TFT 显示驱动板使用说明

TFT Display Driver Board Instructions

HTM-H027A02-UART-A02

主控系列 Master Control Series	☐EzUILet ☑EzUIH ☐EzUIC ☐ESP32 Series ☐STM32 Series

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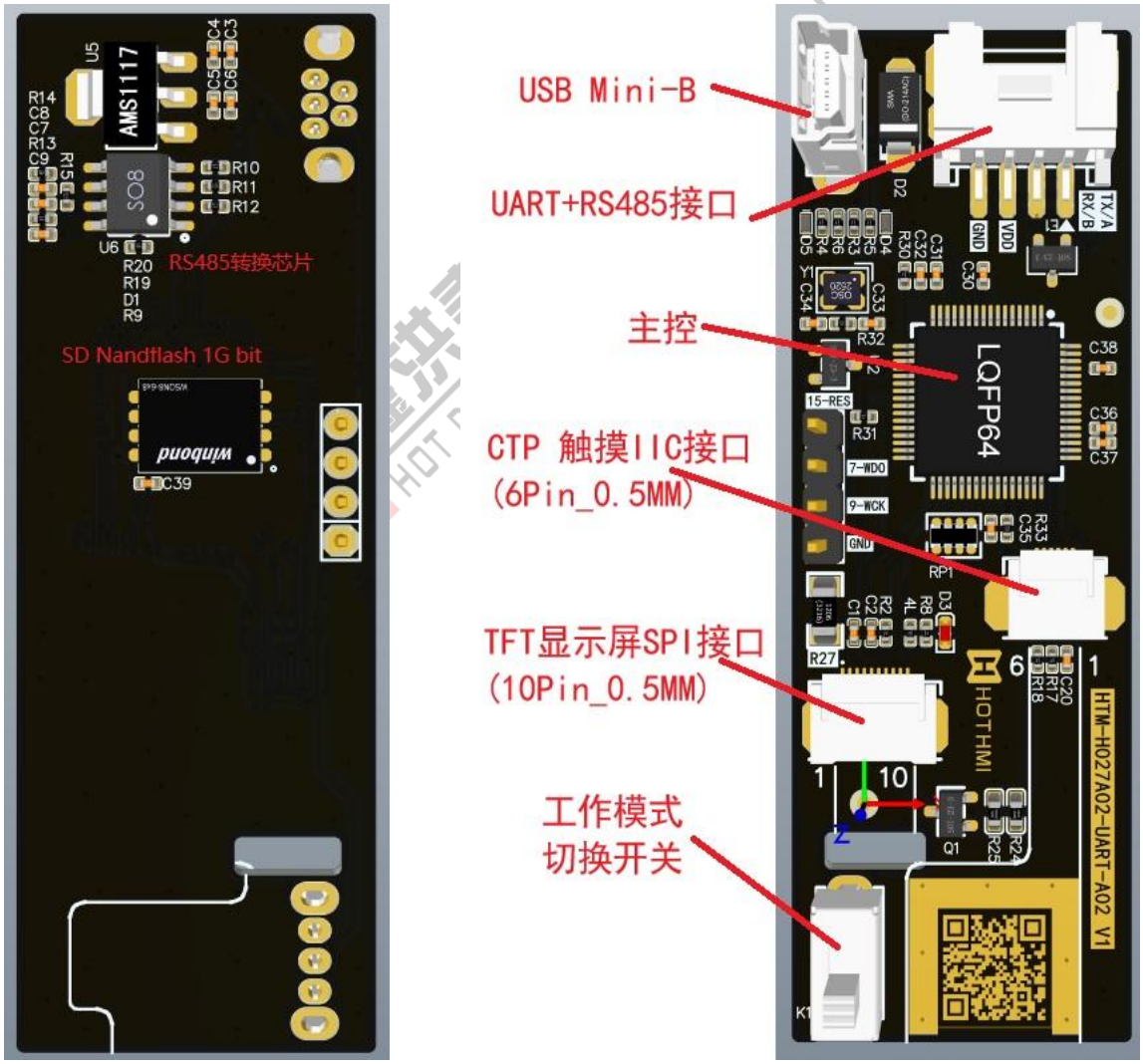
一、基本特征 General Feature:

HTM-H027A02-UART-A02 是 EzUIH 系列 TFT 显示驱动应用开发板之一。它基于 Arm China STAR-MC1 32 位微处理器，最高工作频率为 150MHz。开发板适用于所有 TFT SPI-4L 接口并支持电容触摸操作。

HTM-H027A02-UART-A02 is one of our EzUIH series development boards for TFT display driver applications. It is based on the Arm China STAR-MC1 32-bit microprocessor with a maximum operating frequency of 150MHz. Development board works with all TFT SPI-4L interfaces and supports capacitive touch operation.



显示资源上位机 Display resource upper computer	Support: EzUITool or ATF_UITool
PCB 尺寸（毫米） PCB Dimensions(mm)	23.50（H）x 68.00（V）x 1.60（D）
TFT 接口 TFT Interface	Serial Peripheral Interface (4-line 8bit serial)
电源 Power Supply	+5.0V(USB or UART port)
支持接口 Supported Interface	UART-TTL（+3.3V） UART-RS485
工作温度 Operating Temperature	-20 ℃ ～ +70 ℃
特征 Features	0 代码，上电即可演示 TFT 显示屏效果； 0 code, power on to demonstrate the TFT display effect; 测试和评估 TFT 显示器； Test and evaluate a TFT display; 在此基础上进行二次开发 Build on this with secondary development
使用方法 Usage Methods	1、通过上位机整合显示资源布置； Integration of display resource arrangement through the upper computer; 2、通过 USB 端口进行显示资源更新； Display resource update via USB port; 3、通过 UART 端口控制显示资源内容切换，刷新等操作；支持 arduino 系统板 UART 串口调试 Controls display resource content switching, refreshing etc. via UART port;Support arduino system board UART serial debugging

二、引脚说明 Pin Description

2.1 TFT 引脚说明 TFT Pin Description

引脚编号 Pin NO.	标号 Symbol	详细描述 Description
1	LEDA	LED阳极 LED anode
2	VCI	电源 Power supply
3	CS	芯片选择引脚，低电平使能。 Chip selection pin.Low enable.
4	RESX	重置信号。信号为低电平有效 Reset signal. Signal is active low
5	SCL	该引脚用于串行接口的时钟。 This pin is used to be serial interface clock.
6	SDI	SPI接口输入引脚。 SPI interface input pin.
7	D/CX	在4行串行接口中显示数据/命令选择引脚。 Display data/command selection pin in 4-line serial interface.
8	TE/SPI4W	-撕裂效应信号，如果不使用请打开此引脚 -接高时 SPI 4线接口选择 -Tear effect signal,Disconnect this pin if not used -SPI 4-wire interface selection when connected high
9	LEDK	LED阴极 LED cathode
10	GND	电源地 Power supply ground

- 结束 -
- END -

2.2 CTP 引脚说明 CTP Pin Description

引脚编号 Pin NO.	标号 Symbol	详细描述 Description
1	VDD	+3.3V 电源 +3.3V Power Supply
2	GND	电源地 Power supply ground
3	CTP-RTN	系统复位脚 Reset pin
4	CTP-SCL	I2C 时钟信号 I2C clock signal
5	CTP-SDA	I2C 数据信号 I2C data signal
6	CTP-INT	中断信号 Interrupt signal
- 结束 - - END -		

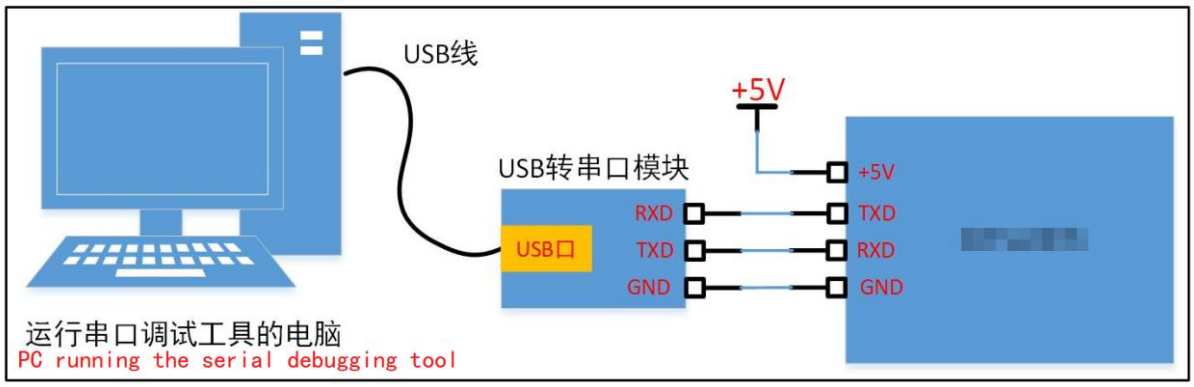
2.3 UART 引脚说明 UART Pin Description

引脚编号 Pin NO.	标号 Symbol	详细描述 Description
1	TX/A	当为UART TTL 端口时，引脚定义为"TX";当为RS485 端口时，引脚定义为"A"。 When it is UART TTL port, the pin is defined as "TX"; when it is RS485 port, the pin is defined as "A".
2	RX/B	当为UART TTL 端口时，引脚定义为"RX";当为RS485 端口时，引脚定义为"B"。 When it is UART TTL port, the pin is defined as "RX"; when it is RS485 port, the pin is defined as "B".
3	VDD	+5.0V 电源 +5.0V Power Supply
4	GND	电源地 Power supply ground
- 结束 - - END -		

2.3 接口参考电路图 Interface Reference Circuit Diagram

电脑端串口调试助手在电脑端使用 USB 转 UART（TTL 电平）模块，连接的示意图如下：

The serial port debugging assistant on the computer side uses the USB to UART (TTL level) module on the computer side, and the schematic diagram of the connection is as follows:



注： USB 转串口模块为 TTL 电平的 UART 口；

Note: The USB to Serial Module is a TTL level UART port;

文档修订记录 Document revision history ：

版本 Version	日期 DATE	修改说明 Modify description	编辑 Editorial
0-0	2025-06-21	初次编制 First compilation.	YL

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- - END - -