ESRP-RMM-UNO2484

Regular-Size Modular Box Platform (MBP) with Intel® Core™ i5-7300U Processor, 4 x GbE, 1 x mPCIe, 1 x HDMI, and 1 x DP

Features

- Extends cloud intelligence and analytics to edge devices
- Enhanced cyber security with an embedded TPM 2.0 security chip
- Multiple mPCIe expansion slots for easy expansion
- Stackable second layer for up to 4 x iDoor expansion modules
- WISE-PaaS/EdgeLink with support for 200+ PLC devices
- Supports WISE-PaaS/DeviceOn and WISE-Marketplace

Introduction

The ESRP-RMM-UNO2484 edge intelligence computer is built to extend cloud intelligence and analytics to edge devices. ESRP-RMM-UNO2484 enables stream analytics, machine learning, image recognition, and high-value AI modules to be deployed from the Azure cloud to the edge in order to support diverse applications. All data are collected and delivered to the cloud by WISE-Edgelink and secured by key encryption technology provided by the embedded security chip. With WISE-DeviceOn software, users are able to access manage the system remotely and deploy WISE-Marketplace I.App products.

WISE-DeviceOn Function Highlights

Device Management
- Remote Monitoring & Control
- Device Onboarding & Registration

Connectivity Service
- Industrial Protocol Connectivity
- Plug-n-Play Peripherals

System Security
- McAfee Application Control
- Acronis Backup Recovery

Edge Intelligence
- Real-Time Data Processing
- Data Analysis & Filtering

Cloud Integration
- Pre-Configured with Azure, Ali, AWS
- Data Intelligence & AI Enabling

WISE-Marketplace Integration
- Over 200+ I.App Offerings
- Easy to Purchase and Deploy

Specifications

General

- **Certification** — CE, FCC, UL, CCC, BSMI
- **Dimensions (W x D x H)** — 200 x 140 x 40 mm (7.8 x 5.6 x 1.6 in) for the single-stack model
200 x 140 x 70 mm (7.8 x 5.6 x 2.8 in) for the double-stack model
- **Form Factor** — Regular size with stackable design
- **Enclosure** — Aluminum housing
- **Mount Options** — Stand, wall, VESA (optional), DIN rail (optional)
- **Weight (Net)** — Single stack: 1.4 kg (3.09 lb)
Double stack: 1.8 kg (3.97 lb)
- **Power Requirement** — 10 ~ 36 V_{DC}
- **Power Consumption** — 55W (typical), 95.2W max.
- **OS Support** — Windows 10 IoT Enterprise LTSC

System Hardware

- **BIOS** — AMI EFI 64 Mbit
- **Watchdog Timer** — Programmable timer with 255 interval levels, from 1 to 255 seconds
- **Hardware Security** — TPM2.0
- **Processor** — 7th gen Intel® Core™ i5-7300U, 2.6 GHz
- **Memory** — Built-in 8 GB DDR4 2133 MHz (supports up to 16 GB)
- **Graphics Engine** — Intel® HD Graphics 620
- **Ethernet** — LAN A: Intel i219-IT GbE, 802.1Qav, IEEE1588/802.1AS, 802
LAN B-D: Intel i210-IT GbE, 802.1Qav, IEEE1588/802.1AS, 802
- **LED Indicators** — LEDs for Power, HDD, LAN (Active, Status), RTC battery low
- **Storage** — 1 x Built-in 120GB mSATA SSD (Shared with mPCIe slot)
2 x 2.5" SATA SSD/HDD drive bays (with RAID 0/1 support)
- **Expansion** — 1 x full-size mPCIe slot for the single-stack model (supports only wireless iDoor technology)
4 x full-size mPCIe slots for the double-stack model (1 x slot for wireless iDoor technology, 3 x slots for iDoor modules)

I/O Interfaces

- **Serial Ports** — 4 x RS 232/422/485
- **LAN Ports** — 4 x RJ45, 10/100/1000 Mbps IEEE 802.3u 1000BASE-T fast Ethernet
- **USB Ports** — 4 x USB3.0
- **Displays** — 1 x HDMI, 1 x DP
HDMI 1.4 (4096 x 2304 @24 Hz)
HDMI 1.4 (1920 x 1080 @60 Hz)
DP 1.2 (4096 x 2304 @60 Hz)
DP 1.2 (1920 x 1080 @60 Hz)
- **Audio** — Line-out
- **Power Connector** — 1 x 2-pin terminal block

Environment

- **Operating Temperature** — -20 ~ 60 °C (-4 ~ 140 °F) @ 5 ~ 85% RH with 0.7 m/s airflow
- **Storage Temperature** — -40 ~ 85 °C (-40 ~ 185 °F)
- **Relative Humidity** — 10 ~ 95% RH @ 40 °C/104 °F, non-condensing
- **Shock Protection** — Operating, IEC 60068-2-27, 50G, half sine, 11 ms
- **Vibration Protection** — Operating, IEC 60068-2-64, 3 Grms, random, 5 ~ 500 Hz, 1hr/axis (mSATA)
- **Ingress Protection** — IP40

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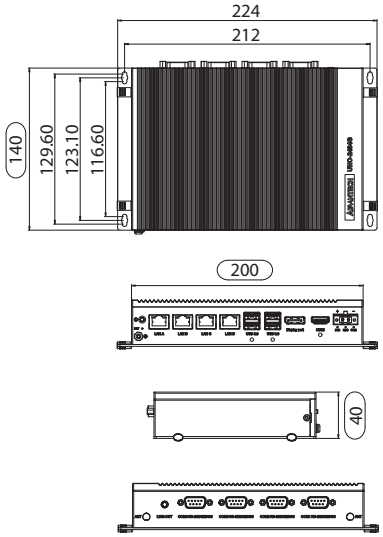
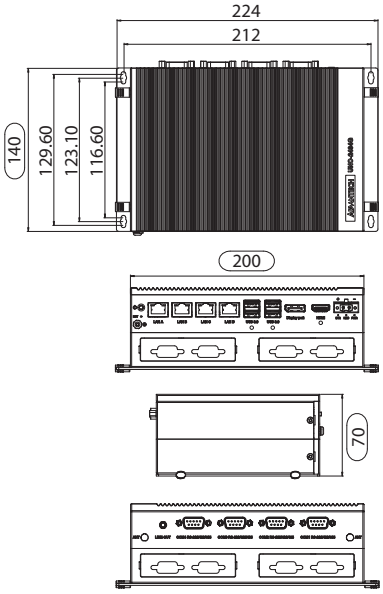
Dimensions

Unit: mm

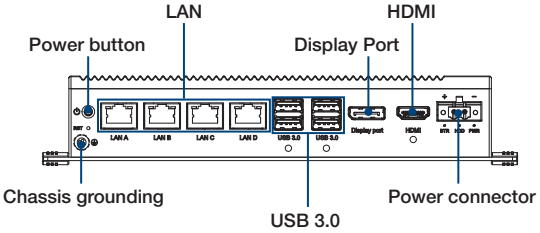
ESRP-RMM-UNO2484 single-stack model



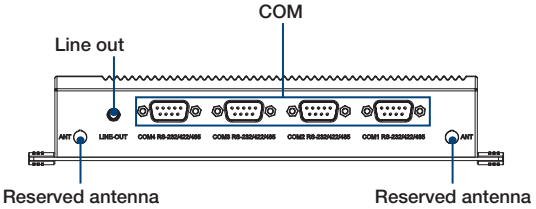
ESRP-RMM-UNO2484 double-stack model



Front I/O View

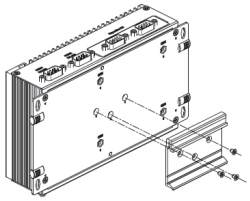


Rear I/O Veiw

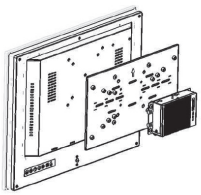


Installation Scenario

DIN-Rail Mount Illustration



VESA Mount Illustration



Ordering Information

- **ESRP-RMM-UNO2484** UNO-2484G, 8G Memory, 120G SSD, Win10, DeviceOn

iDoor Modules

- **PCM-24S2WF-BE** 802.11 a/b/g/n 2T2R with Bluetooth 4.0, half-size mPCIe, 2-port SMA
- **PCM-24S23G-AE** 6-band HSPA cellular module with GPS, SIM holder, 2 x SMA
- **PCM-24R2GL-AE** 2-port Gigabit Ethernet module with mPCIe, RJ45
- **PCM-24D2R2-BE** 2-port isolated RS-232 module with mPCIe, DB9
- **PCM-24D4R4-BE** 4-port non-isolated RS-422/485 module with mPCIe, DB37
- **PCM-24R1TP-AE** 1-port Gigabit Ethernet module with Intel® 82574L, mPCIe, RJ45
- **PCM-27D24DI-AE** 24-channel isolated digital I/O with counter, mPCIe, DB37

Contact Advantech for a complete list of all compatible iDoor modules.

Optional Accessories

- **96PSA-A150W24T2** Power adapter 150W
- **96PSA-A120W24T2** Power adapter 120W
- **1702002600** Power cable, US plug, 1.8 M (industrial grade)
- **1702002605** Power cable, EU plug, 1.8 M (industrial grade)
- **1702031801** Power cable, UK plug, 1.8 M (industrial grade)
- **1700000596** Power cable, China/Australia plug, 1.8 M (industrial grade)
- **UNO-2000G-VMKAE** UNO-2000 VESA mount kit
- **UNO-2000G-DMKAE** UNO-2484G DIN-rail kit
- **UNO-2000-LKAE** Cable locking kit, 10 units/per pack

Expansion Modules

UNO-2484G-EKBE

Secondary expansion stack with support for 4 x iDoor modules (3 x mPCIe slots)

Specifications

General	
Ports	4 x iDoor (3 x mPCIe only)
Dimensions	200 x 140 x 40 mm/7.8 x 5.6 x 1.6 in
Weight	400 g/0.08 lb
Environment	
Operating Temperature	-20 ~ 60 °C (-4 ~ 140 °F)

Ordering Information

Part Number	Description
UNO-2484G-EKBE	Secondary expansion stack with support for 4 x iDoor

UNO-2484G-S2AE

Secondary expansion stack with support for 2 x swappable HDDs/SSDs

Specifications

General	
Ports	2 x external swappable HDD/SSD storage
Dimensions	200 x 140 x 40 mm/7.8 x 5.6 x 1.6 in
Weight	400 g/0.08 lb
Environment	
Operating Temperature	-20 ~ 60 °C (-4 ~ 140 °F)

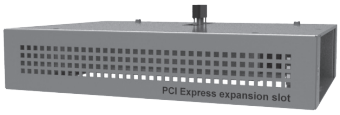
Ordering Information

Part Number	Description
UNO-2484G-S2AE	Secondary expansion stack with support for 2 x external swappable HDDs/SSDs

UNO-2484G-PCIEAE

Secondary expansion stack with support for 1 x PCIe x4 card

Front view



Side view

Specifications

General	
Ports	1 x PCIe x4 slot for half-size PCIe card (167 x 111 mm)
Dimensions	200 x 140 x 40 mm/7.8 x 5.6 x 1.6 in
Weight	400 g/0.08 lb
Power consumption	15W max.
Environment	
Operating Temperature	0 ~ 50 °C/32 ~ 122 °F (depending on expansion card)

Ordering Information

Part Number	Description
UNO-2484G-PCIEAE	Secondary expansion stack with PCIe x4