UNO-220

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

NEW

CE FCC

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**   GPI 0-3: VIH: 2 ~ 5V
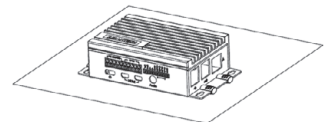 VIL: 0 ~ 0.8V
  GPO 0-3: 0 ~ 5V

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

Installation Scenario

DIN-Rail Mount Illustration
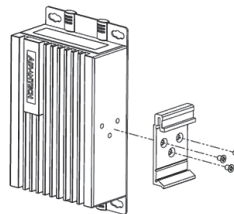
Stand Mount Illustration

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
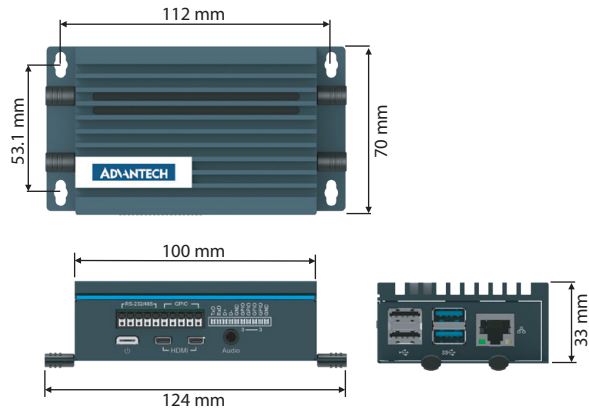
Optional Accessories

- **UNO-200-DMKAE**   Optional DIN-rail kit
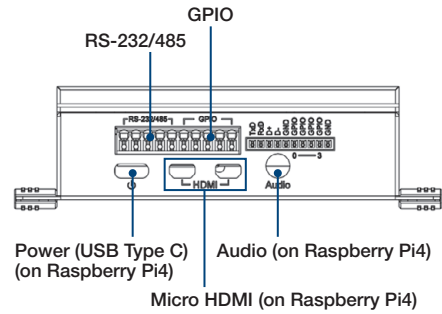
Adapter and power cord

- **XUNO-FSP015-DPAN3**   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)
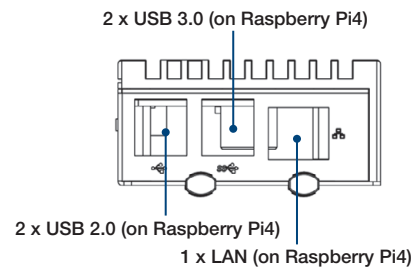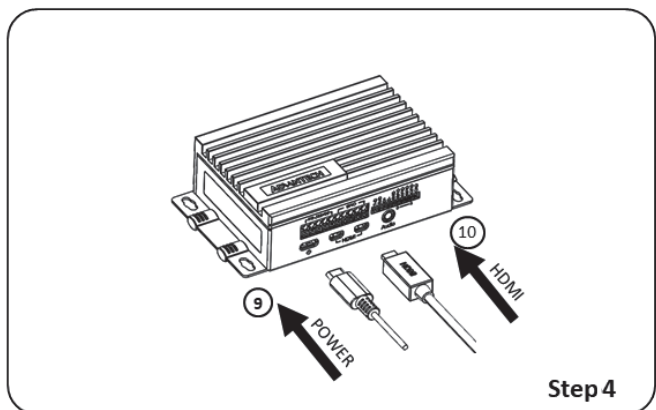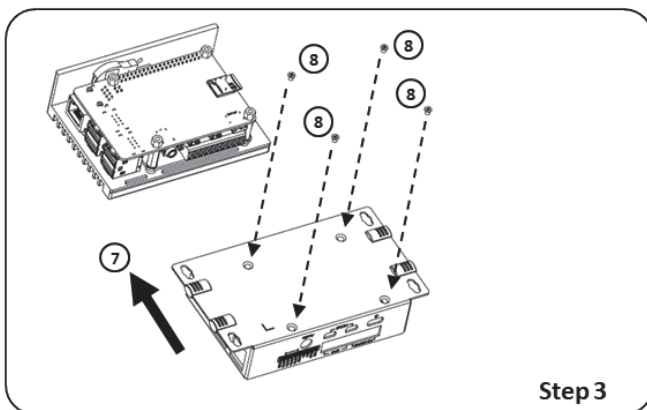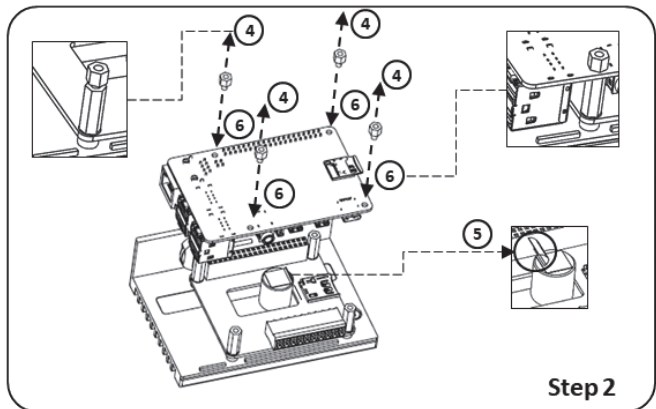
Dimensions

Unit: mm

112 mm

53.1 mm

70 mm

ADVANTECH

100 mm

33 mm

124 mm

Front I/O View

GPIO

RS-232/485

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 LAN (on Raspberry Pi4)

Raspberry Pi4 Installation Guide

Step 1

Step 2

Step 3

Step 4
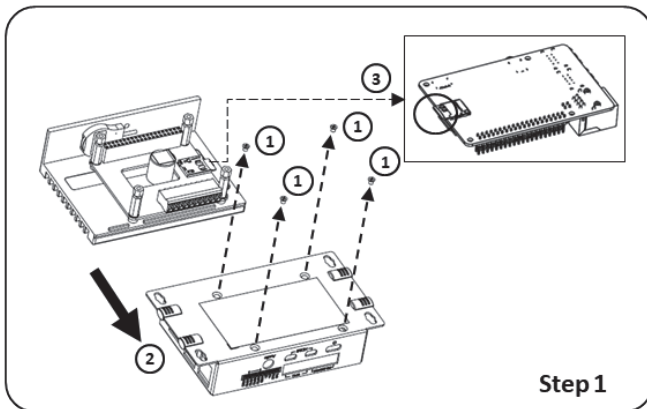
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