UNO-2271G

Intel® Atom™ Pocket-Size Smart Factory Edge Gateway with 2 x GbE, 1 x mPCIe, HDMI, eMMC

Features

- Intel® Atom™ E3815/E3825 processor with 4GB DDR3L onboard memory
- 2 x GbE, 1 x USB 3.0, 1 x HDMI, option 2 x RS-232/422/485 or 3 x USB2.0
- Compact fanless design
- Rubber stopper design with internal reserved screws for 2nd layer assembly
- Diverse system I/O and isolated digital I/O by iDoor technology
- Supports Fieldbus protocol by iDoor technology
- Supports 30+ iDoor combination with four main categories of smart factory applications
- 32GB eMMC storage onboard

Introduction

Advantech's new generation UNO-2000 series of embedded automation computers are highly ruggedized, fanless, and modular designs. New UNO-2000 series includes pocket, small, and regular-sized form-factors for different kinds of smart factory applications such as Equipment Connectivity (EC), Process Visualization (PV), Environment Management (EM), and Dispatch Management (DM).The modular design of UNO- 2271G features optimized I/O and offers three different configurations. It also supports Advantech's iDoor technology via a second expansion stack. UNO-2000 series provide flexible and time-to-market support for a variety of applications.

Specifications

General

- **Certification** CE, FCC, UL, CCC, BSMI
- **Dimensions (W x D x H)** 100 x 70 x 30 mm (3.9" x 2.8" x 1.2"), UNO-2271G-E21BE/E021AE
  100 x 70 x 60 mm (3.9" x 2.8" x 2.6"), UNO-2271G-E22BE/E23BE/E022AE/E023AE
- **Form Factor** Pocket Size, same dimension as standard 2.5" SSD/HDD
- **Enclosure** Aluminum Housing
- **Mounting** Stand, Wall, VESA (Optional), DIN-rail (Optional), Pole (Optional)
- **Weight (Net)** 0.5 kg (1.1lbs) for UNO-2271G-E21BE/E021AE
  0.6 kg (1.2lbs) for UNO-2271G-E22BE/ E022AE and E23BE/ E023BE
- **Power Requirement** 10 ~ 30V_{DC}
- **Power Consumption** 12W (Typical), 24W (Max)
- **OS Support** For mSATA storage: Windows7, Windows10 LTSB, Advantech Linux
  For eMMC storage: Advantech embedded customized Windows7 64bits, Windows 10 LTSB, Advantech Linux

System Hardware

- **BIOS** AMI EFI64 Mbit
- **Watchdog Timer** Programmable 255 levels timer interval, from 1 to 255 sec
- **Processor** Intel Atom E3815 Single Core 1.46GHz
  Intel Atom E3825 Dual Core 1.33Ghz
- **System Chip** Intel Atom SoC integrated
- **Memory** Onboard 4GB DDR3L 1066 MHz
- **Graphics Engine** Intel® HD Graphics
- **Ethernet** Realtek RTL8111E GbE, 802.10av
- **LED Indicators** LEDs for Power, HDD, LAN (Active, Status)
- **Storage** Onboard 32GB eMMC (Option mSATA shared with mPCIe slot)
- **Expansion** 1 x Full-size mPCIe slot

I/O Interfaces

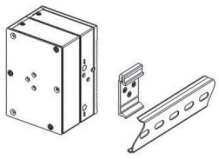
- **Serial Ports** 2 x RS 232/422/485 for UNO-2271G-E23BE/ E023AE
- **LAN Ports** 2 x RJ45, 10/100/1000 Mbps IEEE 802.3u
  1000BASE-T Fast Ethernet
- **USB Ports** 1 x USB 3.0 for UNO-2271G-E21BE/E021AE
  3 x USB 2.0 and 1 x USB 3.0 for UNO-2271G-E22BE/E022AE
  1 x USB 3.0 for UNO-2271G-E23BE/E023AE
- **Displays** 1 x HDMI, supports 1920 x 1080 @ 60Hz
- **Power Connector** 1 x 2 Pins, Terminal Block

Environment

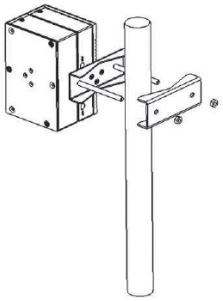
- **Operating Temperature** 0 ~ 50°C (32 ~ 122°F) @ 5 ~ 85% RH with 0.7 m/s airflow
- **Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)
- **Relative Humidity** 10 ~ 95% RH @ 40°C, non-condensing
- **Shock Protection** Operating, IEC 60068-2-27, 50G, half sine, 11 ms
- **Vibration Protection** Operating, IEC 60068-2-64, 2 Grms, random, 5 ~ 500 Hz, 1hr/axis (mSATA)
- **Ingress Protection** IP30

Installation Scenario

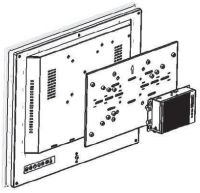
DIN-rail Mount Illustration



Pole Mount Illustration



VESA Mount Illustration



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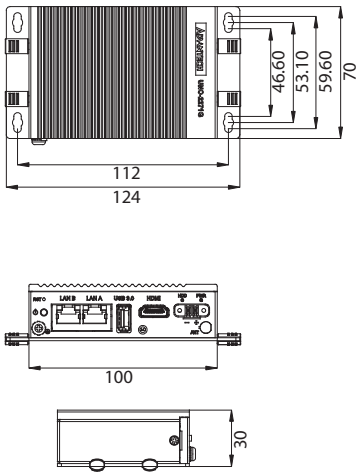
All product specifications are subject to change without notice.

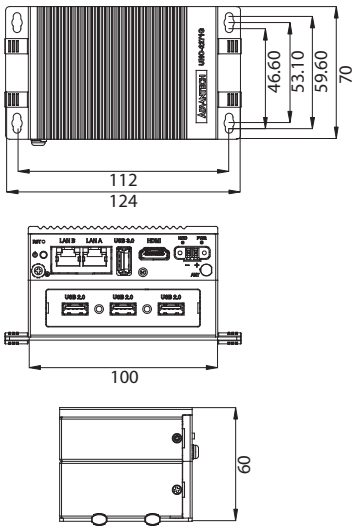
Dimensions

Unit: mm

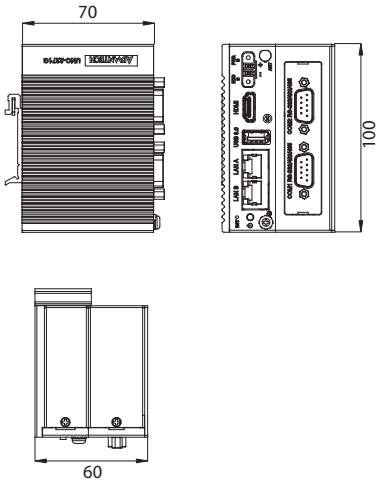
UNO-2271G-E21BE/E021AE



UNO-2271G-E22BE/E022AE

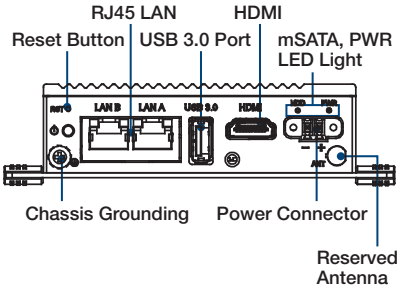


UNO-2271G-E23BE/E023AE

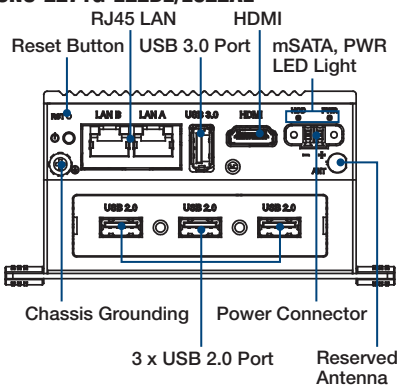


Front I/O View

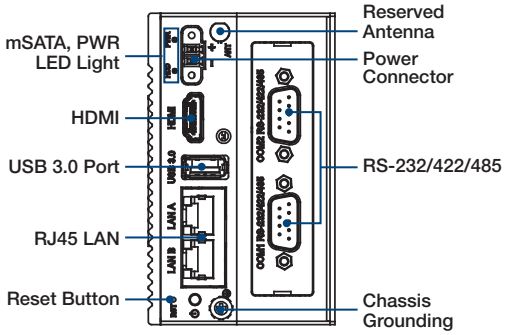
UNO-2271G-E21BE/E021AE



UNO-2271G-E22BE/E022AE



UNO-2271G-E23BE/E023AE



Ordering Information

	CPU	Ordering Part Number	USB2.0	RS-232/422/485	LAN	USB3.0	HDMI	mPCIe
Single Stack	Single Core E3815	UNO-2271G-E21BE	x	x	2	1	1	1
Double Stack		UNO-2271G-E22BE	3	x				
		UNO-2271G-E23BE	x	2				
Single Stack	Dual Core E3825	UNO-2271G-E021AE		x				
Double Stack		UNO-2271G-E022AE	3	x				
		UNO-2271G-E023AE	x	2				

iDoor Modules

- **PCM-23U1DG-BE** Internal locked USB Slot for USB Dongle
- **PCM-24R2GL-AE** 2-Port Gigabit Ethernet, mPCIe, RJ45
- **PCM-26D2CA-AE** 2-Ports Isolated CANBus mPCIe, CANOpen, DB9
- **PCM-2300MR-AE** MR4A16B, MRAM, 2 MByte, mPCIe
- **PCM-27D24DI-AE** 24-Channel Isolated Digital I/O w/ counter mPCIe, DB37

Embedded O/S

- **20703LEB1S0074** AdvLinux V2.0.4 (Ubuntu 18.04) image
- **20703WE7PS0018** WS7P X64 MUI V4.19 B006 image
- **20703WX9ES0011** WIN10 IoT Enterprise LTSC v6.04 B041 image

Optional Accessories

Adapters & Power cords

- **PWR-247-DE** 60W AC to DC UNO series power adapter
- **1702002600** Power Cable US Plug 1.8 M
- **1702002605** Power Cable EU Plug 1.8 M
- **1702031801** Power Cable UK Plug 1.8 M
- **1700000596** Power Cable China/Australia Plug 1.8 M

Mounting Kits

- **UNO-2271G-DMKAE** UNO-2271G DIN RAIL Mount Kit
- **UNO-2000G-VMKAE** UNO-2000 VESA Mount Kit
- **UNO-2000G-PMKAE** UNO-2000 Pole Mount Kit

Others

- **UNO-2000-LKAE** Cable lockable kit 10 units/ per pack

Wi-Fi module & antenna

- **EWM-W157H01E** Wifi 802.11 a/b/g/n/ac, w/ Bluetooth 4.0
- **9656EWMG00E** (Half-size to full size mPCIe bracket)
- **1750006043** Coaxial cable for antenna
- **1750008717-01** Antenna L=10.9 cm 50 Ohm

LTE module & antenna

- **968AD00589** Quectel EG25G LTE Module Cat. 4, Mini-PCIe with Sim Holder
- **1750007990-01** Antenna 4G/LTE full band L=11 cm 50 Ohm
- **1750006264** Antenna SMA(F)/MHF 15cm cable

Extended Module

UNO-2271G-EKBE

2nd stack expansion module for support 1 x iDOOR on UNO-2271G-E21BE/ UNO-2271G-E021AE

Specifications

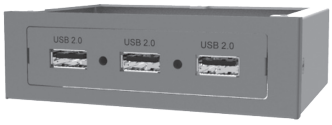
General	
Ports	1 x iDOOR (Chassis only)
Dimensions	100 x 70 x 30 mm
Weight	100g
Environment	
Operating Temperature	0 ~ 50 °C

Ordering Information

P/N	Description
UNO-2271G-EKBE	UNO-2271G 2nd stack extension kit for iDoor

UNO-2271G-U3BE

2nd stack expansion module for support 3 USB2.0 ports on UNO-2271G-E21BE/ UNO-2271G-E021AE



Specifications

General	
Ports	3 x USB2.0 ports
Dimensions	100 x 70 x 30 mm
Weight	120g
Environment	
Operating Temperature	0 ~ 50 °C

Ordering Information

P/N	Description
UNO-2271G-U3BE	UNO-2271G 2nd stack with 3 USB2.0 ports

UNO-2271G-R2BE

2nd stack expansion module for support 2 RS-232/422/485 ports on UNO-2271G-E21BE/ UNO-2271G-E021AE

Specifications

General	
Ports	2 x RS-232/422/485 ports
Dimensions	100 x 70 x 30 mm
Weight	120g
Environment	
Operating Temperature	0 ~ 50 °C

Ordering Information

P/N	Description
UNO-2271G-R2BE	UNO-2271G 2nd stack with 2 COM ports