P12800HY101X_B01

10.1 Inches, 1280xRGBx800, 16.7M Colors, Android LCM

P12800HY101X_B01 is an industrial level Android LCM based on Rockchip RK PX30 ARM. It is equipped with Quad-core Coretex-A35, supporting most decoding solutions under 1080p@60fps, H.265/H.264/MVC/VP8 solutions and many other great features of Rockchip RK PX30. Meanwhile, with good jpeg picture processing performance and 3D GPU, it supports OpenGL ES2.0 and OpenVG1.1.

Rockchip RK PX30 has high-performance external memory interface (DDR3/DDR3L/LPDDR2) capable of sustaining demanding memory bandwidths, also provides a complete set of peripheral interface to support very flexible applications.

Core Board	
CPU	1.5 GHz Quad-core A35 ARM
RAM	1GB DDR3
eMMC	8GB
GPU	Mali-G31
Power Management	RK809
System Version	
Android	Android 8.1
Ubuntu	Ubuntu16.04 or linux+QT5.12 (Default system is Android. Need to refresh firmware to choose Ubuntu. Apps need to be developed separately.)
Display	
Color	16.7M (16777216) colors, 24-bit color 8R8G8B.
Active Area (A.A.)	217.58 mm(W)×136.36 mm(H), 1280×800
View Area (V.A.)	219.46 mm(W)×138.10mm(H), 1280×800
Resolution	1280×800
Backlight	LED
Brightness	350

Optical Specifications						
Item	**Symbol**	**Condition**	**Min.**	**Typ.**	**Max.**	**Unit**
Viewing Angle (CR≧10)	θL	Φ=180° (9 o′ clock)	70	80	—	Degree
	θR	Φ=0° (3 o′ clock)	70	80	—	
	θT	Φ=90° (12 o′ clock)	50	60	—	
	θB	Φ=270° (6 o′ clock)	60	70	—	

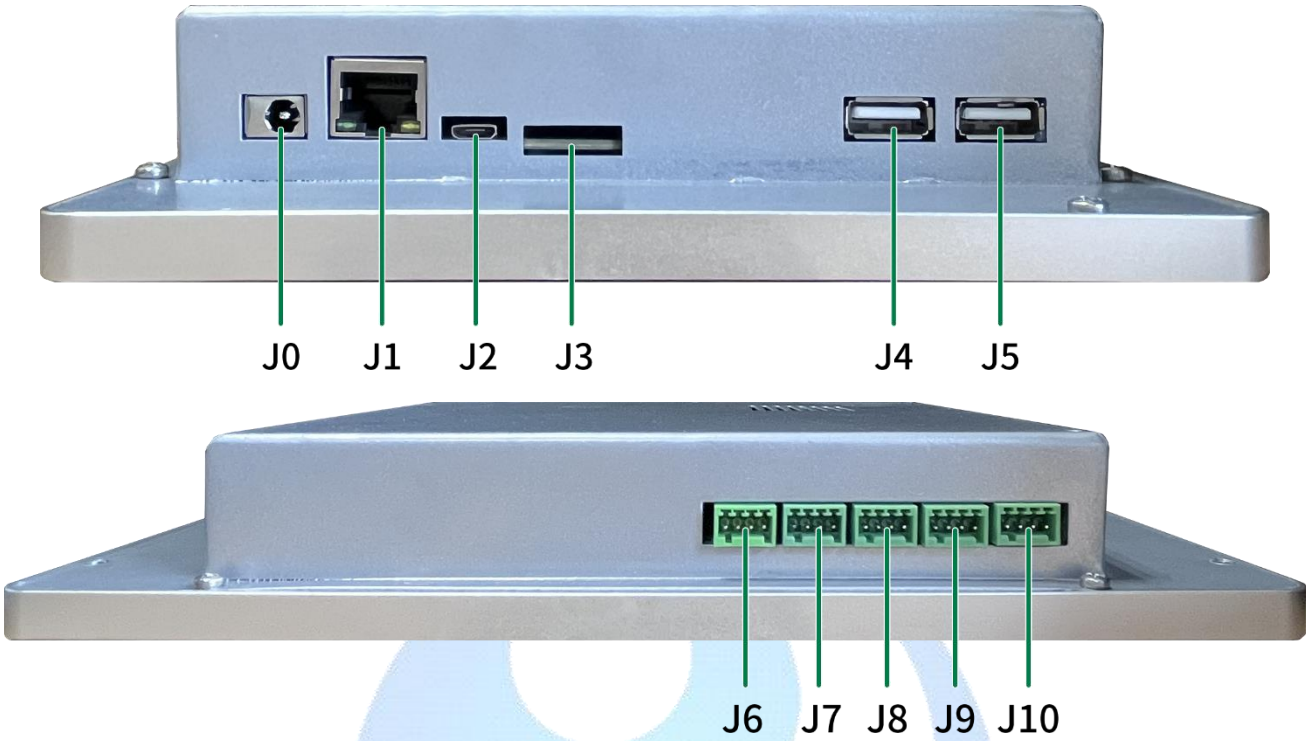
Voltage & Current					
Item	**Condition**	**Min.**	**Typ.**	**Max.**	**Unit**
Power Voltage		12	12	26	V
Operation Current	—	—	500	730	mA
Power Supply	12V 2A DC (Recommended).				

Reliability Test					
Item	**Condition**	**Min.**	**Typ.**	**Max.**	**Unit**
Working Temperature	60%RH at 12V voltage	-20	25	70	℃
Storage Temperature	—	-30	25	85	℃
Working Humidity	25℃	10%	60%	90%	RH
Protection Paint	—	—	None	—	—

Interface					
Item	**Condition**	**Min.**	**Typ.**	**Max.**	**Unit**
Baud Rate	Standard	1200	9600	115200	bps
	User Defined	1200	—	115200	bps
Serial Mode	Serial Port*4 (2*RS232,1*TTL, 1*RS485 /TTL) (5V/12V)				
USB	USB HOST*2				
Ethernet	Support 10m/100m Ethernet.				
Wi-Fi/Bluetooth	Support 802.11b/g/n Wi-Fi wireless network; Bluetooth 4.0				
4G LTE Module	4G LTE Module(Onboard)/GPS(Optional)				

Peripherals	
Microphone	Audio input interface.
Loudspeaker	Audio output interface. 5W/8Ω
TF card	Yes
IIC	1
IO interface	4
Output Power	Three connectors output 3.3V /5V /12V, one of three

Interface Description



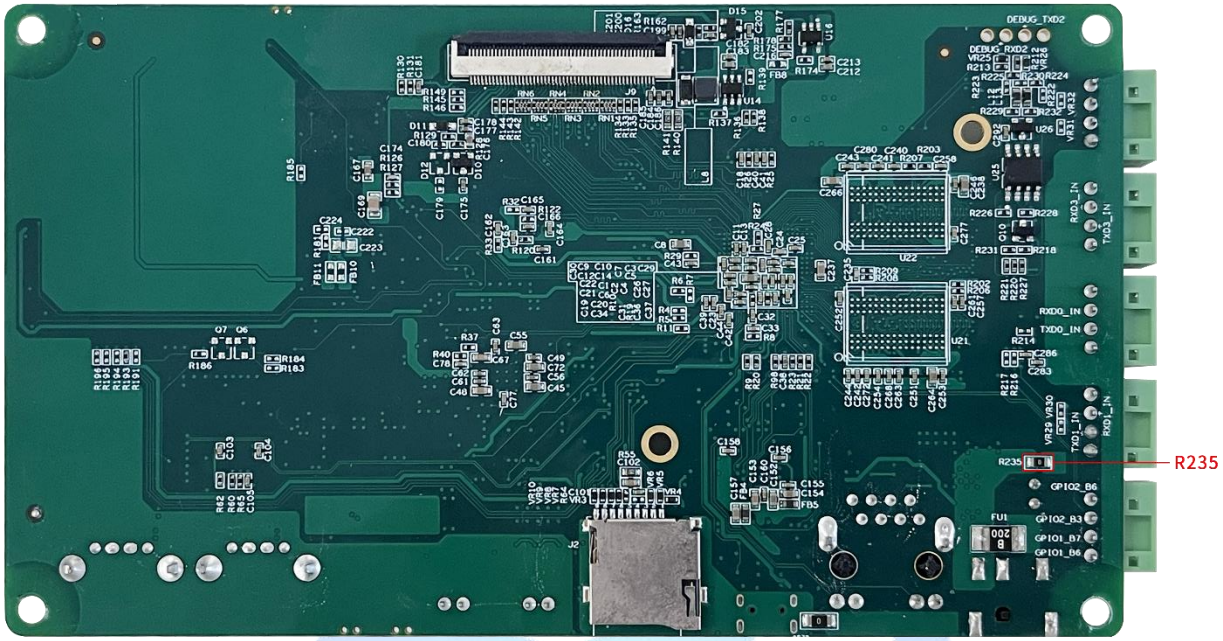
Num.	Interface Name	Description
J0	Power	12V/2A power supply (maximum voltage ranges 26V DC)
J1	RJ45 interface	Support 10M/100M network
J2	USB_Micro	OTG /App debugging/ Firmware upgrade interface
J3	SIM card	Micro-SIM supported
J4	USB_HOST1	Support USB Peripherals
J5	USB_HOST2	Support USB Peripherals
J6	UART4	Device name: ttyS4, TTL/485, Pin definition: V, RXD, TXD, GND
J7	UART3	Device name: ttyS3, TTL ,Pin definition: V, RXD, TXD, GND
J8	UART0	Device name: ttyS0, RS232 ,Pin definition: V, RXD, TXD, GND
J9	UART1	Device name: ttyS1, RS232 ,Pin definition: V, RXD, TXD, GND
J10	IO interface	Pin definition: GPIO1_B6/1.8V GPIO1_B7/1.8V GPIO2_B3/3.3V GPIO2_B6/3.3V

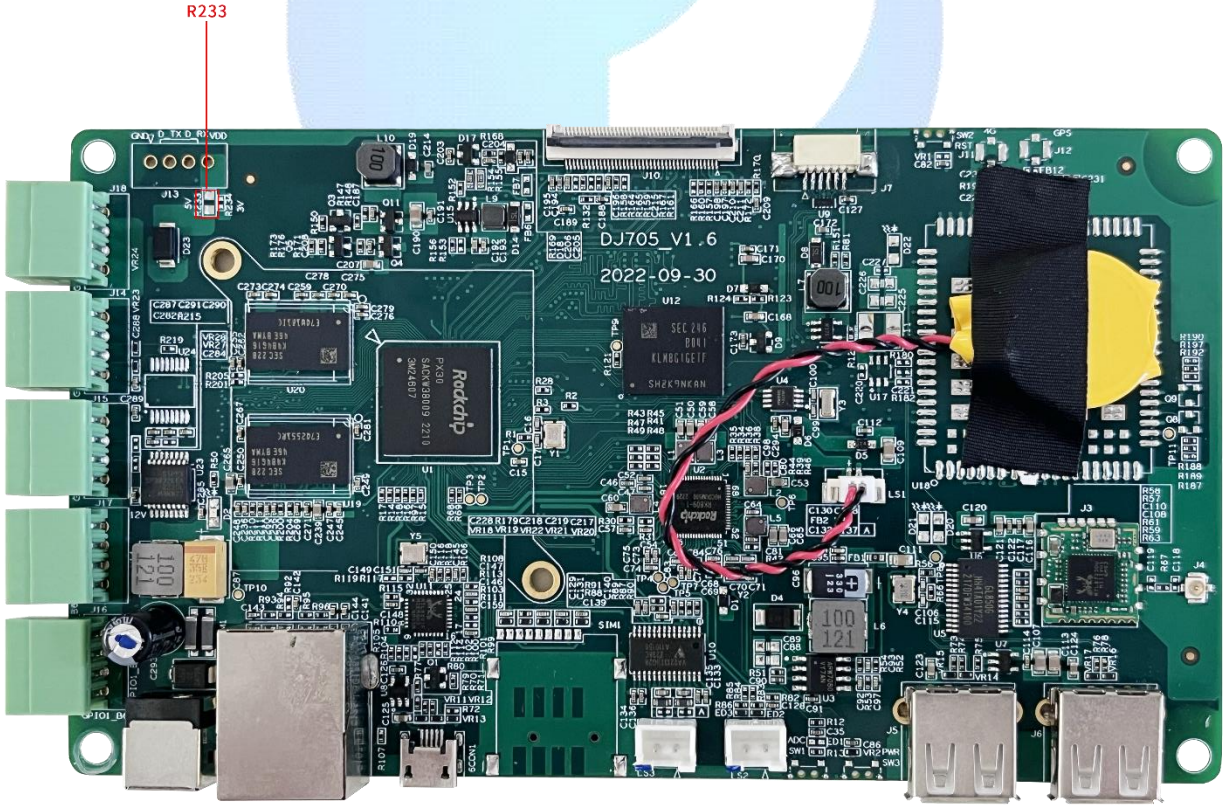
Note: The serial port voltage supports 5V and 12V, with 5V being the default setting. You can control the voltage by following the instructions on the next page.

It is a difficult task to modify the serial port voltage and RS485 to TTL, which may cause damage to the product. If you need to modify the product, please inform us before purchasing, and we will entrust the factory to modify it.

Change serial port voltage from 12V to 5V

Operation: Move the 0Ω resistor from the backside R235 to the frontside R233 (next to the label '5V').

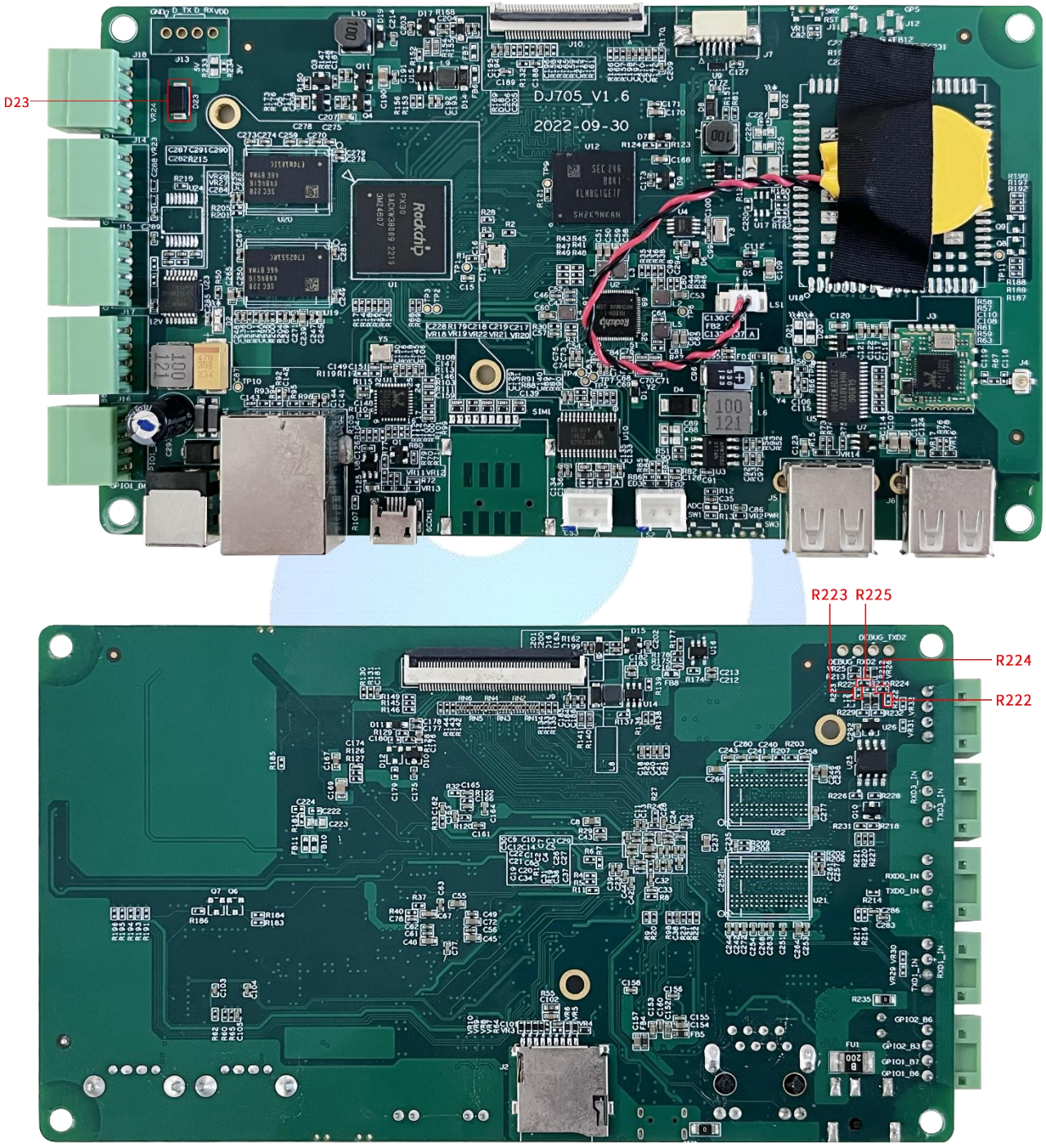


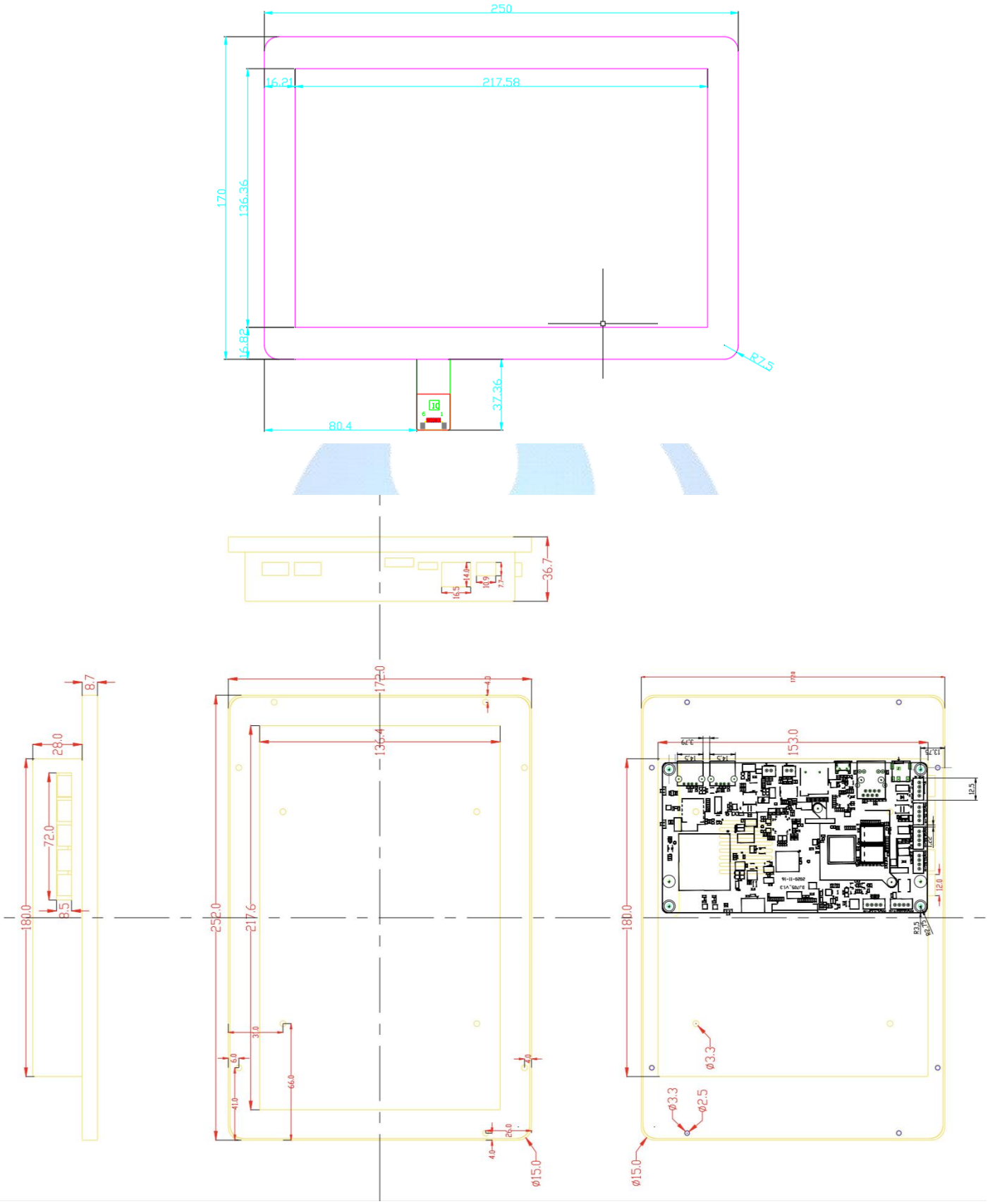


Change the 485 setting of Serial Port 4 to TTL.

As shown in the figure below:

1. Remove the frontside D23.
2. Move the backside resistors R224 and R225 to the positions of R222 and R223, respectively.




250
16.21
217.58
170
136.36
16.82
R7.5
37.36
80.4
36.7
8.7
28.0
72.0
8.5
180.0
172.0
136.4
252.0
217.6
3.0
6.0
41.0
66.0
26.0
4.0
Ø15.0
153.0
12.5
12.0
Ø3.3
Ø2.5
Ø15.0