WOP-2057V

5.7" QVGA Operator Panel with PM Designer 2.0 Software

Preliminary

$C\epsilon$ FCC

Features

- Various LCD sizes (3.5", 5.7", 7", 8", 10.4", 12.1")
- Supports ARM9-based CPUs with 70~200MHz and 4~16M flash memory size
- Supports RTC, battery backup RAM, and Ethernet-based operator panels
- Supports Runtime data downloads through Serial, Ethernet, USB, or Micro-SD
- Supports adjustable brightness controls via touch panel
- Reliable firmware for 24/7 operation
- Supports Windows XP/ Vista-based PM Designer 2.0 development tool
- Easy to switch one application to different LCD sizes in seconds
- Supports vertical and horizontal application screen rotation
- Supports over 250 PLC industrial communication protocols
- Communicates with up to four types of devices
- Panel mounting for machinery

Introduction

To satisfy the stringent standards required in the automation market, especially packaging, label slitting, and motion-based robot dispensing, Advantech offers the WOP-2000 series which are designed with ARM9-based RISC CPU with 70~200MHz and 4~16MB flash memory size for application software. The WOP-2000 series also support a variety of LCD size from 3.5" to 12.1" for different applications involving the use of PLCs, motion/thermal controllers, inverters and sensors. PM Designer 2.0 is a software development kit which helps create application solutions for labor-saving, improved efficiency of manufacturing and easy control of every machine in the factory. The WOP-2000 series is bundled with PM Designer 2.0 offering an outstanding price performance ratio for various markets such as conventional operator panels, HMI + Low mini SCADA systems, and HMI + communication gateways.

Specifications

General

- **Certifications** — CE / FCC
- **Dimensions (WxHxD)** — 187 x 145.7 x 45 mm (7.36" x 5.73" x 1.77")
- **Cut-out Dimensions** — 174.5 x 132.5 mm (6.87" x 5.21")
- **Front Panel Thickness** — 6mm
- **Operating System** — HMI RTOS, PM Designer 2.0
- **Power Supply Voltage** — $24V_{DC} \pm 10\%$
- **Power Consumption** — 15W
- **Enclosure Housing** — Plastic
- **Mounting** — Panel
- **Weight (Net)** — 0.65 kg (1.42 lbs)

System Hardware

- **CPU** — RISC 32bits, 70MHz
- **Battery Backup Memory** — 128KB
- **Flash Memory** — 4MB
- **Power-On LED** — Yes
- **Communication LED** — COM1 and COM2
- **Front USB Access** — No

Communication Interface

- **COM1** — RS-232/422/485 (DB9 Female)
- **COM2** — RS-232/422/485 (DB9 Female & 5-Pin Connector)
- **COM3** — None
- **Ethernet (RJ45)** — 10/100-BaseT (for N1AE model)
- **I/Os** — USB Client — No
  - USB Host — No
  - Micro-SD Slot — No

LCD Display and Touchscreen

- **Display Type** — QVGA TFT LCD
- **Display Size** — 5.7"
- **Max. Resolution** — 320 x 240
- **Max. Colors** — 265 colors
- **Luminance (cd/m²)** — 400
- **Viewing Angle (H/V°)** — 100/95
- **Backlight Life** — LED, 20,000 hrs
- **Dimming** — Adjustable by touch panel
- **Touchscreen** — 4 wire analog resistive
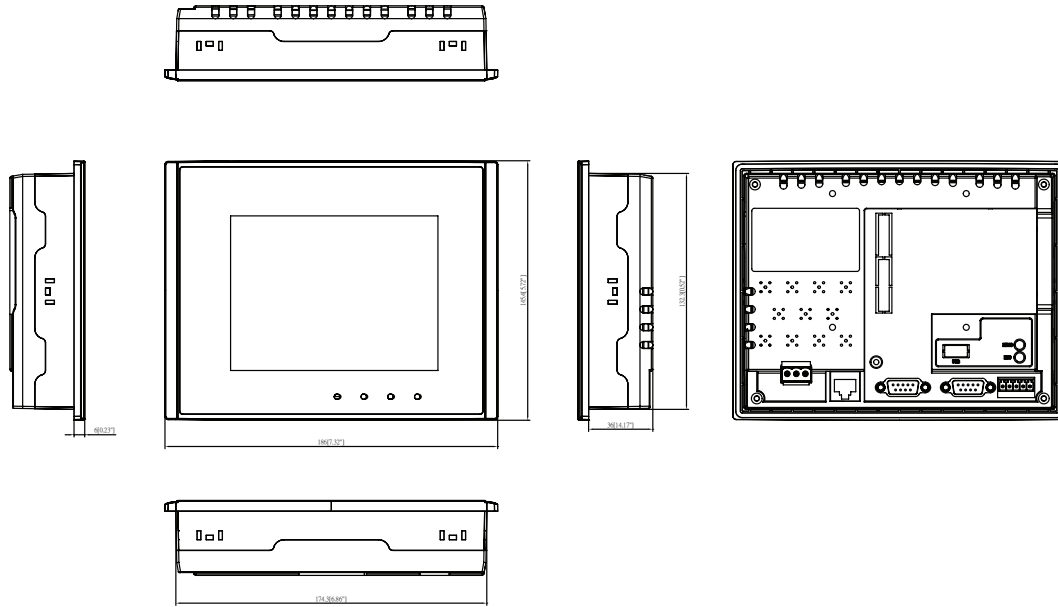
Environment

- **Operating Temperature** — 0 ~ 50° C (32 ~ 122° F)
- **Storage Temperature** — -20 ~ 60° C (-4 ~ 140° F)
- **Humidity** — 10 ~ 95% RH @ 40° C, non-condensing
- **Ingress Protection** — Front panel: NEMA4, IP65
- **Vibration Protection** — Operating, radom vibration 1 Grms (5 ~ 500 Hz)

Ordering Information

- **WOP-2057V-S1AE** — 5.7" QVGA, 4MB, RS-232/422/485
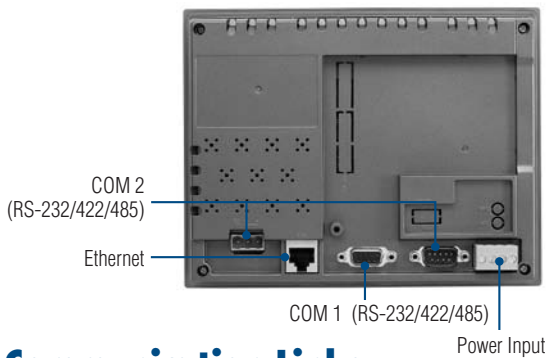- **WOP-2057V-N1AE** — 5.7" QVGA, 4MB, RS-232/422/485, Ethernet

1 Automation Software
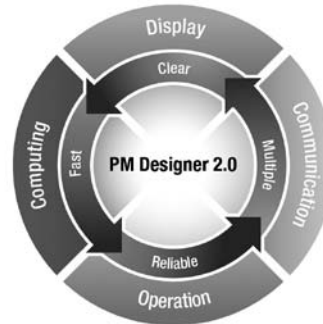
2 Touch Panel PC

3 Industrial Panel PC

4 Industrial Monitor

5 Fanless Box PC

6 Ethernet Switch

7 Device Server

8 Serial Comm. Card

9 DAQ

10 Signal Conditioning

11 USB DAQ

12 Motion Control I/O

13 PC-based Controller

14 PAC

15 RS-485 I/O

16 Ethernet I/O

17 Building Automation

18 Video Surveillance

Dimensions

Unit: mm

Panel Cut-out Dimensions: 174.5 x 132.5 mm (6.87" x 5.21")

Rear View

COM 2 (RS-232/422/485)

Ethernet

COM 1 (RS-232/422/485)

Power Input

HMI Software Features

Display
Clear
Communication
Multiple
PM Designer 2.0
Fast
Computing
Reliable
Operation

Communication Links

Direct Link

1-to-1 Connection

HMI — RS-232 — PLC

HMI — Etherent — PLC

1-to-N Connection

HMI — RS-485 — PLC / PLC / PLC — Sub links
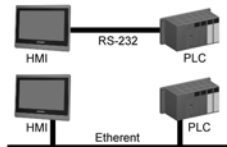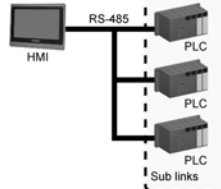
N-to-1 Data Sharing Connection

HMI ••• HMI — RS-232 / Etherent — PLC
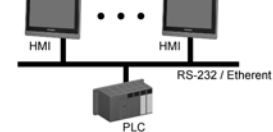
In-Direct Link

2-to-1 Connection

HMI — Indirect link via 2-to-1 connection — HMI 2-to-1 server — Direct link — PLC

N-to-1 Connection

Etherent — HMI ••• HMI — Indirect Link via N-to-1 connection (Etherent)

N-to-1 master — Direct link — PLC HMI
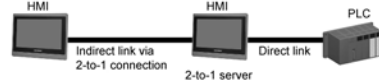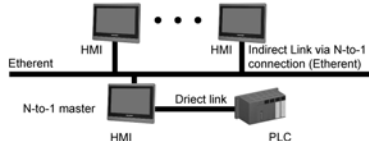
2-to-1 Transparent Connection

HMI — HMI — PLC — 2-to-1 Transparent Server

PC — HMI — PLC — 2-to-1 Transparent Server