UNO-220

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

Features
- Automation kit featuring an industrial-grade I/O board for creating RPi-based IoT systems
- Industrial grade I/O board utilizing RS-232/485 and GPIO for flexible expansion
- Battery-backed RTC enabling fail-safe time keeping
- Included OS enables RPi identification of UNO-220, and automatically configures GPIOs and drivers for the board
- Easy 4-step RPi 4 installation
- Supports wall-mount and DIN rail installation for industrial applications
- Supports TPM hardware security upon request

Introduction
UNO-220 is designed for customers using Raspberry Pi (RPi) single-board computers (SBCs) in unique 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 an intelligent gateway. UNO-220 features pre-finished mounting holes and attachment screws enabling plug-and-play assembly with separately purchased RPi 4 SBCs. This system provides developers with a complete RPi-ready industrial-grade gateway kit ideal for rapid prototyping and mass deployment.

Specifications

General
- Certification: CE, FCC
- Dimensions (W x D x H): 100 x 70 x 32 mm (3.9 x 2.7 x 1.2 in)
- Form Factor: Micro
- Enclosure: Aluminum housing
- Mount Options: Wall mount, DIN rail (optional)
- Weight (Net): 0.5 kg (1.10 lbs)
- 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 (available upon request)
- Storage: 1 x Micro SD slot (dummy)
  (internal 8 GB SD card interchangeable with Raspberry Pi 4)

I/O Interfaces
- Serial Ports: 1 x RS232/485 (5-pin terminal block), automatic direction control, 300 ~ 115.2k bps
- GPIO: GPIO 0-3: VH: 2 ~ 5V
  - VIH: 0 ~ 0.8V
  - GPO 0-3: 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 AdvRaspbian OS

Optional Accessories
- UNO-200-DMKA: Optional DIN-rail kit
Raspberry Pi 4 Installation Guide

Step 1

Step 2

Step 3

Step 4

Dimensions

Front I/O View

RS-232/485

Power (USB Type C) (on Raspberry Pi 4)

Audio (on Raspberry Pi 4)

Micro HDMI (on Raspberry Pi 4)

Side I/O View

2 x USB 3.0 (on Raspberry Pi 4)

2 x USB 2.0 (on Raspberry Pi 4)

1 x LAN (on Raspberry Pi 4)