UNO-220-P4N2AE

Industrial Raspberry Pi 4 HAT Gateway
Kit with POE function, TPM,
1 x RS-232/485, 8 x GPIO, 8 GB SD Card,
and AdvRaspbian OS

Features
- Protect your Raspberry Pi device from dust and temperature extremes.
- Industrial-grade gateway kit provides Raspberry Pi-ready solutions for rapid prototyping
- Industrial grade I/O board for RS-232/485 and GPIO extension
- Integrated with PoE function allows users to power Raspberry Pi4 via an Ethernet cable
- Battery-backed RTC enabling fail-safe time keeping
- Built-in TPM function provides robust protection for critical data
- Included OS enables RPi identification of UNO-220, and automatically configures GPIOs and drivers for the board
- Supports wall-mount and DIN rail installation for industrial applications
- LED indicator for more easier mentanence

Introduction
UNO-220 is designed for customers using Raspberry Pi 4 (RPi 4) single-board computers (SBCs) in IoT applications. Featuring a system-image OS equipped micro SD card, an RPi 4 HAT I/O board, additional RS-232/485 GPIOs, and an RTC battery backup for precise time keeping; the UNO-220 industrial-grade chassis transforms RPi 4 into a more ruggedized gateway ideal for rapid prototyping in shop floor environment.

Specifications

General
- Certification: CE, FCC
- Dimensions (W x D x H): 100 x 70 x 40 mm
- Form Factor: Micro
- Enclosure: Aluminum housing
- Mount Options: Wall mount, DIN rail (optional)
- Weight (Net): 0.5 kg (1.10 lbs)
- Power Input: 5VDC via USB-C connector @ 3.0A (Minimum) or IEEE 802.3at PoE-PD (Leverage with Raspberry Pi 4 Gigabit LAN)
- Power Consumption: 15 W (typical)
- OS Support: AdvRaspbian

System Hardware
- Watchdog Timer: Programmable 255 level timer interval (1 – 255 sec.)
- Hardware Security: TPM 2.0

I/O Interfaces
- Serial Ports: 1 x RS232/485 (5-pin terminal block), automatic direction control, 300 – 115.2k bps
- GPIO: GPIO 0-7: VIH: 2 – 5V VIL: 0 – 0.8V GPIO 0-7: 0 – 5V

Environment
- Operating Temperature: 0 – 50 °C (32 – 122 °F) @ 5 – 85% RH without 0.7m/s airflow
- Storage Temperature: -20 – 60 °C (-4 – 140 °F)
- Relative Humidity: 10 – 95% RH @ 40 °C, non-condensing
- Ingress Protection: IP40

Ordering Information
- UNO-220-P4N1AE: Industrial Raspberry Pi gateway kit with 1 x RS-232/485, 4 x GPIO, 8 GB SD card, and Raspbian OS
- UNO-220-P4N2AE: Industrial Raspberry Pi 4 Gateway Kit with POE function, TPM, 1 x RS-232/485, 8 x GPIO, 8 GB SD Card, and AdvRaspbian OS
- UNO220P4N22101-T: UNO-220-P4N2AE without SD card, Quick LT

Optional Accessories
- UNO-200-DMKAE: Optional DIN-rail kit
- XUNO-15W-05V-USB-C: 15W 5V USB-Type C connector
- 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)

Packing List
- 96FMSD-8G-CM-AT: 8GB SD card with AdvRaspbian OS

All product specifications are subject to change without notice. Last updated: 27-Jul-2021
**Dimensions**

Unit: mm

Front I/O View

- RS-232/485
- GPIO
- Power (USB Type C) (on Raspberry Pi4)
- Audio (on Raspberry Pi4)
- Micro HDMI (on Raspberry Pi4)

Side I/O View

- 2 x USB 3.0 (on Raspberry Pi4)
- 2 x USB 2.0 (on Raspberry Pi4)
- 1 x IEEE 802.3at PoE-PD LAN

**Raspberry Pi4 Installation Guide**

1. **Step 1**
   - Insert SD card on RPi4

2. **Step 2**
   - Insert RPi4

3. **Step 3**
   - Connect components

4. **Step 4**
   - Power and HDMI