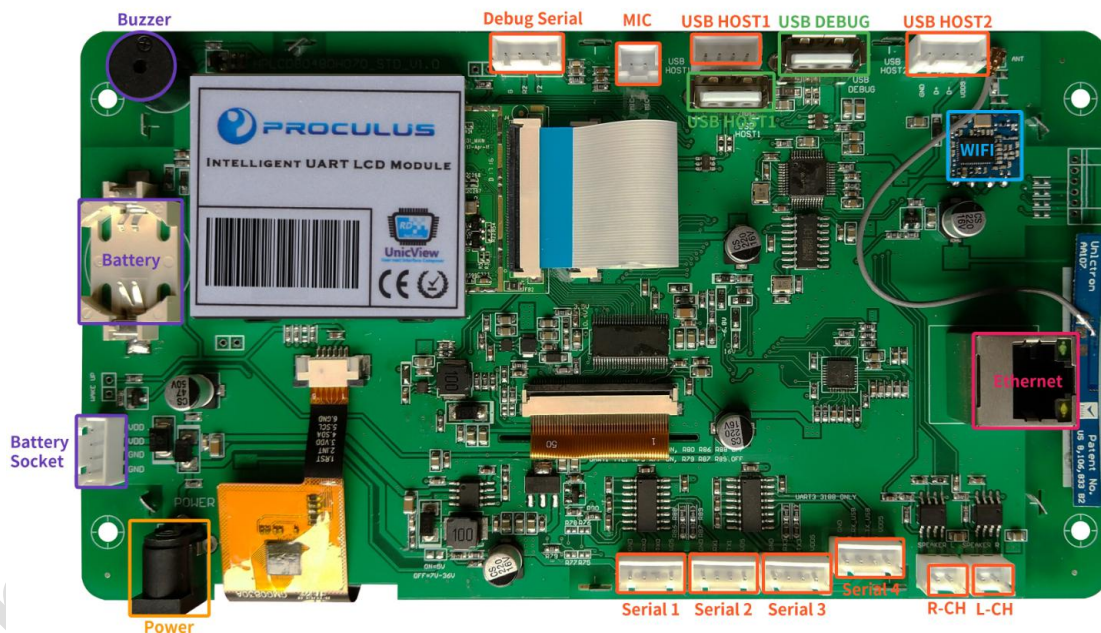


# P10600MS070P\_T01

7.0 Inches, 1024xRGBx600, 16.7M Colors, Android LCM



P10600MS070P\_T01 is an industrial level Android LCM based on Rockchip RK3288 ARM. It is equipped with Quad-core Cortex-A17, supports most decoding solutions under 1080p@60fps, H.265/H.264/MVC/VP8 solutions under 1080p@60fps and many other great features of Rockchip RK3288. Meanwhile, with good jpeg picture processing performance and 3D GPU, it supports OpenGL ES2.0 and 1.1 OpenVG1.1. RK3288 has high-performance external memory interface (DDR3/DDR3L/LPDDR2) capable of sustaining demanding memory bandwidths, also provides a complete set of peripheral interface to support very flexible applications.

- Core Board

| Item             | Parameter                |
|------------------|--------------------------|
| CPU              | 1.8GHz Quad-core A17 ARM |
| RAM              | 2GB DDR3                 |
| eMMC             | 8GB eMMC                 |
| GPU              | Mali-T764 MP4            |
| Power Management | ACT8846 PMU              |

### ● System Version

| Item    | Parameter  |
|---------|--|
| Android | Android 5.1  |
| Ubuntu  | Ubuntu 13.09 (Default system is Android. Need to refresh firmware to choose Ubuntu. Apps need to be developed separately.) |

### ● Display

| Item               | Parameter                | Description         |
|--------------------|--------------------------|---------------------|
| Color              | 16.7M (16777216) colors  | 24-bit color 8R8G8B |
| Active Area (A.A.) | 154.08 mm(W)×85.92 mm(H) | 1024×600            |
| View Area (V.A.)   | 155.96 mm(W)×88.87mm(H)  | 1024×600            |
| Resolution         | 1024×600                 |                     |
| Backlight          | LED                      | -                   |
| Brightness         | 300nit                   | -                   |

### ● Optical Specifications

| Item                               | Symbol         | Condition          | Values |      |      | Unit   | Remark |
|------------------------------------|----------------|--------------------|--------|------|------|--------|--------|
|                                    |                |                    | Min.   | Typ. | Max. |        |        |
| Viewing Angle (CR <sub>≥10</sub> ) | θ <sub>L</sub> | Φ=180° (9 o'clock) | 65     | 75   | -    | Degree |        |
|                                    | θ <sub>R</sub> | Φ=0° (3 o'clock)   | 65     | 75   | -    |        |        |
|                                    | θ <sub>T</sub> | Φ=90° (12 o'clock) | 65     | 75   | -    |        |        |
|                                    | θ <sub>B</sub> | Φ=270° (6 o'clock) | 65     | 75   | -    |        |        |

### ● Voltage & Current

| Item              | Condition | Min  | Typ. | Max  | Unit |
|-------------------|-----------|------|------|------|------|
| Power Voltage     |           | 10.0 | 12.0 | 18.0 | V    |
| Operation Current | -         | -    | 400  | -    | mA   |

Recommended power supply: 12V 3A DC

### ● Reliability Test

| Item                | Condition            | Min | Typ. | Max | Unit |
|---------------------|----------------------|-----|------|-----|------|
| Working Temperature | 60%RH at 12V voltage | -30 | 25   | 70  | °C   |
| Storage Temperature | -                    | -30 | 25   | 85  | °C   |
| Working Humidity    | 25°C                 | 10% | 60%  | 90% | RH   |
| Protection Paint    | -                    | -   | None | -   | -    |

### ● Interface

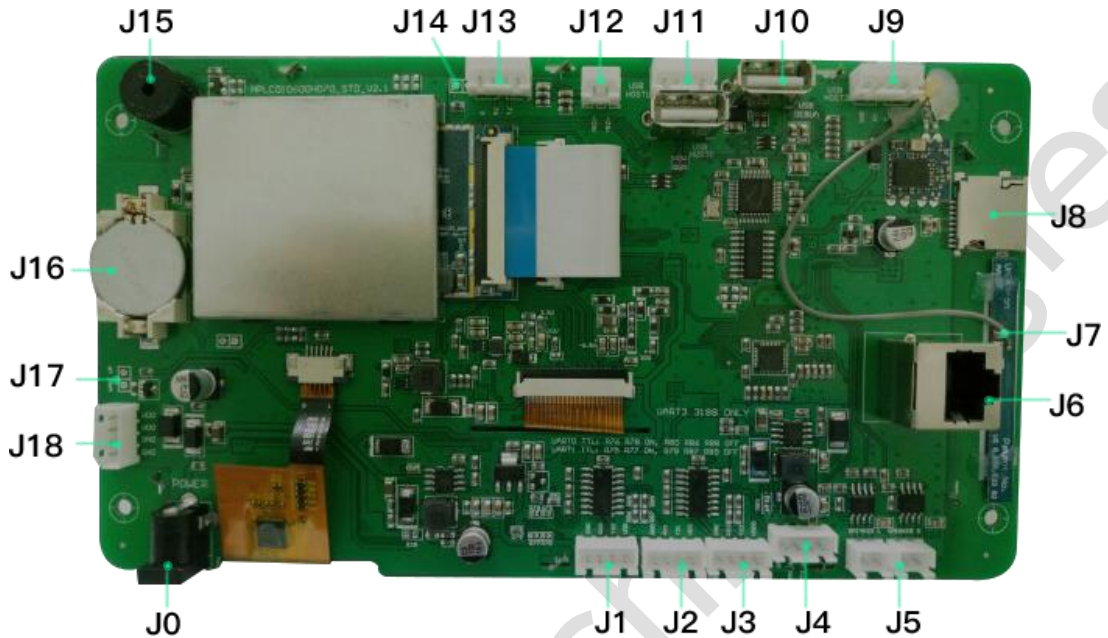
| Item           | Condition   | Min  | Typ.   | Max    | Unit |
|----------------|---|------|--------|--------|------|
| Baudrate       | Standard  | 1200 | 115200 | 115200 | bps  |
|                | User Defin  | 1200 | -      | 115200 | bps  |
| Serial Mode    | Serial Port*4 (defaulted interface RS232). 2 of them support TTL. |      |        |        |      |
| User Interface | Standard serial communication protocol. 4Pin_2.54mm socket.       |      |        |        |      |
| USB            | USB DEBUG*1. USB HOST*2   |      |        |        |      |

|                 |  |
|-----------------|--|
| <b>Ethernet</b> | Support 802.11b/g/n/WIFI wireless network. Support 10m/100m Ethernet |
|-----------------|--|

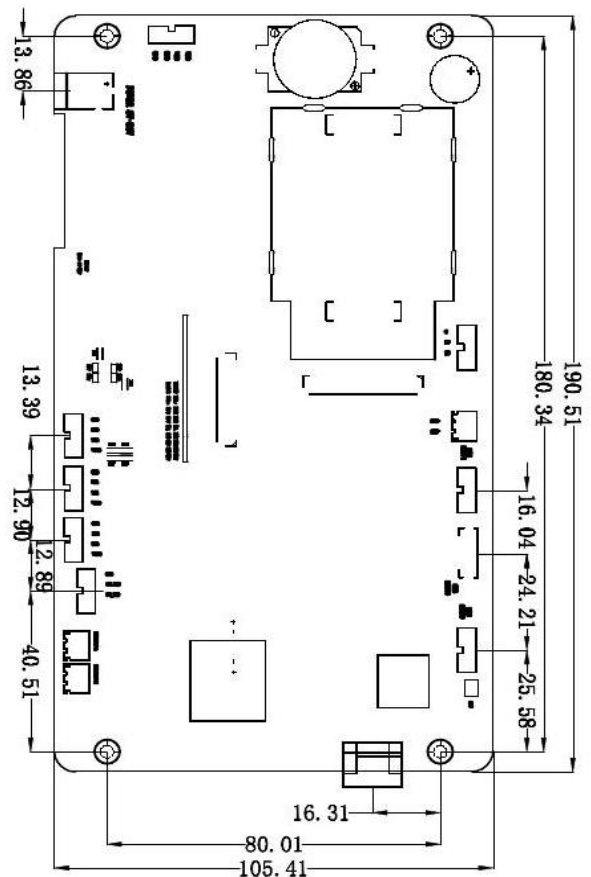
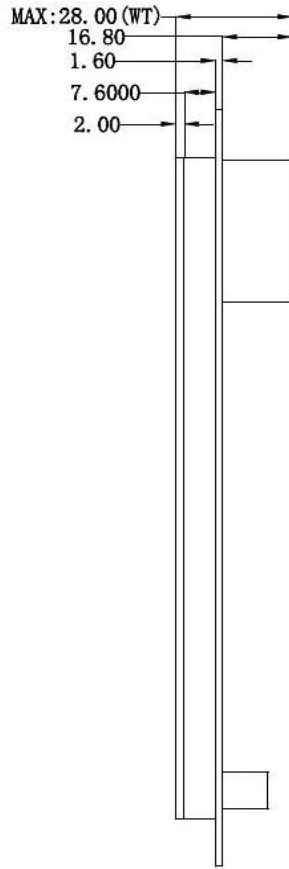
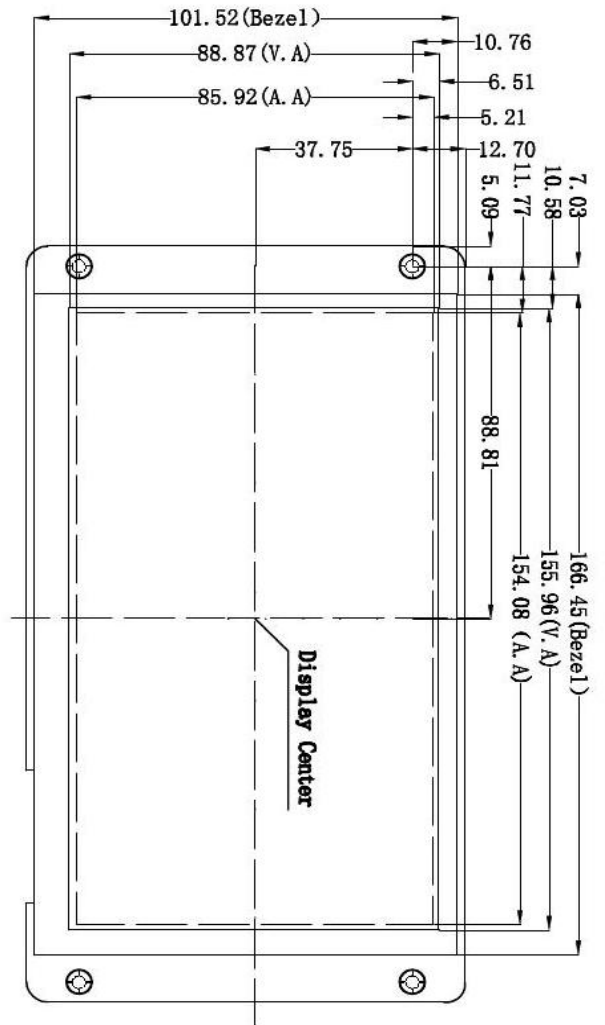
## ● Peripherals

|                    |   |
|--------------------|---|
| <b>Peripherals</b> | Microphone interface. 2-channel 4 Ω/3W loudspeaker. |
|--------------------|---|

## ● Interface Description



| Num. | Interface Name       | Description  |
|------|----------------------|--|
| J0   | Power                | 12V3A power supply   |
| J1   | Serial port 0        | Device name: ttyS0. Support RS232/TTL. Pin definition: GND, RX, TX, VCC        |
| J2   | Serial port 1        | Device name: ttyS1. Support RS232/TTL. Pin definition: GND, RX, TX, VCC        |
| J3   | Serial port 3        | Device name: ttyS3. Pin definition: GND, RX, TX, VCC (Not Available in RK3188) |
| J4   | USB-serial interface | Device name: ttyCOM0. Pin definition: GND, RX, TX, VCC                         |
| J5   | Loudspeaker          | Support 4W output  |
| J6   | RJ45 interface       | Support 10M/100M network   |
| J7   | Wireless network     | Support IEEE802.11b/g/n network. Support wireless & Bluetooth 2-in-1.          |
| J8   | TF card              |  |
| J9   | USB2                 | Support USB Peripherals  |
| J10  | USB DEBUG            | App debugging interface. Firmware upgrade interface                            |
| J11  | USB1                 | Support USB Peripherals  |
| J12  | Mic                  | Audio input port   |
| J13  | Serial debugging     | Reserved   |
| J14  | RECOVERY             | Short-circuit to enter firmware burning mode                                   |
| J15  | Buzzer               |  |
| J16  | RTC                  | Supply system RTC  |
| J17  | Wake-up              |  |
| J18  | Power                | Same as J0   |



| Pin Name | Pin Definition | Pin Type | Remarks     |
|----------|----------------|----------|-------------|
| VCC      | 1, 2           | P        | POWER INPUT |
| NC       | 3              | -        | Not Defined |
| TXD0     | 4              | OUT      | DOUT        |
| RXD0     | 5, 6           | IN       | DIN         |
| GND      | 7, 8           | P        | GND         |

| Pin Name | Pin Definition | Pin Type | Remarks |
|----------|----------------|----------|---------|
| TXD4     | 1              | OUT      | DOUT    |
| RXD4     | 2              | IN       | DIN     |
| GND      | 3              | P        | GND     |
| TXD1     | 4              | OUT      | DOUT    |
| RXD1     | 5, 6           | IN       | DIN     |
| TXD2     | 7              | OUT      | DOUT    |
| RXD2     | 8              | IN       | DIN     |

1. Location hole is used as position reference.

2. Unmarked Tolerance is +/-0.3mm.

Active area is marked in Dash lines.

|            |                  |              |          |      |  |
|------------|------------------|--------------|----------|------|--|
| Part No.   | P10600MS070P_T01 |              |          |      |  |
| Datasheet  | A4               | Drawn by     | Proculus | Date |  |
| Proportion | 1:1              | Verified by  |          | Date |  |
| Unit       | mm               | Confirmed by |          | Date |  |