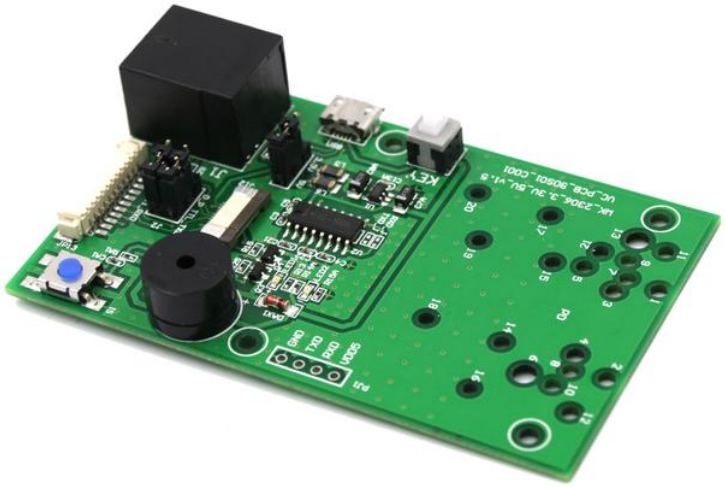
YidaScan



MT100

EVK Multifunctional Development Board

User Manual

Disclaimer

Please read through the manual carefully before using the product and operate it according to the manual. It is advised that you should keep this manual for future reference.

Do not disassemble the device or remove the seal label from the device, doing so will void the product warranty.

All pictures in this manual are for reference only and actual product may differ. The information contained herein is subject to change without prior notice.

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Revision

Version	Description	Date
V1.0	Initial Version	2020-11-03
V1.1	Adjust PJ1 output to TTL signal	2021-03-16

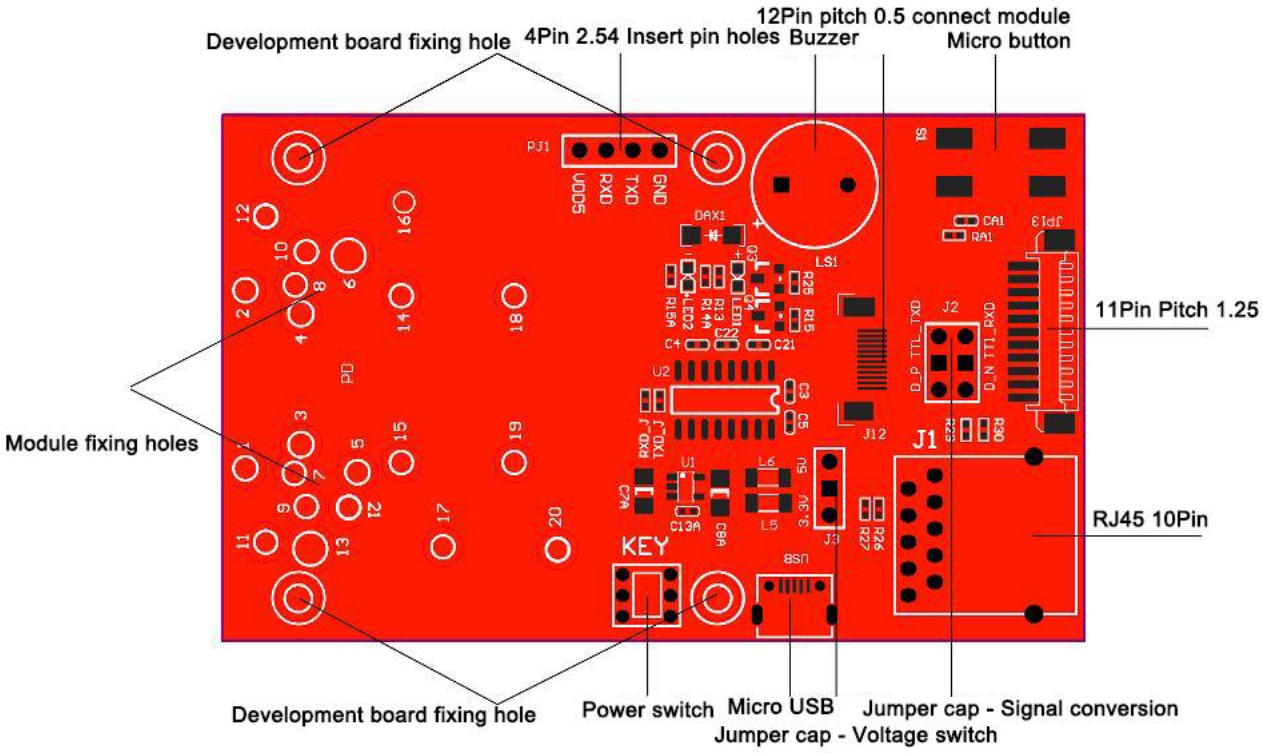
Table of Content

Introduction

MT100 is a multifunctional development board, used to connect the barcode scanner module and the receiving host, the development board uses a common input signal, support a variety of interface types of signal output.

Appearance

The image below shows what the MT100 looks like, with electronic components such as trigger buttons and a buzzer on the upper surface. There are 4 screw holes around the edges for attaching the MT100 to other equipment.



【MT100 Appearance Diagram】

Function Description

Module fixing holes

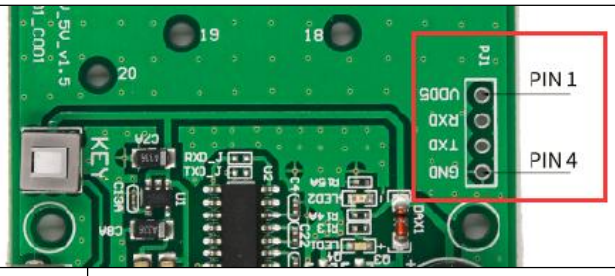
The module fixing holes are located at the front of the development board and are labeled "1, 2, 3... ... 20, 21 ", mainly used for fixed barcode scanner module.

Development board fixing holes

The fixing holes of the development board are located on both sides of the development board and are mainly used to fix the development board.

4PIN Pitch 2.54 Insert pin holes

4PIN Pitch 2.54 Pin holes are located in the middle of the right side of the development board and marked as "PJ1". The spacing between the jacks is 2.54mm. The output signal is TTL interface, the foot position is defined as follows:

PJ1			
PIN#	Signal	Type	Definition
PIN1	VCC	P	DC 5V power input
PIN2	RX	Input	TTL received, module data input pin
PIN3	TX	Output	TTL sending, module data output pin
PIN4	GND	P	Power-supply Ground

Buzzer

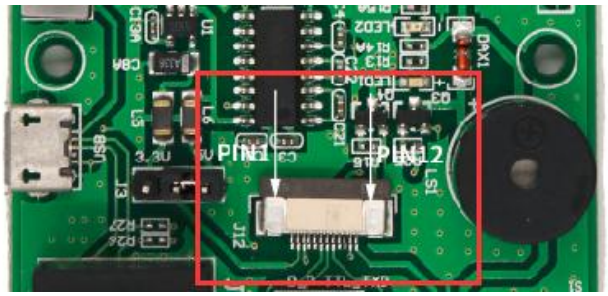
The buzzer is located in the middle and lower part of the right side of the development board, marked "LS1", which is mainly used to emit buzzes when the devices is working.

Micro Button

The micro button is located at the lower right side of the development board, marked as "S1". It is mainly used to trigger scanning of the barcode scanner module. It is kept at high level in idle time and works at low power to trigger scanning.

12PIN Pitch 0.5 socket

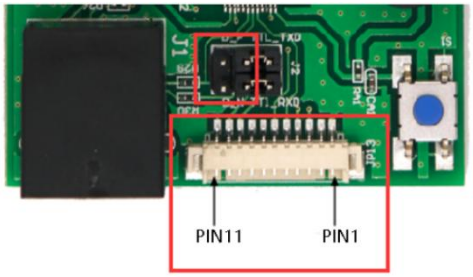
The 12PIN Pitch 0.5 socket is located at the lower part of the middle of the development board and marked as "J12". It is mainly used to connect the barcode scanner module. The scanner module and the development board are connected together through FFC 12PIN line. The foot position is defined as follows:

J12			
PIN#	Signal	Type	Definition
PIN1	N/C	-	-
PIN2	VCC	P	3.3/5V Power input
PIN3	GND	P	Power-supply Ground
PIN4	TX	Output	TTL send, corresponding to module RX
PIN5	RX	Input	TTL received, corresponding to module TX
PIN6	D-/HOST DATA	Input/Output	USB_D- signal/PS2_HOST DATA
PIN7	D+/HOST CLK	Input/Output	USB_D+ signal/PS2_HOST CLK
PIN8	KB DATA	-	PS2_KB DATA
PIN9	BEEP	Output	Buzzer output signal
PIN10	LED	Output	Indicator output signal
PIN11	KB CLK	-	PS2_KB CLK
PIN12	TRIG	Output	Trigger pin, output low level signal triggers module scanning

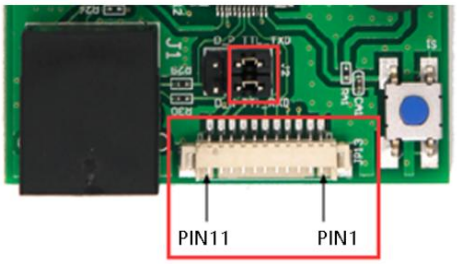
11PIN Pitch 1.25 socket

11PIN Pitch 1.25 Socket is located at the bottom of the middle part of the development board and marked as "PJ13". It is mainly used to connect data lines and support the output of USB signal, TTL signal, PS2 keyboard port signal and RS232 signal.

JP13 needs to be used with the "signal conversion jumper cap" in the position of "J2". When the jumper cap is on the left side, the output signals are USB and PS2 signals. The pin position is defined as follows:

JP13			
PIN#	Signal	Type	Definition
PIN1	GND	P	Power-supply Ground
PIN2	VCC	P	DC 5V Power input
PIN3			
PIN4	-	-	-
PIN5	PS2_KB DATA	Input/Output	PS2_KB DATA
PIN6	PS2_KB CLK	Input/Output	PS2_KB CLK
PIN7	-	-	-
PIN8	-	-	-
PIN9	D+/HOST CLK	Input/Output	USB_D+/PS2_HOST CLK
PIN10	D-/HOST DATA	Input/Output	USB_D-/PS2_HOST DATA
PIN11	-	-	-

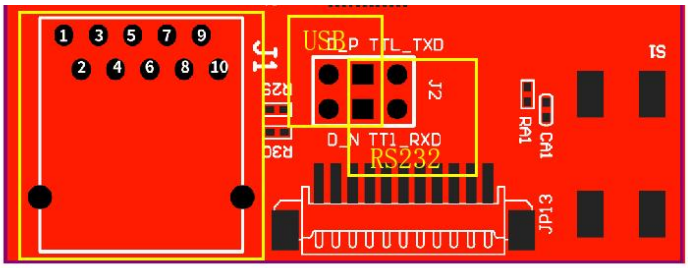
When the jumper cap is on the right, the output signals are TTL and RS232 output signals. The pins are defined as follows:

JP13			
			
PIN#	Signal	Type	Definition
PIN1	GND	P	Power-supply Ground
PIN2	VCC	P	DC 5V Power input
PIN3	TX	Output	RS232_TX is send
PIN4	RX	Input	RS232_RX is received
PIN5	-	-	-
PIN6	-	-	-
PIN7	-	-	-
PIN8	-	-	-
PIN9	TX	Output	TTL_TX is send
PIN10	RX	Input	TTL_RX is received
PIN11	-	-	-

RJ45 10PIN crystal head base

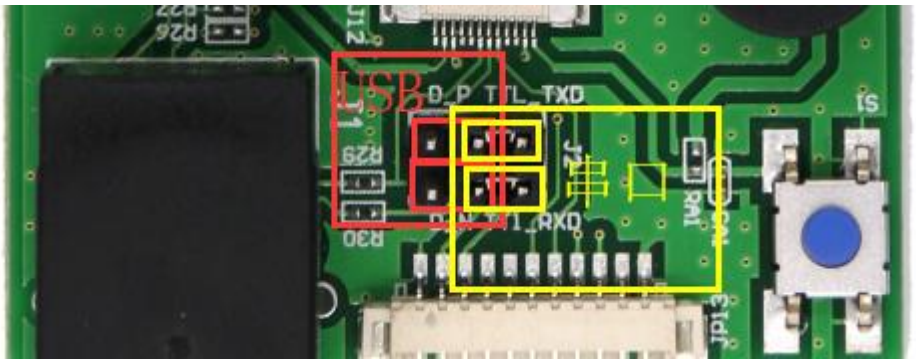
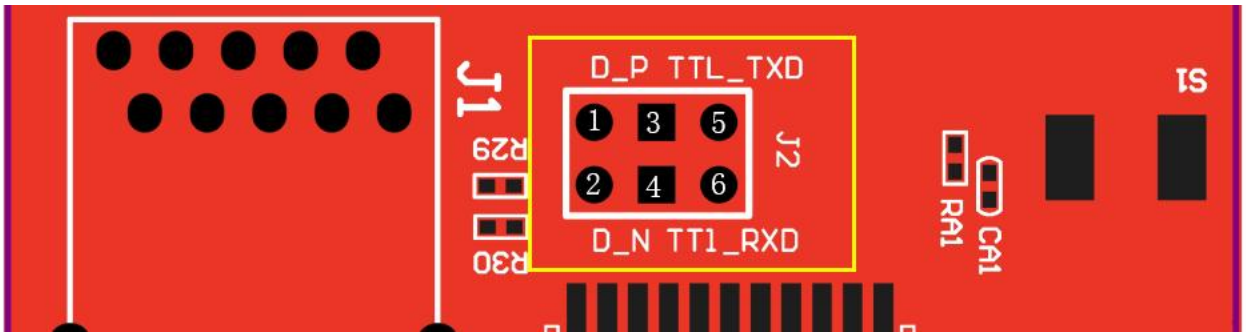
RJ45 10PIN crystal socket is located at the bottom of the left side of the development board, marked as "J1". It is used to connect data cables and supports the output of USB and RS232 signals.

J1 should be used with the "signal conversion jumper cap" in the position of "J2". When the jumper cap is located on the left side, the output signal is USB; When the jumper cap is located on the right side, the output signal is RS232 and the foot position is defined as follows:

J1			
PIN#	Signal	Type	Definition
PIN1	-	-	-
PIN2	-	-	-
PIN3	D+		USB_D+
PIN4	-	-	-
PIN5	D-		USB_D-
PIN6	VCC	P	DC 5V Power input
PIN7	-	-	-
PIN8	GND	P	Power-supply Ground
PIN9	-	-	-
PIN10	-	-	-

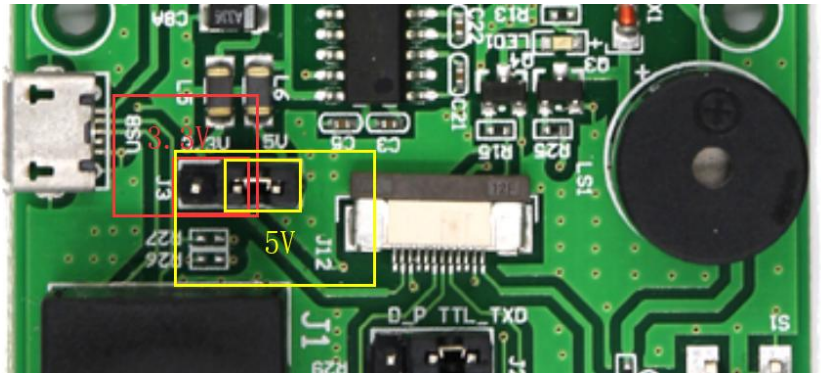
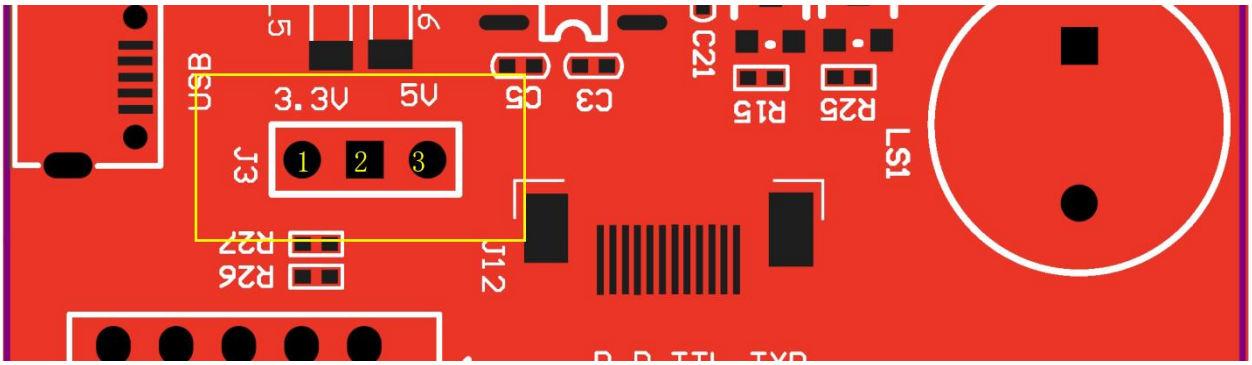
Jumper Cap - Signal Conversion

The signal conversion jumper cap is located at the lower part of the middle of the development board and marked as "J2". It is mainly used for switching USB and serial port signals.

J2	
	
When the jumper cap is located in the left 4 pins, connect 1-3,2-4, output USB or keyboard port signal.	
When the jumper cap is located in the four pins on the right and connects 3-5, 4-6, the serial port (TTL or RS232) signal is output.	

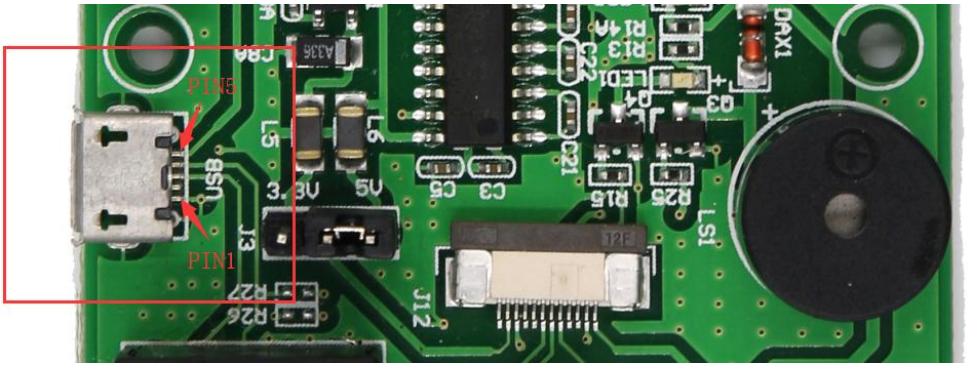
Jumper Cap - Voltage Switch

The signal conversion jumper cap is located at the lower middle of the development board and marked "J3". It is mainly used to switch the power supply voltage to 3.3V or 5V.

J3	
	
When the jumper cap is located in the left 2 pins and connected 1-2, the output voltage is 3.3V.	
When the jumper cap is located in the right 2 pins, connect 2-3, output 5V voltage.	

Micro USB

The Micro USB female head is located at the lower middle of the left side of the development board, marked as "USB", and the output signal is a USB interface. The pins are defined as follows:

USB			
PIN#	Signal	Type	Definition
PIN1	GND	P	Power-supply Ground
PIN2	-	-	-
PIN3	D+	Input/Output	USB_D+
PIN4	D-	Input/Output	USB_D-
PIN5	VCC	P	DC 5V Power input

Power Switch

The power switch is located in the middle of the left side of the development board and marked as "KEY". It is mainly used to control the power input of the development board. Press down for power supply, bounce off for power off.