www.raystar-optronics.com
E-Newsletter

August, 2021【Issue No.133】

1. [RL0F00035000XGAAASA00] 3.5" CANopen Smart Display IPS TFT with PCAP

RL0F00035000XGAAASA00, this 3.5-inch CAN bus Smart Display adopts one of our off-the-shelf IPS TFT modules RFC350X-AYW-DNG coupled with coding firmware interface. In the light of the coding firmware, users only need to execute commands of control which cut down on time of programming notably. Such smart display is an excellent solution for faster time-to-market.

The Smart Display of Raystar is comprised of our TFT module and CAN interface. There are plenty of advantages of this interface including data transmission of long distance (up to 40 meters), being highly immune to electrical interference, good stability. CAN BUS is the most common physical layer; the maximum transmission rate can reach 1Mb/s (High-Speed CAN). It's effortless to communicate with other devices supporting CANopen protocol, moreover, there're various types of objects of control to choose from. On top of that, its flexible parameter control settings allow users for faster development.

Smart Display has built-in flash memory (Flash) to store fonts and graphic objects (Object Dictionary). The host can simultaneously control up to 30 Smart Displays and demonstrate different graphic objects. This Smart Display also provides standard UI objects enabling users to swiftly develop projects. If customers need customized UI objects, Raystar's engineering team is able to provide you with comprehensive help and convert image files in PNG / JPG format into image control objects which can be completed in 3 to 5 working days.

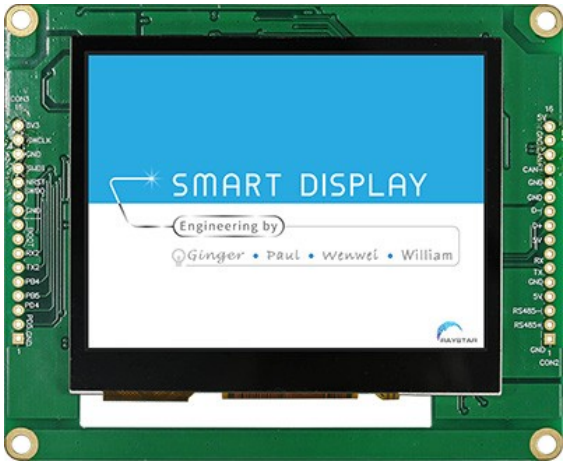
Features of 3.5-inch Smart Display:

1. DC 5V working voltage, low power consumption for USB to drive.
2. Self testing after booting function.
3. CAN bus communication interface.
4. Support CANopen negotiation. Default baud rate is 250KB.
5. Embedded FLASH memory, storing Font and Object Dictionary.
6. Support capacitive touch panel (CTP).
7. Smart Display scenario is slave device display and action from Master Device instruction.
8. Embedded buzzer controlled by Master Device.
9. Demo set HOST can be used on multiple platforms, such as Computer (with USB to CAN Dongle), MCU, Raspberry Pi (with PiCAN2).

Raystar CAN Smart Display includes:

Hardware Platform (Container) Physical Layer including MCU/Flash/Display	**Firmware code** (Data contents) Presentation Layer including Splash /application/UI	**Software code** (Support tools) Application Layer including PC+AP / Interface Dongle to con-figure or update Smart Display contents.

Splash Screen: The default splash image is shown below.



Mechanical Data:

■ LCD panel: 76.84(W) × 63.84(H) × 4.53(D) mm

■ PCB: 100(W) × 82(H) × 1.6 mm

■ Housing outline: NA

General information:

■ Operating voltage: 5 VDC

■ Communication Interface: CAN bus differential ± 3.3 Vpp

■ LCD display size: 3.5 inch

■ Dot Matrix: 320 × RGB × 240 (TFT) dot

■ Module dimension: 76.84(W) × 63.84(H) × 4.53 (D) mm

■ Active area: 70.08(W) × 52.56(H) mm

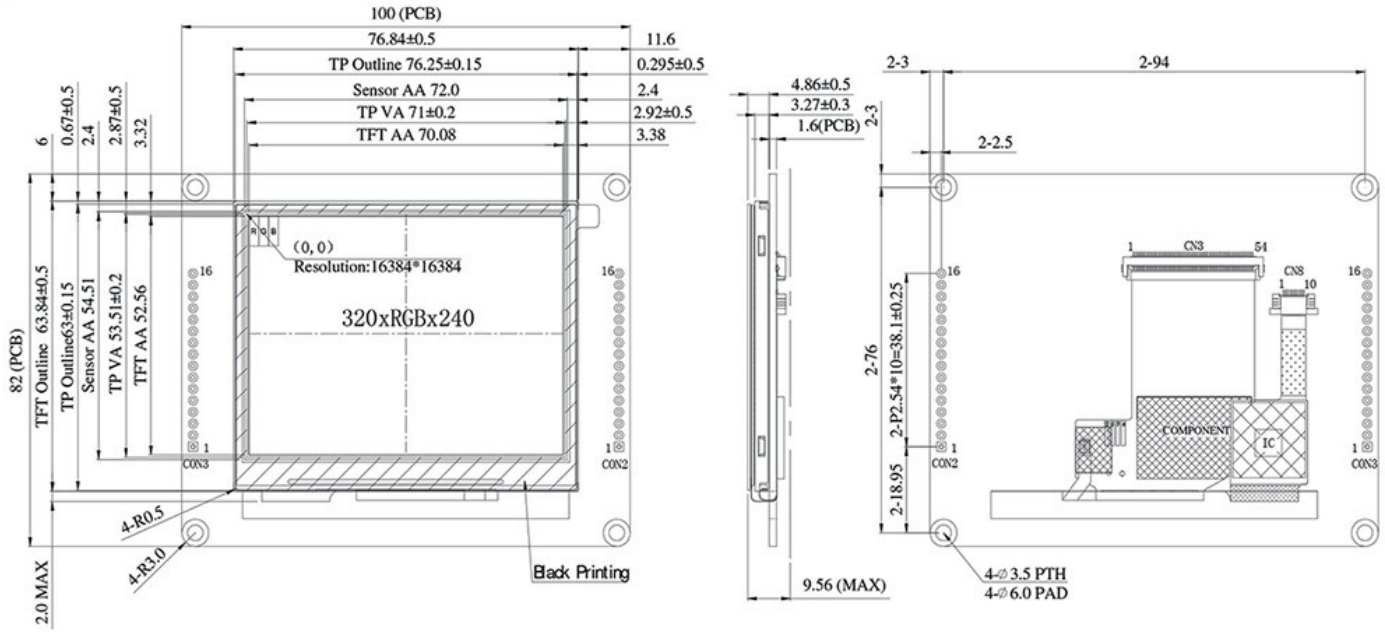
■ Dot pitch: 0.073(W) × 0.219(H) mm

■ LCD type: TFT, Normally Black, Transmissive

■ View Direction: 80/80/80/80 (IPS TFT)

■ Aspect Ratio: 4:3

■ Touch Panel: With PCAP touch panel



There are 3 scenarios for different applications. Feel free to contact Raystar by sending us inquiries via the website.

RL0F00035000XGAAASB00
(Industrial Application)

>> Link to web page

RL0F00035000XGAAASC00
(Vehicle Application)

>> Link to web page

RL0F00035000XGAAASD00
(Medical Application)

>> Link to web page

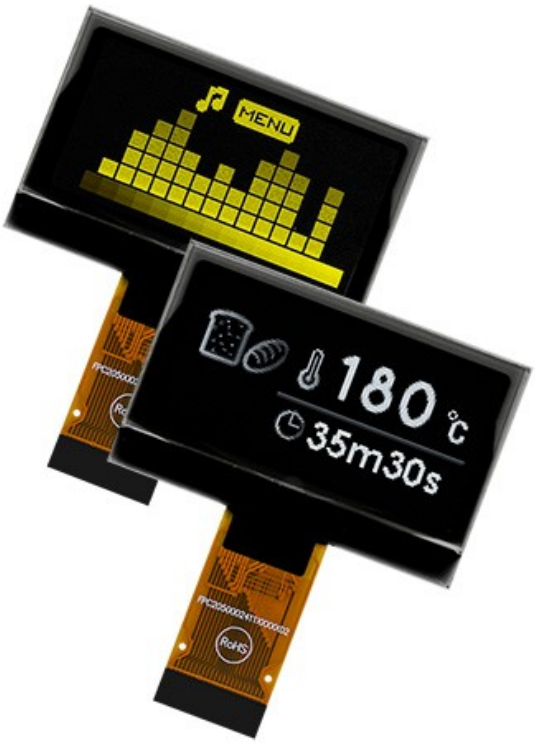
Raystar has developed a software application of Windows Integrated Development Environment (IDE)—GUI (Graphical user interface) builder for Smart Displays. The GUI builder is intended mainly for users who haven't purchased the hardware (Smart Display); they are still able to simulate display effects and functions through the simulator. All you need is to contact us through our website or send inquiries to our sales email address. We'll provide it free of charge.

>> Introduction of Raystar Smart Display GUI Builder Video

2. [REX012864AA] 1.54" 128x64 OLED Display Support Grayscale

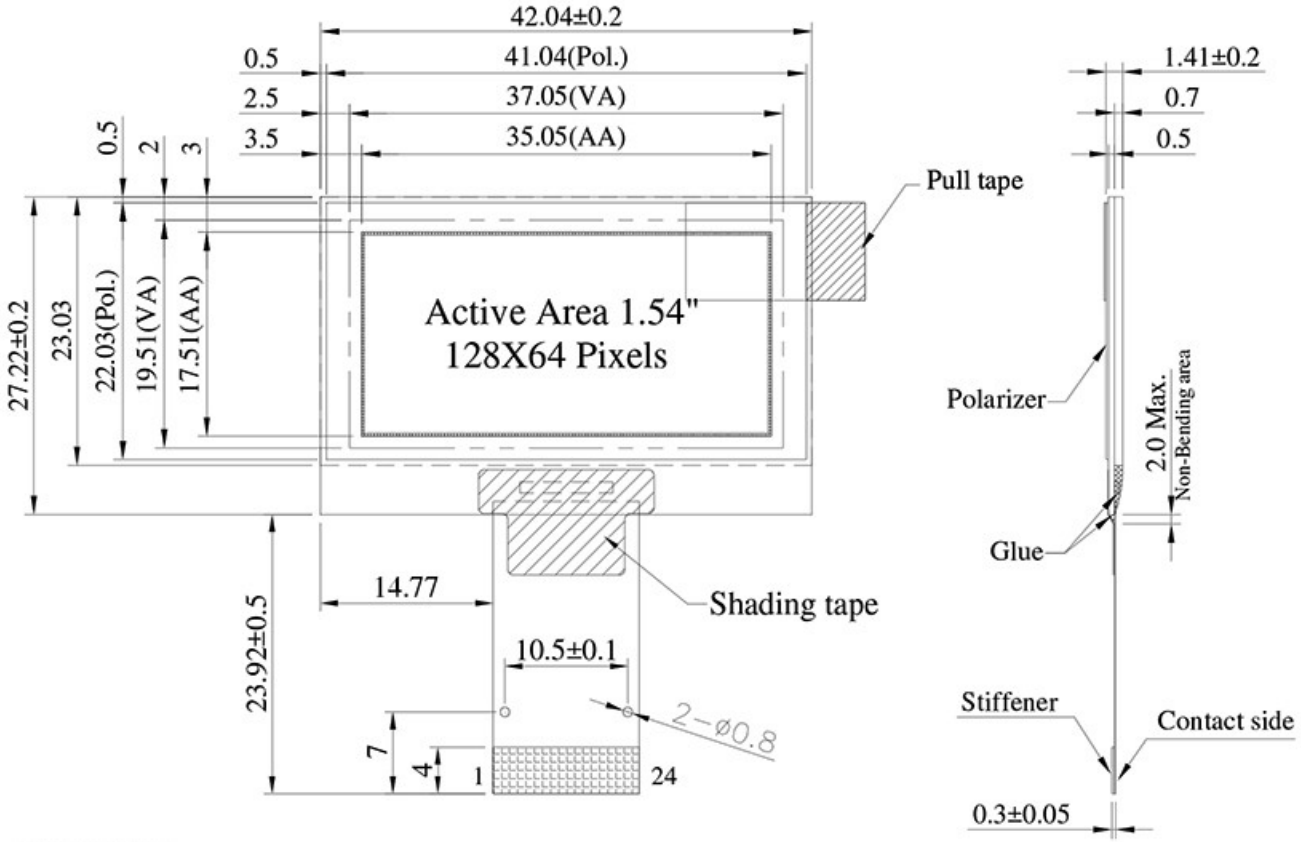
This is a Graphic OLED with resolution of 128x64 dots, diagonal size 1.54 inch, and built-in SSD1327 controller. There are 2 emitting colors (White / Yellow) available for this OLED module and it also features grayscale. REX012864AA OLED display supports 6800 and 8080 parallel, 4-wire SPI, I2C interface.

Our OLED boasts high contrast ratio 10,000:1 making the visual performance stand out from traditional displays. Logic supply voltage ranges from 1.65V-3.5V, the typical value is 3V. The module works within temperature from -40℃ to +80℃; Storage temperature range is -40℃ to +85℃.



Specification:

- Module dimension: 42.04×27.22×1.41 mm
- Active area: 35.05×17.51 mm
- Dot Matrix : 128×64
- Dot Size: 0.249×0.249 mm
- Dot Pitch: 0.274×0.274mm
- Display Mode: Passive Matrix
- Duty: 1/64 Duty
- Display Color: White/Yellow
- Support Grayscale
- OLED IC: SSD1327
- OLED Interface: 6800,8080,4-wire SPI,I2C
- Size: 1.54 inch



>> Link to REX012864AA

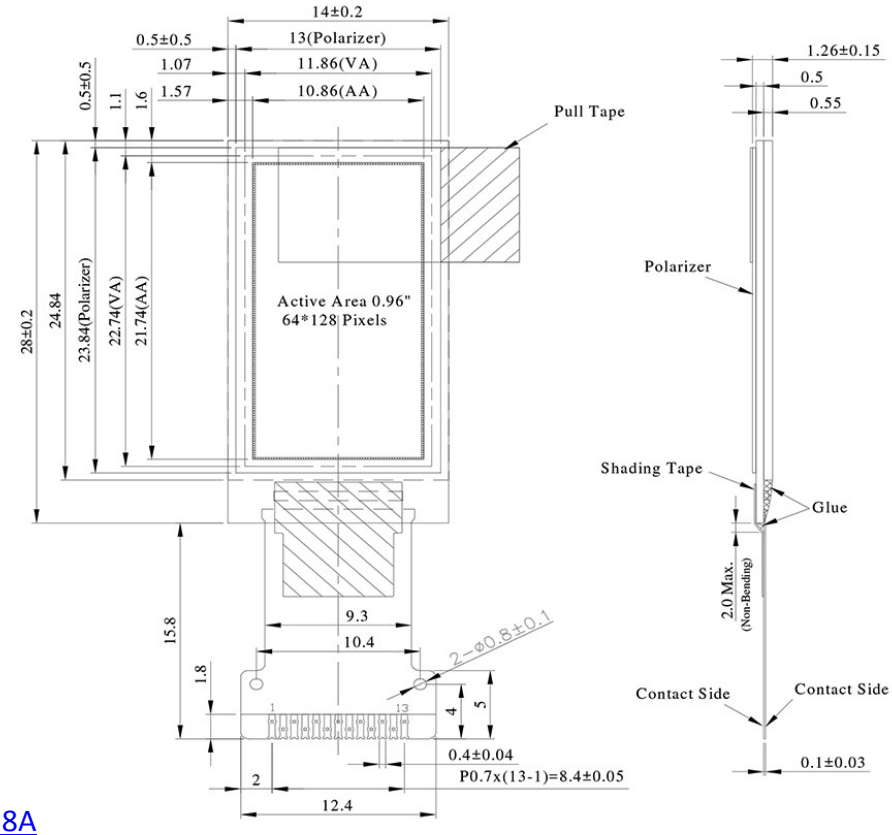
3. [REX064128A] 0.96" Portrait Mode 64x128 OLED Display

REX064128A is the portrait mode OLED display module in our product line; the diagonal size is only 0.96 inches. This OLED has resolution of 64x128 pixels, using SH1107 controller IC. The OLED display can be emitting light by itself, there's no need for backlight. Therefore, REX064128A is thinner than other TFT LCD modules of the same size. This 64x128 COG OLED display supports 4-wire SPI / I2C interface.

Our OLED boasts high contrast ratio 10,000:1 making the visual performance stand out from traditional displays. Logic supply voltage ranges from 1.65V-3.3V, the typical value is 3V. The module works within temperature from -30℃ to +70℃; Storage temperature range is -30℃ to +70℃.

Specification:

- Module dimension: 14.0 × 28.0 × 1.26 mm
- Active area: 10.86 × 21.74 mm
- Dot Matrix: 64 × 128
- Pixel size: 0.15 × 0.15 mm
- Pixel pitch: 0.17 ×0.17 mm
- Display Mode: Passive Matrix
- Duty: 1/64 Duty
- Display Color: White
- IC: SH1107
- Interface: 4-wire SPI , I2C
- SIZE:0.96 inch



>> Link to REX064128A

