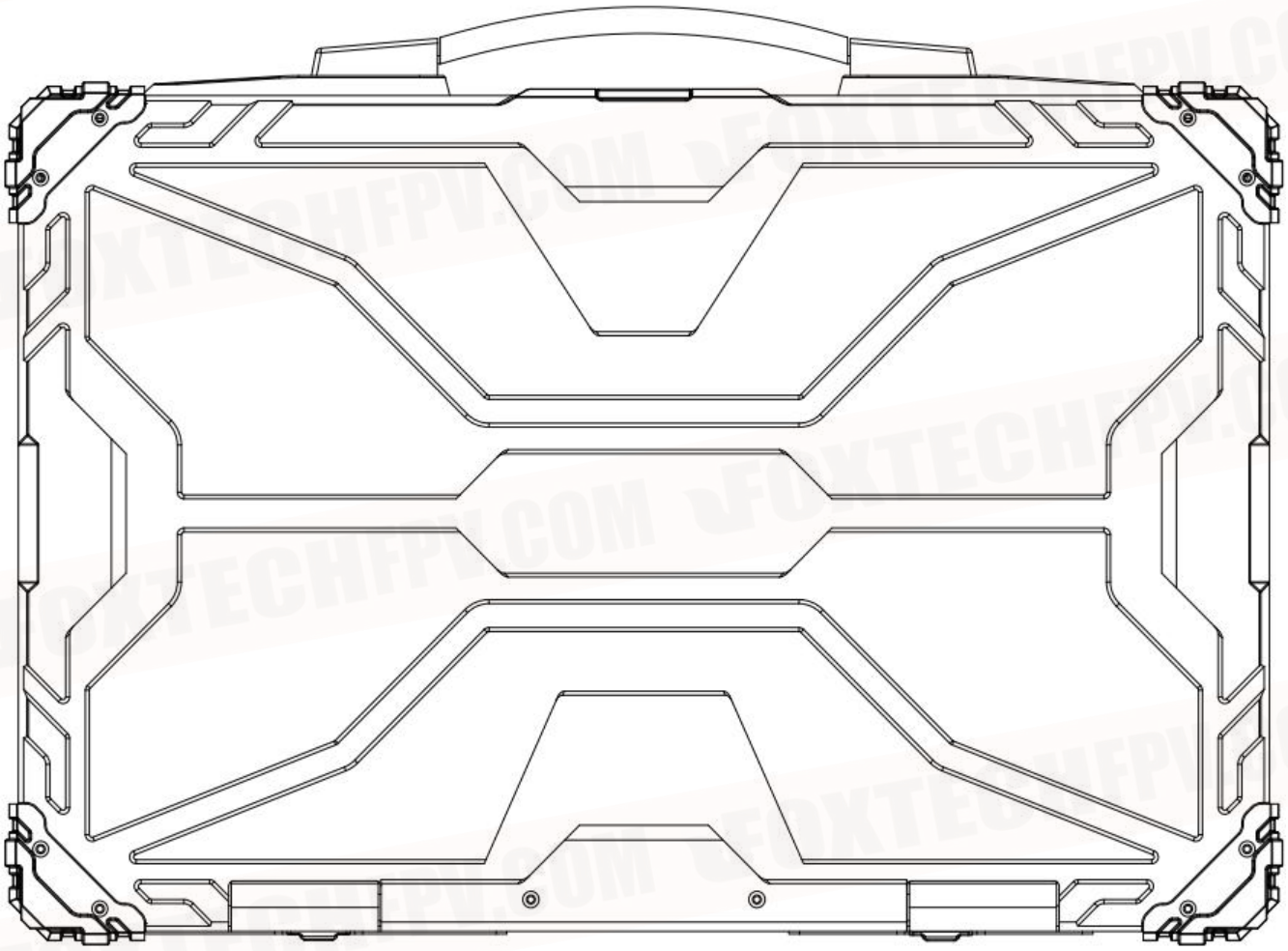
Foxtech GS-75U Dual-screen Ground Contrtol Station



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Ground station use and maintenance instructions

The basic operation of a hardened notebook is similar to that of a normal notebook, but there are also differences caused by the unique structure and different features of the design.

- **Power on**

Make sure the computer power connection is intact or the lithium battery is fully charged, press the power on button for 1-2s, if there is a password, please enter the user password and then enter the system.

- **Operation**

Operate exactly the same as a normal computer, start and run the system.

- **Power off**

Click "Start" with the mouse, left-click "Shutdown System" and select "Shutdown Computer" and wait until the screen shows "windows is shutting down". You can also long press the power on switch for about 3S to achieve shutdown.

- **System crash or abnormality**

Press and hold the power on switch for more than 5s, then the power supply can be forcibly cut off, if you need to turn on the power, you can operate according to the normal power on mode.

Diagnosis and treatment of common faults

- **No response after startup**

1. When you press the power on button, please check if the computer power indicator lights up, or if you can hear the sound of the computer fan turning. If the aperture on the boot button does not light up, and you do not hear the fan sound, and the computer does not respond at all, it indicates that your computer is not powered on, please check the power supply.

2. See the power indicator light up and also hear the rotating sound of the fan turning. This

indicates that your computer has been powered on, please observe the LCD screen, if it has No response, please check the LCD connection cable, confirm whether the BIOS screen resolution of the external monitor is 1920 * 1080 bit.

- **can't boot into the system.**

Please confirm in the BIOS if the hard disk information is denied, check whether the system is damaged, if there is damage, reinstall the system.

- **No response to touch**

Please check whether the cable between the keyboard touch board and the main board is securely connected.

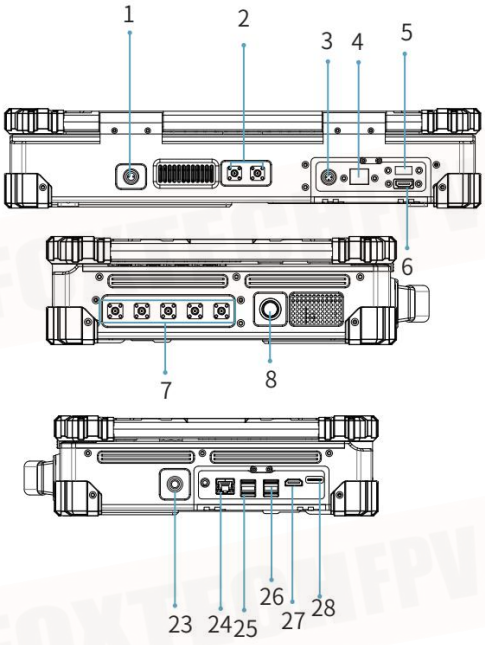
Specification

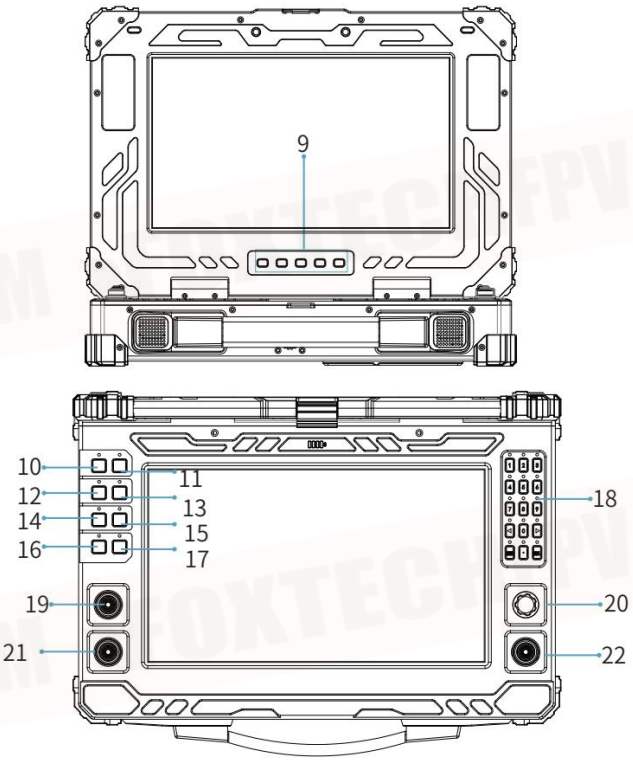
System Parameters	Processor	Intel I7-7500U	I/O	LAN	2
	battery	6 hours		USB	5*USB port
	RAM	DDR4 8G		VGA	1
	Disk	Solid State Disks 256G		HDMI	2
LCD screen	Display type	2*13.3 " FHD TFT LCD		Power input	DC19V
	Max resolution	1920*1080		SMA Antenna	5(reserved)
	maximum colour	16M		WIFI/4G	2个
	Display area	293.472 × 165.078 mm	Internal reserved	Internal reserved space for secondary development	
	brightness	1000nits		1*RS232/DC 5V/DC 12V/1*USB/1*HDMI/1*LAN	
Touch Sc	Upper screen	Optional resistive touch	Environmental parameters	Operating	0℃-50℃
	Lower Screen	Capacitive Touch Screen		Storage	-20℃-70℃
Button	Screen adjustment	Brightness/Source		Relative	20%～80%@40℃ (no condensation)
	Customized button	8		vibration	road grade transportation
	Numeric Keypad	1	parameters	material	Aluminum alloy
	Twist switch	4		color	Grey
	Knob	1		Weight	7.8Kg
	2-axis joystick	3		size	429*290*88.6
Other	loudspeaker*2		Operating System	Windows 7/Linux	

Interface Description

- **Product interface**

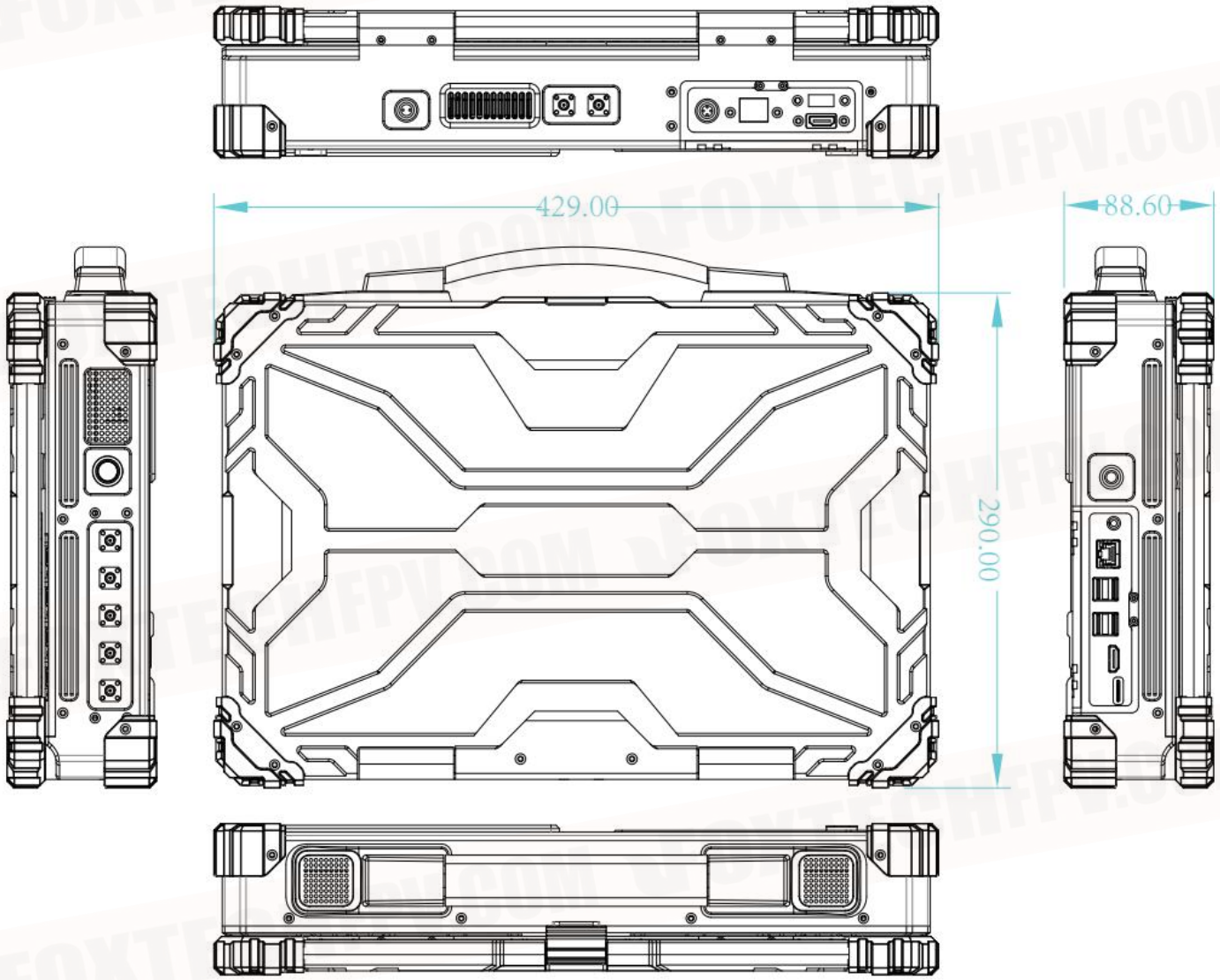
- Interface





序号	组件	说明	序号	组件	说明
1	DC IN	DC I9V	15	F6	00 04
2	WIFI/4G		16	F7	00 02
3	aviation plug	reserved	17	F8	00 01
4	LAN	reserved	18	Numeric Keypad	
5	USB	reserved	19	Joystick	
6	HDMI	reserved	20	Knob	
7	SMA	reserved	21	Joystick	
8	Switch		22	Joystick	
9	Brightness/Source	Adjust screen brightness ar	23	Power-on	
10	F1	00 80	24	LAN	
11	F2	00 40	25	USB	2*USB3.0
12	F3	00 20	26	USB	2*USB2.0
13	F4	00 10	27	HDMI	
14	F5	00 08	28	SIM	

Dimension



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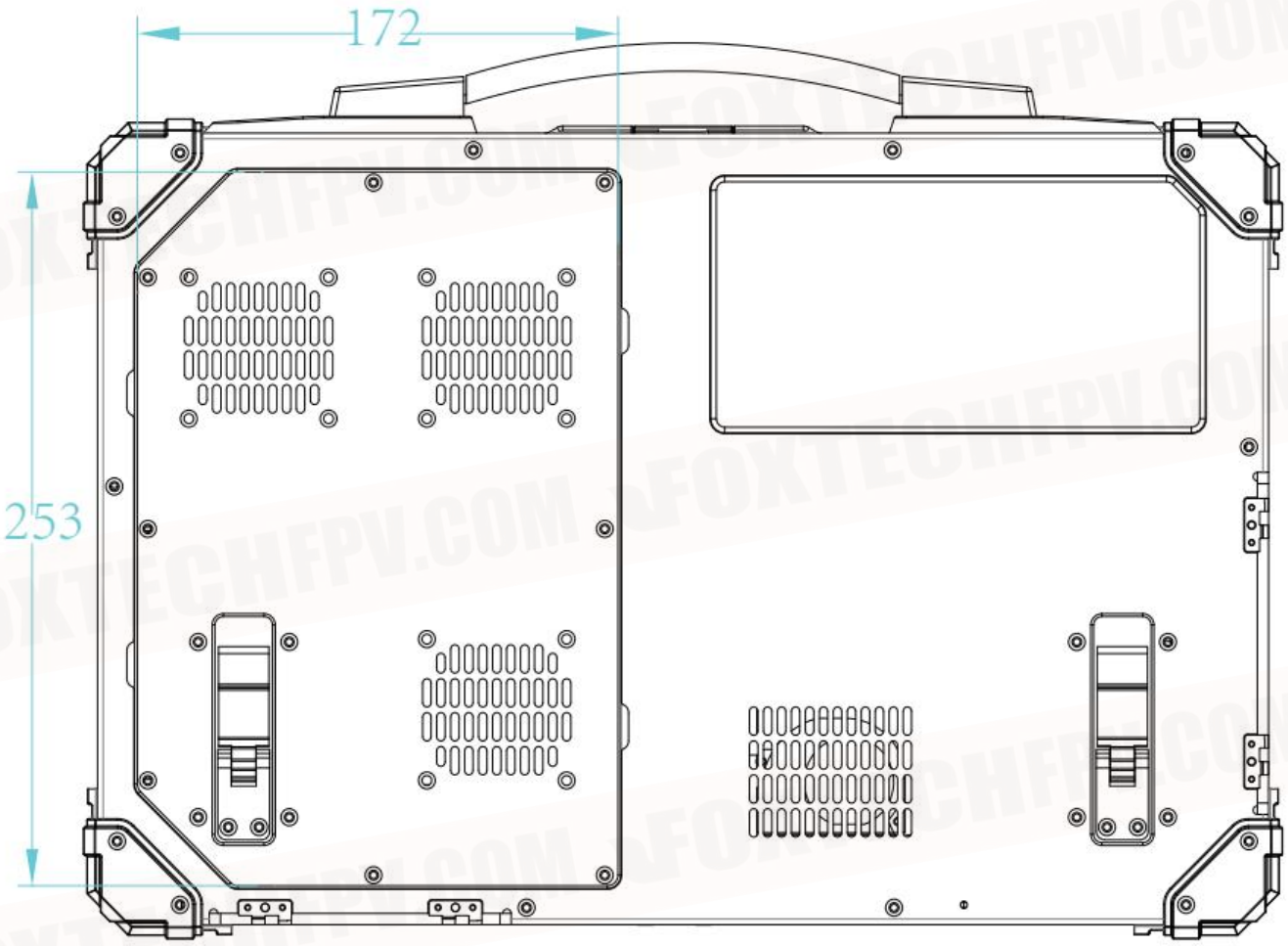
- **Size of the reserved space at the bottom**



Computer operation instructions

- **Turn on the computer**

1. Press the top of the laptop with your thumb to open the laptop

2. Press and hold the computer's rear power-on button to turn on the computer

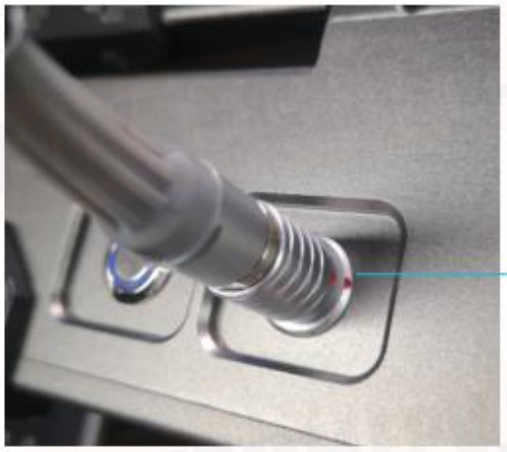
Power Switch

● Interface cover operating instructions

The cover can be opened by pressing down the snap with the thumb and pivoting outward.

● Instructions for the use of the aviation plug interface

1. Plug in the connection cable



Note:

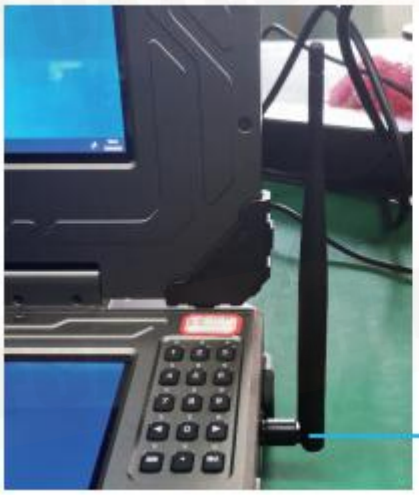
When the cable is inserted into the interface, please align the red dot on the cable with the red dot on the interface

2. Unplug the connection cable

When unplugging the cable, use your fingers to push back the position shown in the figure above to unplug the cable.

● Antenna interface operating instructions

Insert the antenna into the WIFI interface, rotate and tighten the position of the antenna as shown in the figure

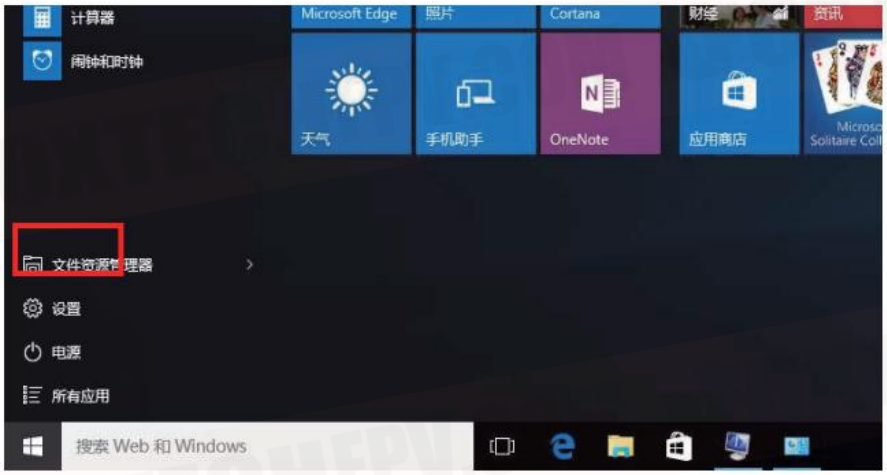


Bend the antenna

● Antenna interface operating instructions

1. Click on the Start menu at the bottom left corner of the desktop

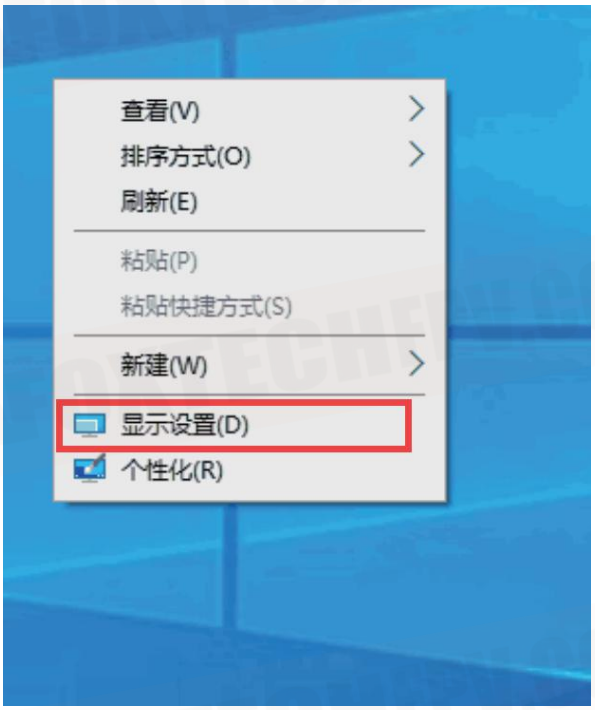
2. Select power options



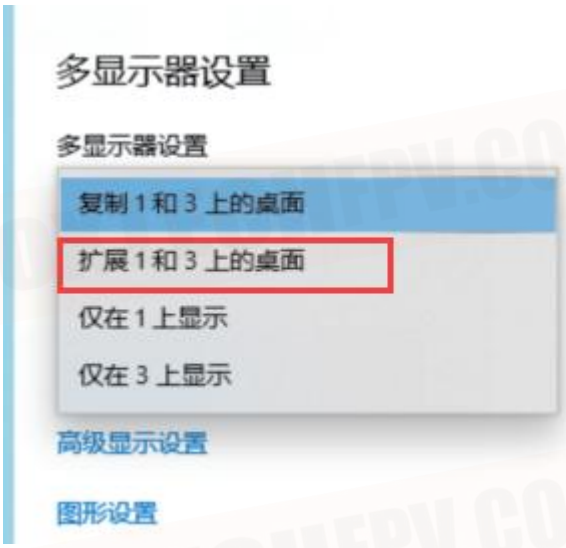
3. Select Shutdown to turn off the computer

- **Extended Desktop Settings**

Right-click the desktop, click Display Settings to enter the monitor settings panel



Click the Multi-monitor settings drop-down list and select "Extend Desktop 1 and 3" to enter the next setting screen



Click on the logo to identify the monitor number (the number is displayed at the bottom right of the monitor)

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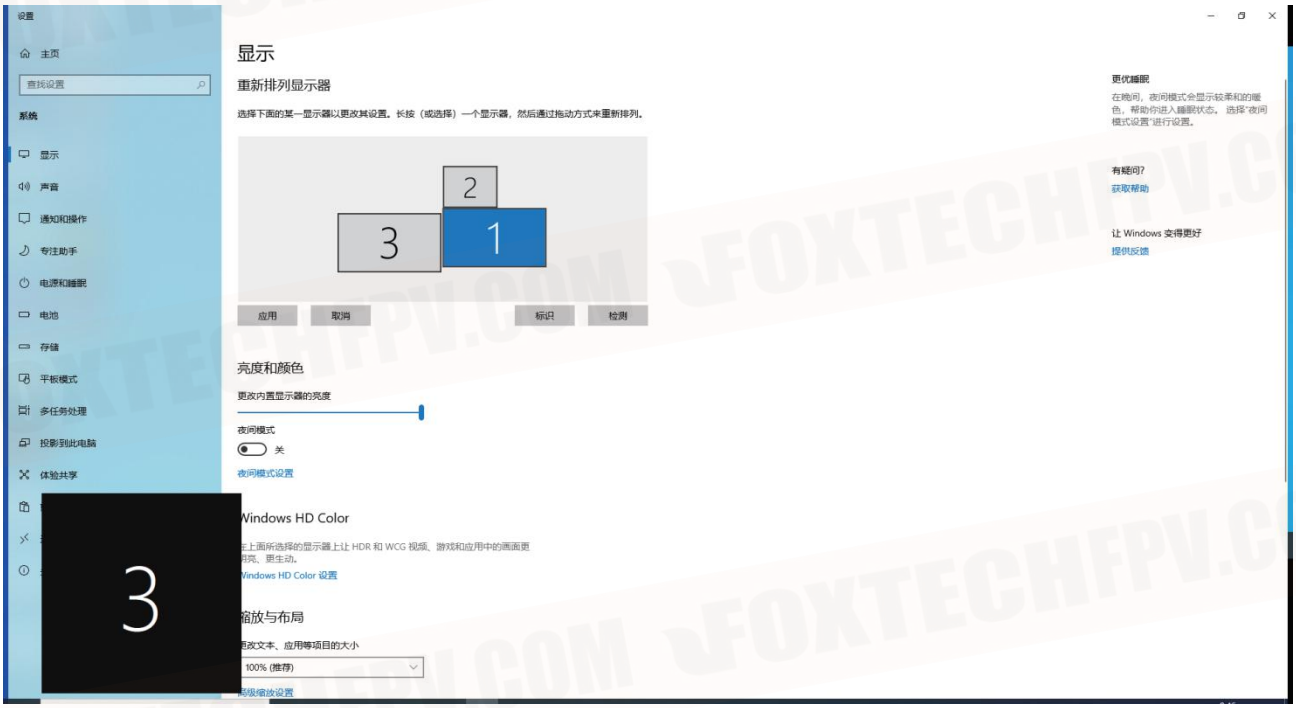


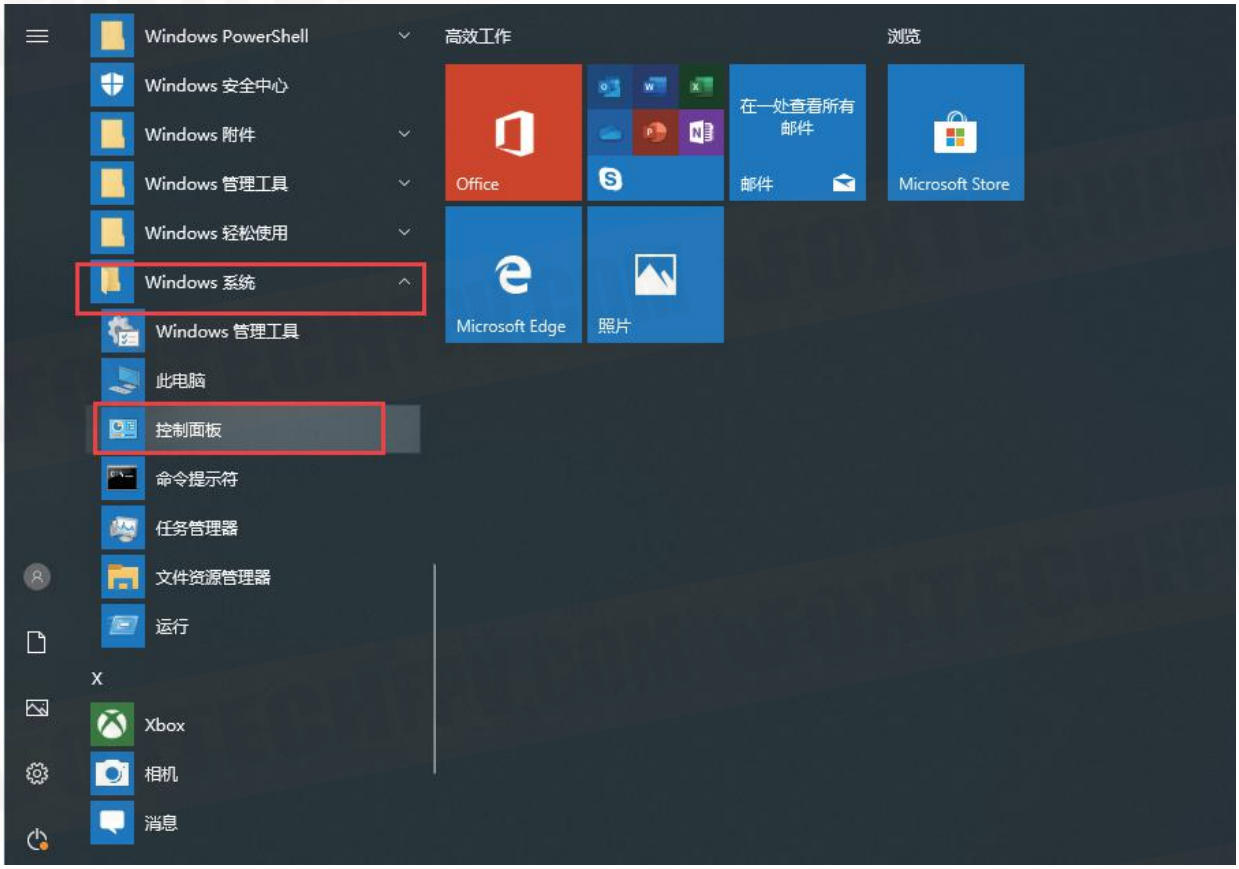
Drag the monitor serial number square to arrange the monitors, and click Apply when the settings are completed.

Note: The following arrangement, the mouse can be moved up and down to move back and forth between the two monitors of 3 and 1 serial number

(When the mouse cursor in the serial number 3 monitor, put the mouse down, the mouse cursor can be to the serial number 1 monitor to operate)

- **Touch screen settings**

Click on the Start menu and select Windows System, then select Control Panel in the drop-down list.



Select tablet settings

Click on Settings

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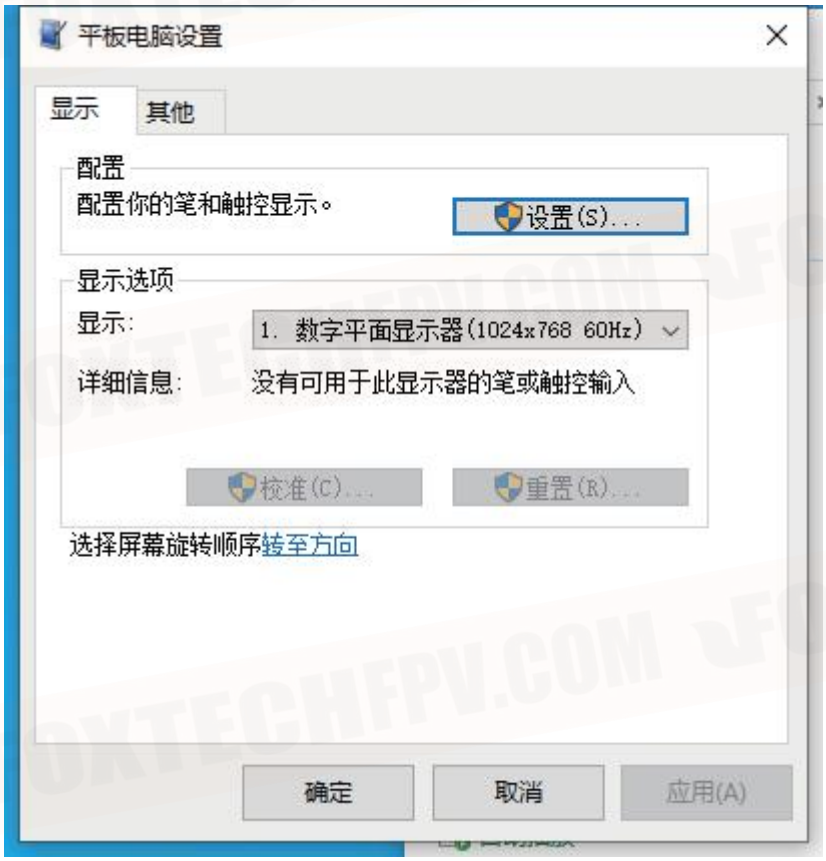

Tap to touch input

Enter the settings screen and operate according to the text prompts.

Tap the screen with one finger to identify it as a touch screen. If this is not a tablet screen, press Enter to go to the next screen. To close the tool, press ESC.

Press **Enter** to continue to the next step to complete your configuration.

Note: After a monitor is set up and enters the white screen state, press “Enter” once more to set up the next monitor, after the setting is completed, just press ESC to exit.

- **Battery indicator status description**

When the battery power reaches 20% the light turns red (at this time you can access the adapter for charging)

When the battery power reaches 10% the light flashes slowly, the power reaches 5% the light flashes quickly (connect the adapter to change the light flashing status)

●Signal source adjustment instructions

Press the PLUS button to select the signal source, and then press Enter to complete the selection

MENU
SOURCE
PLUS
ENTER
POWER

Joystick/key communication protocol

Joystick/Button Communication Protocol					
After power-on, data frames are sent every 10ms (100Hz) COM4 115200					
Byte No.	Name	Type	Value	Note	Physical Location
2	Head-Frame Data	unsigned two bytes	0xAA55		In general, the joysticks and buttons are distributed on the front of the ground station. The naming rules for buttons and joysticks are as follows: The buttons, from left to right, from top to bottom, increase in the order of button 1, button 2; The joysticks, from left to right, from top to bottom, increase in the order of joystick 1, joystick 2.
1	Update Mark	unsigned one byte	0x01、03、05、07、0B、0D	Loop through the list of (1, 3, 5, 7, 11, 13)	
1	Placeholder	unsigned one byte	0X3C		
2	Button	F1	00 80		
		F2	00 40		
		F3	00 20		
		F4	00 10		
		F5	00 08		
		F6	00 04		
		F7	00 02		
		F8	00 01		
2	Status	Reserve	00 00 00		
2	Joystick 1 Up/Down	int16	Up: E803 Down: 18FC	1000:top, 0:neutral position, -1000:bottom	
2	Joystick 1 Left/Right	int16	Left: 18FC Right: E803	1000:rightmost, 0:neutral position, -1000:leftmost	
2	Joystick 2 Up/Down	int16	Up: E803 Down: 18FC	1000:top, 0:neutral position, -1000:bottom	
2	Joystick 2 Left/Right	int16	Left: 18FC Right: E803	1000:rightmost, 0:neutral position, -1000:leftmost	
2	Joystick 3 Up/Down	int16	Up: E803 Down: 18FC	1000:top, 0:neutral position, -1000:bottom	
2	Joystick 3 Left/Right	int16	Left: 18FC Right: E803	1000:rightmost, 0:neutral position, -1000:leftmost	

2	Knob	int16	Left: 18FC Right: E803	1000:Knob rightmost,0:neutral position,-1000:Knob leftmost	**Notice:** The value should not exceed the specified range, otherwise, it will be treated as invalid data.
2	Reserve		default 0x3C3C		
2	Reserve		default 0x3C3C		
2	Reserve		default 0x3C3C		
2	Reserve		default 0x3C3C		
2	Check			CRC16_CCITT:multinomial: $x^16+x^12〖+x〗^5+1$ (0x1021), initial value 0x0000, lower bit-front, high bit-back. The result is xor with 0x0000	

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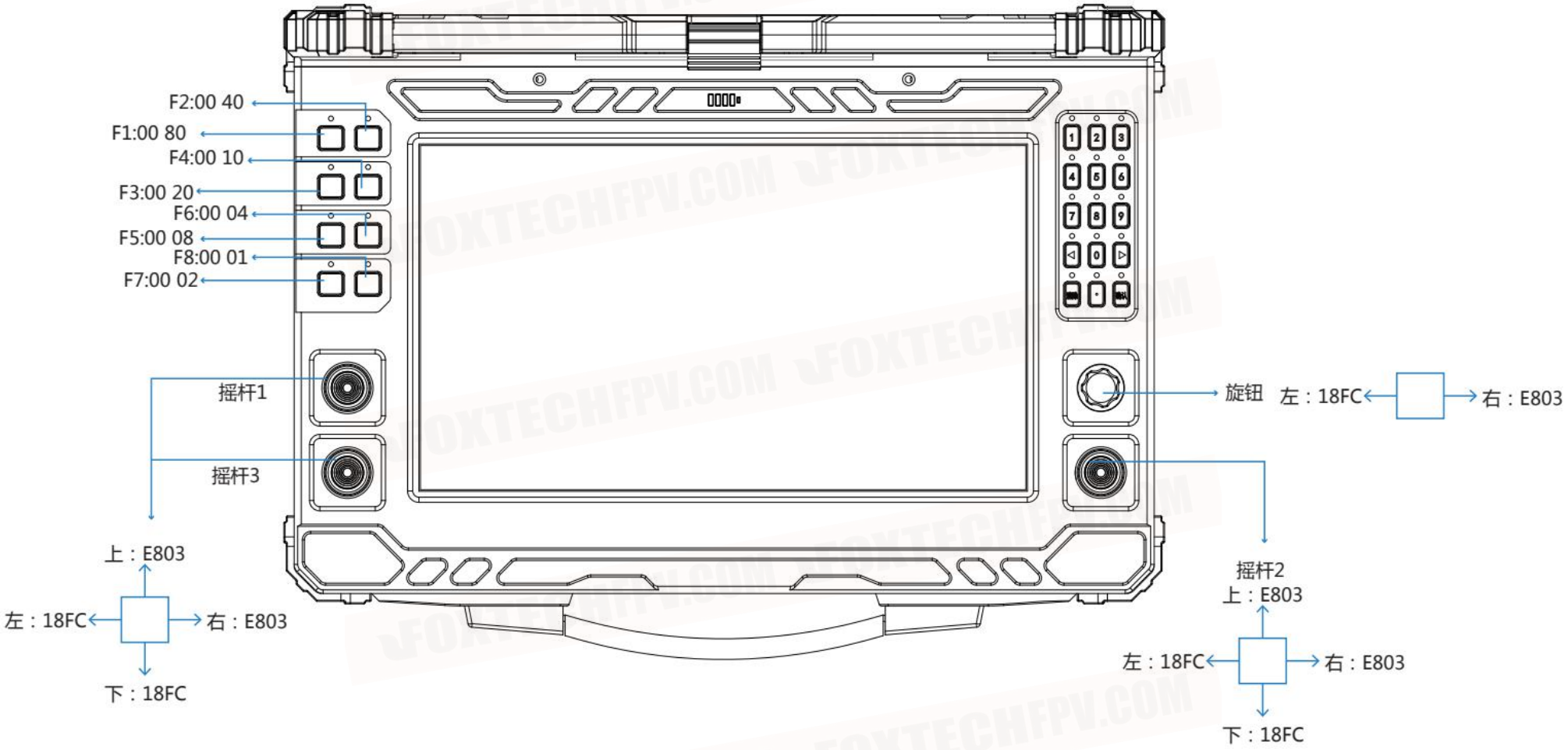
Joystick/Button Diagram