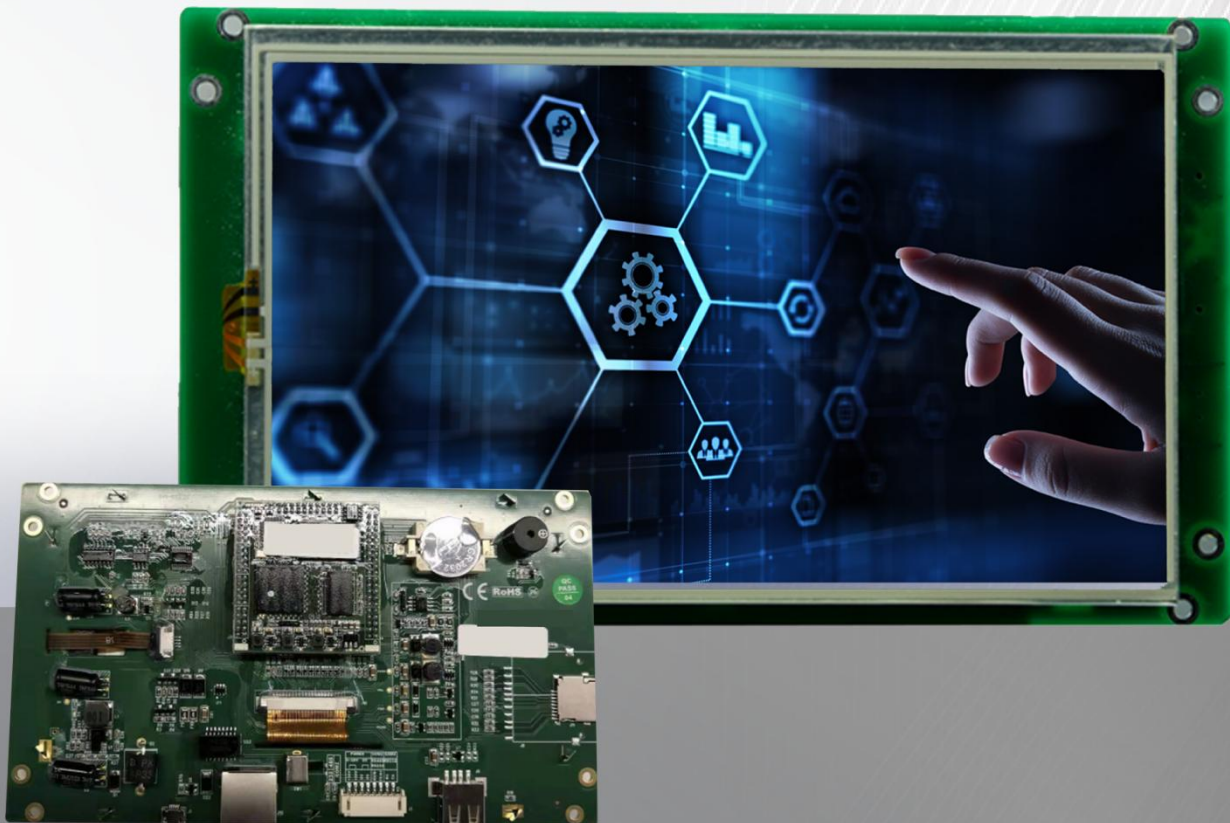


# FD307R

## Datasheet

**Document Version: 01**

**Publication date: 2025-03-20**



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# 1 Product Overview

## 1.1 Product introduction

- ◆ Industrial high quality components are used.
- ◆ Built-in installation structure without enclosure, compatible with serial port HMI.
- ◆ Various communication connections, supporting USB, SD card expanding connection.
- ◆ Compatible with powerful HMI configuration software.
- ◆ Reliable industrial design and high quality

## 1.2 Product Appearance

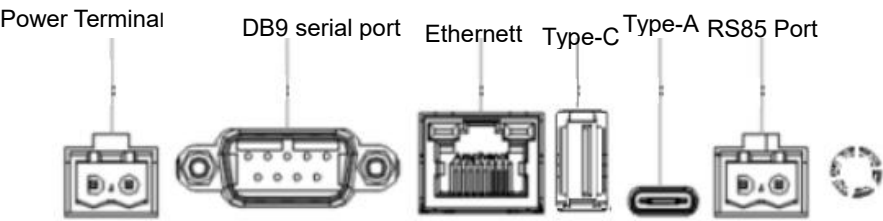


## 2 Specifications

| Category           | Item                         | Description                                              |
|--------------------|------------------------------|----------------------------------------------------------|
| Hardware           | Display Device               | 7" 16:9 TFT LCD                                          |
|                    | Resolution                   | 1024×600                                                 |
|                    | Colors                       | 24-bit true color                                        |
|                    | Brightness                   | 350cd/m <sup>2</sup>                                     |
|                    | Backlight                    | LED                                                      |
|                    | LCD Lifetime                 | 50000 hours                                              |
|                    | Touch Panel                  | 4-wire industrial resistive touch panel                  |
|                    | CPU                          | Cortex-A7(main frequency is 1GHz,dual-core)              |
|                    | Memory                       | 128MB DDR3                                               |
|                    | Flash                        | 4GB eMMC                                                 |
|                    | RTC                          | Built-in                                                 |
|                    | Ethernet                     | 1* 10M/100M self-adaptive RJ45 port                      |
|                    | SD Card                      | NA                                                       |
|                    | Bluetooth                    | NA                                                       |
|                    | USB Port                     | 1*USB Type-A 2.0 port;1*USB Type-C 2.0 port              |
|                    | Program Download Method      | USB Slave/USB flash drive/Ethernet                       |
|                    | Serial Port                  | ◆ COM1:RS232/RS485/RS422<br>◆ COM2:RS485<br>◆ COM3:RS232 |
|                    | LCD Viewing Angles (T/B/L/R) | 85° /85° /85° /85°                                       |
| Electrical feature | Rated Power                  | < 10W                                                    |
|                    | Rated Voltage                | DC24V,operatingI range:DC 9V~28V                         |
|                    | Power Protection             | Lightning surge protection                               |
|                    | Power Interruption Tolerance | < 5ms                                                    |
|                    | CE&RoHS                      | EN61000-6-2:2019 and EN61000-6-4:2019 standards          |

| Category                   | Item                   | Description                                                                                                                                             |
|----------------------------|------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
|                            |                        | certified;RoHS certified;lightning surge $\pm 1\text{kV}$ ;group pulse $\pm 2\text{kV}$ ;electrostatic contact $4\text{kV}$ ,air discharge $8\text{kV}$ |
| Environmental requirements | Operating Temperature  | $0\sim 50^{\circ}\text{C}$                                                                                                                              |
|                            | Storage Temperature    | $-20\sim 60^{\circ}\text{C}$                                                                                                                            |
|                            | UV Resistance          | Operating in high UV environment is prohibited(e.g.,in direct sunlight)                                                                                 |
|                            | Environmental Humidity | $10\%\sim 90\%\text{RH}$ (non-condensing)                                                                                                               |
|                            | Vibration Resistance   | $10\sim 25\text{Hz}$ (X/Y/Z direction, $2\text{G}/30$ minutes)                                                                                          |
|                            | Cooling Method         | Natural air cooling                                                                                                                                     |
| Mechanical feature         | Protection Level       | NA                                                                                                                                                      |
|                            | Enclosure Material     | Bare chassis                                                                                                                                            |
|                            | Cutout Dimensions      | $166\text{mm}\times 101\text{mm}$                                                                                                                       |
|                            | Dimensions             | $190.4\text{mm}\times 110\text{mm}\times 27\text{mm}$ (W×H×D)                                                                                           |
|                            | Weight                 | Approximately 300g                                                                                                                                      |

### 3 Port Description



#### 3.1 Power Terminal

| J1 | Definition                      | Illustration                                                                               |
|----|---------------------------------|--------------------------------------------------------------------------------------------|
| 1  | 24V                             | External DC power supply 24V, supporting 8~28V input                                       |
| 2  | 24V                             | External DC power supply 24V, supporting 8~28V input                                       |
| 3  | GND                             | External power supply 0V                                                                   |
| 4  | GND                             | External power supply 0V<br>COM1 RS232 GND, connect to the GND of the external 232 device. |
| 5  | COM1_RS232_RXD<br>COM1_RS485_B- | COM1 RS232 receiving pin, RS232 LEV, Connecting TXD of 232 external device COM1 RS485-     |
| 6  | COM1_RS232_TXD<br>COM1_RS485_A+ | COM1 RS232 transmit pin, RS232 LEV, connecting RXD of 232 external device COM1 RS485+      |
| 7  | COM2_RS485_B-                   | COM2 RS485-                                                                                |
| 8  | COM2_RS485_A+                   | COM2 RS485+                                                                                |

| J2 | Definition     | Illustration (Default is not soldered)                                          |
|----|----------------|---------------------------------------------------------------------------------|
| 1  | 5V             | External DC power supply 5V                                                     |
| 2  | GND            | External DC power supply 0V<br>COM3 RS232 GND, connect external 232 devices GND |
| 3  | COM3_RS232_RXD | COM3 RS232 receive pin ,RS232 level, connect external 232 device TXD            |
| 4  | COM3_RS232_TXD | COM3 RS232 transmit pin ,RS232 level, connect external 232 device RXD           |
| 5  | TD+            | Ethernet parallel connection, Ethernet 10/100Base-T send data +,                |

| J2 | Definition | Illustration (Default is not soldered)                                                   |
|----|------------|------------------------------------------------------------------------------------------|
|    |            | corresponding RJ45-pin1                                                                  |
| 6  | TD-        | Ethernet parallel connection, Ethernet 10/100Base-T send data -, corresponding RJ45-pin2 |
| 7  | RD+        | Ethernet parallel connection, Ethernet 10/100Base-T send data +, corresponding RJ45-pin3 |
| 8  | RD-        | Ethernet parallel connection, Ethernet 10/100Base-T send data -, corresponding RJ45-pin6 |

## 3.2 Ethernet Port

RJ45 port for Ethernet communication with the controller or server.



## 3.3 USB Type-C 2.0 Port

USB Slave port, Used for program download and debugging.



## 3.4 USB Type-A 2.0 Port

USB Host port, Used for connecting peripheral devices, such as USB flash drive or bar code scanner

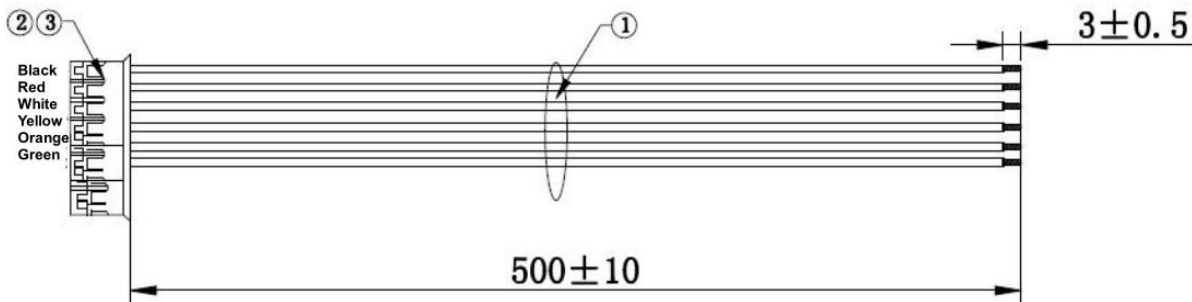


## Unit: mm



5 addendum

Matching wire harnesses × 2



|         |              |                     |          |         |                                                        |                 |                       |
|---------|--------------|---------------------|----------|---------|--------------------------------------------------------|-----------------|-----------------------|
| 3       | Terminal     | PH-2.0TEP-2         | 8        | Tinning | Remarks:<br>All materials are environmentally friendly |                 |                       |
| 2       | Housing      | PH-8Y (spacing 2.0) | 1        | White   |                                                        |                 |                       |
| 1       | Wire         | UL 1007 22#         | 1        | Gray    |                                                        |                 |                       |
|         |              |                     | 1        | Blue    |                                                        |                 |                       |
|         |              |                     | 1        | White   | $255 \pm 2$                                            | $3.0 \pm 0.5$   | $3.0 \pm 0.5$ Tinning |
|         |              |                     | 1        | Orange  |                                                        |                 |                       |
|         |              |                     | 1        | Green   |                                                        |                 |                       |
|         |              |                     | 1        | Yellow  |                                                        |                 |                       |
|         |              |                     | 1        | Red     |                                                        |                 |                       |
|         |              |                     | 1        | Black   |                                                        |                 |                       |
| Project | Product Name | Specification       | Quantity | Color   | Wire Cutting Length                                    | Left Processing | Right Processing      |

|    |            |                                                                              |              |
|----|------------|------------------------------------------------------------------------------|--------------|
| J1 | Definition | Illustration                                                                 | Harness pins |
| 1  | 24V        | External DC power supply 24V, supporting 8~28V input                         | Black        |
| 2  | 24V        | External DC power supply 24V, supporting 8~28V input                         | Red          |
| 3  | GND        | External power supply 0V                                                     | White        |
| 4  | GND        | External power supply 0V<br>COM1 RS232 GND, connect external 232 devices GND | Yellow       |

|   |                                 |                                                                                           |        |
|---|---------------------------------|-------------------------------------------------------------------------------------------|--------|
| 5 | COM1_RS232_RXD<br>COM1_RS485_B- | COM1 RS232 receiving Pin, RS232 LEV, Connecting TXD of 232 external device<br>COM1 RS485- | Orange |
| 6 | COM1_RS232_TXD<br>COM1_RS485_A+ | COM1 RS232 transmit pin, RS232 LEV, connecting RXD of 232 external device<br>COM1 RS485+  | Green  |
| 7 | COM2_RS485_B-                   | COM2 RS485-                                                                               | Blue   |
| 8 | COM2_RS485_A+                   | COM2 RS485+                                                                               | Gray   |