Smart Panlee

Smart Serial LCD Display

ZX4D30NE01S-UR-4827

Features:

1. Support rapid prototyping

Core Materials (Tab. 0):

No.	Name	Model	Remark
1	ESP32-S3 Module	WT32-S3-WROVER-N16R8	
2			
3			

Hardware Interface:

Hardware Interface Diagram:

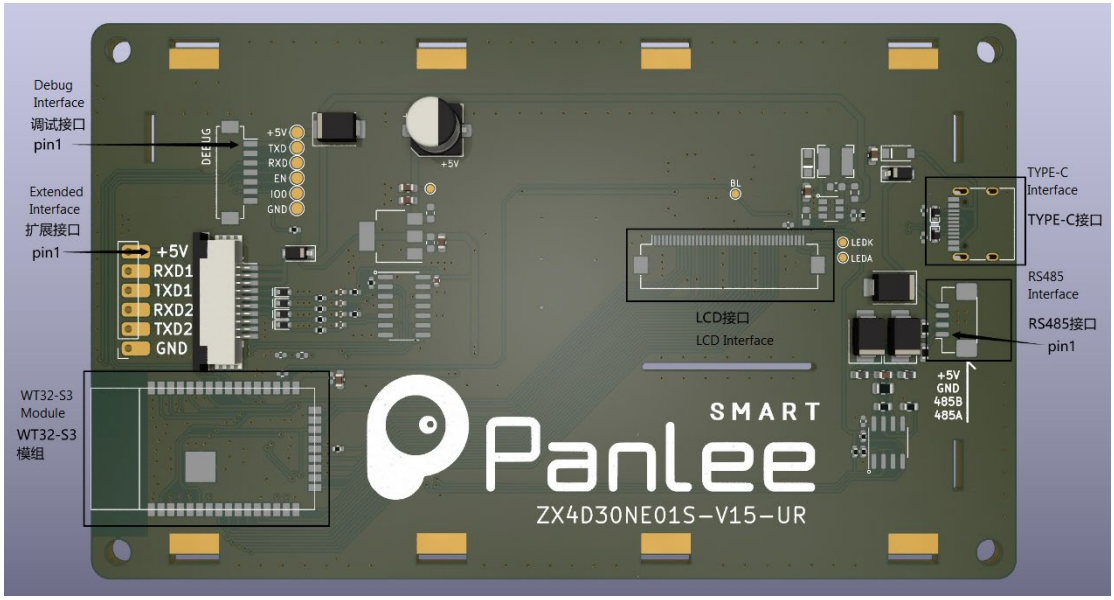


Fig. 1 Hardware Interface

Interface Description:

[1] Debug Interface (Tab.1)

Pin	Description	Module Pin	Voltage Range	Remark
1	+5V	-	5V	
2	NC		3.3V	
3	TXD	TXD	3.3V	
4	RXD	RXD	3.3V	
5	ESP_RXD	RXD	3.3V	
6	BOOT	-IO0	-	
7	GND			

[2] Debug Interface (Test Point) (Tab.2)

Pin	Description	Module Pin	Voltage Range	Remark
1	+5V	-	5V	
2	TXD	TXD	3.3V	
3	RXD	RXD	3.3V	
4	ESP_EN	EN	3.3V	
5	BOOT	IO0	3.3V	
6	GND			

[3] Extended GPIO (Weld Hole Position) (Tab.3)

Pin	Description	Module Pin	Voltage Range	Remark
1	+5V	-	5V	5V power supply input
2	RXD1	GPOI41	3.3V	Serial port (input only)
3	TXD1	GPIO4	3.3V	Serial port (output only)
4	RXD2/IO1	GPIO1	3.3V	Serial/GPIO (input only)

5	TXD2/IO2	GPIO2	3.3V	Serial/GPIO (output only)
6	GND	-	-	

[4] Extended GPIO (FPC Connector) (Tab.4)

Pin	Description	Module Pin	Voltage Range	Remark
1	+5V	-	5V	5V power supply input
2	+5V	-	5V	5V power supply input
3	+5V	-	5V	5V power supply input
4	RXD1	GPOI41	3.3V	Serial port (input only)
5	TXD1	GPIO4	3.3V	Serial port (output only)
6	RXD2/IO1	GPIO1	3.3V	Serial/GPIO (input only)
7	TXD2/IO2	GPIO2	3.3V	Serial/GPIO (output only)
8	GND	-	-	-
9	GND	-	-	-
10	GND	-	-	-

[5] RS485 Interface (Tab.5)

Pin	Description	Remark
1	RS485-A	RS485 bus TXD: GPIO0 RXD: GPIO39 DE (Flow Control): GPIO38
2	RS485-B	
3	GND	
4	+5V	+5V input

[4] LCD Interface (Tab.4)

Description	Module Pin	Remark
LCD-R3	4	RGB data
LCD-R4	5	
LCD-G	6	
LCD-R6	7	
LCD-R7	15	
LCD_G2	16	
LCD_G3	17	
LCD_G4	18	
LCD_G5	8	
LCD_G6	3	
LCD_G7	46	
LCD_B3	9	
LCD_B4	10	
LCD_B5	11	
LCD_B6	12	
LCD_B7	13	
LCD_CLK	14	RGB clock
LCD_DISP	21	
LCD_HSYNC	47	Horizontal sync
LCD_VSYNC	48	Vertical sync
LCD_DE	40	
BL_EN	45	Backlight control, active high

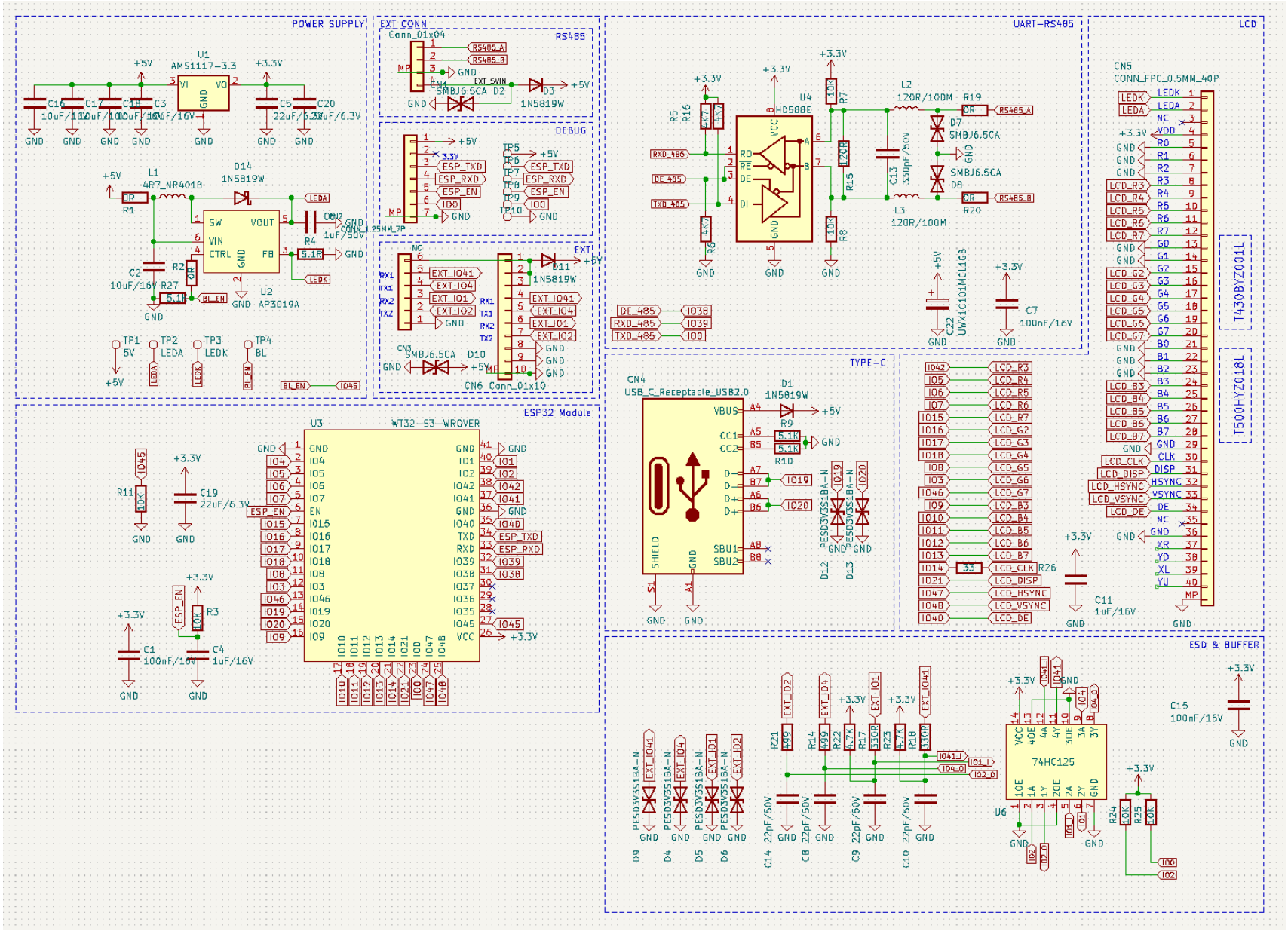
[5] LCD Interface (Tab.5)

Pin	Description	GPIO	Remark
1	TP_SCL	39	TP IIC interface
2	TP_SDA	38	

Hardware Peripherals:

Peripheral Name	Description
RS485	Serial port IO with flow control
Resistance TP chip	Resistance TP chip with IIC interface
LCD	

Schematic：


POWER SUPPLY
EXT CONN
RS485
DEBUG
UART-RS485
LCD
TYPE-C
ESP32 Module
ESD & BUFFER
U1
AMS1117-3.3
U2
AP3019A
U3
WT32-S3-WROVER
U4
HD5888
U6
74HC125
CN4
USB_C_Receptacle_USB2.0
CN5
CONN_FPC_0.5MM_40P
CN6 Conn_01x10
L1
4R7_NR4018
L2
120R/100M
L3
120R/100M
D14
1N5819W
D1
1N5819W
D10
SMBJ6.5CA
D11
1N5819W
D7
SMBJ6.5CA
D8
SMBJ6.5CA
T430BYZ001L
T500HYZ018L

Specification Parameters:

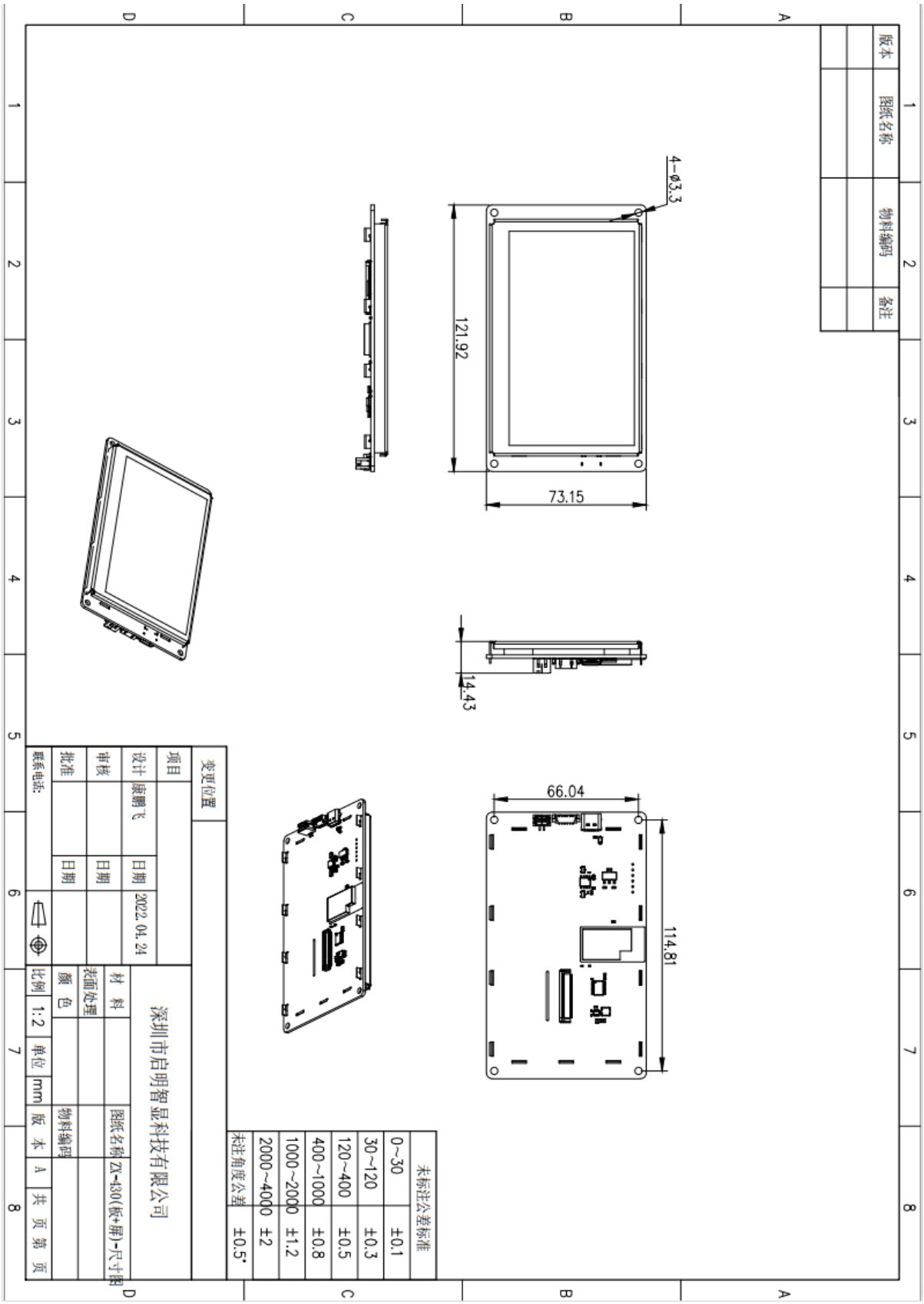
[1] Display Parameters (Tab.6)

Display Type	LCD
Drive IC Model	ST7701
Viewing Angle	FULL
Resolution	480*272
Interface	RGB
Color	
Backlight Mode	

[2] Touch Parameters (Tab.7)

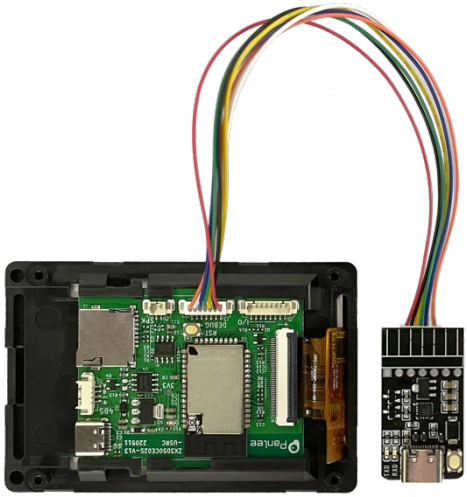
Touchscreen Type	
Driver IC Model	
Interface	
Touchscreen structure	
Touch Mode	
Surface Hardness	
Light Transmittance	

Outline Dimensional Drawing (Fig.2)



Firmware Burning:

1. Connect the downloader (ZXACC-ESPDB) via a USB-Type C cable. And then connect the ZX3D50CE02S board with the downloader (ZXACC-ESPDB) through an MX1.25-7P cable. As the downloader (ZXACC-ESPDB) has automatic data flow processing capabilities, the



firmware can be downloaded automatically through the ESP32 Flash Download Tools.

Fig.3

2. As shown in Fig. 4: Select the firmware path at mark 1, and then fill in the burning address, usually 0X00. Note that this checkbox must be checked; Set the crystal frequency to be 40MHz at mark 2; Select 32Mbit for Flash size at mark 3; Select DIO for SPI MODE at mark 4; Select the COM port number recognized by the computer at mark 5; Select the baud rate at mark 6 (the higher the value is, the faster the firmware will be downloaded. Max. 1152000bps).

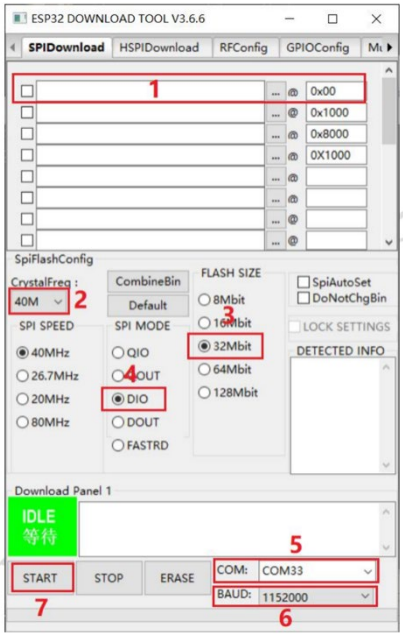


Fig.4

3. After the previous configuration, click START at mark 7 to start burning the firmware.

4. Complete the above steps, and then press the reset button on the back of the development board to start running the firmware you just burned.

Online GUI Designer:

Users can use our online GUI designer platform, which is similar to MIT APP Inventor, to realize the rapid GUI development with building blocks. Currently, the platform has perfected the graphic interface development, and more driver code blocks will be further improved in the future.

Login Page: http://8ms.xyz/login
User Manual: https://doc.smartpanle.cn/ESP32-S3/index.html

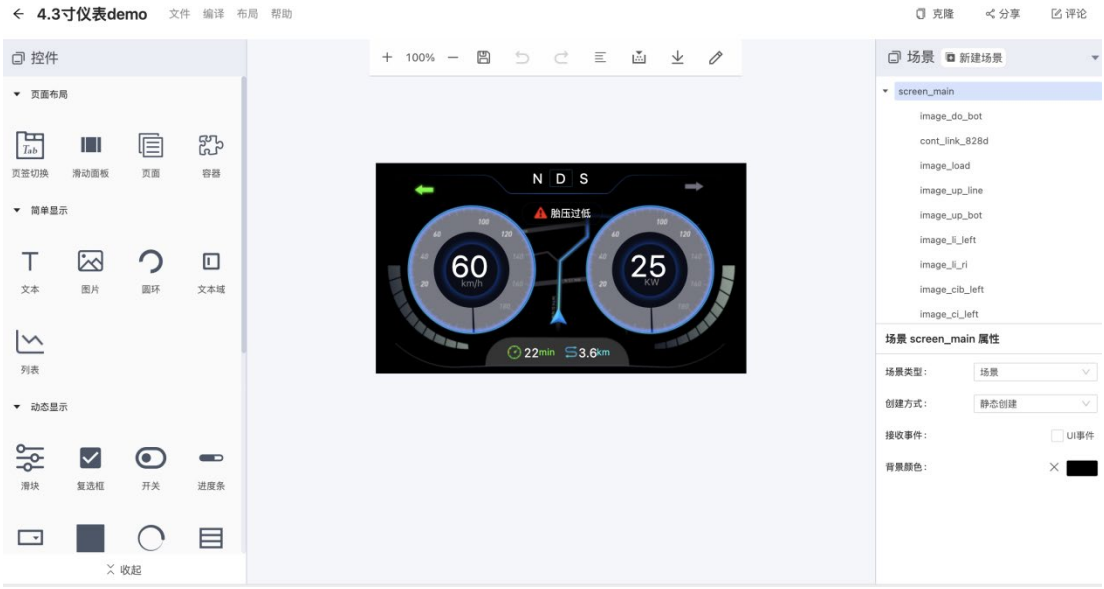


Fig.5

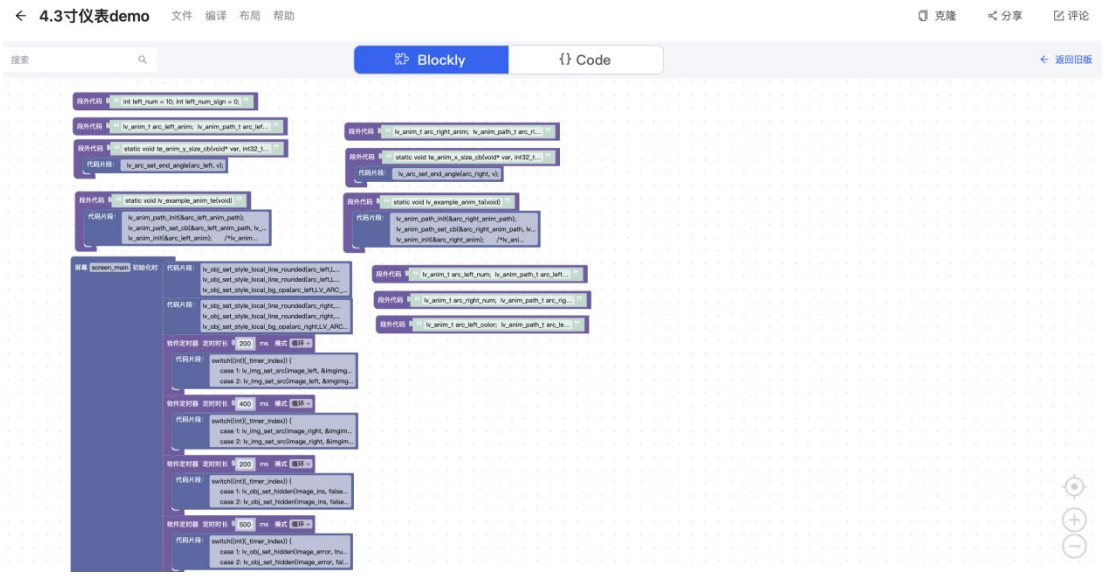


Fig.6

Contact Us

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