



# SPECIFICATION FOR TFT LCD MODULE

CUSTOMER : \_\_\_\_\_

CUSTOMER MODULE : \_\_\_\_\_

HL MODEL :           HG070YTD02C          

Preliminary Specification

Final Specification

Customer Confirmation column:

Approved by : \_\_\_\_\_ Dept. : \_\_\_\_\_ Date : \_\_\_\_\_

Please return one of the copies of the specification with your signature to us within two weeks after you receive this document. If it is not returned, we will assume that you agree to the entire contents of this specification document.

Designed by	Checked by	Approved by

# 发布说明

日期	版本号	更改说明

## 1、产品简介（Introduction）

HG070YTD02C 系列显示终端是深圳市鸿光显示有限公司（以下简称：本公司）基于全志 F1C100s 系列芯片设计开发的智能显示终端，可搭载指令集或者 AGUS 系统。用户可以在该产品上快速实现显示功能，如表盘时钟、图标变量、艺术字、曲线显示、列表显示、文本显示等；以及轻松实现触控功能,如数据文本录入、按键值返回、增量调节、弹出菜单等。

HG070YTD02C Series display terminal is an intelligent display terminal designed and developed by our company based on Allwinner F1C100s chip, which can be equipped with Instruction-set or AGUS system. Users can quickly implement the display functions on the product, such as dial clock, icon variables, art words, display, curve display, list display, text display, etc.; and easily realize the touch function, such as data text entry, key value return, incremental adjustment, pop-up menu, etc.



注：未涉及关键结构工艺修改或布局大调整，仅产品工艺或可靠性方面的变更迭代，公司不予对外发起变更，具体以收到的实物为准。

Note: There is no key structural process modification or major layout adjustment. Only the product process or reliability changes and iterations, the company will not initiate changes to the outside world, and the specific items will prevail.

## 1.1、产品特性（Features and benefits）

- 支持指令集系统、AGUS 系统
- Support Instruction-set or AGUS system
- 支持 RS232、TTL/CMOS 通信电平，最大波特率 921600bps
- Support RS232、TTL/CMOS, the max baud rate is 921600bps
- 支持 128 段 WAV 格式的音频输出
- Supports audio output in a 128's WAV format
- 支持视频播放，格式为 AVI
- Support avi-video
- 支持通过 SD 卡/U 盘离线批量下载，提高下载效率，降低对操作人员的需求；
- Support offline batch download through SD-Card / USB flash disk, which improves download efficiency and reduce requirements for operators;
- 支持背光亮度调节和自动待机屏幕保护功能；
- Support backlight brightness adjustment and automatic standby screen saver function;
- 支持多语言、图片、二维码显示
- Support multi-language font library, picture, QR code display;
- 支持键盘号码和英文输入，可定制的键盘界面；
- Support number and English input, customizable keyboard interface;
- 支持 0°、90°、180°、270°显示，可以根据实际配置
- Support 90 degrees, 180 degrees, 270 degrees screen rotation, adjustable visual angle;
- 易于上手的 JX 开发环境，不需要编码技能；
- Easy-to-use JX GUIs Development, no coding skills required;
- 无系统加载时间，通电即运行；
- Instant operation when power on without system load time;
- 良好的电磁兼容、电磁辐射设计，性能可靠、稳定
- Excellent electromagnetic compatibility characteristics.

## 1.2、运用场景（Applications）

广泛应用于工业自动化、电力、电信、环保、医疗、金融、石油、化工、交通、能源、地质、冶金、公共查询与监控、智能家电、轨道交通、数据机房、充电桩、电力医疗、国防安全、共享设备等数十个行业和领域。

It is widely used in dozens of industries and fields, such as industrial automation, electricity, telecommunications, environmental protection, medical treatment, finance, petroleum, chemical, transportation, energy, geology, metallurgy, public inquiry and monitoring, intelligent home appliances, transit track, data rooms, charging piles, power medicine, national security and security, shared equipment.

## 2、产品规格（Product description）

### 2.1、产品型号表（Ordering information）

产品型号 (Type number)	产品编码 (Numer)	说明 (Description)
HG070YTD02N		256Mbits, 预置 AGUS 系统 (the AGUS System)

HG070YTD02R		256Mbits, 预置 AGUS 系统, 电阻式触摸屏【defined】 ( the AGUS System, withr-touch screen defined)
HG070YTD02C		256Mbits, 预置 AGUS 系统, 电容式触摸屏仅外置 ( the AGUS System, Capacitive touch screen is external only)

## 2.2、显示性能参数 (Display)

参数 (Item)	数据 (Parameter)	说明 (Description)
颜色 (Color)	64K (65536) Colors; 16bits color (R5G6B5)	
液晶类型 (Panel Type)	TN, TFT-LCD	
可视角度 (Viewing Angle)	普通视角, 典型值 70°/70°/50°/70° (L/R/U/D) Normal viewing angle, 70°/70°/50°/70° (L/R/U/D)	
显示尺寸 (A.A) (Active Area(A.A))	154.1mm(W) × 85.9mm(H)	800 x RGB x 480
分辨率 (Resolution)	800 x RGB x 480 pixel	可以设置成 0°/90°/180°/270°显示模式 Support 0°/90°/180°/270°rotated display
背光模式 (Backlight)	LED	不低于 10000H (以最高亮度连续工作, 亮度减半时间) ≥ 10000H ( Continuous working with maximum brightness, time of brightness halves)
亮度 (Brightness)	300 nit 不带触摸 300 nit Without a touch	TA 模式: 可进行 64 级亮度调节。 TA system:64 levels adjustment.
	250 nit 带触摸 250 nit With the touch	
工作寿命 Life Time	30000	

注意: 如果超过 30 分钟及以上时间高对比度静止显示可能会引起液晶屏残影, 建议增加屏保避免该问题。

Note: If the high contrast static display exceeds 30 minutes or more may cause LCD screen residual, it is recommended to increase the screensaver to avoid this problem.

## 2.3、电性能参数 (Voltage & Current)

参数 (Item)	测试条件 (Conditions)	最小值 (Min)	典型值 (Type)	最大值 (Max)	单位 (Unit)
工作电压 (Power)	—	—	+12	—	V
工作电流 (Current)	VCC=+12V, 背光亮度最亮 VCC=+12V, Backlight on	—	210	—	mA
	VCC=+12V, 背光亮度最暗 VCC=+12V, Backlight off	—	65	—	mA

注意: 推荐使用+12V 1A 稳压源供电

Note: Recommended Power Supply +12V 1A DC

## 2.4、工作环境和可靠性参数 (Reliability Test)

参数 (Item)	测试条件 (Conditions)	最小值 (Min)	典型值 (Type)	最大值 (Max)	单位 (Unit)
工作温度 (Working Temperature)	+12V, 湿度 60% 60%RH at +12V	-20	25	70	°C
储存温度 (Storage Temperature)	—	-30	25	85	°C
工作湿度 (Working Humidity)	25°C	10%	60%	85%	RH

三防处理 (Protective Paint)	—	—	无	—	—
认证及等级 (Certification & Levels)	IEC4、CE、RoHS				

## 2.5、接口性能参数 (Interface)

参数 (Item)	测试条件 (Conditions)	最小值 (Min)	典型值 (Type)	最大值 (Max)	单位 (Unit)
串口波特率 (BaudRate)	用户自定义 (配置文件) User-Set	1200	115200	921600	bps
输出电平 (Output)	Output 1, Iout=1mA	3.0	3.3	—	V
	Output 0, Iout=-1mA	—	0	0.3	V
输入电平 (Input)	Input 1, Iin=1mA	2.4	3.3	5.0	V
	Input 0, Iin=-1mA	0	—	0.5	V
串口模式 (Mode)	模式: 8N1, J6 ON = +3.3V TTL/CMOS; J6 OFF = RS232 兼容接口; Mode: 8N1, J6 ON = +3.3V TTL/CMOS; OFF = RS232;				
用户接口 (Socket)	HY2.0-8P/10pin, 1.0mm FFC 连接器				
SD 卡接口 (Slot)	Yes (SD/SDHC, FAT32, 4096) 可更新固件、图片、字库等文件(Update the firmware, pictures, font, and other files)				
USB 接口 (Slot)	NO				

## 2.6、存储特性 (Memory)

存储类型 (Type)	典型值 (Typ.)	功能 (Features)	典型值 (Typ.)	单位 (Unit)	说明 (Description)
Flash	32MByte (256kbits)	字库存储空间 (Space of Font)	5.75 ~ 31	Mbyte	单个字库 256Kbytes, 储存字库、图标库及其他二进制文件。 A single font of 256Kbytes, store font, icon libraries, and other binary files
		图片存储空间 (Picture Storage)	0 ~ 25.25	Mbyte	BMP 图片存储格式, (图片存储数量和液晶屏分辨率大小有关) BMP format(The number of pictures stored is affected by the LCD screen resolution)

## 2.7、系统和外设支持 (System & Peripherals)

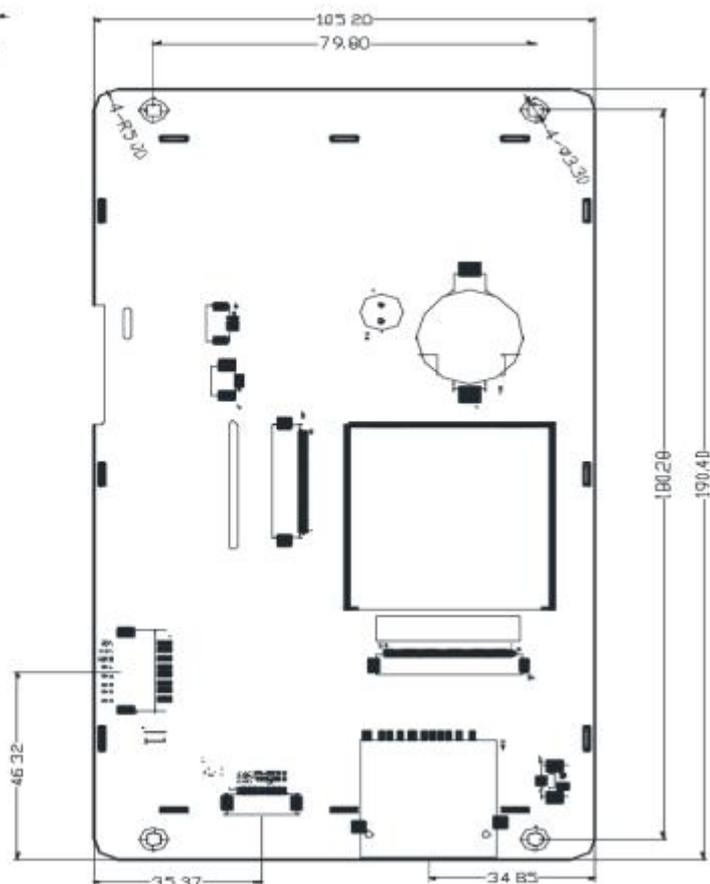
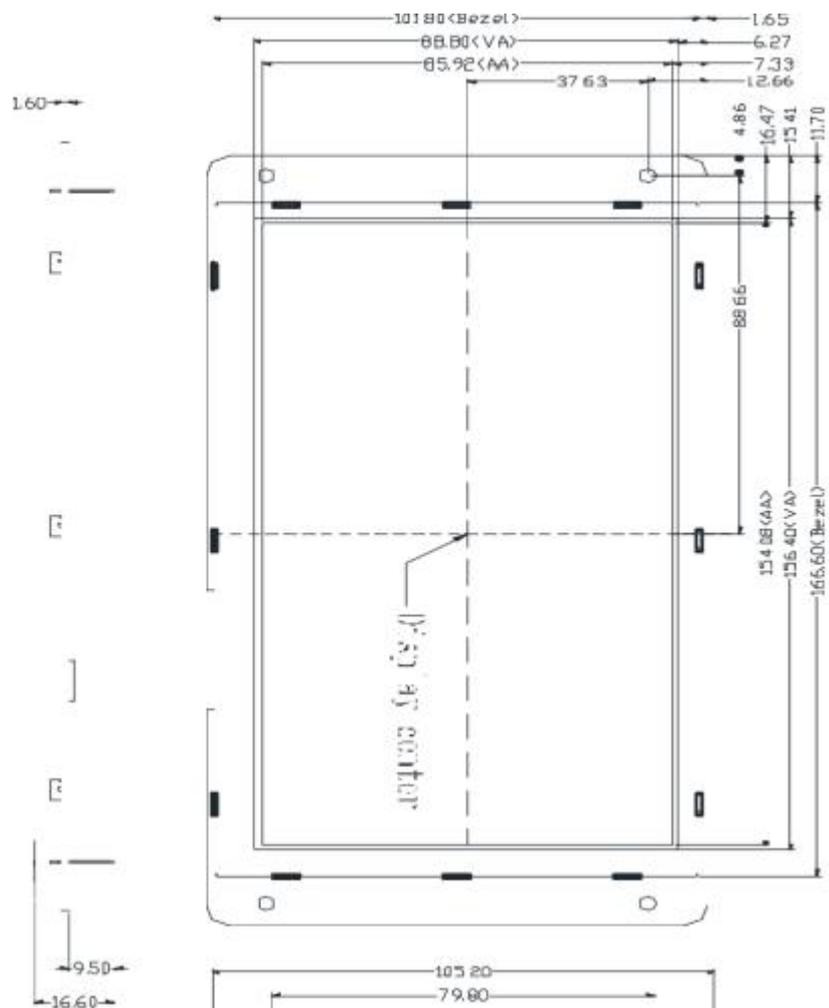
系统 (System)	指令集 (AS-System) /AGUS (默认, default)
支持外设 (Peripheral)	电阻/电容式触摸屏、蜂鸣器、扬声器、RTC Resistance/capacitance touch screen, Buzzer, speaker, RTC

## 2.8、包装和物理尺寸 (Packing Capacity & Dimension)

外形尺寸 (Dimension)	190.4mm (W) x 105.2 mm (H) x 16.6mm				
净重量 (Net Weight)	TBD				
包装箱号 (Model)	包装箱尺寸 (Size)	层数 (Layer)	数量/层 (片) Quantity/Layer	总数量 (片) (Quantity(Pcs))	
1 号箱 (1 <sup>st</sup> Box)	480mm (L) x 320mm (W) x 230mm (H)	—	—	30	

### 3、产品尺寸 (Product Dimension)

整机尺寸(不含背壳)	31	↑	-
整机尺寸(含背壳)	40.5	↑	8.2
整机尺寸(含背壳)	43	↑	9.3
整机尺寸(含背壳)	47.1	↑	7
整机尺寸(含背壳)	49.7	↑	8
整机尺寸(含背壳)	50	↑	7.7
整机尺寸(含背壳)	整机尺寸(含背壳)		



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