

COMBO Multi-Touch Panel PC Series

Compact and Projective Capacitive Touch Panel PC with Wide Temperature and Voltage Support Powered by NXP i.MX 6 Series Family

In IPC market, a robust and highly reliable Panel PC system is a must to ensure non-stop and stable operation on production line. Featuring cost effective and power efficiency, COMBO Series is an ideal HMI in factory automation, food and beverage industry, data collecting equipment environments.

Product Introduction

yocto
PROJECT



COMBO Series Panel PC is a new era and innovation of Portwell's standard Panel PC product line. Powered by Freescale™ i.MX6 processor, the cost effective and power efficient Panel PC comes with one Gigabit Ethernet, two USB 2.0 hosts, one OTG, one HDMI port, one serial port, one CAN port, a wide range DC input from DC 12V to 24V and an optional Wi-Fi/3G/4G LTE feature. Besides, it is equipped with 512MB or 2GB DDR3 memory down and 4GB/8GB eMMC, which targets to support mission-critical industrial applications.

COMBO Panel PC can boot from the onboard eMMC or SD card to Yocto Linux 3.10.53 kernel version or Android 5.0 operating systems via U-Boot boot loader, specially customized to take full advantage of the i.MX6 CPU 3D graphics acceleration capabilities. To sum up, COMBO Series Panel PC is a ready platform for all kind of industrial applications, including factory automation, machine automation, data collecting and energy-saving control systems.

Panel PC with NXP i.MX 6 Solo/Quad-core Processor

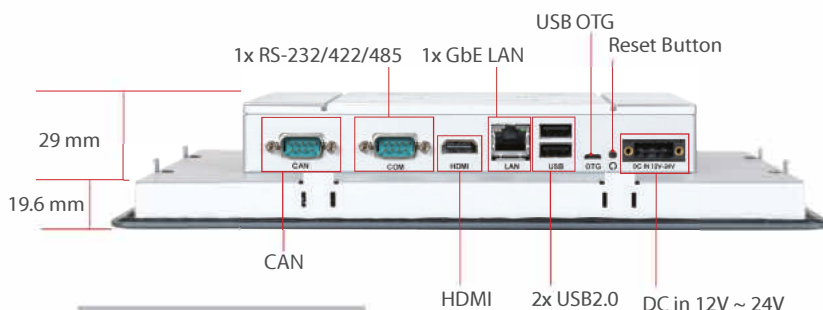
The i.MX 6 series processors unleash a scalable multi-core platform that includes single-, dual- and quad-core families based on the ARM® Cortex™ A9 architecture for next generation industrial applications. By combining the power-efficient processing capabilities with bleeding edge 3D and 2D graphics, as well as high-definition video, the i.MX 6 series provides a new level of multimedia performance to enable an unbounded next generation user experience. The unprecedented levels of performance and power efficiency making it an ideal solution for designs requiring high performance in low power or thermally constrained cost-sensitive devices.



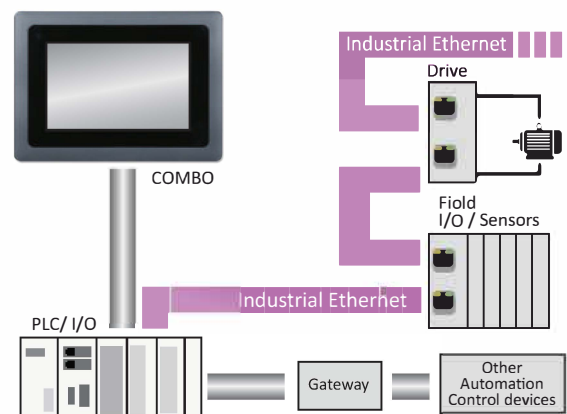
NXP freescale™
Enabled

CAN Bus Connectivity

COMBO Panel PC features CAN Bus specification version 2.0B, which supports both standard and extended message frames communication, making it a suitable equipment for applications such as cars, trucks, tractors, trains, agricultural machinery, textile machinery, etc. With a high degree of reliability and stability, CAN Bus is also widely used in industrial control.



* The picture of COMBO-S1020



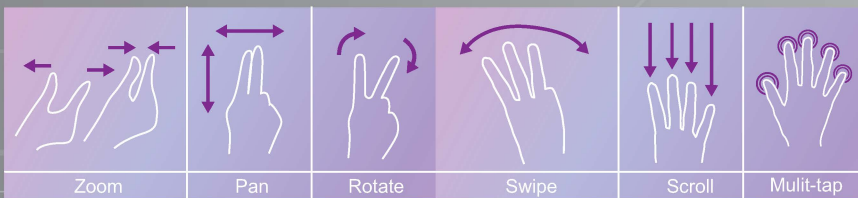


■ Wide Operating Temperature Support with Fan-less Design

COMBO Panel PC takes advantage of NXP i.MX6 family to operate under extremely hot and cold conditions. Compared to most Panel PC in the market, the operating temperature of COMBO Panel PC can be as low as -20°C or up to 60°C in spite of its fan-less design. Moreover, the cable-less structure optimizes the thermal dissipation as well as makes it more durable in rugged environments.

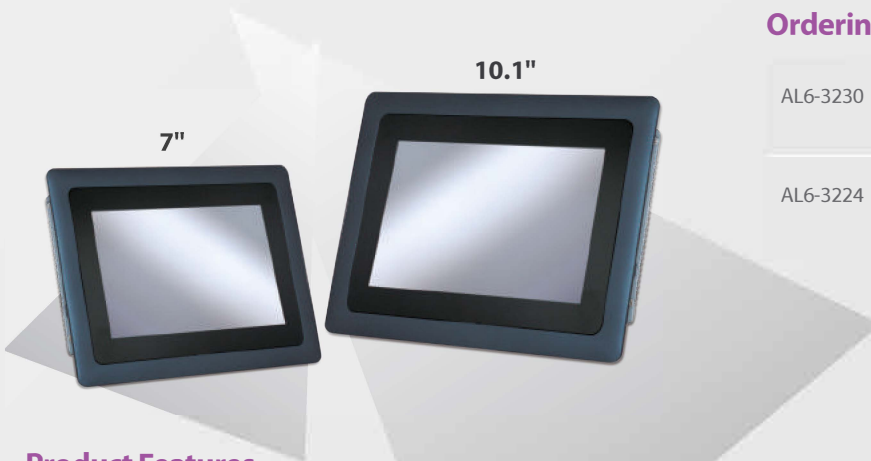
■ Projective Capacitive Multi-Touch Screen

By adopting antiscratch surface with 7H hardness protection, high touch durability and long-term stability are built-in features of COMBO Panel PC. 10-points multi-touch supports a full set of gestures such as zooming in/out, panning, or rotating, giving users a whole new way to control and interact with what's on the screen even with surgical gloves or thin cotton gloves.



Ordering Guide

| | |
|----------|--|
| AL6-3230 | (R).ATO.COMBO-S0720-PP1000. 7" NXP i.MX 6 (Cortex A9) P-CAP Panel PC |
| AL6-3224 | (R).ATO.COMBO-S1020-PP1000. 10.1" NXP i.MX 6 (Cortex A9) P-CAP Panel PC |



Product Features

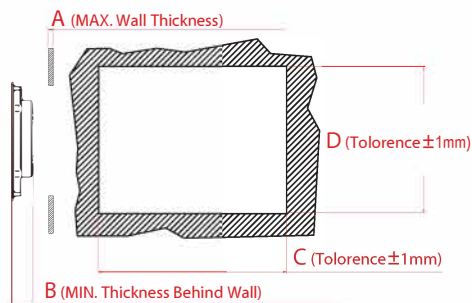


Quick Selection Guide

COMBO Multi-Touch 7" / 10.1"

| Model Name | COMBO-S0720 | COMBO-S1020 |
|---------------------|--|---------------------------|
| Display | | |
| LCD Size | 7" (16:9) | 10.1 ^{HD} (16:9) |
| Resolution | WVGA 800 x 480 | WXGA 1280 x 800 |
| Brightness | 300 cd/m ² | 300 cd/m ² |
| Contrast Ratio | 500 : 1 | 1300 : 1 |
| Backlight | LED type | LED type |
| Touch Screen | Projected Capacitive Multi-Touch | |
| System | | |
| SoC | Freescale™ i.MX6 Solo/Quad-core Processor (Cortex™ A9) | |
| Memory | 512MB/2GB DDR3 1066 Memory Chip on Board | |
| BIOS | N/A | |
| Graphics | Freescale™ i.MX6 Graphic Engine | |
| LVDS | Single/Dual Channel 24-bit | |
| LAN Chipset | Single Atheros AR8035 Ethernet PHY | |
| Audio | Wolfson WM8962 Audio Codec | |
| Watchdog Timer | Control by Software | |
| Storage Device | 4/8GB eMMC on board, 1 x SD card | |
| OS | Linux™ 3.10.53 + QT 5.2 / Android 5.0 | |
| I/O Interface | | |
| Series Port | 1 x RS-232/422/485 | |
| Display | 1 x HDMI | |
| USB | 2 x USB 2.0, 1 x USB OTG | |
| Ethernet | 1 x Gigabit Ethernet | |
| Others | 1 x CAN 2.0B (DB9) 1 x SMA Antenna hole for WIFI, 3G, 4G LTE Solution | |
| Expansion | 1x Full-size Mini-PCle socket 1 x DVI-D input, 4-bit DI / 4-bit DO, 1 x RS-232 (Optional) | |
| Mechanical | | |
| Dimesion(mm)(WxDxH) | 217 x 156 x 45.9 mm | 286 x 196 x 48.6 mm |
| Mounting | VESA Mount 50 x 25, 75 x 75 ; Panel Mount | |
| Weight (Kg)(N) | 1.2 Kg | 1.6 Kg |
| Weight (Kg)(G) | 3 Kg | 3.4 Kg |
| Power | | |
| Power Supply | DC 12V ~ 24V input with 3-pin terminal block connector | |
| Consumption (Max) | 23 W | 25 W |
| Consumption (Min) | 4.8 W | 6.2 W |
| Environmental | | |
| OP /Storage Temp | -20 ~ 60 °C / -30 ~ 80°C (20 ~ 90% non-condensing) | |
| Vibration | 1.0G (SD/eMMC), Power on & 2.16G, Packaged; 5~500Hz, IEC 60068-2-6 | |
| Shock | 15G peak acceleration, 11 ms (Power on condition), IEC 60068-2-27 | |
| Drop | Package with Carton from 96.5 cm (1-Corner, 3-Axis, 6-Face), ISTA 2A Standard | |
| IP Protection | IP65 (Front) / IP20 (Rear), IEC 60529 Edition 2.1 Standard | |
| Certificate | CE/FCC Class A | |

Cut out Dimension



COMBO Multi-Touch

| | A (mm) | B (mm) | C (mm) | D (mm) | Mounting Kits (pcs) |
|-------------|--------|--------|--------|--------|---------------------|
| COMBO-S0720 | < 6.5 | 42 | 201 | 140 | x 8 |
| COMBO-S1020 | < 8.6 | 45 | 270 | 180 | x 8 |