

# P10600HY070K\_T01

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



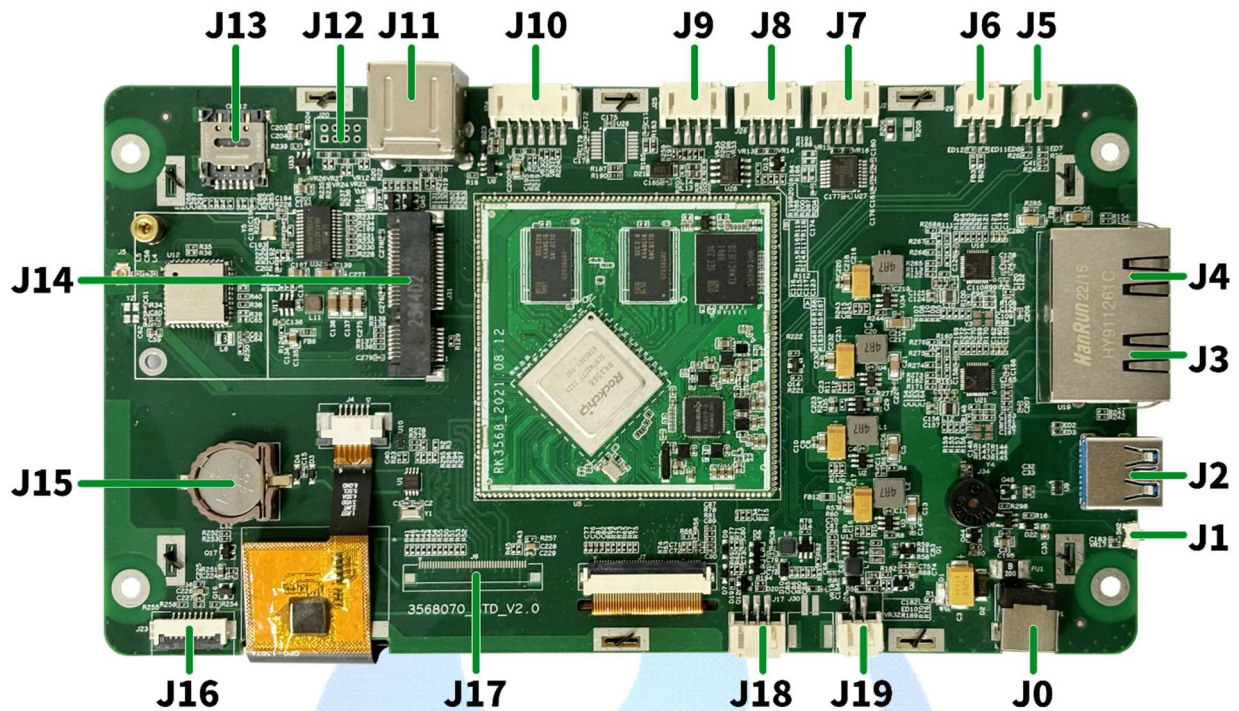
P10600HY070K\_T01 is an industrial level Android LCM based on Rockchip RK3568 ARM. It is equipped with Quad-core Cortex-A55, supporting most decoding solutions under 1080p@60fps, H.265/H.264/MVC/VP8 solutions and many other great features of Rockchip RK3568. Meanwhile, with good jpeg picture processing performance and 3D GPU, it supports OpenGL ES2.0 and OpenVG1.1.

Rockchip RK3568 has high-performance external memory interface (DDR4/DDR3/DDR3L/LPDDR2) capable of sustaining demanding memory bandwidths, also provides a complete set of peripheral interface to support very flexible applications.

| Core Board               |                                                                                                                            |                     |      |      |      |        |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------|---------------------|------|------|------|--------|
| CPU                      | 2.0GHz Quad-core A55 ARM                                                                                                   |                     |      |      |      |        |
| RAM                      | 2GB DDR4                                                                                                                   |                     |      |      |      |        |
| eMMC                     | 8GB                                                                                                                        |                     |      |      |      |        |
| GPU                      | Mali-G52                                                                                                                   |                     |      |      |      |        |
| Power Management         | RK809                                                                                                                      |                     |      |      |      |        |
| System Version           |                                                                                                                            |                     |      |      |      |        |
| Android                  | Android 12/13                                                                                                              |                     |      |      |      |        |
| Ubuntu                   | linux+QT5.12 (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.)       | 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               | 350                                                                                                                        |                     |      |      |      |        |
| Optical Specifications   |                                                                                                                            |                     |      |      |      |        |
| Item                     | Symbol                                                                                                                     | Condition           | Min. | Typ. | Max. | Unit   |
| Viewing Angle<br>(CR≥10) | θL                                                                                                                         | Φ=180° (9 o’ clock) | 70   | 80   | —    | Degree |
|                          | θR                                                                                                                         | Φ=0° (3 o’ clock)   | 70   | 80   | —    |        |
|                          | θT                                                                                                                         | Φ=90° (12 o’ clock) | 50   | 60   | —    |        |
|                          | θB                                                                                                                         | Φ=270° (6 o’ clock) | 60   | 70   | —    |        |
| Voltage & Current        |                                                                                                                            |                     |      |      |      |        |
| Item                     | Condition                                                                                                                  |                     | Min. | Typ. | Max. | Unit   |
| Power Voltage            |                                                                                                                            |                     | 12   | 12   | 18   | V      |
| Operation Current        | —                                                                                                                          |                     | —    | 400  | —    | mA     |
| Power Supply             | 12V 2A DC (Recommended).                                                                                                   |                     |      |      |      |        |

| Reliability Test    |                                                              |      |      |        |      |
|---------------------|--------------------------------------------------------------|------|------|--------|------|
| Item                | Condition                                                    | Min. | Typ. | Max.   | Unit |
| Working Temperature | 60%RH at 12V voltage                                         | -20  | 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                                                     | 1200 | 9600 | 115200 | bps  |
|                     | User Defined                                                 | 1200 | —    | 115200 | bps  |
| Serial Mode         | 2*RS232,1*RS485                                              |      |      |        |      |
| USB                 | 1*USB 3.0 OTG,2*USB 2.0 HOST                                 |      |      |        |      |
| Ethernet            | 2*(10m/100m/1000m Ethernet)                                  |      |      |        |      |
| Wi-Fi/Bluetooth     | Support 802.11b/g/n Wi-Fi wireless 5G network; Bluetooth 5.0 |      |      |        |      |
| 4G LTE Module       | 4G LTE Module(Onboard)/GPS(Optional)                         |      |      |        |      |
| Peripherals         |                                                              |      |      |        |      |
| Microphone          | Audio input interface.                                       |      |      |        |      |
| Loudspeaker         | Audio output interface.                                      |      |      |        |      |
| TF card             | —                                                            |      |      |        |      |
| IO interface        | Reserved                                                     |      |      |        |      |

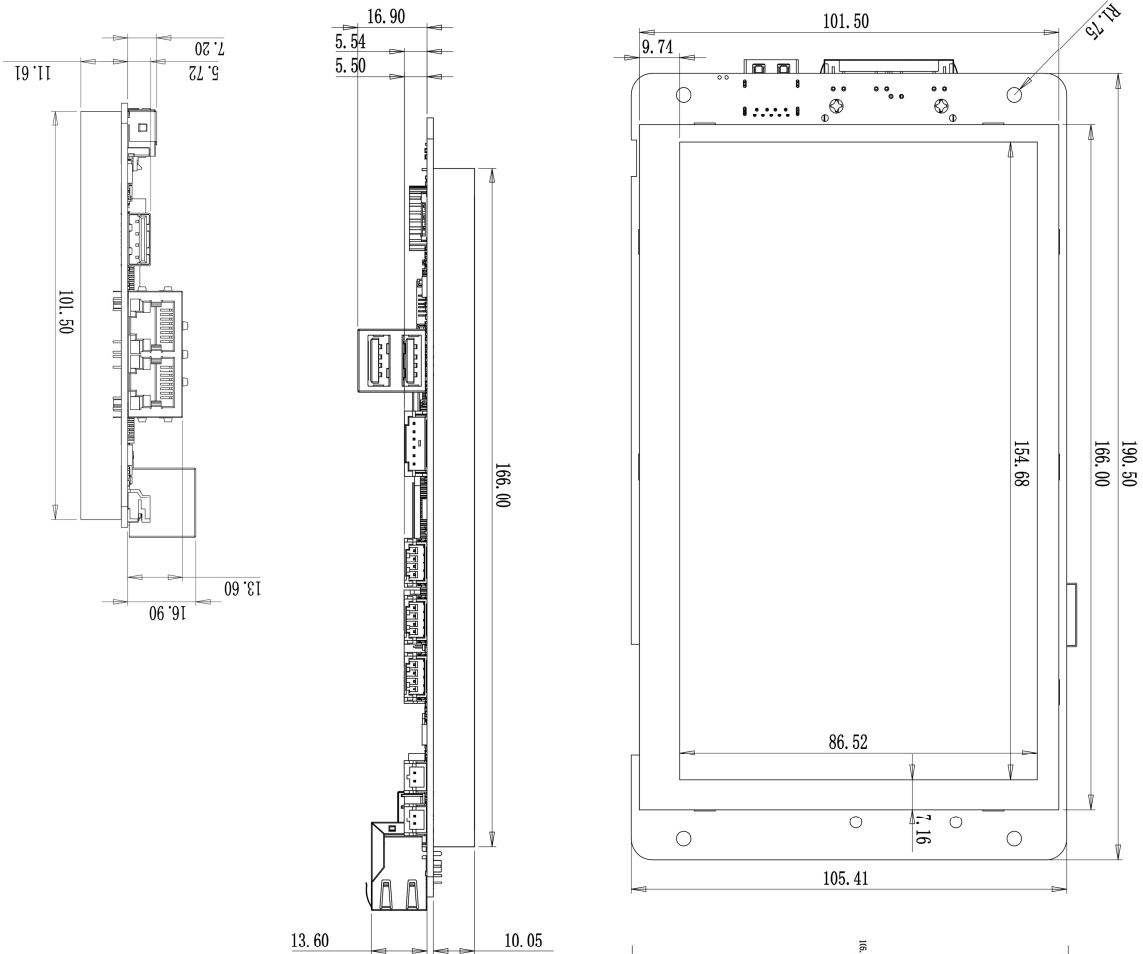
## Interface Description



| Num. | Interface Name      | Description                                                                                  |
|------|---------------------|----------------------------------------------------------------------------------------------|
| J0   | Power               | 12V/2A power supply                                                                          |
| J1   | RESET               | Reboot                                                                                       |
| J2   | USB_OTG             | USB 3.0 OTG/ OTG function /APP debugging interface/Firmware upgrade interface                |
| J3   | Ethernet1           | Support 10M/100M/1000M network                                                               |
| J4   | Ethernet2           | Support 10M/100M/1000M network -                                                             |
| J5   | MIC interface       | Audio input interface                                                                        |
| J6   | Speaker interface   | Audio output interface -                                                                     |
| J7   | UART 5              | UART5 Serial port, system communication node ttyS5<br>Interface definition: GND, TX5, RX5, V |
| J8   | UART 0              | UART0 Serial port, system communication node ttyS0<br>Interface definition: GND, TX0, RX0, V |
| J9   | RS485               | RS485 port for the system communication node ttyS0<br>Interface definition: DC_IN, A, B, GND |
| J10  | SPI interface       | Interface definition: GND,CLK,MOSI,MOSO,CS,VCC                                               |
| J11  | USB interface       | 2*USB 2.0 HOST, External input/output device                                                 |
| J12  | Reserved            | 2*USB 2.0 HOST, Reserved                                                                     |
| J13  | SIM Card interface  | NANO SIM card, Reserved                                                                      |
| J14  | 4G module interface | Expanded 4G function, Reserved                                                               |
| J15  | RTC                 | RTC                                                                                          |

|     |                 |                                                              |
|-----|-----------------|--------------------------------------------------------------|
| J16 | Reserved        | GPIO interface, Reserved                                     |
| J17 | Reserved        | MIPI Camera interface, Reserved                              |
| J18 | Debug interface | Debug function                                               |
| J19 | ADK             | Short-connect to burn mode<br>Interface definition: GND, ADK |





1. Location hole is used as position reference  
2. Unmarked Tolerance is  $\pm 0.3\text{mm}$   
Active area is marked in Dash lines

| Part No.   | P10600HY070K_T01 |              |         | PROCLUS |  |
|------------|------------------|--------------|---------|---------|--|
| Datasheet  | A4               | Drawn by     | Proclus | Date    |  |
| Proportion | 1:1              | Verified by  |         | Date    |  |
| Unit       | mm               | Confirmed by |         | Date    |  |