

UNO-420

Intel® Atom™ PoE Powered Device Sensing Gateway with 3 x COM, 2 x LAN (1 x PoE), 8 x GPIO, HDMI, USB3.0

NEW



Introduction

The new UNO-420 is ruggedized fanless design with Intel® Atom™ E3815 Processor, 3x COM port, 2x LAN port (one with Power Over Ethernet (PoE) technology), and 8 x Programmable GPIO. PoE allows you to add a device in awkward or remote locations where power cable may not equipment with. It supports one Ethernet cable for both data and power delivery. Ethernet cable, which appears in many existing infrastructures is considerably less expensive than fiber over the scope of an installation. UNO-420 features optimized I/O, PoE-IN, and wide operation temperature, which is suitable for machine data gateway in many industries.

Specifications

General

- **Certification** CE, FCC, CB, UL
- **Dimensions (W x D x H)** 125 x 125 x 50 mm
- **Enclosure** Aluminum Housing
- **Mounting** Wall Mount (Optional Din-Rail)
- **Weight (Net)** 1.5 kg
- **Power Requirement** 10 ~ 30 V_{DC}
- **Power Consumption** 12W (Typical), 20W (Max)

System Hardware

- **BIOS** AMI EFI64 Mbit
- **Watchdog Timer** Programmable 255 levels timer interval, from 1 to 255sec
- **Processor** Intel Atom E3815 1.46GHz
- **System Chip** Intel Atom SoC integrated
- **Memory** 2GB DDR3L 1066 MHz
- **Graphics Engine** Intel® HD Graphics
- **Ethernet Realtek** RTL8111E GbE, 802.10av
- **LED Indicators** LEDs for Power, Storage (M.2)
- **Storage** Onboard 32GB eMMC
- **Expansion** 1 x M.2 2242 (B key)
1 x Full-size mPCIe slot (USB/PCIe Signal)
1 x Half-size mPCIe slot (USB/PCIe Signal)

I/O Interfaces

- **Serial Ports** 2 x RS-232/422/485, 0.15~115.2kbps, DB9
1 x RS-485, 0.15~115.2kbps, terminal block
- **LAN Ports** 2 x RJ45 (1x PoE-IN IEEE 802.3at & 10/100/1000 Mbps IEEE 802.3u 1000Base-T Fast Ethernet)
- **Isolated GPIO** 8 x GPIO (Programmable ADC, DAC 12bit), isolated protection, 2000 V_{DC}
DI: logic 0: 0~ 1.5 V ; logic 1: 3.5V~5V
DO: logic 0: 0~0.4V ; logic 1: 4~5V
AI: 12 bit ADC (0~5V scale; Integral Nonlinearity error: 2 Bit Max
AO: 12 bit DAC (0~2.5V scale / 0~5V scale; Integral Nonlinearity error: 2 bit Max
- **USB Port** 1 x USB 3.0
- **Display** 1 x HDMI, supports 1920 x 1080 @ 60Hz
- **Power Connector** 1 x 2 Pins, Terminal Block

Software

- **OS Support** Advlinux/ WIN10 IoT Enterprise 2019 LTSC
- **Application Software** WISE-PaaS/EdgeLink
Max Connection: 4 for uplink protocols (MQTT x 4, Modbus x 4...etc.)
Max Tag: 3000 Tags

Features

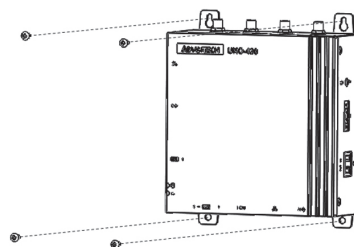
- Intel Atom™ E3815 Processor with 2GB DDR3L onboard memory
- 2 x GbE (1 x PoE-IN), 1 x USB 3.0, 1 x HDMI, 1 x RS-485, 2 x RS-232/422/485, and 8 x Programmable GPIO
- 32GB eMMC storage onboard
- Ruggedized compact fanless design
- Support dual wireless communication for WiFi/3G/4G/GPS
- Support one Ethernet cable for both data & power delivery
- Support Trusted Platform Module (TPM) 2.0 for cyber security
- Advantech WISE-PaaS/EdgeLink support
- Edgeline support MQTT, LWM2M client for cloud communication
- EdgeLink supports more than 200 I/O Drivers
- EdgeLink supports user-defined acquisition period

Environment

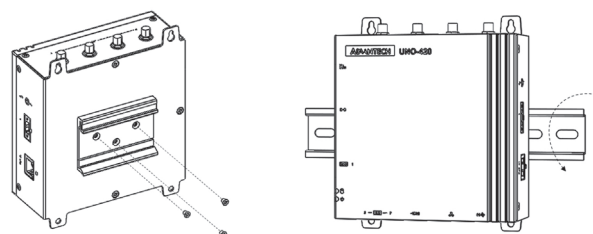
- **Operating Temperature** -20 ~ 60°C (-4~140 °F) @ 5 ~ 85% RH with 0.7 m/s airflow
- **Storage Temperature** -40 ~ 80°C (-40 ~ 180°F)
- **Relative Humidity** 10 ~ 95% RH @ 40°C, non-condensing
- **Shock Protection** Operating, IEC 60068-2-27, 50G, half sine, 11 ms
- **Vibration Protection** Operating, IEC60068-2-6, 2 Grms, random, 5 ~ 500 Hz, 1hr/axis (M.2)

Installation Scenario

Wall Mount Illustration

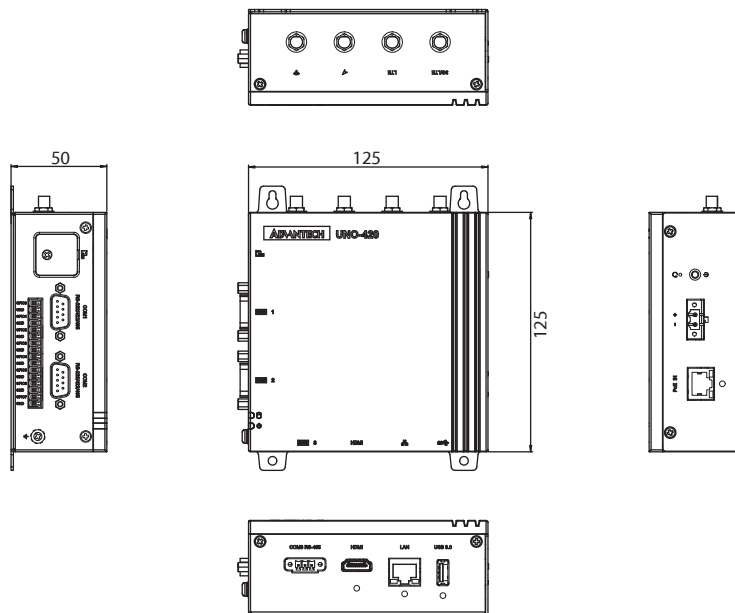


DIN-rail Mount Illustration (Optional)

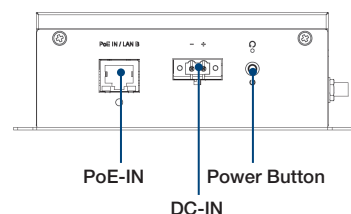
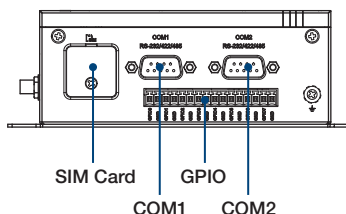
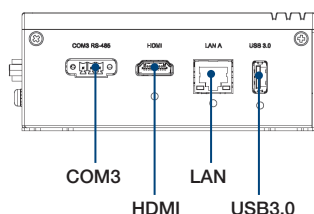


Dimensions

Unit: mm



Front I/O View



Ordering Information

- UNO-420-E0A Intel Atom E3815 1.46 GHz, 4GB, 2 x LAN, 3 x COM, 8 x GPIO, 1 x HDMI, 1x USB3.0
- ESRP-PCS-UNO420 UNO-420-E0A with Advlinux & EdgeLink

Optional Accessories

- UNO-400-DMKAE UNO-4 series DIN rail Kit

Wi-Fi Solution

- EWM-W157H01E Half size mPCIe 802.11 a/b/g/n/ac,RTL8821AE,with BT4.0
- EWM-W135H01E Half size mPCIe 802.11 a/b/g/n,AR9382,2T2R,Half size Mini PCIe
- 1750008717-01 Dipole Ant. D.B 2.4/5G WIFI 3dBi SMA/M-R BLK
- 1750009035-01 Cable Ant. SMA/F-BH MHF1/113 BLK L100mm

3G/LTE Solution

- EWM-C117FL03E LTE/HSPA+/GPRS module, w/ SIM Slot,TOBY-L200, for USA AT&T, T-Mobile,w/o voice function
- EWM-C117FL04E LTE/HSPA+/GPRS module, w/ SIM Slot,TOBY-L210, for Europe, APAC,w/o voice function
- EWM-C117FL05E LTE/HSPA+/GPRS module, w/ SIM Slot,TOBY-L210H-60S, for Japan Softbankw/o voice function
- EWM-C117FL06E LTE/HSPA+/GPRS module, w/ SIM Slot,TOBY-L280H, for Taiwan. w/o voice function
- EWM-C145FL01E LTE/HSPA+/GPRS (WCDMA and CDMA) for China
- 1750008697-01 Dipole Ant.698~960/1710~2700MHz SMA/M RG174GRY
- 1750009036-01 Cable Ant. SMA/F-R-BH MHF1/113 BLK L100mm

GPS Solution

- EWM-G109H01E Advantech GPS module, u-blox NEO-M8N multi-GNSS (GPS, Beidou, GLONASS, Galileo, QZSS and SBAS)
- 1750006426 Antenna 2 dBi SMA-Male L=171.5mm AN8921F-92B01SM
- 1750006264 Antenna SMA(F)/MHF 15cm SMALFN8-3150A-00X00R

Router

- ICR-1601G Industrial Cellular Router,GPS,EMEA,2x ETH,ACC
- EKI-6333AC-A IEEE 802.11 a/b/g/n/ac Wi-Fi AP

Adapter & Power Cable

- 96PSA-A60W24T2 A/D 100-240V 60W 24V C14 CORD END TERMINAL
- 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)

Embedded OS

- 20703WX9ES0003 WIN 10 IoT Enterprise 2019 LTSC