

# P80480MS050C\_T01

**5.0 Inches, 800xRGBx480, 16.7M Colors, Android LCM**



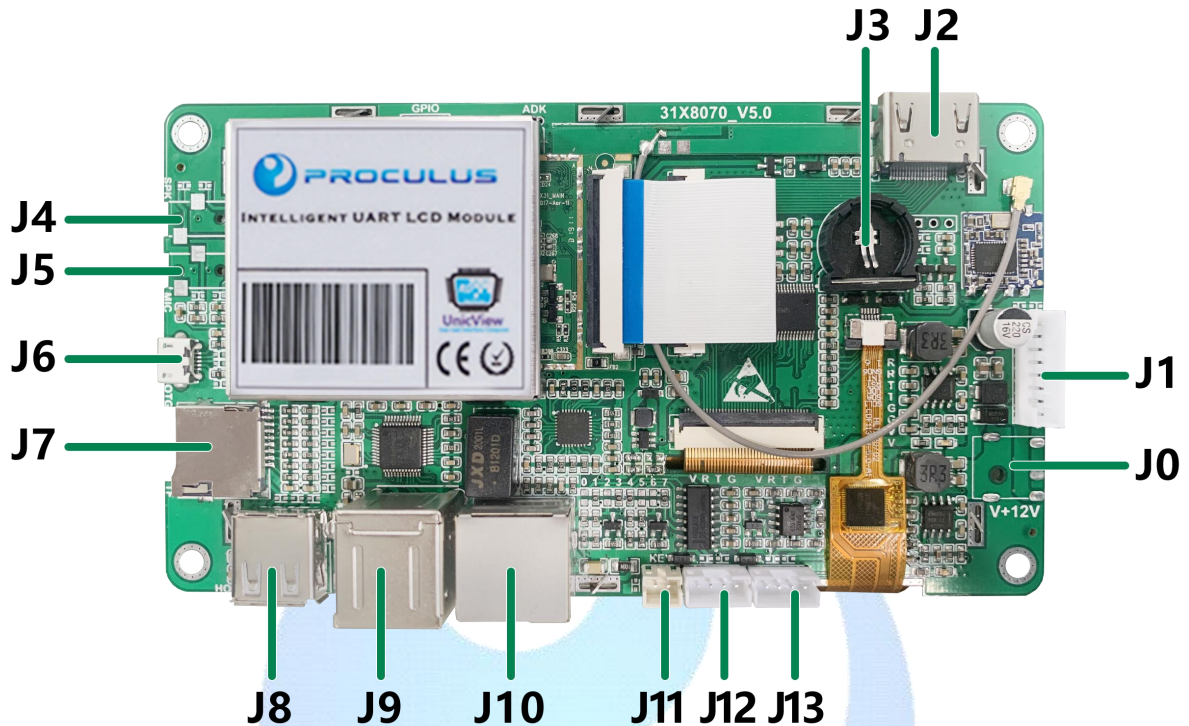
P80480MS050C\_T01 is an industrial level Android LCM based on Rockchip RK3128 ARM. It is equipped with Quad-core Cortex-A7, supports most decoding solutions under 1080p@60fps, H.264/MVC/VP8 solutions under 1080p@30fps and many other great features of Rockchip RK3128. Meanwhile, with good jpeg picture processing performance and 3D GPU, it supports OpenGL ES2.0 and 1.1 OpenVG1.1.

RK3128 has high-performance external memory interface (DDR3/LPDDR2/LVDDR3) capable of sustaining demanding memory bandwidths, also provides a complete set of peripheral interface to support very flexible applications.

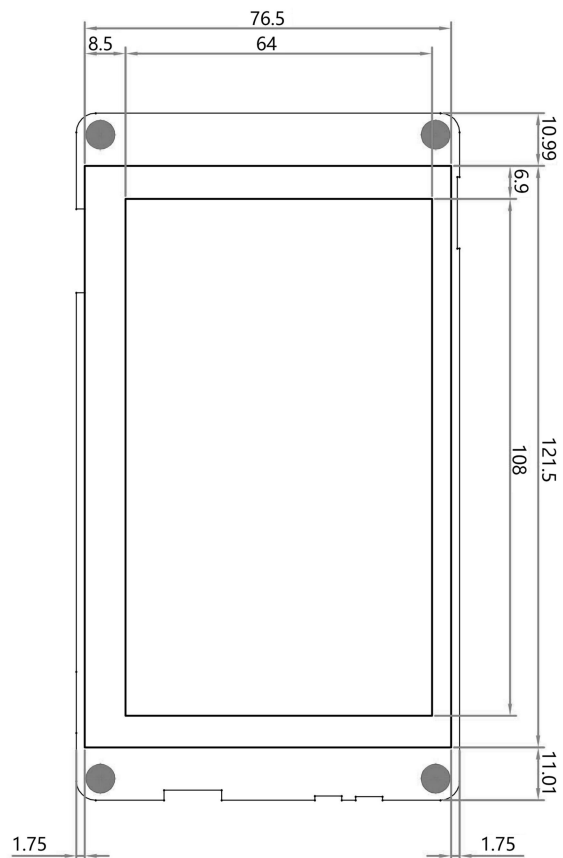
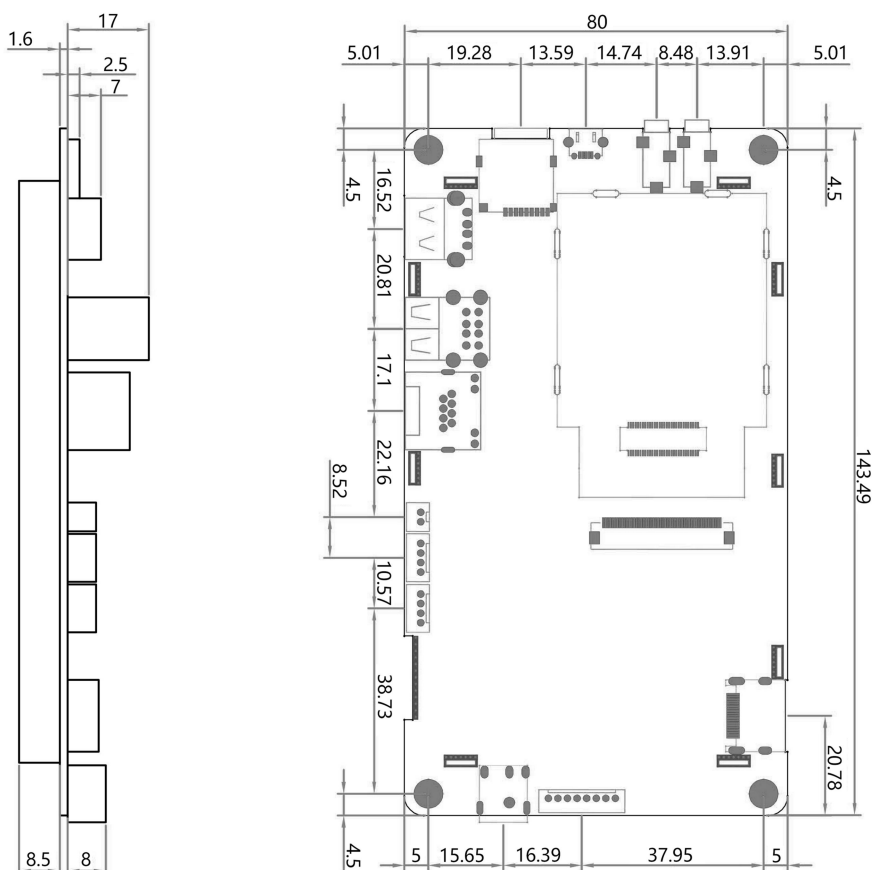
| Core Board               |                                                                                                                            |                     |      |      |      |        |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------|---------------------|------|------|------|--------|
| CPU                      | 1.3 GHz Quad-core A7 ARM                                                                                                   |                     |      |      |      |        |
| RAM                      | 1GB DDR3                                                                                                                   |                     |      |      |      |        |
| eMMC                     | 8GB                                                                                                                        |                     |      |      |      |        |
| GPU                      | Mali400 MP2                                                                                                                |                     |      |      |      |        |
| Power Management         | ACT8846 PMU                                                                                                                |                     |      |      |      |        |
| System Version           |                                                                                                                            |                     |      |      |      |        |
| Android                  | Android 5.1/7.1                                                                                                            |                     |      |      |      |        |
| Ubuntu                   | Ubuntu 15.04 (Default system is Android. Need to refresh firmware to choose Ubuntu. Apps need to be developed separately.) |                     |      |      |      |        |
| Display                  |                                                                                                                            |                     |      |      |      |        |
| Color                    | 16.7M (16777216) colors, 24-bit color 8R8G8B.                                                                              |                     |      |      |      |        |
| Active Area (A.A.)       | 110.4 mm(W)×67.1 mm(H), 800*480.                                                                                           |                     |      |      |      |        |
| View Area (V.A.)         | 108.0 mm(W)×64.8 mm(H), 800*480.                                                                                           |                     |      |      |      |        |
| Resolution               | 800*480                                                                                                                    |                     |      |      |      |        |
| Backlight                | LED                                                                                                                        |                     |      |      |      |        |
| Brightness               | 750nit                                                                                                                     |                     |      |      |      |        |
| Optical Specifications   |                                                                                                                            |                     |      |      |      |        |
| Item                     | Symbol                                                                                                                     | Condition           | Min. | Typ. | Max. | Unit   |
| Viewing Angle<br>(CR≥10) | θL                                                                                                                         | Φ=180° (9 o’ clock) | 65   | 75   | —    | Degree |
|                          | θR                                                                                                                         | Φ=0° (3 o’ clock)   | 65   | 75   | —    |        |
|                          | θT                                                                                                                         | Φ=90° (12 o’ clock) | 65   | 75   | —    |        |
|                          | θB                                                                                                                         | Φ=270° (6 o’ clock) | 65   | 75   | —    |        |
| Voltage & Current        |                                                                                                                            |                     |      |      |      |        |
| Item                     | Condition                                                                                                                  |                     | Min. | Typ. | Max. | Unit   |
| Power Voltage            |                                                                                                                            |                     | 5.5  | 12   | 19   | V      |
| Operation Current        | —                                                                                                                          |                     | —    | —    | 800  | mA     |
| Power Supply             | 12V 2A DC (Recommended).                                                                                                   |                     |      |      |      |        |

| Reliability Test    |                                                            |      |      |        |      |
|---------------------|------------------------------------------------------------|------|------|--------|------|
| Item                | Condition                                                  | Min. | Typ. | Max.   | Unit |
| Working Temperature | 60%RH at 12V voltage                                       | -30  | 25   | 70     | ℃    |
| Storage Temperature | —                                                          | -30  | 25   | 85     | ℃    |
| Working Humidity    | 25℃                                                        | 10%  | 60%  | 90%    | RH   |
| Protection Paint    | —                                                          | —    | None | —      | —    |
| Interface           |                                                            |      |      |        |      |
| Item                | Condition                                                  | Min. | Typ. | Max.   | Unit |
| Baud Rate           | Standard                                                   | —    | 9600 | —      | bps  |
|                     | User Defin                                                 | 1200 | —    | 115200 | bps  |
| Serial Mode         | Serial Port*2 (1*RS232/TTL, 1*RS232/TTL/RS485)             |      |      |        |      |
| User Interface      | Standard serial communication protocol. 8Pin_2.0mm socket. |      |      |        |      |
| USB                 | USB DEBUG*1. USB HOST*3.                                   |      |      |        |      |
| Ethernet            | Support 10m/100m Ethernet.                                 |      |      |        |      |
| Wi-Fi               | Support 802.11b/g/n Wi-Fi wireless network.                |      |      |        |      |
| 4G LTE Module       | —                                                          |      |      |        |      |
| Peripherals         |                                                            |      |      |        |      |
| Microphone          | Audio input interface.                                     |      |      |        |      |
| Loudspeaker         | Audio output interface.                                    |      |      |        |      |
| HDMI                | HDMI output interface. (Optional)                          |      |      |        |      |
| IIC                 | —                                                          |      |      |        |      |
| TF card             | Yes                                                        |      |      |        |      |
| GPIO                | Reserved                                                   |      |      |        |      |

## Interface Description



| Num. | Interface Name            | Description                                                                |
|------|---------------------------|----------------------------------------------------------------------------|
| J0   | Power                     | 12V2A power supply                                                         |
| J1   | User interface            | Device Name: TTY51 /Pin Definition: 12V, 12V, GND, GND, TXD, TXD, RXD, RXD |
| J2   | HDMI                      | HDMI output interface (Optional)                                           |
| J3   | Battery interface         | RTC power supply                                                           |
| J4   | MIC                       | Reserved                                                                   |
| J5   | Audio interface           | Reserved                                                                   |
| J6   | OTG interface             |                                                                            |
| J7   | TF interface              |                                                                            |
| J8   | USB interface             | Support USB Peripherals                                                    |
| J9   | USB interface             | Support USB Peripherals/Support dual USB parallel use                      |
| J10  | RJ45 interface            | Support 10M/100M network                                                   |
| J11  | External switch interface |                                                                            |
| J12  | RS232 interface           | Device Name: TTY50 /Pin Definition: 5V A B GND/ Same as J13                |
| J13  | RS485 interface           | Device Name: TTY50 /Pin Definition: 5V A B GND/ Same as J12                |



1.Location hole is used as position reference

2.Unmarked Tolerance is +/-0.3mm

Active area is marked in Dash lines

|            |                  |              |  |          |                                                                                                                                   |  |
|------------|------------------|--------------|--|----------|-----------------------------------------------------------------------------------------------------------------------------------|--|
| Part No.   | P80480MS050L_T01 |              |  |          |  <b>PROCULUS</b><br>PROCULUS TECHNOLOGIES INS. |  |
| Datasheet  | A4               | Drawn by     |  | Proculus | Date                                                                                                                              |  |
| Proportion | 1:1              | Verified by  |  |          | Date                                                                                                                              |  |
| Unit       | mm               | Confirmed by |  |          | Date                                                                                                                              |  |