W22ITWS-MHB1-EX

21.5" Intel® Core™ i5-1135G7 C1D2 HMI Panel PC

CE

CSA
C US

FC

TD0700KL

KEY FEATURES

- Intel® 11th Generation Tiger Lake UP3 Core™ i5 CPU,HMI Panel PC
- Signature true flat display screen with edge-to-edge design
- Aluminum, anti-corrosion treated housing
- Superior sealing with front IP65 protection against dust and water
- Projected Capacitive Multi-Touch Screen (PCAP)
- Fanless Design, C1D2 HMI Panel PC
- Support wide range 9-29 V DC input
- Quick & Easy Removable 2.5" SSD Bay Slot
- Support PCIe x4 Card
- C1D2 & IECEx certificated, Compliance with ATEX grade zone 2

INTRODUCTION

Winmate ATEX M Series HMI is designed for hazardous environments, certified for C1D2, IECEx, and ATEX Zone 2 compliance. Available in sizes from 12.1" to 24", it features Intel® processors, multi-OS support, and a sleek true-flat PCAP touch display. With fanless operation, anti-corrosion aluminum housing, and front IP65 protection, it offers durability and reliability. Its wide 9-29V DC input, removable SSD bay, and PCIe x4 support make it ideal for industrial automation in oil, gas, and chemical industries.

OVERVIEW

MODULAR DESIGN

Expand panel PC capabilities with modular design

Winmate's M series ATEX modularized panel PC features outstanding versatility and simple maintenance. The panel and box modules can be interchangeably combined to provide multiple platform solutions and customization for different applications. It supports fast, easy maintenance and provides an upgradeable path to the future.

Signature true flat display screen with edge-to-edge design

Easy to maintain and clean. The glass cover lens provides excellent protection from scratch and reduces the gap for a possible accumulation of dust and liquid. The true-flat surface also gives a slim and elegant appearance to the device goes beyond that of the standard industrial, marine computers with a sleek and edge-to-edge design, rugged construction, powerful performance, and flexible mounting options.

TRUE FLAT AND EASY CLEAN

WINMATE

WINMATE

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Fanless Cooling System

We use well-defined thermal analysis procedures to verify IPC systems to meet the harsh environment applications. Especially in fanless cooling design, we develop a heat-sink or heat-pipe solution to conduct the heat and the airflow for the best thermal solution. In the fan cooling system, we will analyze the system's thermal profiles before designing it to ensure the most efficient heat convection.

Certified for Hazardous Locations

The W22ITWS-MHB1-EX is C1D2 certified computer for remote data collection, process visualization, and control.

Superior sealing with front IP65 protection against dust and water

Winmate's IP65 Series built for wet and dusty applications; it is rated to IP65 and supports water and dust resistance while keeping a compact and narrow bezel design, suitable for use in wet and dusty environments such as Oil and Gas application.

Full Aluminum Alloy Enclosure, Compact, Low weight design, Excellent Heat Dissipation

Like the other Winmate series products with IP65 also features a low-power, fanless design for superior energy efficiency, quiet operation, and an extended product lifecycle.

SPECIFICATIONS

Display

Resolution	1920x1080	Size	21.5 inches
Contrast Ratio	1000:1	Panel Brightness	350.0 nits
View Angles	89,89,89,89	Active Area	476.64x268.11 mm
Touch / Glass	Projected Capacitive Multi Touch Screen		

System Specification

WLAN	Support (Optional)	BT	Support (Optional)
Expansion Port	Modular Design for easy service in the field	Processor	Intel Core i5-1135G7 2.4GHz (up to 4.2GHz)
Memory	2 x SO-DIMM, DDR4 3200 MHz, 4GB 8GB (Optional) 16GB (Optional) 32GB (Optional)	Storage	1 x M.2 2280 NVMe SSD, 128GB up to 512GB 1 x 2.5" Removable 256GB SSD up to 512GB (Optional)
Ethernet controller	Intel® Ethernet Controller I211-AT + Intel® Ethernet Connection I219-LM	Security	Trusted Platform Module (TPM) 2.0
Operating System	Windows 11 IoT Enterprise (64 bit) (Optional) Windows 11 Pro 64 bit (Optional) Linux Ubuntu 22.04(Do not support Wake on Touch) (Optional)		

Mechanical

Dimension	532.6 x 324.1 x 94.2 mm	Weight	11.0 kg
Mounting	Panel mount VESA Mount	Enclosure	Metal Housing
Cooling System	Fanless design	Cut out	504 x 304 mm

Environment

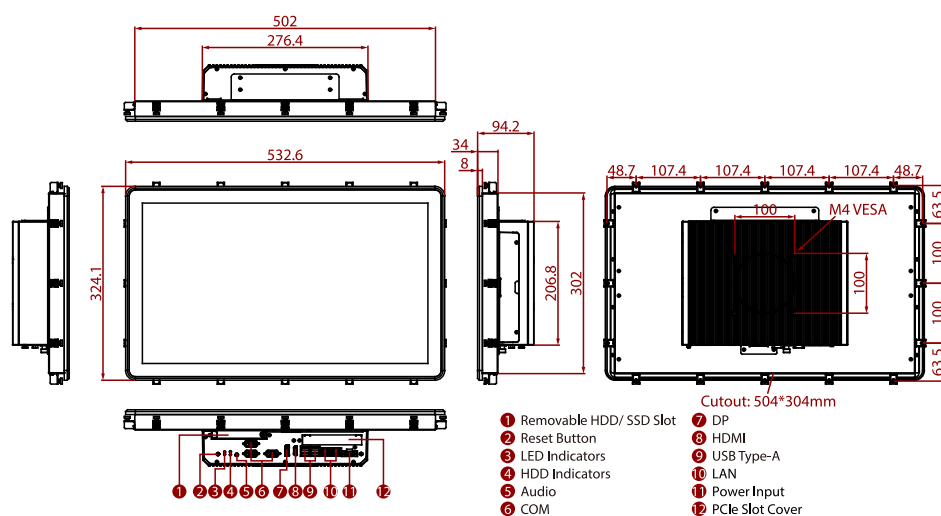|			
Operating Humidity	10% to 90% RH, Non-Condensing	Operating Temperature	-20°C to 60°C
Storage Temperature	-20°C to 60°C		

Certification

Certification	CE, FCC Class 1, Division 2, Group A, B, C, D, T5 IECEx Ex ec IIC T4 Gc Compliance with ATEX grade zone 2

IO Ports

Power Input	1 x 9~29V DC, 3-Pin Terminal Block	USB Port	4 x USB 3.2 Gen.1 (Type-A)
Serial Port	2 x RS232/422/485 (Default RS232) 1 x RS232	Video	1 x DP1.4 1 x HDMI 2.0 (Optional)
Audio	1 x Audio Combo Connector (Mic in / Line Out)	Expansion Port	1 x mPCIe slot

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			1 x PCIe x16 slot (x4 signal)(module max size:180x121mm) 1 x M.2 2230 Key E slot for WiFi 1 x M.2 2280 Key M slot for NVMe SSD Swappable 2.5" HDD/SSD Bay Slot
LAN	2 x Giga LAN RJ45 Connector	**Indicator**	1 x LED Indicator for storage

Control

Button	1 x Power Button with LED Indicator 1 x Reset Button

Accessory

Accessory	100~240V AC to DC Adapter Power Cord Open Wire Cable with terminal block connector Mounting clips VESA screws

Power

Power Rating	9V~29V DC with protection fuse	**Adapter**	12V 120W
Consumption	60W~70W		

DIMENSIONS   UNIT:MM

NOTE

1. This is a simplified drawing and some components are not marked in detail.
2. The product shown in this datasheet is a standard model. For diagrams that contain customized or optional I/O, please contact the Winmate Sales Team for more information.
3. All specifications are subject to change without prior notice.

❶ Removable HDD/ SSD Slot
❷ Reset Button
❸ LED Indicators
❹ HDD Indicators
❺ Audio
❻ COM
❼ DP
❽ HDMI
❾ USB Type-A
❿ LAN
⓫ Power Input
⓬ PCIe Slot Cover

Cutout: 504*304mm

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