

UNO-2176

Intel® Pentium® M/Celeron® M Fanless Box PC with 2 x LAN, 6 x COM, 8 x DI, 8 x DO



Features

- Onboard Pentium® M 1.4 GHz/Celeron® M 1.0 GHz
- Onboard 512 KB battery-backup SRAM
- Two RS-232 and four isolated RS-232/422/485 ports with automatic flow control
- 8-ch Isolated DI and 8-ch Isolated DO with counter and timer
- Two 10/100Base-T RJ-45 ports
- Two USB ports
- PC/104 expansion slots
- Windows® CE 5.0 & 6.0, Windows XP Embedded SP2, and Linux ready solution
- Onboard system status LED indicators
- Supports Boot from LAN function
- Fanless design with no internal cabling

Introduction

UNO-2176 is an embedded automation computer that supports PC/104 expansion, serial communication ports and several other networking interfaces. UNO-2176 supports Windows XP Embedded OS and Windows CE 5.0 & 6.0, which offers a pre-configured image with optimized onboard device drivers. Windows XP Embedded delivers the power of the Windows operating system in componentized form. You can seamlessly integrate your applications into Windows XP Embedded and speed up your system development with an application ready platform that can provide a rich networking interface to fulfill diverse requirements.

Specifications

General

- **Certification** CE, FCC Class A, UL, CCC
- **Dimension (W x D x H)** 255 x 152 x 59 mm (10" x 6.0" x 2.36")
- **Enclosure** Aluminum
- **Mounting** Wallmount
- **Power Consumption** 24 W (Typical)
- **Power Requirements** 9 ~ 36 V_{DC} (e.g. +24 V @ 2 A) (Min. 48 W), AT
- **Weight** 2.4 kg
- **OS Support** Windows XP Embedded, Windows 2000/XP, Windows CE 5.0 & 6.0, Linux

System Hardware

- **CPU** Pentium M 1.4 GHz, Celeron M 1.0 GHz
- **Memory** 512 MB DDR SDRAM
- **Battery Backup SRAM** 512 KB
- **Indicators** LEDs for Power, IDE, Alarm for battery backup SRAM, Diagnosis (programmable), LAN (Active, Status) and Serial (Tx, Rx)
- **Keyboard/Mouse** 1 x PS/2
- **PC/104 Slot** PC/104 Supports +5V Power
- **Storage** SSD: 1 x internal type I/II CompactFlash® slot
HDD: Build-in one 2.5" SATA/IDE HDD bracket
DB15 VGA connector, 1600 x 1200 @ 85 Hz
- **Display** Programmable 256 levels timer interval, from 1 to 255 sec
- **Watchdog Timer**

I/O Interface

- **Serial Ports** 2 x RS-232
2 x isolated RS-232/422/485 with DB9 connectors
2 x isolated RS-232/422/485 with 5-pin screw terminal
Automatic RS-485 data flow control
Isolation protection: 2,000 V_{DC}
Surge protection: 2,000 V_{DC} (EFT)
(COM1, COM2) RS-232: 50 ~ 115.2 kbps,
(COM3-COM6) RS-232: 300 ~ 115.2 kbps
RS-422/485: 300 ~ 921.6 kbps (Max.)
- **Serial Port Speed**
- **LAN** 2 x 10/100Base-T RJ-45 ports (Built-in boot ROM in flash BIOS)

- **USB** 2 x USB, EHCI, Rev. 2.0 compliant
- **Digital Inputs** 8-ch wet contact
- Logic 0: 0 ~ 3 V_{DC}; Logic 1: 10 ~ 50 V_{DC}
- 2,000 V_{DC} isolation
- 2,000 V_{DC} ESD protection
- 70 V_{DC} over-voltage protection
- ±50 V_{DC} input range and 10 kHz speed
- Interrupt handling speed: 10 kHz
- **Digital Outputs** 8-ch DO
- 2,000 V_{DC} isolation and 200 mA max/channel sink current
- Keep output status after system hot reset
- 5 ~ 40 V_{DC} output range and 10 kHz speed
- **Timer/Counter** Timer/Counter
- Counter source: DI1 & DI3, Pulse output: DO2 & DO3
- Can be cascaded as one 32-bit counter/timer
- Down counting, preset counting value
- Timer time base: 100 kHz, 10 kHz, 1 kHz, 100 Hz

Environment

- **Humidity** 95% @ 40° C (non-condensing)
- **Operating Temperature** UNO-2176-C11E: -20 ~ 65° C (-4 ~ 149° F) @ 5 ~ 85% RH
UNO-2176-P11E: -20 ~ 60° C (-4 ~ 140° F) @ 5 ~ 85% RH
- **Operating Humidity** 20 ~ 95% (non-condensing)
- **Shock Protection** IEC 68 2-27
CompactFlash®: 50 G @ wall mount, half sine, 11 ms
HDD: 20 G @ wall mount, half sine, 11 ms
IEC 68 2-64 (Random 1 Oct./min, 1hr/axis.)
- **Vibration Protection** CompactFlash®: 2 Grms @ 5 ~ 500 Hz,
HDD: 1 Grms @ 5 ~ 500 Hz

Ordering Information

- **UNO-2176-C11BE** Celeron M 1 GHz, 512 MB RAM Fanless Box PC
- **UNO-2176-P11BE** Pentium M 1.4 GHz, 512 MB RAM Fanless Box PC

Accessories

- **UNO-PCM22-AE** 2 x PC/104 expansion kit for UNO-2100 series
- **UNO-FPM21-AE** UNO-2000 series VESA mount kit