UNO-2271G V2

Edge IoT Gateway with 2 x GbE, 2 x USB 3.2, 1 x mPCIe, 1 x HDMI, and 32 GB eMMC

Features

- Intel® Celeron® N6210 dual-core/Pentium® N6415 quad-core processor
- 4 GB/8 GB DDR4 onboard memory
- Compact, robust, fanless, and cable-free system with modular design
- 2 x GbE, 2 x USB 3.2 Gen 1, and 1 x HDMI 1.4
- Optional stackable extension kits for PoE, COM, wireless connectivity, and iDoor expansion
- Built-in TPM 2.0 for hardware-based security
- System is certified for compatibility with Ubuntu Core, Microsoft Azure IoT Edge, AWS IoT Greengrass, WISE-DeviceOn, and WISE IoT Edge

Introduction

Advantech's next-generation UNO-2000 series embedded automation computers are rugged, fanless solutions that can be flexibly configured for diverse smart factory applications. Available in pocket-sized, small, and standard form factors, UNO-2000 series solutions feature a modular design that can be equipped with stackable extension modules to support various operations, including equipment connectivity, process visualization, environment management, and dispatch management.

The UNO-2271G model of this series features optimized I/O and can be integrated with three optional second stack extension modules. Moreover, UNO-2271G is certified for compatibility with Ubuntu Core, Microsoft Azure IoT Edge, AWS IoT Greengrass, WISE-DeviceOn, and WISE IoT Edge software.

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 in
- **Form Factor** Pocket sized
- **Enclosure** Aluminum
- **Mount Options** Stand, wall, VESA (optional), DIN rail (optional)
- **Weight (Net)** 0.5 kg/1.1 lb
- **Power Requirement** 10 ~ 30V_{DC}
- **Power Consumption** 12W (typical), 30W (max.)
- **Operating System** Windows10 LTSC, Windows 11, Ubuntu 20.04, Ubuntu Core 20
- **Software Compatibility** Microsoft Azure IoT Edge (Edge Managed certification)
  AWS IoT Greengrass (device certification)
  Canonical Ubuntu Core 20
  WISE-DeviceOn
  WISE IoT Edge

System Hardware

- **BIOS** AMI UEFI x64
- **Watchdog Timer** Programmable interval timer, from 1 to 255 seconds
- **Processor** Intel® Celeron® N6210 dual-core (1.2 GHz)/ Pentium® N6415 quad-core (1.2 GHz)
- **Memory** 4 GB/8 GB DDR4 2666 MHz onboard
- **Graphics Engine** Intel® UHD Graphics
- **Ethernet** 2 x i211AT/i210AT
- **LED Indicators** Power, Run (programmable), LAN (active, status)
- **Storage** 32 GB eMMC (up to 256 GB upon request)
  1 x mSATA slot shared with mPCIe slot
- **Expansion** 1 x Full-size mPCIe slot (SATA/PCIe/USB2.0 signal)
- **Hardware Security** TPM2.0 (TPM2.0 Library Reversion 1.38)

I/O Interfaces

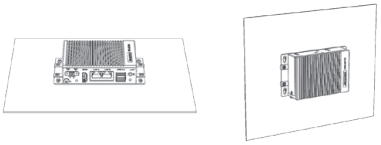
- **LAN Ports** 2 x RJ45, 10/100/1000 Mbps IEEE 802.3u 1000BASE-T Fast Ethernet
- **USB Ports** 2 x USB 3.2 Gen 1
- **Display Output** 1 x HDMI (1920 x 1080 @60Hz)
- **Power Connector** 1 x 2-pin terminal block

Environment

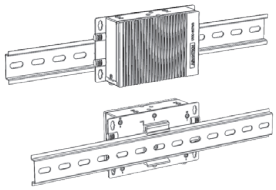
- **Operating Temperature** -20 ~ 60 °C (-4 ~ 140 °F) with 0.7m/s airflow
- **Storage Temperature** -40 ~ 85 °C /-40 ~ 185 °F
- **Relative Humidity** Operating , 95% RH @ 40° C, Non-Condensing
  Non-Operating, 95% RH @ 60° C, Non-Condensing
- **Shock Protection** Operating, IEC 60068-2-27, 50G, half sine, 11 ms
- **Vibration Protection** Operating, IEC 60068-2-64, 2 Grms, random, 5 ~ 500 Hz, 1hr/axis (mSATA)
- **Ingress Protection** IP30

Installation Scenarios

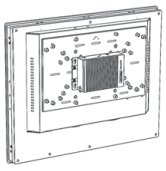
Stand/Wall Mount



DIN-Rail Mount (optional)



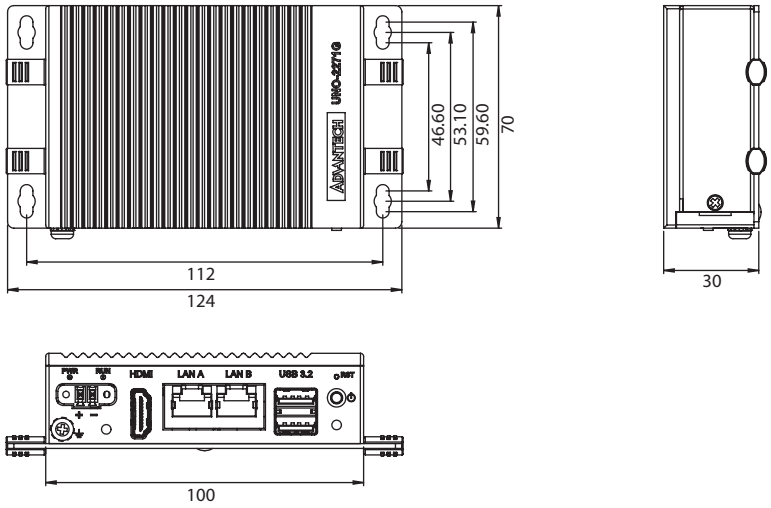
VESA Mount (optional)



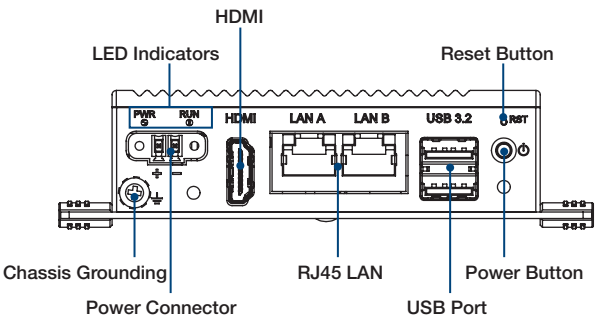
All product specifications are subject to change without notice.

Dimensions

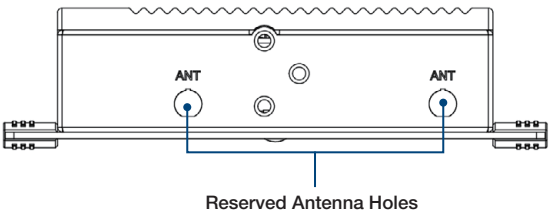
Unit: mm



Front I/O



Rear I/O



Ordering Information

- **UNO-2271G-N221AU** Intel® Celeron® N6210 dual-core CPU with 4 GB RAM, 2 x GbE, 2 x USB, 1 x mPCIe, 1 x HDMI, 32 GB eMMC (US region)
- **UNO-2271G-N221AE** Intel® Celeron® N6210 dual-core CPU with 4 GB RAM, 2 x GbE, 2 x USB, 1 x mPCIe, 1 x HDMI, 32 GB eMMC
- **UNO-2271G-N231AU** Intel® Pentium® N6415 quad-core CPU with 8 GB RAM, 2 x GbE, 2 x USB, 1 x mPCIe, 1 x HDMI, 32 GB eMMC (US region)

Embedded OS

- **20704WX9ES0000** WIN10 IoT Enterprise 2019 x64 LTSC v6.07 B005
- **20704WX1ES0001** WIN10 IoT Enterprise 2021 x64 LTSC v6.08 B009
- **20704U20CS0000** Ubuntu Core 20 - Intel IOTG version_20211213
- **20704U20DS0000** Ubuntu Desktop - Intel IOTG version_20211203
- **20704U20DS0001** AdvLinuxTu V3.0.4 for UNO series

Optional Accessories

Adapters and Power Cables

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

Mount Kits

- **UNO-2271G-DMKAE** UNO-2271G DIN-rail mount kit
- **UNO-2000G-VMKAE** UNO-2000 VESA mount kit

Miscellaneous

- **UNO-2000-LKAE** Cable lock kit, 10 units per pack

Wi-Fi Module (mPCIe) and Antenna

- **EWM-W193H01E** Realtek mPCIe module with Wi-Fi 802.11 a/b/g/n/ac, 2T2R, and BT4.2
- **9656EWMG00E** Half to full-size mPCIe bracket
- **1750006043** Coaxial cable for antenna
- **1750008717-01** Antenna, 10.9 cm, 50 Ohm

LTE Module (mPCIe) and Antenna

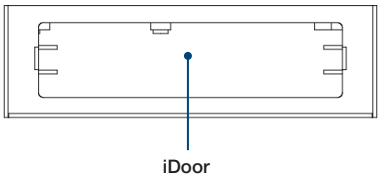
- **968AD00589** Quectel EG25G LTE Cat. 4 mPCIe module with SIM slot (CE RED certified)
- **1750007990-01** Antenna full-band 4G/LTE, 50 Ohm, 11 cm
- **1750006264** Antenna SMA(F)/MHF, 15 cm

Stackable Extension Kits

UNO-2271G-EKBE

Second stack module for iDoor technology

Front I/O



Specifications

General	
I/O	1 x iDoor slot (chassis only)
Dimensions	100 x 70 x 30 mm/ 3.93 x 2.75 x 1.18 in
Weight	100 g/0.22 lb
Environment	
Operating Temperature	Dependent on iDoor module installed

Ordering Information

Part Number	Description
UNO-2271G-EKBE	UNO-2271G stack extension kit with 1 x iDoor slot

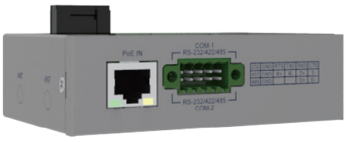
Optional iDoor Modules*

Part Number	Description
PCM-24D2R2-BE	2-port isolated RS-232 mPCIe, DB9
PCM-24D2R4-BE	2-port isolated RS-422/485 mPCIe, DB9
PCM-24D4R2-BE	4-port non-isolated RS-232 mPCIe, DB37
PCM-24D4R4-BE	4-port non-isolated RS-422/485 mPCIe, DB37
PCM-2300MR-AE	MR4A16B, 2 MB MRAM, mPCIe
PCM-26D2CA-AE	2-port isolated CAN bus mPCIe, CANopen, DB9
PCM-27D24DI-AE	24-channel isolated digital I/O with counter mPCIe, DB37
PCM-24R2GL-AE	2-port Gigabit Ethernet, mPCIe, RJ45
PCM-23U1DG-CE	USB slot with lock for USB dongle

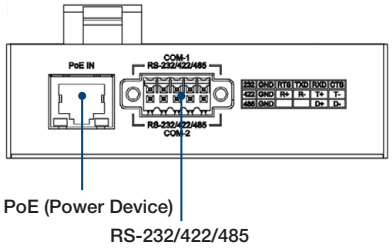
*Contact Advantech for more compatible iDoor solutions.

UNO-2271G-RP1EA

Second stack module with 2 x COM, 1 x PoE (PD), 1 x M.2 (B key)



Front I/O



Specifications

General	
I/O	2 x COM (RS-232/422/485) terminal block 1 x PoE+ (802.3at) (power device) Note: Because PoE can only provide 25.5W max. power, USB ports should only be used to connect USB 2.0 devices.
Expansion	1 x M.2 (B key) (SATA/USB 3.0 signals for LTE)
SIM Slot	1 x nano SIM slot
Dimensions	100 x 70 x 30 mm/ 3.93 x 2.75 x 1.18 in
Weight	120 g/0.26 lb
Environment	
Operating Temperature	-20 ~ 60 °C/-4 ~ 140 °F

Ordering Information

Part Number	Description
UNO-2271G-RP1EA	UNO-2271G V2 second stack module with 2 x COM, 1 x PoE, 1 x M.2 (B key)

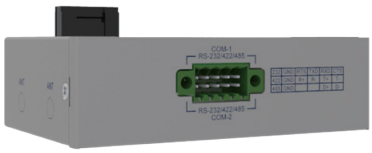
Optional Accessories

LTE Module (M.2 B key) and Antenna

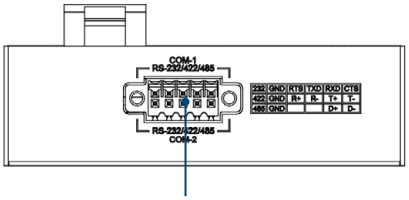
Part Number	Description
968AD00590	Quectel EM06-E LTE Cat. 6 M.2 module (EMEA/Brazil/APAC)
1750008644-01	SMA cable, 150 mm
1750008303-01	Antenna

UNO-2271G-RS2EA

Second stack module with 2 x COM, 1 x M.2 (B key), 1 x M.2 (E key)



Front I/O



Specifications

General	
I/O	2 x COM (RS-232/422/485) terminal block
Expansion	1 x M.2 (B key) (SATA/USB 3.0 signals for LTE) 1 x M.2 (E key) (PCIe/USB 2.0 signals for Wi-Fi)
Network Connectivity	1 x nano SIM slot
Dimensions	100 x 70 x 30 mm/ 3.93 x 2.75 x 1.18 in
Weight	120 g/0.26 lb
Environment	
Operating Temperature	-20 ~ 60 °C/-4 ~ 140 °F

Ordering Information

Part Number	Description
UNO-2271G-RS2EA	UNO-2271G V2 second stack module with 2 x COM, 2 x M.2 (B+E key)

Optional Accessories

Wi-Fi Connectivity Kit (M.2 A-E key)

Part Number	Description
EWM-W192K1	Wi-Fi kit with Intel AC9260 module (802.11AC+BT), 2 x SMA cables and antennas (CE RED certified)

LTE Module (M.2 B key) and Antenna

Part Number	Description
968AD00590	Quectel EM06-E LTE Cat. 6 M.2 module (EMEA/Brazil/APAC)
1750008644-01	SMA cable, 150 mm
1750008303-01	Antenna

AT&T/Verizon-Certified LTE Kit for North America

Part Number	Description
C-PCM-24S24G-227-2	LTE kit with MultiTech LTE Cat. 4 modem, M.2 (B key) 3042 adapter board, 2 x SMA cables and antennas

5G NR Sub-6 Module (M.2 B key) and Antenna

Part Number	Description
AIW-355-DQ-E01	5G (Sub-6 GHz)/LTE/WCDMA module with GNSS (EU)
AIW-355-DQ-N01	5G (Sub-6 GHz)/LTE/WCDMA module with GNSS (US)
AIW-355-DQ-C01	5G (Sub-6 GHz)/LTE/WCDMA module with GNSS (China)
1750008569-01	Coaxial cable SMA (F) to MFH4, 300 mm/11.8 in
1750009372-01	5G (Sub-6 GHz)/LTE/WCDMA full-band dipole antenna
UNO-M2-3052HS	M.2 (B key) 3052 heat sink kit for 5G module