4CH AHD MOBILE DVR(T4)

Hardware Instructions

(V1.0)

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Chapter 1 Accessories and Interface

1. MDVR and accessories

Before you use this product please check the accessories in the packing box. If there is anything missing or damaged please contact your seller. The MDVR and accessories are listed as following:

List of MDVR and accessories

Description	Picture	Quantity
MDVR		1
Power cable		1
I/O cable		1
AV cable		1
GPS antenna (Optional)		1
Wi-Fi antenna (Optional)		1

3G/4G antenna (Optional)		1
Remote control (Optional)		1
IR Extension cable (Optional)		1
Mouse (Optional)		1
Intercom (Optional)		1

2. Device Connection Diagram

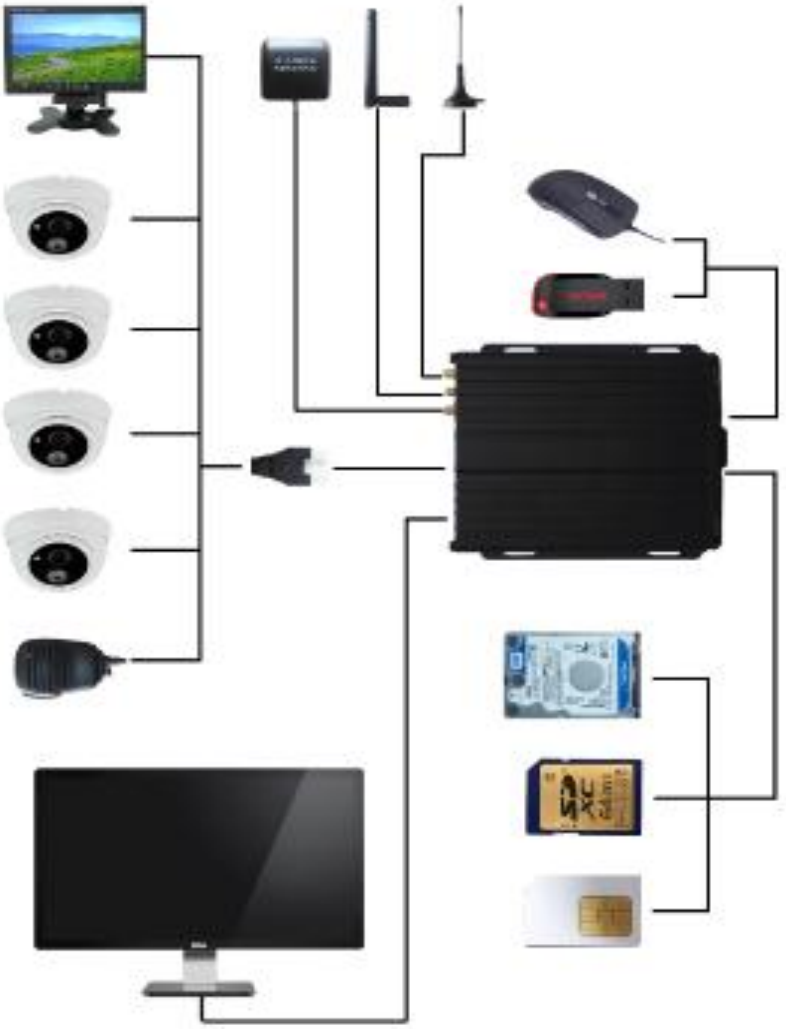


Figure 1. Connection Diagram

3. Panel Explanation

Figure 2. Front panel

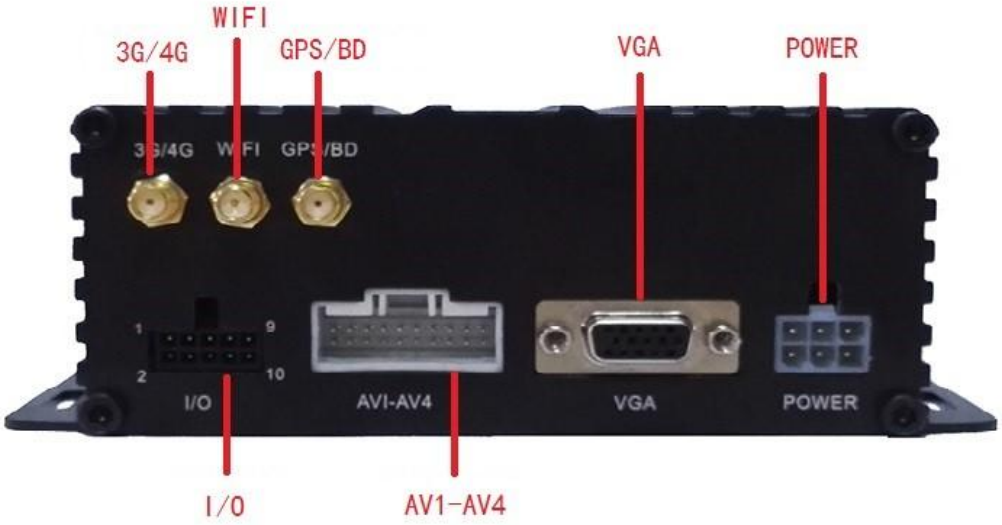


Figure 3. Back panel

4. Interfaces Definition

Here we introduce the definition of the interfaces of Power, I/O, AV Input & Output. See as shown below:

4.1 Power interface

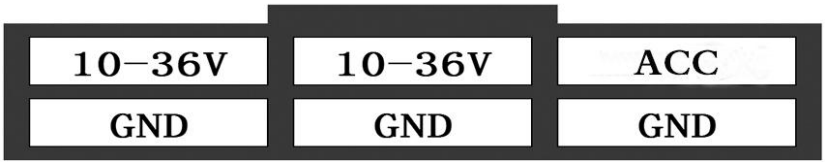


Figure 4. Power interface definition

4.2 I/O Interface definition

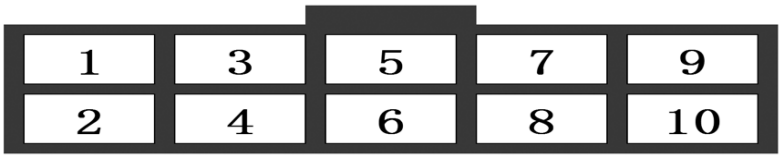


Figure 5. Front view of I/O Interface

I/O Interface definition

PIN	Color	Definition	PIN	Color	Definition
1	Blue	Alarm output	2	Black	GROUND
3	Purple	Alarm IN2_POS	4	Purple	Alarm input 1
5	Purple	Alarm IN4_POS	6	Purple	Alarm input 3
7	Red	5V OUTPUT	8	White	TXD (TTL electrical level)
9	Grey	IR extension	10	Yellow	RXD(TTL electrical level)

4.3 Aviation interface definition

AV-IN Camera Interface AV-OUT Monitor Interface

Chapter 2 Installation and Application

1. HDD, Sim Card, SD Card installation

Please insert the key into the hole of the lock on the front panel, and open the hdd lock anticlockwise, then pull the cover outward.

Figure 6. Open the HDD lock

Turn the fixing screws of the HDD holder, and draw out the hdd holder after disassemble the screws

Figure 7. Draw out HDD holder

Insert the HDD into the HDD holder as the direction show as below, and fix the 4pcs set

screws. (set screws included in the accessories box)

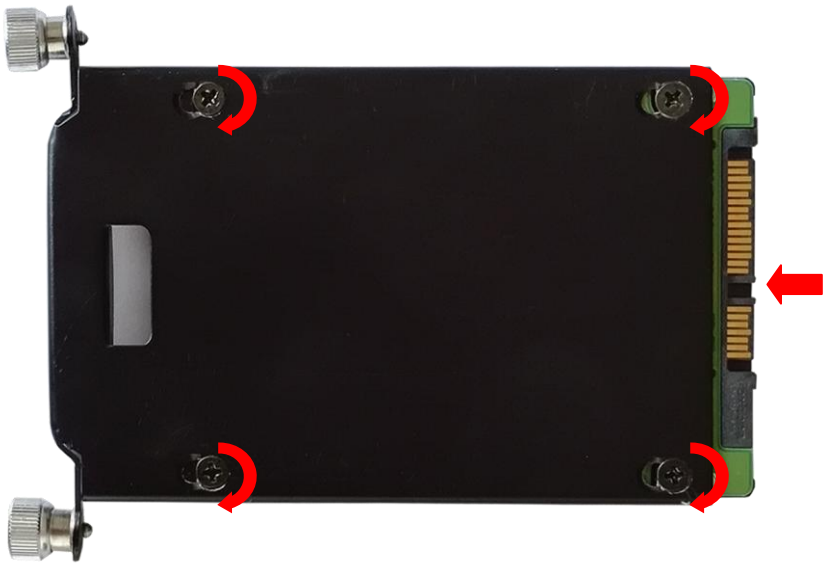


Figure 8. Fasten HDD

Insert the mounted HDD holder into the dvr mainframe, and lock the set screws on both sides, make the SD Card's pin contact area face down and insert into the mainframe, make the Sim card's chip contact area face up and insert into the mainframe,

Figure 9. Install HDD, SD Card, SIM Card

After install HDD, SD Card and Sim Card, cover over the front cover plate and lock the HDD lock.

2. Antennas Connection

Please connect the WiFi, 3G/4G and GPS antennas as per the picture as following We suggest you put the GPS antenna externally at the vehicle's roof to make sure signal connection even when it is weak.

Figure 10. Antennas Connection

3. Power Connection

Please connect the power as per the definition of power interface. Positive pole (RED) connects with power input 9-36V DC, ACC ignition (YELLOW) connects with 5-36V DC.

Figure 11. Power Connection

The yellow ignition wire is used to detect the ignition signal. We strongly suggest you connect it with the "RUN" terminal of the ignition switch, or any terminal in the vehicle's switch box which will have power only when the vehicle was ignited (f.g. the FM radio)

PS: When testing the device, please connect both of the red power wire and the yellow

ignition wire with the positive pole of the UPS, otherwise, the device will not boot.

4. Camera Connection

You can connect the camera with the AV input cable directly, or by extension cable (optional). The AV cable in the accessories box has mark on each connector, AV 1-4 are for cameras connection.

Figure 12. Cameras Connection

PS: Before you connecting the cameras, please double check the definition of the AV interface, please make sure your cameras are with same aviation interface definition with the DVR.

5. Monitor connection

The device supports VGA and CVBS output. You can switch the output mode to be the one you need by the mouse or remote control.

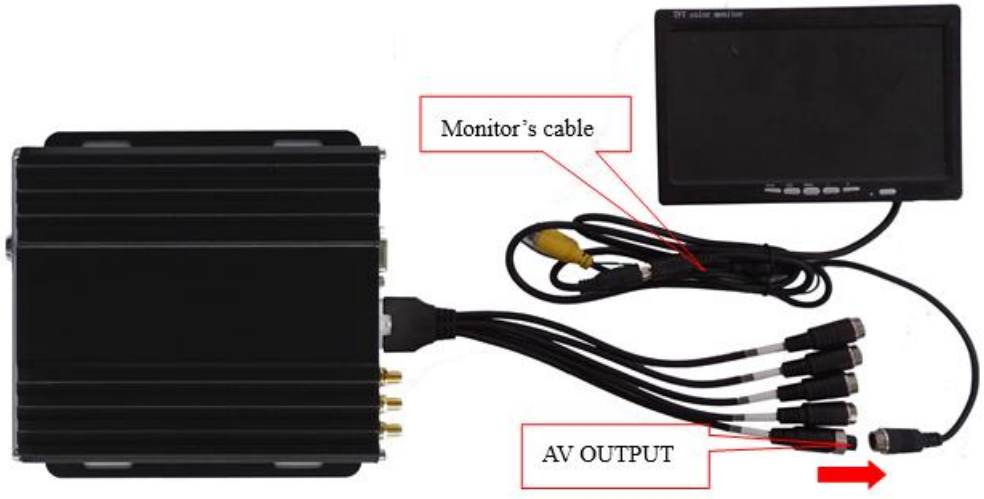


Figure 13. Aviation interface monitor connection

PS: Before you connecting the monitor, please double check the definition of the AV interface, please make sure your monitor is with same aviation interface definition with the DVR.

6. Intercom connection

When you're going to use the intercom, please connect the cables which come with the intercom. If the cable is not long enough for you, you can use extension cable.

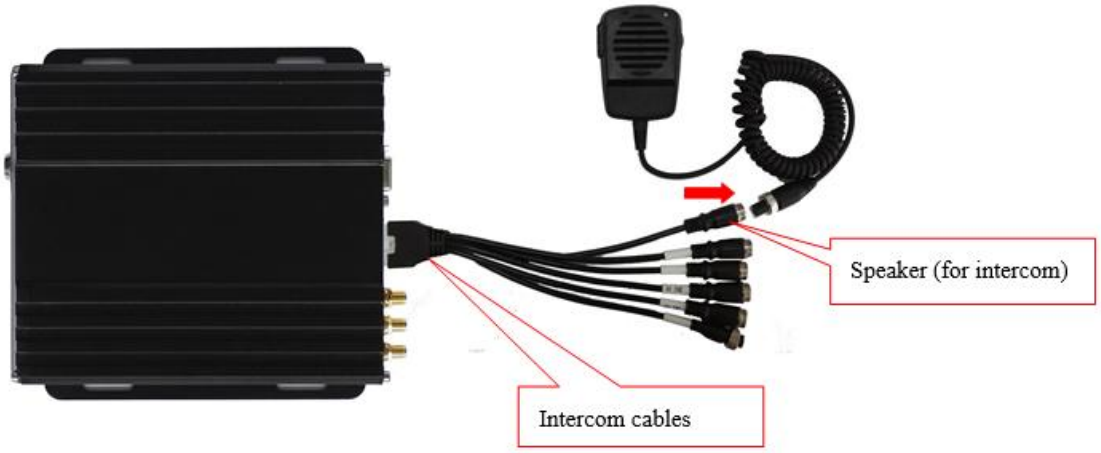


Figure 14. Intercom Connection

PS: The intercom cable only comes with the intercom, they are one set.

7. I/O wires connection

When you're going to use it, please connect the wires as the I/O interface definition. You will also find tips of the interface definition in the DVR menu.

7.1 IR extension connection

Figure 15. IR extension connection

I/O wires				IR extension cable	
PIN	**Definition**	**Color**		**Color**	**Definition**
2	Ground	Black	⟷	Black	Ground
7	5V Output	Red	⟷	Red	5V Power
9	IR extension	Grey	⟷	White	Signal

IR Connection

7.2 Alarm input connection

This device provides 4 channels alarm inputs (2 channels Positive trigger, 2 channels negative trigger). You can connect the positive pole of circuit of the reverse light, turn light, door open & close etc with them for applications such as reverse assistant, camera channels switching. You can also connect it with the SOS emergency button for alarm linkage.

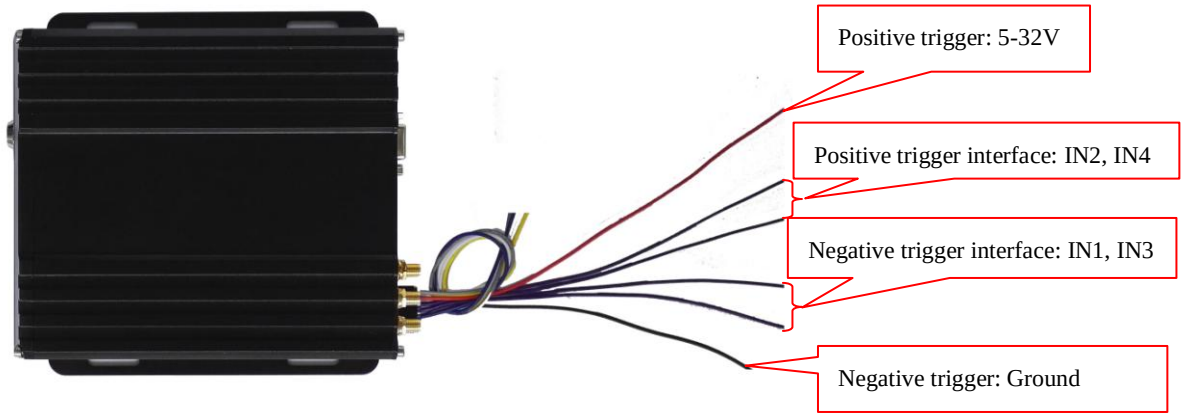


Figure 16. Alarm Input Connection

I/O wires				Alarm Trigger connection	
PIN	Definition	Color		Color	Alarm trigger condition
3	Alarm input2	Purple		Red	5V-32V
5	Alarm input4	Purple			
4	Alarm input1	Purple		Black/Red	Ground/5-32V
6	Alarm input3	Purple			

Alarm Input Connection

7.2.1 Application of Alarm input (Reverse assistance)

The device comes with Reverse assistant feature, give an example with Alarm Input2, we connect the wire of alarm input 2 with the positive pole of reverse light's power, See as shown below:

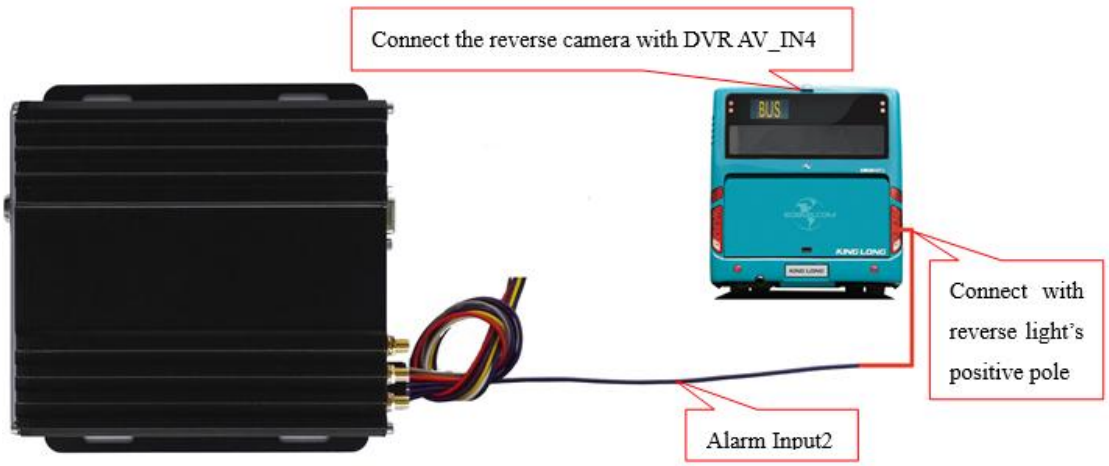
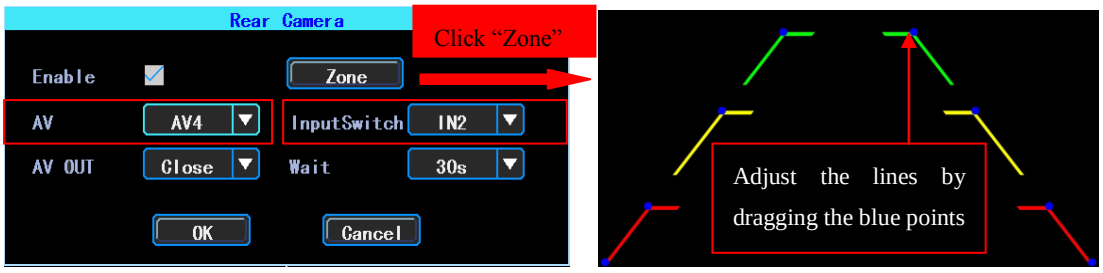


Figure 17. Reverse Assistance Connection

I/O wires				Alarm trigger connection	
PIN	Definition	Color		Color	Alarm Trigger Condition
3	Alarm input 2	Purple		Red	Positive pole of Reverse light

Reverse Assistance Connection

Setup it in the DVR menu "Advanced"→"RearCamera", see as following, click "OK" to save your setting.



AV channel: Please select the reverse camera's channel
Input Switch: Please select the alarm input number which connect with the reverse light's power
PS: When using reverse assistance, please use IN2, IN4 positive trigger to setup

When you put reverse gear, the DVR will display the reverse camera's channel only. See as shown below:

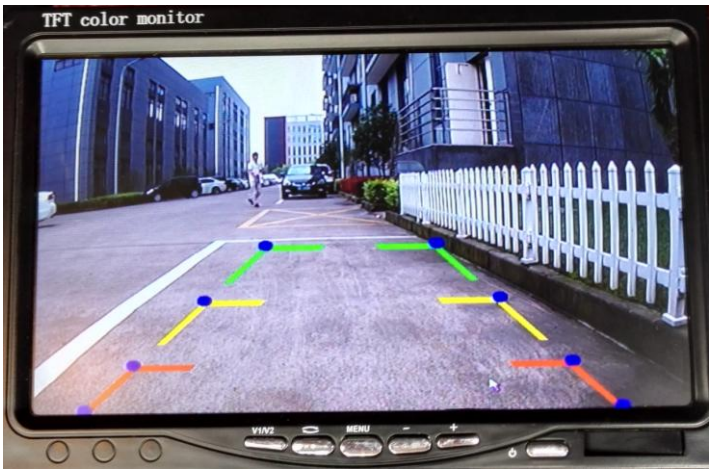


Figure 18. Reverse Assistance

7.2.2 Application of Alarm Input (Emergency Alarm)

You can connect an Emergency Button With the alarm input of the device. When you hit the Emergency alarm button, the device will send alarm information to the server platform. That is alarm linkage. (This application requests the DVR connecting with the server in real time, otherwise, the server platform will not receive the alarm information). We give an example with Alarm Input 1, connect the I/O alarm input wire 1 with one terminal of the Emergency button, and connect the other terminal of the Emergency button with ground.

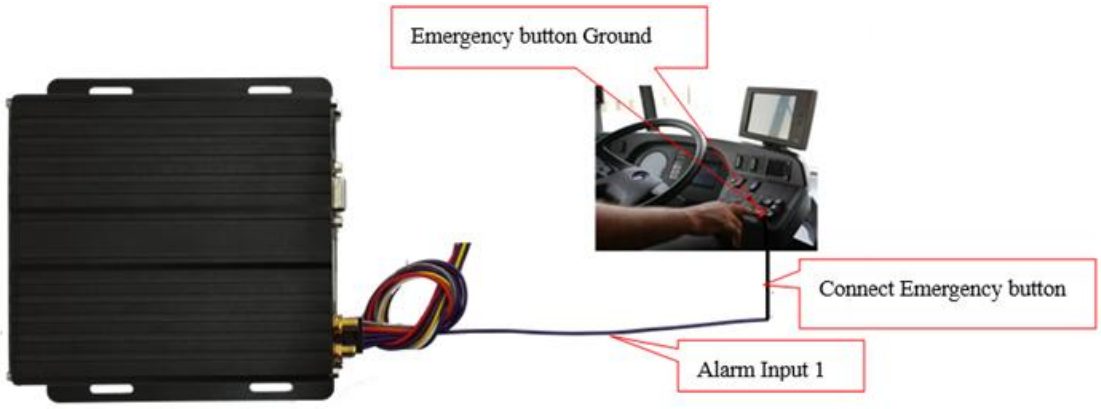


Figure 19. Emergency button connection

I/O wires				Alarm trigger connection	
PIN	Definition	Color		Color	Alarm trigger condition
4	Alarm input1	Purple		Black	Ground

Emergency button connection

PS: (If the connected Alarm input is Positive trigger, the other end of the Emergency button will be 5-32V DC power)

Setup it in the DVR menu “Alarm” → “Input”, select AlarmInput1 in the list to setup the alarm parameter. See as shown below:

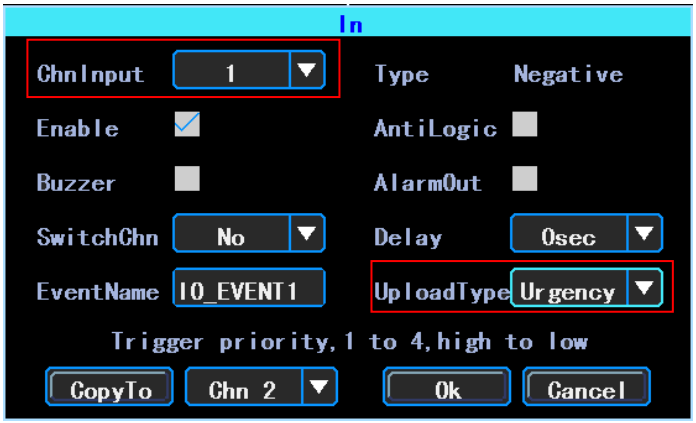


Figure 20. Setup alarm input

ChnInput: This channel is used to connect with the Emergency button.
UploadType: When you use the emergency button, please set up it to be “Urgency”, otherwise, set up it to be “No”

7.3 Serial ports connection

The device provides a group of serial ports which are used to connect with some user's peripherals, the interface is LVTTL (3.3V) level

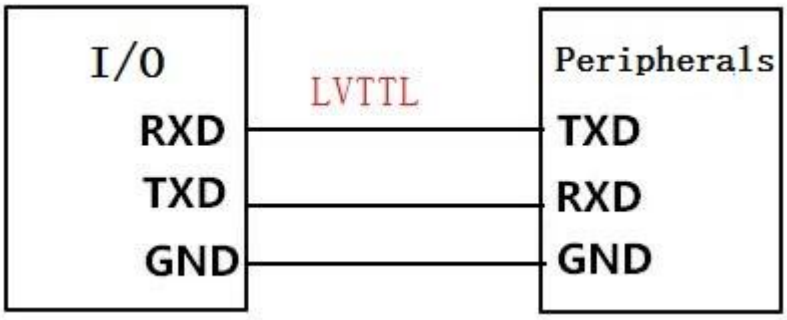


Figure 21. Serial ports Connection

I/O wires				Peripherals	
PIN	**Definition**	**Color**		**Color**	**Definition**
2	Ground	Black	⟷	Black	Ground
8	TXD(TTL level)	White	⟷	Yellow	RXD
10	RXD(TTL level)	Yellow	⟷	White	TXD

Serial ports connection