

# WOP-310K

Revolutionary Industrial HMI  
– Transform Your Operations with Smart Automation



## Features

- ARM9™ Cortex-A35 800MHz + 8GB for fast, smooth performance
- 500+ protocols – connect any device, cut integration costs
- 16MB non-volatile memory protects data from power loss
- Free HMINavi Designer – Serial/Ethernet/USB, no license needed
- Unlimited I/O/macros, up to 7,999 screens
- No limitation on the internal I/Os points used for variety application
- Reliable firmware setting from HMINavi software for 24/7 operation
- Easy to switch one application to different LCD sizes in seconds
- IP65 aluminum – tough and stylish
- IDCS cloud – 24/7 monitoring & predictive maintenance
- Built-in FTP, VNC, Email, and security servers
- Dual Ethernet + WiFi/LTE for IoT & remote access

CE FCC

## Introduction

WOP-300K series products as a comprehensive IoT total solution with edge controllers for manufacturing plants, process industries, semiconductor applications, and various general machine operations. The WOP-300K series product deliver seamless Industry 4.0 transformation through integrated edge computing, cloud connectivity, and real-time data analytics across diverse manufacturing environments. Additionally, this systems are bundled with the free HMINavi Designer programming software – a comprehensive IoT development platform designed for smart automation applications to enable predictive maintenance, quality assurance, and batch traceability through advanced visualization and data integration capabilities. Robust dual Ethernet ports with optional WiFi/LTE support and powerful connectivity drivers support 500+ variety market brands of industrial equipment, ensuring universal IoT compatibility and seamless digital transformation across manufacturing, semiconductor, and general edge machine applications.

## Specifications

### General

▪ <b>Certification</b>	CE: EN61000-6-2, EN61000-6-4 EMI: FCC Part 15 Class A
▪ <b>Dimensions (W x H x D)</b>	267 x 185.4 x 32.7 mm (10.51" x 7.30" x 1.29")
▪ <b>Cutout Dimensions</b>	252 x 170 mm (9.92" x 6.69")
▪ <b>Front Panel Thickness</b>	8.4 mm (0.33 in)
▪ <b>Operating System</b>	HMI Linux, HMINavi Designer V4.0
▪ <b>Power Supply Voltage</b>	24Vdc ± 10% (Isolated)
▪ <b>Power Consumption</b>	20W
▪ <b>Enclosure Housing</b>	Die-cast aluminum alloy front bezel + PC
▪ <b>Mount Options</b>	Panel
▪ <b>Weight (Net)</b>	0.955 kg (2.10 lbs)

### System Hardware

▪ <b>CPU</b>	RISC ARM® Cortex™-A35 800MHz 64bits
▪ <b>Backup Memory</b>	128KB
▪ <b>Working Memory</b>	16 MB (eMMC) for Data & Alarm Logger
▪ <b>Storage</b>	512MB DDR3L

### Communication Interface

▪ <b>COM1</b>	RS-232 (9Pin Terminal)
▪ <b>COM2</b>	RS-422/485 (9Pin Terminal)
▪ <b>COM3</b>	RS-485/CAN (9-Pin Terminal)
▪ <b>Ethernet (RJ45)</b>	10/100-BaseT x1 10/100/1000-BaseT x1
▪ <b>4G / Wi-Fi</b>	Mini-PCIe Extension Bus
▪ <b>I/Os</b>	2 x USB 2.0 Type-A (Host) 1 x USB2.0 (Type-C) (Client) 1 x SD Card Slot

### LCD and Touchscreen

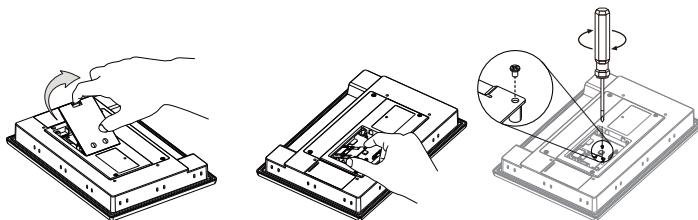
▪ <b>Display Type</b>	WXGA
▪ <b>Display Size</b>	10.1"
▪ <b>Max. Resolution</b>	1280 x 800
▪ <b>Max. Colors</b>	16.7M colors
▪ <b>Luminance (cd/m²)</b>	400
▪ <b>Backlight Life</b>	LED, 30,000 hr
▪ <b>Touchscreen</b>	4 wires analog resistive

### Environment

▪ <b>Operating Temperature</b>	-10 ~ 60°C
▪ <b>Storage Temperature</b>	-25 ~ 65°C (Reliability)
▪ <b>Humidity</b>	95% RH @ 40° C
▪ <b>Ingress Protection</b>	Front panel: IP66
▪ <b>Shock Vibration</b>	5 ~ 500Hz (X,Y,Z direction, 1Grms, 1hour per axis)

## 4G / WiFi Module Installation Scenario

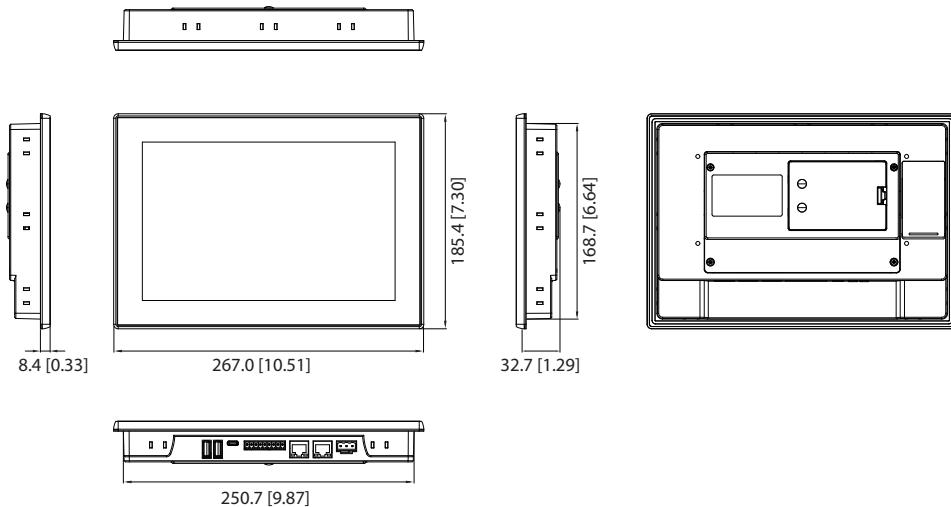
\*Refer to the "WOP-300K Installation Guide" for detailed installation steps



Open the extension rear cover ➡ Insert the mini PCI-e Wi-Fi card ➡ Lock the screw

## Dimensions

Unit: mm [inch]



**Panel Cutout Dimensions: 252 x 170 mm (9.92 x 6.69 in)**

## Optional Accessories

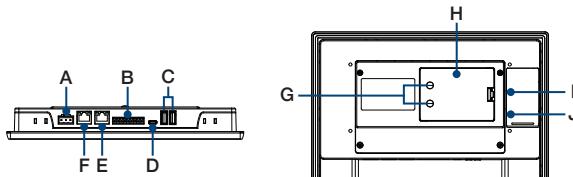
### DIN-Rail Type Power Supply Module

- PSD-A60W24 DIN RAIL A/D 100-240V 60W 24V
- PSD-A120W24 DIN RAIL A/D 100-240V 120W 24V

### Wi-Fi Module

- EWM-W180H01E Wi-Fi 5 + BT Module 2.4/5 GHz MiNi PCIe

## I/O



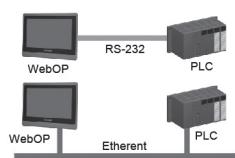
- A. Power connector
- B. COM1&2&3 9-pin female
- C. USB host (type-A)
- D. USB client (type-C)
- E. Ethernet port1: Giga LAN
- F. Ethernet port2: 10/100M LAN

- G. Wi-Fi antenna port
- H. Extension rear cover
- I. SD card slot
- J. Nano SIM card slot

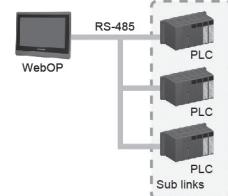
## Communication Links

### Direct Link

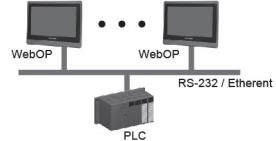
#### 1-to-1 Connection



#### 1-to-N Connection



#### N-to-1 Data Sharing Connection

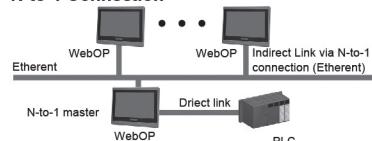


### In-Direct Link

#### 2-to-1 Connection



#### N-to-1 Connection



#### 2-to-1 Transparent Connection

