



**WINSTAR Display Co.,Ltd.**  
**華凌光電股份有限公司**



## **SPECIFICATION**

**MODEL NO. : WLOF0007000A8GFADSA01**

### **Summary**

#### **7 Inch Smart Display (UART series) Features**

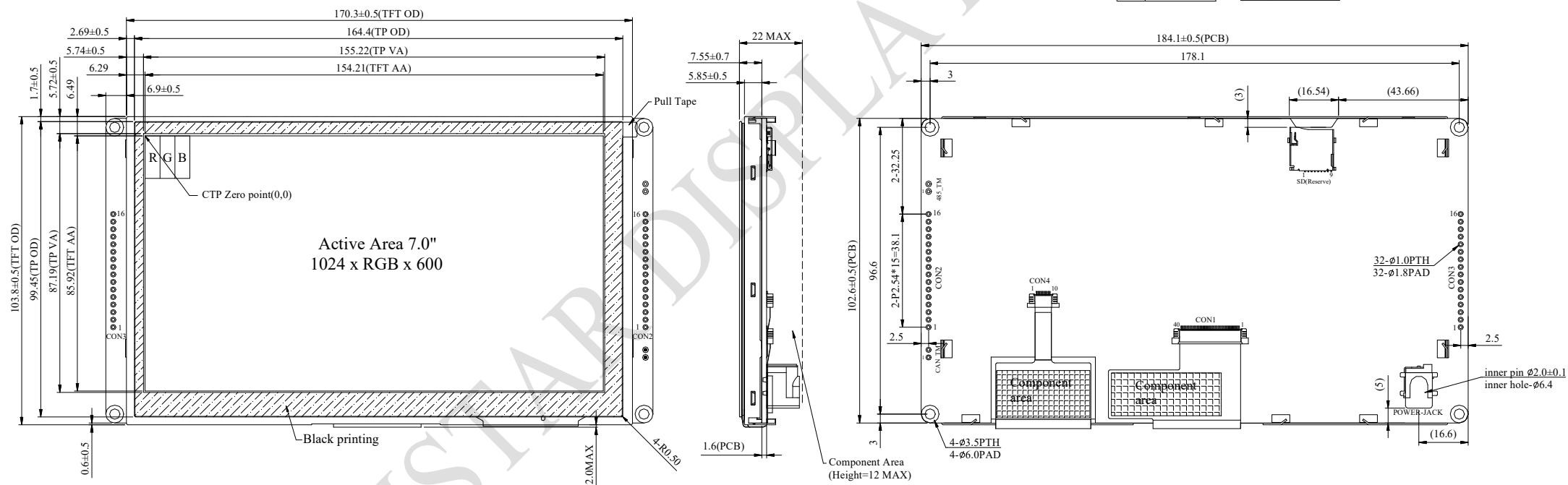
1. +12V power supply input with 8V to 35V dynamic range power input, the power consumption is around 6 Watt.
2. Self-testing after booting function.
3. UART communication interface.
4. Supports UART protocol, default baud rate at 115200Kbps.
5. Built in 32M external flash memory to store the font and Object Dictionary Data.
6. Support capacitive touch panel (CTP).
7. Build in buzzer and can be 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 with 3.3V TTL.

# Product information

## General information

| Item                    | Standard Value                    | Unit              |
|-------------------------|-----------------------------------|-------------------|
| Operating voltage       | 8~35                              | Vdc               |
| Communication Interface | UART                              | --                |
| MCU                     | STM32F746                         | N/A               |
| Flash Memory            | 32                                | MB                |
| SDRAM Memory            | 16                                | MB                |
| LCD display size        | 7.0                               | inch              |
| Dot Matrix              | 1024 x RGBx600(TFT)               | dot               |
| Module dimension        | 184.1(W) x 103.8(H) x 22(D)       | mm                |
| Active area             | 154.2144 x 85.92                  | mm                |
| Pixel pitch             | 0.1506 x 0.1432                   | mm                |
| Brightness              | Min:400; Typ:450                  | cd/m <sup>2</sup> |
| LCD type                | TFT, Normally Black, Transmissive |                   |
| View Direction          | 85/85/85/85                       |                   |
| Aspect Ratio            | 16:9                              |                   |
| Touch Panel             | With PCAP                         |                   |
| Surface                 | Glare                             |                   |

# Contour Drawing



The non-specified tolerance of dimension is  $\pm 0.3\text{mm}$ .

## Absolute Maximum Ratings

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

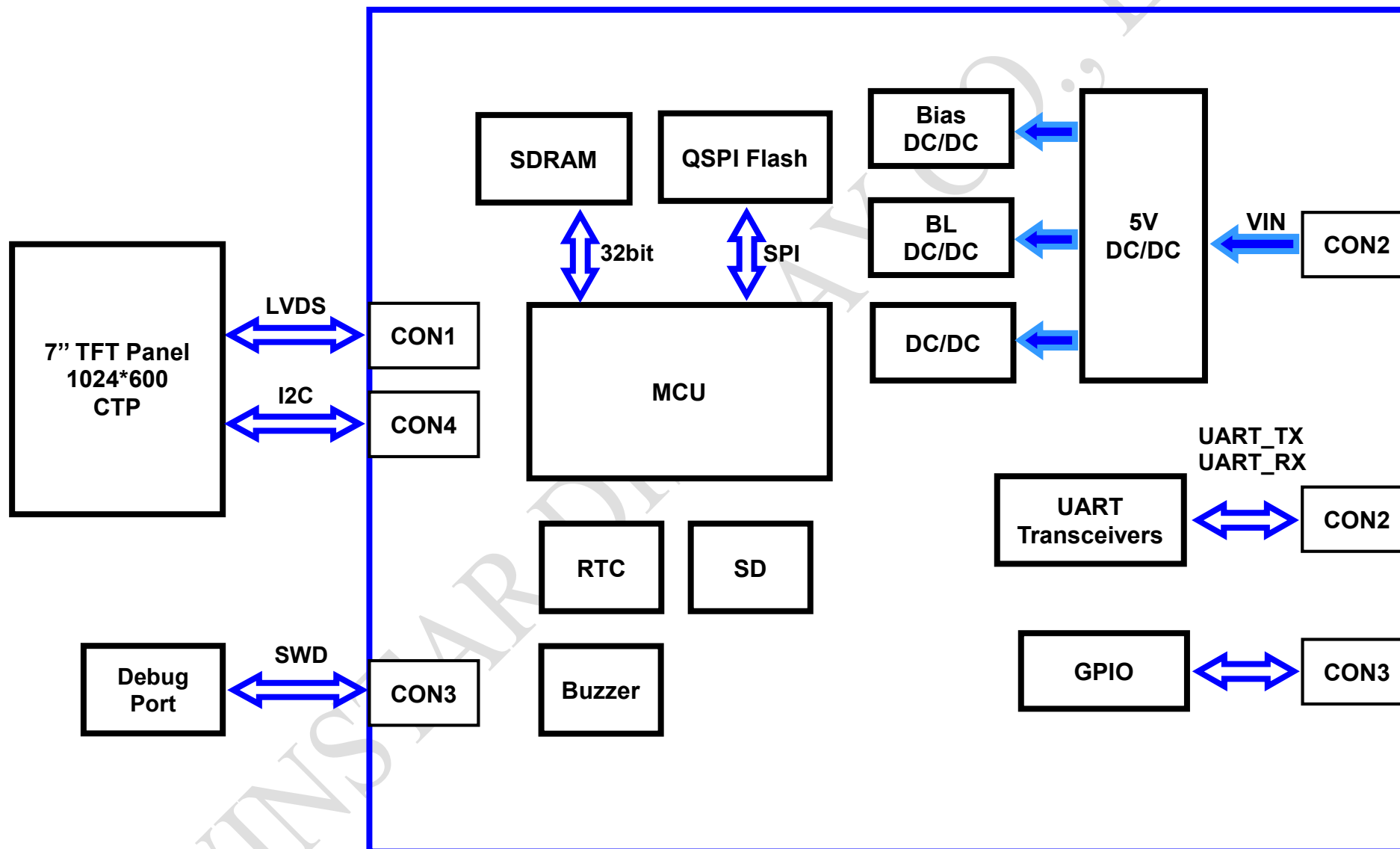
## Electrical Characteristics

| Item              | Symbol | Condition | Min | Typ | Max | Unit |
|-------------------|--------|-----------|-----|-----|-----|------|
| Supply Voltage    | VIN    | —         | 8   | 12  | 35  | V    |
| Operating current | I(mA)  | —         | —   | 520 | —   | mA   |

## BOM

| Item | Description          |
|------|----------------------|
| LCM  | WF70A8TYAHLNGB#      |
| PCBA | SV10007R00A8K00N0109 |

# Block diagram



# Interface

## CON2 definition:

| Pin | Symbol  | Function                     | Remark |
|-----|---------|------------------------------|--------|
| 1   | VIN     | Power supply GND input       | Input  |
| 2   | GND     | Power supply 8V to 35V input | Input  |
| 3   | Reserve | -                            |        |
| 4   | Reserve | -                            |        |
| 5   | GND     | Power supply GND input       | Input  |
| 6   | GND     | Power supply GND input       | Input  |
| 7   | Reserve | -                            |        |
| 8   | Reserve | -                            |        |
| 9   | NC      | -                            |        |
| 10  | UART_RX | UART RX interface            | I/O    |
| 11  | UART_TX | UART TX interface            | I/O    |
| 12  | GND     | Power supply GND input       | Input  |
| 13  | VIN     | Power supply 8V to 35V input | Input  |
| 14  | Reserve | -                            |        |
| 15  | Reserve | -                            |        |
| 16  | GND     | Power supply GND input       | Input  |

**CON3 definition:**

| Pin | Symbol | Function                                                     | Remark |
|-----|--------|--------------------------------------------------------------|--------|
| 1   | +3V3   | 3.3V power for JTAG interface                                | Output |
| 2   | SWCLK  | CLK pin for JTAG interface                                   | Input  |
| 3   | GND    | GND for JTAG interface                                       | Output |
| 4   | SWDIO  | Data pin for JTAG interface                                  | I/O    |
| 5   | NRST   | Reset pin for JTAG interface                                 | Input  |
| 6   | GND    | Power GND                                                    | Output |
| 7   | Wkup   | WKup,ADC,Timer,Event,I/O                                     | Input  |
| 8   | BOOT0  | Lo: Internal flash boot (Default)<br>Hi: External flash boot | Input  |
| 9   | IO_0   | ADC,DAC,Timer,Event,I/O @3.3V                                | I/O    |
| 10  | IO_1   | ADC,Timer,Event,I/O @3.3V                                    | I/O    |
| 11  | IO_2   | ADC,Timer,Event,I/O @3.3V                                    | I/O    |
| 12  | IO_3   | ADC,Timer,Event,I/O @3.3V                                    | I/O    |
| 13  | IO_4   | ADC,Timer,Event,I/O @3.3V                                    | I/O    |
| 14  | IO_5   | ADC,Timer,Event,I/O @3.3V                                    | I/O    |
| 15  | IO_6   | ADC,Timer,Event,I/O @3.3V                                    | I/O    |
| 16  | IO_7   | RST,ADC,Event,I/O @3.3V                                      | I/O    |

@3.3V : I/O allow below 3.3V input, If exceeding 3.3V may cause MCU damage