UNO-2174A/2178A

Intel® Atom™ N450/ D510 Automation Computers with 6 x USB, 8 x COM, 2 x Mini PCIe



Features

- Onboard Intel Atom N450/D510 processors
- 2 x 10/100/1000Base-T RJ-45 ports, 6 x USB 2.0 ports
- Windows® CE 6.0, WES 2009, WES 7 and Linux ready solution
- Onboard system status LED indicators
- Front-accessible CF slot
- Supports Boot from LAN function
- 2 x Mini PCIe slots with 1 x SIM slot support
- Fanless design with no internal cabling
- Isolation between chassis and power ground
- Supports wide operating temperatures from - 10 ~ 70°C
- IP40 ingress protection
- Windows 7 32 & 64-bit supported
- Supports plug-in cards (1 x PCI-104 and 1 x PC/104+) with additional daughterboard expansion
- Supports 8 x COM ports (UNO-2178A)
- Supports arbitrary baud rates

Introduction

The UNO-2174A and UNO-2178A are Embedded Automation Computers equipped with Intel Atom N450/D510 CPUs, Gigabit Ethernet ports, rich I/O, and 2 x Mini PCIe socket. They also feature WLAN, 3G expansion and compatibility with Windows 7. Both products have Energy Star certification, IP40 anti-dust ingress protection and wide operating temperatures (-10 ~ 70°C), providing high performance and high versatility with low power consumption. The UNO-2174A and UNO-2178A are economic new computing platforms for manufacturing executing systems, facility automation, and industrial thin client applications. With an additional daughterboard, the UNO-2174A and UNO-2178A support 1 x PC/104+ and 1 x PCI-104 plug-in cards for further expansion.

Specifications

General

Certification	Energy Star, CE, FCC Class A, UL, CCC, C-Tick Class A, BSMI
Dimensions (W x D x H)	UNO-2174A-A23E: 255 x 152 x 50 mm (10" x 6.0" x 2.0") UNO-2174A-A33E: 255 x 152 x59mm(10"x6.0"x2.3") UNO-2178A: 255 x 152 x 59 mm (10" x 6.0" x 2.3")
Enclosure	Aluminum +SECC
Mounting	DIN-rail, Wallmount, VESA
Industrial Grounding	Isolation between chassis and power ground
Power Consumption	UNO-2174A: 12 W (Typical) UNO-2178A: 16 W (Typical)
Power Requirements	9 ~ 36 V_{DC} (e.g +24 V @ 1.5 A) (Min. 36 W), ATX
Power Suspend Mode	S3, S4
Weight	2.5 kg
OS Support	Windows XP/7, WES7, WES-2009, CE 6.0, Linux, QNX
System Design	Fanless design with no internal cabling
Remote Management	Built-in Advantech DiagAnywhere agent on Windows CE, WES2009, WES7

System Hardware

CPU	UNO-2178A: Intel Atom D510 Dual Core 1.66 GHz UNO-2174A: Intel Atom N450 1.6 GHz /D510 1.66GHz
Memory	2 GB DDR2 SDRAM built-in
Indicators	LEDs for Power, CF, LAN (Active, Status), Serial (Tx, Rx)
Keyboard/Mouse	1 x PS/2
Storage	CF: 1 x rear type I/II CompactFlash® slot HDD: 1 x built-in 2.5" SATA HDD/SSD bracket (Not available when PCI-104 expansion is being used)
Display	DB15 VGA connector, UNO-2174A supports up to 1400 x 1050, UNO-2178A supports up to 2048 x 1536
Watchdog Timer	Programmable 256 levels timer interval, from 1 to 255 sec
Expansion	2 x Mini PCIe 1 x SIM card slot
Printer Port	1 x Printer port (UNO-2174A)

Daughterboard (Additional purchase required)

Expansion Slot	PC/104+ and PCI-104 support (+5 & 3.3V power) (HDD slot is not available when PCI-104 slot is being used) 2 x Mini PCIe card slots and 1 x SIM card slot

I/O Interface

Serial Ports	UNO-2174A: 2 x RS-232/485 (COM1-2), 2 x RS-232/422/485 w/ 128kB FIFO (COM A-B) UNO-2178A: 2 x RS-232/485 (COM1-2), 2 x RS-232/422/485 w/ 128kB FIFO (COM A-B), 4 x RS-232/485 from DB25 print port (COM3-6)
Serial Port Speed	50-115.2 kbps (COM 1-6 in RS-232/485 mode) 50-115.2 kbps (COM A/B in RS-232 mode, 921.6kbps peak performance) 50-921.6 kbps (COM A/B in RS-422/485 mode)
LAN	2 x 10/100/1000Base-T RJ-45 ports (Built-in boot ROM in flash BIOS)
USB Ports	6 x USB 2.0
Audio	Line in, Line out, Mic in (5.1 channel HD audio)

Environment

Humidity	95% @ 40°C (non-condensing)
Operating Temperature	IEC 60068-2-2 with 100% CPU/ I/O loading -10 ~ 70°C (14 ~ 158°F)
Ingress Protection	IP40
Shock Protection	IEC 60068-2-27 CompactFlash: 50 G @ wall mount, half sine, 11 ms HDD: 20 G @ wall mount, half sine, 11 ms
Vibration Protection	IEC 60068-2-64 (Random 1 Oct./min, 1hr/axis.) CompactFlash: 2 Grms @ 5 ~ 500 Hz, HDD: 1 Grms @ 5 ~ 500 Hz

Ordering Information

UNO-2174A-A23E	Intel Atom N450 1.6 GHz, 2 GB RAM, 4 x COM ports Automation Computer
UNO-2178A-A33E	Intel Atom D510 1.66 GHz, 2 GB RAM, 8 x COM ports Automation Computer
UNO-2174A-A33E	Intel Atom D510 1.66 GHz, 2GB RAM, 4 x COM ports Automation Computer

Accessories

UNO-FPM21-AE	UNO-2000 series VESA mount kit
EWM-W138H01E	Mini PCIe card for WLAN
1750006043	Wi-Fi cable 15CM
1750002842	Antenna for Wi-Fi
9656EWMG00E	Half-size miniPCIe to miniPCIe bracket set
PCLS-DIAGAW10	Advantech Remote Monitoring & Diagnosis Utility
UNO-PCM23-AE	1 x PCI-104 and 1 x PC/104+ Expansion board

All product specifications are subject to change without notice

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