# SMART DISPLAY SPECIFICATION




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# RL0F00101000JGFAASA00

# Summary

**10.1 Inch Smart Display (UART series) Features**

1. +12V power supply input, the power consumption is around 6W.
2. Self testing after booting function.
3. UART communication interface.
4. Supports Proprietary UART protocol, default baud rate at 115200Kbps.
5. Built in 16MB flash memory, store the font and Object Dictionary Data.
6. Support projected capacitive touch screen (PCAP).
7. Embedded buzzer controlled by Master Device.
8. Demo set HOST can be used on multiple platforms, such as Computer (with USB to UART Dongle), MCU, Raspberry Pi (with PiCAN2).
9. GPIO PIN support.

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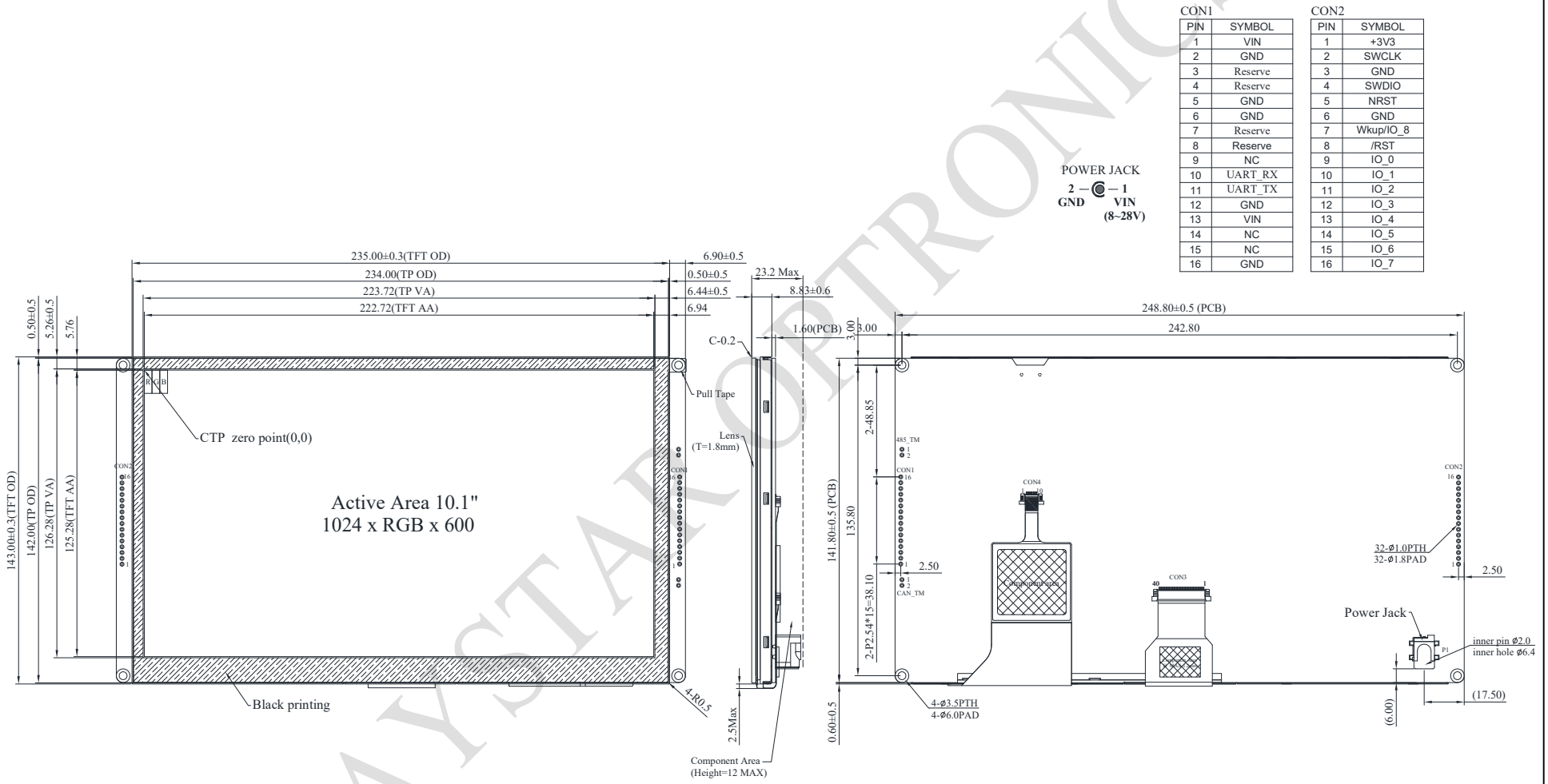
# Product Information

## General Information

| Item | Standard Value | Unit |
|---|---|---|
| Operating voltage | 8V~28V dynamic | Vdc |
| Communication Interface | UART | -- |
| MCU | STM32F746 | N/A |
| Flash Memory | 16 | MB |
| LCD display size | 10.1 | inch |
| Dot Matrix | 1024 x RGBx600(TFT) | dot |
| Module dimension | 235(W) x 143(H) x 23.2(D) | mm |
| Active area | 222.72 (H) x 125.28(V) | mm |
| Pixel pitch | 0.2175(W) x 0.2088(H) | mm |
| Brightness | Min:300; Typ:400 | |
| LCD type | LED, Normally White | |
| View Direction | 85/85/85/85 | |
| Aspect Ratio | 16:9 | |
| Touch Panel | Projected Capacitive Touch Screen, PCAP | |
| Surface | Glare | |

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# Contour Drawing




The non-specified tolerance of dimension is ±0.3mm.

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# Absolute Maximum Ratings

| Item | Symbol | Min | Typ | Max | Unit |
|---|---|---|---|---|---|
| Operating Temperature | TOP | -20 | — | +70 | ℃ |
| Storage Temperature | TST | -30 | — | +80 | ℃ |

# Electrical Characteristics

| Item | Symbol | Condition | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Supply Voltage | VCC | — | 8 | 12 | 28 | V |
| Supply LCM current | I(mA) | - | - | 530 | - | mA |

# BOM

| Item | Description |
|---|---|
| LCM | RFH1010J-AYW-LNB |
| PCBA | SV10010R100JB00N0105 |

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# Interface

**CON1 Definition**

| Pin | Symbol | Function | Remark |
|---|---|---|---|
| 1 | +12V | Power supply12V input | Input |
| 2 | GND | Power supply GND input | Input |
| 3 | Reserve | - | - |
| 4 | Reserve | - | - |
| 5 | GND | Power supply GND input | GND |
| 6 | GND | Power supply GND input | GND |
| 7 | Reserve | - | - |
| 8 | Reserve | - | - |
| 9 | NC | - | - |
| 10 | UART_RX | USART RX interface | I/O |
| 11 | UART_TX | USART TX interface | I/O |
| 12 | GND | Power supply GND input | GND |
| 13 | +12V | Power supply12V input | Input |
| 14 | NC | - | - |
| 15 | NC | - | - |
| 16 | GND | Power supply GND input | Input |

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**CON2 Definition**

| Pin | Symbol | Function | Remark |
|---|---|---|---|
| 1 | VDD3V | 3.3V power for JTAG | Output |
| 2 | JTAG_SWCLK | CLK pin for JTAG interface | Input |
| 3 | GND | GND for JTAG interface | Output |
| 4 | JTAG_SWDIO | Data pin for JTAG interface | I/O |
| 5 | NRST | Reset pin for JTAG interface | Input |
| 6 | GND | GND | Output |
| 7 | Wkup/ IO_8 | (PA0) for system Resume from suspend (Reserve) | WKup,ADC,Timer,Event,I/O |
| 8 | /RST | Reset (active Low) | I |
| 9 | IO_0 | ADC,DAC,Timer,Event,I/O | PA5 |
| 10 | IO_1 | ADC,Timer,Event,I/O | PA6 |
| 11 | IO_2 | ADC,Timer,Event,I/O | PA7 |
| 12 | IO_3 | RST,Timer,Event,I/O | PA8 |
| 13 | IO_4 | RST,Timer,Event,I/O | PC13 |
| 14 | IO_5 | ADC,Timer,Event,I/O | PB11 |
| 15 | IO_6 | RST,Timer,Event,I/O | PA15 |
| 16 | IO_7 | RST,ADC,Event,I/O | PD11 |

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