Embedded Automation Computers

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Fieldbus Master UNO Introduction
Embedded Automation Computer Selection Guide
DIN-rail Automation Computers
UNO-1110/L/ST  Ti Cortex AM3505 DIN-rail PC with 2 x LAN, 5 x COM, 4 x USB, 1 x Mini PCIe
UNO-11500/GE  AMD Geode LX800 DIN-rail PCs with 2 x LAN, 3 x COM, PCI-104
UNO-1170A/GE  Intel Atom N270 DIN-rail PCs with 2 x LAN, 3 x COM, 4 x USB, PC/104+
UNO-1172A/GE  Intel Atom DS10 DIN-rail PCs with 3 x LAN, 2 x COM, VGA, Mini PCIe, PC/104+

High Performance Automation Computers with PC/104+ Expansion
UNO-2173A/AF  Intel Atom N270 Automation Computers with 2 x LAN, 3 x COM, Mini PCIe
UNO-2174A/2178A  Intel Atom N450/DS10 Automation Computers with 6 x USB, 8 x COM, 2 x Mini PCIe
UNO-2172/218Z  Intel Core 2 Duo/ Pentium M/ Celeron M Automation Computers with 2 x GbE, 4 x COM, DVI
UNO-2174G/2184G  Intel Celeron Automation Computers with 4 x LAN, 2 x Mini PCIe, DVI/DP/HDMI

Wallmount Automation Computers with PCI/PCIe Expansion
UNO-3072LA  Intel Atom N270 Automation Computer with 2 x PCI, 2 x GbE, DVI
UNO-3072A  Intel Atom DS10 Automation Computer with 2 x PCI, 2 x GbE, and FireWire
UNO-3074A  Intel Atom DS10 Automation Computer with 4 x PCI, 2 x GbE, and FireWire
UNO-3082  Intel Core 2 Duo Automation Computer with Dual DVI, 2 x PCI and FireWire
UNO-3084  Intel Core 2 Duo Automation Computer with Dual DVI, 1 x PCIe, 3 x PCI and FireWire
UNO-3272/3282  Intel Core 2 Duo / Celeron M Automation Computers with PCI/PCIe, 2 x GbE, 4 x COM, DVI

Accessories

To view all of Advantech’s Embedded Automation Computers, please visit www.advantech.com/products.
Introduction
Advantech’s Embedded Automation Computers are designed to fulfill the needs of mission critical automation applications. Their embedded design, industrial automation features and advanced computer technology deliver robustness, reliability and flexibility to satisfy customers who are looking for a rugged & compact computing platform with an industrial design and built-in I/O for diverse automation applications. Leveraging field-approved and worldwide accepted real-time OS technology, Advantech provides Windows CE, Windows XP Embedded and Embedded Linux ready solutions and supports several standard networking interfaces, such as Ethernet, RS-232/422/485, onboard I/O lines, CANbus and more. Because of their open architecture, great expansion capability and reliable fanless, cable-less and diskless design, Advantech’s Embedded Automation Computers are ideal platforms to implement diverse custom applications in power and energy, transportation, machine automation, factory automation, building automation, facility monitoring system, and environment monitoring vertical markets.

Features
Fanless Design
Advantech’s Embedded Automation Computers are robust computers without rotating parts, such as a CPU fan, system fan, power supply fan or HDD. This concept significantly increases reliability, extends MTTR, and extremely reduces maintenance efforts. Therefore, you don’t need to worry about a CPU cooler or HDD failure issue anymore, even in dusty environments.

For applications that require mass storage, we also provide dual HDD with built-in RAID 1 feature that ensures data well kept once one of HDDs is failed during operation.

No Internal Cabling
Unlike general Box PC designs where cables are used for wiring between connectors and CPU boards, connectors on Advantech’s Embedded Automation Computers are soldered directly on the PCB. Therefore, there is no internal cabling inside the chassis. This makes Advantech’s Embedded Automation Computers much more reliable than general Box PC’s in harsh environments.

Energy Star
Advantech’s Embedded Automation Computers have been certified by Energy Star, recognizing their extreme low power consumption and high energy utilization. To build a low-carbon society everyone needs to do their best.

Industrial-grade Power Design
Advantech’s Embedded Automation Computers are designed to accept wide DC power input (ex. 9 – 36 Vdc) in factory floors. In addition, they also feature power reversal protection that prevents system damage when power inputs are reversed.

Grounding Isolation Between Chassis and System
By adapting the feedback of industrial field site, Advantech’s Embedded Automation Computers provide an isolated ground between the system and field. This feature can increase the stability to the entire system structure and is also important for constructing larger systems.

Industrial-grade RS-232/422/485 Design
Advantech’s Embedded Automation Computers provide professional serial communication ports. They not only have patented RS-485 auto-flow control technology, but also have the enhanced drivers under the embedded Windows system which provides better capabilities than traditional drivers and support any -baud-rate function for the Oxford UARTs.

Wide Operating Temperature Range
This series supports wide operating temperature up to 75°C through selecting low-voltage CPU and industrial-grade components as well as associated thermal design that meets critical industrial-grade applications.

For the extremely low temperature environment, ex. -40°C, we can also offer the optional module to sense the temperature and control the system heating and booting sequence.

Non-volatile Memory
To keep critical data alive when system power is lost, Advantech’s Embedded Automation Computers are equipped with onboard battery-backup memory. Onboard battery supplies power to keep memory operating all the time. In addition, we also provide the new FeRAM technology in a Mini PCIe card form factor. FeRAM have similar behavior of SRAM, but without the need a battery to keep the data, it can support up to 100 trillion read/writes times.

Hardware Switchable AT/ATX Power Mode
AT and ATX are two kinds of power management modes. AT features PC on/off capability, which can be controlled through an external power line. On the other hand, ATX features the capability of turning on/off PCs through Hardware/Software triggering signal, such as Wake on LAN. In Advantech’s Embedded Automation Computers, these modes are hardware-based which serves as a more reliable method.

Plug-and-Display VGA Port
The VGA port in Advantech’s Embedded Automation Computers is designed to be ready for display anytime, even when the VGA monitor is not attached while booting up.

Wide Form Factor Selections to Fit Application Environments
These Embedded Automation Computers provide different form factors to fulfill the requirements and scenario of different automation applications. Simply classification: UNO-2000/2100 series are for MES (Manufacturing Execution System)/Thin Client Markets; UNO-1000/2000 series are for Machine Automation/ Facility Automation; UNO-4600 series are for Power and Energy Markets.

Mini PCIe Card Slot Enables Wireless and Fieldbus Communication
New Embedded Automation Computers are equipped with one or more Mini PCIe card slots, which can easily adopt the popular wireless modules, such as Wifi, mobile networking (GSM/GPRS/3G) and GPS modules. For industrial automation applications, this is also an easy and compact interface to integrate fieldbus cards.
Supports Many Operating Systems
Advantech’s Embedded Automation Computers not only support the popular Windows operating system, but also provide embedded operating system solutions offering a pre-configured image with optimized onboard device drivers. Advantech’s Embedded Automation Computers provide the following most popular embedded operating systems:
- Windows CE 5.0
- Windows CE 6.0 R2
- Windows XP Embedded
- Windows Embedded Standard (WES)
- Advantech Embedded Linux

These operating systems fulfill the toughest requirements of complete functionality, high reliability, minimized cost and low power consumption. These Embedded Automation Computers quickly prove themselves to be application-ready platforms that save time and energy in launching projects.

Real-Time Windows CE Meets Time-critical Demands
Windows CE, published by Microsoft, is a robust, compact and highly efficient real-time operating system that quickly satisfies any customized high-performance embedded applications. It also provides enterprise-scale protection with demanding network security mechanisms, including Kerberos Security Protocol, Extensible Authentication Protocol, Secure Sockets Layer (SSL) and so on. Furthermore, Windows CE supports the latest stack network standard, IPv6 that provides more IP addresses than the previous standard, IPv4. Windows CE possesses robust core OS services and complete networking services to offer users an ideal embedded development platform.

WinCE Powered by Wonderware Offers Flexible HMI
WinCE 6.0 R2 version for the UNO series meets Wonderware’s HMI Software’s system requirement. With the HMI software support, these computers can work as HMI or control nodes. With the provided VESA mounting kit they can be integrated with panel monitors, such as FPM series. With support for touchscreen controllers under WinCE, users can operate the systems through touch. Without the monitor, they can also be a control node for programmed control logic.

WES Provides Applications Compatible to Windows CE
Windows Embedded Standard (WES) is a new name of WinXPe which is a componentized version of Windows XP Professional. It is based on Windows XP Professional binaries and features the latest multimedia (Windows Media Player 11, DirectX 9.0c), browsing (Internet Explorer 7.0) technologies, security, Remote Desktop Protocol 6.0 and File Based Write Filter (FBWF). You can seamlessly integrate specific applications into WES with minimum effort.

Open Source Embedded Linux Offers a Cost-effective Alternative
Embedded Linux is a famous, UNIX compatible, open source embedded operating system which ports the Linux kernel to a specific CPU and board into the embedded device. Advantech offers Embedded Linux installation CD for the UNO series products and supports Fedora Core 8 and RedHat 9.0 kernels. In the Embedded Linux, it features read-only file system, real-time kernel, on-line update, X Windows, browsing (Dillo), PDF viewer (XPDF), FTP (GFTP), IP6 and software management (RedHat Package Manager) in 128MB image size.

Driver Packages Provided for QNX and Popular Linux Distributions
Customers can install QNX and standard Linux distributions on the UNO series Embedded Automation Computers and Advantech provides drivers for the following self-design hardware or IO:
- Serial COM ports with Oxford UART
- CAN port
- Watchdog Timer
- Battery-backup SRAM
- Digital I/O ports

To follow the GNU’s open source code policy, Advantech provides driver source codes for compiling and installing popular Linux distributions as well as QNX 6.3.2 and 6.4.1. Customers can easily get it in the companion DVD and on the web site.

Standard Windows Support up to Windows 7
Advantech’s Embedded Automation Computers provide necessary drivers on the companion DVD for users to install popular Windows operating systems, such as Windows 2000, Windows XP Pro, even the latest Windows 7. For the self-design hardware or IO, Advantech provides the WDM (Windows Driver Model) driver architecture of Windows. WDM drivers would work on the other new Windows system as long as WDM is supported.

Software Drivers & Utilities
Advantech’s Embedded Automation Computers provide more value to automation users. By accumulating years of field-experience and collecting customer’s feedback, we had developed several convenient and high-efficient driver/utility which would highly facilitate users to manage the Embedded Automation Computers.

DiagAnywhere for Cluster Management
Users usually need to manage a cluster of the UNO series units on the field site. Advantech DiagAnywhere provides the following functions for users to manage them easily:
- Remote monitoring, control, shutdown and wakeup
- Screen capture and recording
- File transferring

Every UNO series’ Windows-based embedded system, such as WinCE, WES and WinXPe comes bundled with DiagAnywhere. Users only need one client-end utility installed on the PC or laptop then they can do the remote monitor and diagnosis easily.

Non-volatile Memory, Useful Buffer for Controller Application
In some control applications, users need quick and reliable buffers for data transferring. The UNO series provide the non-volatile memory, such as battery-backup SRAM or the FeRAM. With the driver support, users can use memory easily just like a local drive. It can also be used as a quick buffer, not only with high read/write efficiency, but also can reduce the accessing frequency of CompactFlash.

EWF/FBWF Utility Protects the System
In the provided WES and WinXPe image of the UNO series, we provide a friendly utility which has clear interface to guide users active/inactive the EWF (Enhanced Write Filter) and FBWF (File-Based Write Filter) functions step by step. EWF and FBWF are the features provided by Microsoft. They are used to protect the WES or WinXPe from damage. While these functions are active, the specified drive or folder would never be written, and everything would be back to the original configuration after reboot. Empowered by the provided utility, users can utilizes the EWF/FBWF easily.

System Utilities for Status-Monitoring and Availability
Users in industrial fields usually need to monitor the system status. The UNO series provide the LMsensor driver/utility for users to monitor the system parameters, such like the Temperature of CPU/Board and Voltage of system power source. Also, we provide the WDT (Watchdog Timer) driver/utility to increase the availability of the system. WDT would reset the system or send alarm while the system is stuck on some accident events. For both functions, LMsensor and WDT, we also provide the APIs for users to integrate into their applications.

Enhanced COM Port Driver Meets the Industrial Requirements
In the WinCE of the UNO series, we developed enhanced COM port driver which is more time-efficient than standard driver. It can not only increase the communication efficiency but also reduce the CPU loading. In addition, the WDM driver of COM port with Oxford UART supports the function of any-baud-rate. This function is able to support any baud rate users want for specific applications and prevent data loss.

Driver/Utility Support for Fieldbus and Domain I/O
As a domain-focused automation computer provider, Advantech provides a series of value-added software to fulfill the demand of the fieldbus and domain I/O, including EtherCAT Master, CANopen, Modbus OPC Server and IRIG-B.
Fieldbus Master UNO

Introduction

Overview

In a complex automation industrial system, fieldbus is a reliable and real-time communication protocol designed to link with components, such as sensors, actuators, electric motors, switches, valves and contactors. As embedded automation computers, the UNO series, usually act as reliable data gateways, SCADA nodes or PC-base control nodes in industrial automation systems. However, in some scenarios, users may need real-time higher communication and reliability.

Target Applications

SCADA Node

Running SCADA software on the UNO series and collecting process data from industrial components through fieldbus.

Control Node

Running Controller software on the UNO series to deliver the process action to lower level controllers or I/O devices.

Protocol Converter

In between two or more fieldbus networks, the UNO series acts as a seamless translator for transparent data transmission.

Fieldbus Communication Technologies

The fieldbus master UNO series integrate Hilscher’s NetX technology to build in the fieldbus protocol. Hilscher is a company with a field-proven record in industrial communications technology. With these intelligent solutions, the UNO series can manage the entire data transfer so that only useful data are passed on to user applications.

The UNO series support three types of popular fieldbus: PROFIBUS, PROFINET and EtherNet/IP. With these integrated solutions, it provides a powerful, easy to handle and reliable solution at a low-cost.

All protocols are configured using SyCon System Configurator. SyCon is a universal system configurator with a unified user desktop for all fieldbus. By using GSD, EDS or other device description files, graphical input of the individual bus participants, clearly structured menu guidance and automatic computations of the bus parameters; configuration is a very simple exercise. SyCon can be executed under Windows 95/98/ME and Windows NT/2000/XP operating systems.

Ordering Information

PROFINET:
- UNO-1172AEI-A33E
- UNO-2178AEI-A33E
- UNO-2184GEI-D44E

Ethernet/IP:
- UNO-1172AEI-A33E
- UNO-2178AEI-A33E
- UNO-2184GEI-D44E

PROFIBUS:
- UNO-1172APB-A33E
- UNO-2178APB-A33E
- UNO-2184GFPB-D44E

PROFINET I/O Controller

<table>
<thead>
<tr>
<th>Cyclic Data</th>
<th>Max. 1644 bytes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unscheduled Data</td>
<td>Max. 504 bytes per telegram</td>
</tr>
</tbody>
</table>

EtherNet/IP Scanner/Master

| Cyclic Data | Max. 11520 bytes |
| Unscheduled Data | Max. 4096 bytes per request |

Functions

- Alarm handling
- Context management over CTP
- DCP
- Max. 32 devices
- Minimum cycle time 1 ms
- Per device 1 puffer available for diagnostic data

Client Services

- Get_Attribute_Single/All
- Set_Attribute_Single/All

PROFIBUS Master

| Slaves | Max. 125 |
| Cyclic Data | Max. 7568 bytes |
| DPV1 Class 1.2 | Yes |
| Configuration Data | 244 bytes/slave |
| Application-specific Parameters | 237 bytes/slave |
## Embedded Automation Computer Selection Guide

<table>
<thead>
<tr>
<th>Model Name</th>
<th>UNO-1110/L/ST</th>
<th>UNO-1140/1140F</th>
<th>UNO-1150G/1150GE</th>
<th>UNO-1170A/1170AE</th>
<th>UNO-1172A/1172AE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CPU</strong></td>
<td>TI Cortex A8 AM3505, 600 MHz</td>
<td>EVA-X4150 SoC 486SX grade, 500 MHz</td>
<td>AMD Geode LX800, 500 MHz</td>
<td>Intel Atom N270, 1.6 GHz</td>
<td>Intel Atom D510, 1.66 GHz</td>
</tr>
<tr>
<td><strong>Onboard RAM</strong></td>
<td>UNO-1110L: 128 MB DDR2 SDRAM UNO-1100ST: 256 MB DDR2 SDRAM</td>
<td>64 MB DDR SDRAM</td>
<td>256 MB DDR SDRAM</td>
<td>1 GB DDR2 SDRAM</td>
<td>2 GB DDR2 SDRAM</td>
</tr>
<tr>
<td><strong>Battery-Backup SRAM</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>512 KB</td>
<td>1 MB</td>
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<tr>
<td><strong>Display</strong></td>
<td>VGA (only UNO-1110/ST)</td>
<td>VGA</td>
<td>VGA</td>
<td>VGA</td>
<td>VGA</td>
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<tr>
<td><strong>Audio</strong></td>
<td>Line out (only UNO-1110/ST)</td>
<td>-</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes, 5.1 channel HD Audio</td>
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<tr>
<td><strong>Ethernet Ports</strong></td>
<td>2 x 10/100Base-T</td>
<td>2 x 10/100Base-T</td>
<td>1 x 10/100Base-T</td>
<td>2 x 10/100Base-T</td>
<td>2 x 10/100/1000Base-T</td>
</tr>
<tr>
<td><strong>USB Ports</strong></td>
<td>UNO-1110/L: One</td>
<td>Two</td>
<td>Two</td>
<td>Four (One internal)</td>
<td>Four</td>
</tr>
<tr>
<td><strong>PC Card Slots</strong></td>
<td>-</td>
<td>-</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Printer Ports</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>PC/104 Expansion</strong></td>
<td>1 x Mini PCI (w/ USB signal only)</td>
<td>1 x Mini PCI (UNO-1150GE)</td>
<td>1 x Mini PCI (UNO-1170GE)</td>
<td>1 x Mini PCI (UNO-1170A)</td>
<td>1 x Mini PCI + 1 x Mini PCI (UNO-1172AE)</td>
</tr>
<tr>
<td><strong>Onboard I/O</strong></td>
<td>UNO-1110L: N/A</td>
<td>UNO-1110: 4-ch DI, 2-ch DO</td>
<td>UNO-1150G: 4-ch 1.5KV isolated DI, 2-ch 1.5KV isolated DO</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Watchdog Timer</strong></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Compact/Flash Slots</strong></td>
<td>-</td>
<td>One internal</td>
<td>One internal</td>
<td>One internal</td>
<td>One internal</td>
</tr>
<tr>
<td><strong>2.5&quot; HDD Expansion</strong></td>
<td>-</td>
<td>-</td>
<td>1 x SATA (UNO-1150GE)</td>
<td>1 x SATA</td>
<td>1 x SATA</td>
</tr>
<tr>
<td><strong>Mounting</strong></td>
<td>DIN-rail/Wall</td>
<td>DIN-rail/Wall</td>
<td>DIN-rail/Wall</td>
<td>DIN-rail/Wall</td>
<td>DIN-rail/Wall</td>
</tr>
<tr>
<td><strong>Anti-Vibration</strong></td>
<td>5 G w/CF</td>
<td>2 G w/CF, 1 G w/HDD</td>
<td>2 G w/CF, 1G w/HDD</td>
<td>2 G w/CF, 1 G w/HDD</td>
<td>2 G w/CF, 1 G w/HDD</td>
</tr>
<tr>
<td><strong>Anti-Shock</strong></td>
<td>50 G w/CF</td>
<td>50 G w/CF, 20 G w/HDD</td>
<td>50 G w/CF, 20 G w/HDD</td>
<td>50 G w/CF, 20 G w/HDD</td>
<td>50 G w/CF, 20 G w/HDD</td>
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<tr>
<td><strong>Power Input Range</strong></td>
<td>9 ~ 36 VDC</td>
<td>10 ~ 36 VDC</td>
<td>10 ~ 36 VDC</td>
<td>10 ~ 36 VDC</td>
<td>10 ~ 36 VDC</td>
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<tr>
<td><strong>Operating Temperature</strong></td>
<td>-10 ~ 70°C @ 5 ~ 85% RH</td>
<td>-20 ~ 75°C (-4 ~ 167°F)</td>
<td>-10 ~ 60°C (14 ~ 140°F)</td>
<td>-10 ~ 60°C (14 ~ 140°F)</td>
<td>-10 ~ 65°C (14 ~ 149°F)</td>
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<tr>
<td><strong>Power Consumption Typical</strong></td>
<td>15 W</td>
<td>24 W</td>
<td>24 W</td>
<td>24 W</td>
<td>24 W</td>
</tr>
<tr>
<td><strong>Power Requirement</strong></td>
<td>24 W, +24 V @ 1 A power input</td>
<td>48 W, +24 V @ 2 A power input</td>
<td>48 W, +24 V @ 2 A power input</td>
<td>48 W, +24 V @ 2 A power input</td>
<td>48 W, +24 V @ 2 A power input</td>
</tr>
<tr>
<td><strong>Dimensions (W x D x H)</strong></td>
<td>48 x 127 x 152 mm (1.9&quot; x 5&quot; x 6&quot;)</td>
<td>71 x 193 x 152 mm (2.8&quot; x 5.5&quot; x 6&quot;)</td>
<td>71 x 139 x 152 mm (2.8&quot; x 5.5&quot; x 6&quot;)</td>
<td>85.5 x 139 x 152 mm (3.4&quot; x 5.5&quot; x 6&quot;)</td>
<td>85.5 x 139 x 152 mm (3.4&quot; x 5.5&quot; x 6&quot;)</td>
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<tr>
<td><strong>Weight</strong></td>
<td>0.45 kg</td>
<td>1.0 kg</td>
<td>1.6 kg / 2.0 kg</td>
<td>1.6 kg / 2.0 kg</td>
<td>1.6 kg / 2.0 kg</td>
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<tr>
<td><strong>Page</strong></td>
<td>12-9</td>
<td>12-10</td>
<td>12-11</td>
<td>12-12</td>
<td>12-12</td>
</tr>
</tbody>
</table>

*All power input ranges represent the minimum and maximum values recommended for these devices.*
<table>
<thead>
<tr>
<th>Model Name</th>
<th>UNO-2050G</th>
<th>UNO-2053GL</th>
<th>UNO-2059GL</th>
<th>UNO-2170</th>
<th>UNO-2171</th>
<th>UNO-2172</th>
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<tbody>
<tr>
<td>CPU</td>
<td>LX800, 500 MHz</td>
<td>LX800, 500 MHz</td>
<td>LX800, 500 MHz</td>
<td>Intel Celeron M, 600 MHz Intel Celeron M, 1.0 GHz</td>
<td>Intel Celeron M, 1.0 GHz, 1.4 GHz</td>
<td>Intel Celeron M, 1.5 GHz Intel Pentium M, 1.6 GHz</td>
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<td>Onboard RAM</td>
<td>256 MB DDR SDRAM</td>
<td>256 MB/512 MB DDR SDRAM</td>
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<tr>
<td>Battery-Backup SRAM</td>
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<td>512 KB</td>
<td>512 KB</td>
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<td>Display</td>
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<td>VGA</td>
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<td>DVI-I</td>
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<tr>
<td>Audio</td>
<td>-</td>
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<td>-</td>
<td>Yes</td>
<td>Yes</td>
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<tr>
<td>Ethernet Ports</td>
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<td>2 x 10/100Base-T</td>
<td>1 x 10/100Base-T</td>
<td>2 x 10/100Base-T</td>
<td>2 x 10/100Base-T</td>
<td>2 x 10/100Base-T</td>
</tr>
<tr>
<td>USB Ports</td>
<td>-</td>
<td>Two</td>
<td>Two</td>
<td>Two</td>
<td>Two</td>
<td></td>
</tr>
<tr>
<td>PC Card Slots</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>One</td>
<td>-</td>
<td></td>
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<tr>
<td>Printer Ports</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>One</td>
<td>-</td>
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<tr>
<td>PC/104 Expansion</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>PC/104</td>
<td>PC/104+</td>
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<td>PCIe/PCI Expansion</td>
<td>-</td>
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<td>-</td>
<td>-</td>
<td>-</td>
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<td>Onboard I/O</td>
<td>8-ch isolated DI 8-ch isolated DO</td>
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<td>-</td>
<td>-</td>
<td>-</td>
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<tr>
<td>Watchdog Timer</td>
<td></td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
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<tr>
<td>CompactFlash Slots</td>
<td>One internal</td>
<td>Two internal</td>
<td>One internal</td>
<td>IDE (Optional)</td>
<td>1 x IDE/SATA</td>
<td></td>
</tr>
<tr>
<td>2.5&quot; HDD Expansion</td>
<td>IDE (Optional)</td>
<td></td>
<td></td>
<td>Windows 2000/XP, WES-2009, CE 5.0 &amp; 6.0, Linux, QNX</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Operating Systems</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Windows 2000/XP/7, WES7, WES-2009, XPen, CE 5.0 &amp; 6.0, Linux, QNX</td>
<td></td>
</tr>
<tr>
<td>Mounting</td>
<td>DIN-rail/Wall/VESA</td>
<td>DIN-rail/Wall/VESA</td>
<td>DIN-rail/Wall/VESA</td>
<td>DIN-rail/Wall/VESA</td>
<td>DIN-rail/Wall/VESA</td>
<td>DIN-rail/Wall/VESA</td>
</tr>
<tr>
<td>Anti-Vibration</td>
<td>2 G w/CF 1 G w/HDD</td>
<td>2 G w/CF 0.5 G w/HDD</td>
<td>2 G w/CF 1 G w/HDD</td>
<td>2 G w/CF 1 G w/HDD</td>
<td>2 G w/CF 1 G w/HDD</td>
<td>2 G w/CF 1 G w/HDD</td>
</tr>
<tr>
<td>Anti-Shock</td>
<td>20 G w/CF 50 G w/CF</td>
<td>50 G w/CF 20 G w/CF</td>
<td>50 G w/CF 20 G w/CF</td>
<td>50 G w/CF 20 G w/CF</td>
<td>50 G w/CF 20 G w/CF</td>
<td>50 G w/CF 20 G w/CF</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-10 ~ 55°C (-14 ~ 131°F)</td>
<td>-20 ~ 50°C (-4 ~ 122°F)</td>
<td>-20 ~ 50°C (-4 ~ 122°F)</td>
<td>-20 ~ 50°C (-4 ~ 122°F)</td>
<td>-20 ~ 50°C (-4 ~ 122°F)</td>
<td>-20 ~ 50°C (-4 ~ 122°F)</td>
</tr>
<tr>
<td>Power Requirement</td>
<td>15 W</td>
<td>24 W</td>
<td>24 W</td>
<td>24 W</td>
<td>24 W</td>
<td>45 W</td>
</tr>
<tr>
<td>Power Consumption Typical</td>
<td>24 W</td>
<td>+24 V @ 1 A power input</td>
<td>48 W</td>
<td>+24 V @ 2 A power input</td>
<td>48 W</td>
<td>+24 V @ 2 A power input</td>
</tr>
<tr>
<td>Dimensions (W x D x H)</td>
<td>188.8 x 106.5 x 35.5 mm (7.5” x 4.2” x 1.4”)</td>
<td>255 x 152 x 50 mm (10” x 6.0” x 2.0”)</td>
<td>255 x 152 x 59 mm (10” x 6.0” x 2.3”)</td>
<td>255 x 152 x 69 mm (10” x 6.0” x 2.7”)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>0.8 kg</td>
<td>1.6 kg</td>
<td>2.4 kg</td>
<td>3.0 kg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* All power input ranges represent the minimum and maximum values recommended for these devices.
<table>
<thead>
<tr>
<th>Model Name</th>
<th>UNO-2173A/AF</th>
<th>UNO-2174A/2178A</th>
<th>UNO-2176</th>
<th>UNO-2182</th>
<th>UNO-2174G/GL</th>
<th>UNO-2184G</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>Intel Atom N270, 1.6 GHz</td>
<td>Intel Atom N450, 1.6 GHz, Intel Atom D510, 1.66 GHz</td>
<td>Intel Celeron M, 1.0 GHz, Intel Pentium M, 1.4 GHz</td>
<td>Intel Core 2 Duo, 1.5 GHz</td>
<td>UNO-2174G/GL: Intel Celeron 847/807UE, 1.1/1.0 GHz</td>
<td>UNO-2184G: Intel Core i7-2655LE, 2.2 GHz</td>
</tr>
<tr>
<td>Onboard RAM</td>
<td>1 GB/2 GB DDR2 SDRAM</td>
<td>2 GB DDR2 SDRAM</td>
<td>512 MB DDR SDRAM</td>
<td>2 GB DDR2 SDRAM</td>
<td>4 GB/8 GB DDR3 SDRAM</td>
<td></td>
</tr>
<tr>
<td>Battery-Backup RAM</td>
<td>-</td>
<td>-</td>
<td>512 KB</td>
<td>512 KB</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Display</td>
<td>VGA</td>
<td>VGA</td>
<td>VGA</td>
<td>DVI-I</td>
<td>DVI-I/HDMI/DP</td>
<td></td>
</tr>
<tr>
<td>Audio</td>
<td>UNO-2173A: N/A</td>
<td>UNO-2173AF: Yes, 5.1 channel HD audio</td>
<td>-</td>
<td>Yes</td>
<td>Yes, 5.1 channel HD audio</td>
<td></td>
</tr>
<tr>
<td>PC Card Slots</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Printer Ports</td>
<td>(Pin-head reserved for project)</td>
<td>One (UNO-2174A)</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>PC/104 Expansion</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>PCI/PCI Expansion</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Onboard I/O</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Anti-Vibration</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>2.5&quot; HDD Expansion</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>Mounting</td>
<td>DIN-rail/Wall/VESA</td>
<td>DIN-rail/Wall/VESA</td>
<td>DIN-rail/Wall/VESA</td>
<td>DIN-rail/Wall/VESA</td>
<td>DIN-rail/Wall/VESA</td>
<td></td>
</tr>
<tr>
<td>Power Consumption Typical</td>
<td>15 W</td>
<td>24 W</td>
<td>35 W</td>
<td>48 W</td>
<td>72 W</td>
<td></td>
</tr>
<tr>
<td>Power Requirement</td>
<td>36 W</td>
<td>48 W</td>
<td>72 W</td>
<td>48 W</td>
<td>72 W</td>
<td></td>
</tr>
<tr>
<td>Dimensions (W x D x H)</td>
<td>UNO-2174A: 255 x 152 x 59 mm (10&quot; x 6.0&quot; x 2.3&quot;)</td>
<td>UNO-2178A: 255 x 152 x 59 mm (10&quot; x 6.0&quot; x 2.3&quot;)</td>
<td>UNO-2174A: 255 x 152 x 59 mm (10&quot; x 6.0&quot; x 2.3&quot;)</td>
<td>UNO-2178A: 255 x 152 x 59 mm (10&quot; x 6.0&quot; x 2.3&quot;)</td>
<td>UNO-2174A: 255 x 152 x 59 mm (10&quot; x 6.0&quot; x 2.3&quot;)</td>
<td></td>
</tr>
<tr>
<td>Weight</td>
<td>2.5 kg</td>
<td>2.5 kg</td>
<td>2.4 kg</td>
<td>3.0 kg</td>
<td>3.0 kg</td>
<td></td>
</tr>
</tbody>
</table>

* All power input ranges represent the minimum and maximum values recommended for these devices.
<table>
<thead>
<tr>
<th>Model Name</th>
<th>UNO-3072L</th>
<th>UNO-3072/3074</th>
<th>UNO-3072LA</th>
<th>UNO-3072A/3074A</th>
<th>UNO-3082/3084</th>
<th>UNO-3072/3082</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPU</td>
<td>Intel Celeron M, 1.01 GHz</td>
<td>Intel Pentium M, 1.41 GHz</td>
<td>Intel Atom N270, 1.6 GHz</td>
<td>Intel Atom D510, 1.66 GHz</td>
<td>Intel Core 2 Duo, 1.66 GHz</td>
<td>Intel Celeron M, 1.86 GHz</td>
</tr>
<tr>
<td>Onboard RAM</td>
<td>512 MB/1 GB SDRAM</td>
<td>1 GB DDR SDRAM</td>
<td>1 GB2 GB DDR2 SDRAM</td>
<td>2 GB DDR2 SDRAM</td>
<td>2 GB/4 GB DDR2 SDRAM</td>
<td>1 GB DDR2 SDRAM</td>
</tr>
<tr>
<td>Battery-Backup RAM</td>
<td>-</td>
<td>-</td>
<td>512 KB</td>
<td>512 KB</td>
<td>512 KB</td>
<td>512 KB</td>
</tr>
<tr>
<td>Display</td>
<td>VGA</td>
<td>VGA</td>
<td>VGA</td>
<td>Dual DVI-I up to 3 display</td>
<td>VGA+ DVI-D</td>
<td>-</td>
</tr>
<tr>
<td>Audio</td>
<td>-</td>
<td>-</td>
<td>Yes, 5.1 channel HD Audio line out</td>
<td>Yes, 5.1 channel HD Audio line out</td>
<td>Yes, 5.1 channel HD Audio line out</td>
<td>Line in/ Line out</td>
</tr>
<tr>
<td>Ethernet Ports</td>
<td>2 x 10/100Base-T</td>
<td>2 x 10/100Base-T</td>
<td>2 x 10/100Base-T/1000 Base-T</td>
<td>2 x 10/100/1000 Base-T</td>
<td>2 x 10/100/1000 Base-T</td>
<td>-</td>
</tr>
<tr>
<td>USB Ports</td>
<td>Four</td>
<td>Four</td>
<td>Five (One internal), two extra on pin header</td>
<td>Five (One internal), two extra on pin header</td>
<td>Five (One internal), two extra on pin header</td>
<td>Five (One internal)</td>
</tr>
<tr>
<td>PC Card Slots</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Printer Ports</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>PCIe/PCI Expansion</td>
<td>2 x PCI</td>
<td>2 x PCI (UNO-3072)/4 x PCI (UNO-3074)</td>
<td>2 x PCI</td>
<td>2 x PCI (UNO-3072A)/4 x PCI (UNO-3074A)</td>
<td>2 x PCI (UNO-3082)/3 x PCI + 1 x PCIe (UNO-3084)</td>
<td>2 x PCI (UNO-3072)/1 x PCI + 1 x PCIe (UNO-3082)</td>
</tr>
<tr>
<td>Onboard I/O</td>
<td>4-ch isolated DI/4-ch isolated DD</td>
<td>4-ch isolated DI/4-ch isolated DD</td>
<td>-</td>
<td>4-ch isolated DI/4-ch isolated DD</td>
<td>Dual type B IEEE 1394</td>
<td>-</td>
</tr>
<tr>
<td>Watchdog Timer</td>
<td>-</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>-</td>
</tr>
<tr>
<td>CompactFlash Slots</td>
<td>One internal</td>
<td>One internal</td>
<td>One internal</td>
<td>One internal</td>
<td>One internal</td>
<td>One internal</td>
</tr>
<tr>
<td>2.5” HDD Expansion</td>
<td>1 x IDE/ATA</td>
<td>1 x IDE/ATA</td>
<td>1 x SATA, 1 x eSATA</td>
<td>2 x SATA, support RAID 0/1, 1 x eSATA</td>
<td>2 x SATA, support RAID 0/1, 1 x eSATA</td>
<td>2 x SATA, support RAID 0/1</td>
</tr>
<tr>
<td>Mounting</td>
<td>Wall/Stand</td>
<td>Wall/Stand</td>
<td>Wall/Stand</td>
<td>Wall/Stand</td>
<td>Wall/Stand</td>
<td>Wall/Stand</td>
</tr>
<tr>
<td>Anti-Vibration</td>
<td>2 G w/CF, 1 G w/HDD</td>
<td>2 G w/CF, 1 G w/HDD</td>
<td>2 G w/CF, 1 G w/HDD</td>
<td>2 G w/CF, 1 G w/HDD</td>
<td>2 G w/CF, 1 G w/HDD</td>
<td>-</td>
</tr>
<tr>
<td>Anti-Shock</td>
<td>50 G w/CF, 20 G w/HDD</td>
<td>50 G w/CF, 20 G w/HDD</td>
<td>50 G w/CF, 20 G w/HDD</td>
<td>50 G w/CF, 20 G w/HDD</td>
<td>50 G w/CF, 20 G w/HDD</td>
<td>50 G w/CF, 20 G w/HDD</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-20 ~ 60°C (-4 ~ 140°F)</td>
<td>-20 ~ 55°C (-4 ~ 131°F)</td>
<td>-10 ~ 60°C (14 ~ 140°F)</td>
<td>-10 ~ 60°C (14 ~ 140°F)</td>
<td>-10 ~ 55°C (14 ~ 131°F)</td>
<td>-10 ~ 55°C (14 ~ 131°F)</td>
</tr>
<tr>
<td>Power Consumption Typical</td>
<td>24 W</td>
<td>24 W</td>
<td>24 W</td>
<td>25 W</td>
<td>40 W</td>
<td>40 W</td>
</tr>
<tr>
<td>Power Requirement</td>
<td>48 W, +24 V @ 2 A power input</td>
<td>48 W, +24 V @ 2 A power input</td>
<td>48 W, +24 V @ 2 A power input</td>
<td>72 W, +24 V @ 3 A power input</td>
<td>96 W, +24 V @ 4 A power input</td>
<td>120 W, +24 V @ 5 A power input</td>
</tr>
<tr>
<td>Dimensions (W x D x H)</td>
<td>140 x 237 x 179 mm</td>
<td>140 x 237 x 179 mm</td>
<td>140 x 238 x 177 mm</td>
<td>140 x 238 x 177 mm</td>
<td>140 x 238 x 177 mm</td>
<td>140 x 238 x 177 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>4.2 kg / 6.0 kg</td>
<td>4.4 kg / 7.0 kg</td>
<td>4.5 kg</td>
<td>4.5 kg / 5.0 kg</td>
<td>4.5 kg / 5.0 kg</td>
<td>5.5 kg</td>
</tr>
</tbody>
</table>

* All power input ranges represent the minimum and maximum values recommended for these devices.
### UNO-1110/L/ST

**NEW**

**Certification**
- CE, FCC Class A, UL, CCC

**Dimension (W x H x D)**
- 48 x 152 x 127 mm (1.9” x 6.0” x 5”)

**Enclosure**
- Aluminum with solid mounting hardware

**Mounting**
- DIN-rail, Wallmount

**Industrial Grounding**
- Isolation between chassis and power ground

**Power Consumption**
- 4.5 W (min.)

**Power Input**
- 10 - 30 Vdc (13 W), AT, ground isolation

**Weight**
- 0.45 kg

**System Design**
- Fanless design with no internal cabling

---

**Features**

- **CPU**
  - TI Cortex A8 AM3505 600 MHz processor

- **Memory**
  - 128/256 MB DDR2 on board

- **Display**
  - 2 x RS-232/422/485, 1 x RS-485 serial ports

- **LAN**
  - Dual 10/100 Mbps Ethernet

- **USB**
  - 2 x SD card slots

- **Digital I/O**
  - Windows® CE 6.0 Ready Platform and optional uClinux OS support

- **Environment**
  - Ingress Protection: IP40

- **Operating Temperature**
  - -10 ~ 70°C (-14 ~ 158°F)

- **Operating Humidity**
  - 20 ~ 80% (4 ~ 176°F) (only for UNO-1110ST)

- **Storage Temperature**
  - -20 ~ 85°C (-4 ~ 176°F)

- **Storage Humidity**
  - 0 ~ 95% (non-condensing)

- **Vibration Protection**
  - EIC 60068-2-64 (Random 1 Oct/min, 1/hr/axis.)

---

**Specifications**

**General**
- Certification: CE, FCC Class A, UL, CCC

**CPU**
- TI Cortex A8 AM3505 600 MHz
- UNO-1110L: Onboard 128 MB DDR2
- UNO-1110/ST: Onboard 256 MB DDR2

**Display**
- DB15 VGA connector, up to 1024 x 768 (only for UNO-1110/ST)

**Audio**
- Line out (only for UNO-1110/ST)

**Indicators**
- Power, Serial (Tx, Rx), SD

**Storage**
- 2 x SD card slots (one for boot and another for data storage)

**Expansion**
- 1 x Mini PCIe card slot (Signal Protocol: USB Differential)

**System Software**
- Operating System: WinCE 6.0/ Linux
- Remote Management: Built-in Advantech DiagAnywhere agent on Windows

**I/O Interface**
- **Serial Ports**
  - 1 x RS-485, 4 x RS-232/422/485 with DB9 connectors (for UNO-1110/ST)
  - 2 x RS-232/422/485 with DB9 connectors (for UNO-1110L)

**Other**
- Realtime clock, Watchdog timer

---

**Environmental**

- Ingress Protection: IP40
- Operating Temperature: -10 ~ 70°C (-14 ~ 158°F)
- Storage Temperature: -20 ~ 85°C (-4 ~ 176°F) (only for UNO-1110ST)
- Operating Humidity: 20 ~ 80% (4 ~ 176°F) (only for UNO-1110ST)
- Storage Humidity: 0 ~ 95% (non-condensing)
- Vibration Protection: EIC 60068-2-64 (Random 1 Oct/min, 1/hr/axis.)

---

**Ordering Information**

- **UNO-1110L/ACE**
  - TI Cortex AM3505 600MHz DIN-rail PC w/ 128 MB DDR2, WinCE6.0

- **UNO-1110L-ACE**
  - TI Cortex AM3505 600MHz DIN-rail PC w/ 128 MB DDR2, Linux

- **UNO-1110-ST-ACE**
  - TI Cortex AM3505 600MHz DIN-rail PC w/ 256 MB DDR2, WinCE6.0

- **UNO-1110ST-ACE**
  - TI Cortex AM3505 600MHz DIN-rail PC w/ 256 MB DDR2, Linux

- **UNO-1110ST-LAE**
  - TI Cortex AM3505 600MHz DIN-rail PC w/ 256 MB DDR2, Linux

- **PCLS-DIAGAW10**
  - Advantech Remote Monitoring & Diagnosis Utility

---

**Introduction**

Advantech’s UNO-1110 series are RISC-grade embedded platforms that offer up to 2 LAN ports, 5 serial ports and 2 SD card slots. The UNO-1110 series also come with Windows CE 6.0/Linux OS, offering an integrated image. Additionally, the UNO-1110 series operate at temperatures between -40 ~ 80°C, and their small size and lightweight design allows it to be installed in tight industrial environments. With one Mini PCIe card slot support, it is very easy to expand the wireless communication capability of the UNO-1110 series. The UNO-1110 series are excellent gateway devices for converting communication protocols, I/O control, and data storage in the industrial field.

---

**Features**

- **Serial Port Speed**
  - RS-232: 300 ~ 115.2 kbps
  - RS-422/485: 300 ~ 115.2 kbps (Max)
  - 2 x 10/100Base-T RJ-45 ports

- **LAN**
  - 1 x USB2.0 (for UNO-1110L)
  - 4 x USB2.0 (for UNO-1110/ST)

- **USB**
  - 4-ch., dry contact, 0 ~ 50 Vdc input range
  - 4-ch., 1.5KV isolated dry contact, 0 ~ 50 Vdc input range (for UNO-1110ST)

- **Digital Input**
  - 4-ch., 1.5KV isolated dry contact, 0 ~ 50 Vdc input range (for UNO-1110ST)
  - 4-ch., dry contact, 0 ~ 50 Vdc input range (for UNO-1110-L)

- **Digital Output**
  - 2-ch., 200 mA max/channel sink current, 5 ~ 40 Vdc output range (for UNO-1110ST)
  - 2-ch., 200 mA max/channel sink current, 5 ~ 40 Vdc output range (for UNO-1110-L)

---

**Environment**

- Ingress Protection: IP40
- Operating Temperature: -10 ~ 70°C (-14 ~ 158°F)
- Storage Temperature: -40 ~ 85°C (-40 ~ 176°F) (only for UNO-1110ST)
- Operating Humidity: 20 ~ 80% (4 ~ 176°F) (only for UNO-1110ST)
- Storage Humidity: 0 ~ 95% (non-condensing)
- Vibration Protection: EIC 60068-2-64 (Random 1 Oct/min, 1/hr/axis.)

---

**Ordering Information**

- **UNO-1110L/ACE**
  - TI Cortex AM3505 600MHz DIN-rail PC w/ 128 MB DDR2, WinCE6.0

- **UNO-1110L-ACE**
  - TI Cortex AM3505 600MHz DIN-rail PC w/ 128 MB DDR2, Linux

- **UNO-1110-ST-ACE**
  - TI Cortex AM3505 600MHz DIN-rail PC w/ 256 MB DDR2, WinCE6.0

- **UNO-1110ST-ACE**
  - TI Cortex AM3505 600MHz DIN-rail PC w/ 256 MB DDR2, Linux

- **UNO-1110ST-LAE**
  - TI Cortex AM3505 600MHz DIN-rail PC w/ 256 MB DDR2, Linux

- **PCLS-DIAGAW10**
  - Advantech Remote Monitoring & Diagnosis Utility
UNO-1150G/GE AMD Geode™ LX800 DIN-rail PCs with 2 x LAN, 3 x COM, PCI-104

Introduction

UNO-1150G/GE are DIN-rail mounted PCs that provide several serial communication ports and Ethernet interfaces. Their compact size, small footprint and front-accessibility allow easy installation in field cabinets and help to save spaces. With rich OS and driver supports, such as Windows XP Embedded, WinCE 6.0 and embedded Linux, users can integrate applications easily with a platform that can provide versatile functions to fulfill diverse requirements.

Specifications

General
- Certification: CE, FCC Class A, UL, CCC
- Dimension (W x H x D): UNO-1150G: 71 x 152 x 139 mm (2.8" x 6.0" x 5.5") UNO-1150GE: 96.5 x 152 x 139 mm (3.8" x 6.0" x 5.5")
- Enclosure: Aluminum + SECC
- Mounting: DIN-rail, Wallmount
- Power Consumption: 15 W (Typical)
- Power Requirement: 10 ~ 36 VDC (e.g. +24 V @ 1 A) (Min. 24 W), AT
- Weight: UNO-1150G: 1.6 kg UNO-1150GE: 2.0 kg
- OS Support: WES Windows XP Embedded, Windows 2000 & XP, Windows CE 5.0/6.0, Linux
- System Design: Fanless with no internal cabling
- Remote Management: Built-in Advantech DiagAnywhere agent on Windows CE / XPe

System Hardware
- CPU: AMD Geode LX800 500 MHz
- Memory: Onboard 256 MB DDR SDRAM
- Indicators: LEDs for Power, IDE, LAN (Active, Status) and Serial (Tx, Rx), Buzzer for Diagnosis (programmable)
- Keyboard/Mouse: 1 x PS/2
- Storage: SSD: 1 x internal type I/II CompactFlash® slot HDD: 2.5" SATA HDD bracket (UNO-1150GE)
- PC/104 Slot: 2 x PCI-104 slot, supports 3.3 V & +5 V (Only for UNO-1150GE, one PCI-104 left while using HDD)
- Mini PCI: 1 x Mini PCI (UNO-1150GE)
- Display: DB15 VGA connector, supports up to 1024 x 768 @ 60 Hz
- Audio: Line in, Line out
- Watchdog Timer: Programmable 256 level timer interval, from 1 to 255 sec

I/O Interface
- Serial Ports: 2 x RS-232 (one pin header reserved), 2 x RS-232/422/485 with DB9 connectors, automatic RS-485 data flow control
- LAN: 2 x 10/100Base-T RJ-45 ports
- USB: 2 x USB, OpenHCI, Rev. 2.0 compliant
- Printer Port*: 1 x Printer Port pin header

*Note: This function is optional for project requirement.

Environment
- Ingress Protection: IP40
- Operating Temperature: -10 ~ 60°C (-14 ~ 140°F)
- Storage Temperature: -20 ~ 80°C (-4 ~ 176°F)
- Operating Humidity: 20 ~ 95% (non-condensing)
- Storage Humidity: 0 ~ 95% (non-condensing)
- 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: 1Grms @ 5 ~ 500 Hz

Ordering Information
- UNO-1150G-G30E: AMD GeodeLX800 500 MHz, 256 MB DIN-rail PC
- UNO-1150GE-G30E: AMD GeodeLX800 500 MHz, 256 MB DIN-rail PC w/PCI-104

Accessories
- UNO-FPM11-BE: UNO-1100 Series VESA Mount kit
- PCLS-DIAGAW10: Advantech Remote Monitoring & Diagnosis Utility
UNO-1170A/AE

Introduction

UNO-1170A/AE are DIN-rail PCs that provide several serial communication ports and Ethernet interfaces. With their compact size, small footprint, and front accessibility, the UNO-1170A/AE are convenient for wiring and easy to install in field cabinets. With rich OS and driver supports, such as Windows WES 2009, WinCE 6.0, and even embedded Linux, the UNO-1170A/AE are application-ready platforms that provide versatile functionality.

Specifications

General
- Certification: CE, FCC Class A, UL, CCC
- Dimension (W x H x D): UNO-1170A: 85.5 x 152 x 139 mm (3.4" x 6.0" x 5.5")
  UNO-1170AE: 111 x 152 x 139 mm (4.4" x 6.0" x 5.5")
- Enclosure: Aluminum + SECC
- Mounting: DIN-rail, Wallmount
- Power Consumption: 24 W (Typical)
- Power Requirement: 10 ~ 36 VDC (e.g. +24 V @ 2 A) (Min. 48 W), AT
- Weight: UNO-1170A: 1.6 kg
  UNO-1170AE: 2.0 kg
- System Design: Fanless with no internal cabling
- Remote Management: Built-in Advantech DiagAnywhere agent on Windows CE / WES 2009

System Hardware
- CPU: Intel Atom N270 1.6 GHz
- Memory: 1 GB DDR2 SDRAM Built-in
- Battery Backup RAM: 512 KB
- Indicators: LEDs for Power, IDE, LAN (Active, Status), Serial (Tx, Rx), Alarm for battery backup SRAM and diagnosis (programmable)
- Keyboard/Mouse: 1 x PS/2
- Storage: SSD: 1 x internal type II CompactFlash slot
  HDD: one 2.5" SATA HDD bracket
- PC/104 Slot: 1 x PC/104+ slot, supports up to 2 x PC/104+ cards (3.3V & 5V)
  (Only for UNO-1170AE, one PC/104+ left while using HDD)
- Mini PCI: 1 x Mini PCI (UNO-1170AE)
- Display: DB15 VGA connector, 1600 x 1200 @ 85 Hz
- Audio: Line in, Line out
- Watchdog Timer: Programmable 256 level timer interval, from 1 to 255 sec

I/O Interface
- Serial Ports: 2 x RS-232, 1 x RS-232/422/485 with DB9 connectors, automatic RS-485 data flow control
  1 x pin header RS-232
- Serial Port Speed: RS-232: 50 - 115.2 kbps
  RS-422/485: 50 - 921.6 kbps (Max)
- LAN: 2 x 10/100Base-T RJ-45 ports (Built-in boot ROM in flash BIOS)
- USB: 4 x USB, EHCI, Rev. 2.0 compliant (1 is for USB dongle inside chassis)

Environment
- Operating Temperature: (IEC 60068-2-2, 100% CPU/I/O loading)
  -10 ~ 60°C (14 ~ 140°F)
- Storage Temperature: -20 ~ 80°C (-4 ~ 176°F)
- Ingress Protection: IP40
- Operating Humidity: 20 ~ 95% (non-condensing)
- Storage Humidity: 0 ~ 95% (non-condensing)
- Shock Protection: IEC 60068-2-27
  CompFlash: 50 G @ wall mount, half sine, 11 ms
  HDD: 20 G @ wall mount, half sine, 11 ms
  (UNO-1170AE)
- Vibration Protection: IEC 60068-2-6 (Random 1 Oct/min, 1hr/axis.)
  CompFlash: 2 G rms @ 5 - 500 Hz
  HDD: 1 G rms @ 5 - 500 Hz (UNO-1170AE)

Ordering Information
- UNO-1170A-A12E: Intel Atom N270 1.6 GHz, 1 GB RAM DIN-rail PC
- UNO-1170AE-A12E: Intel Atom N270 1.6 GHz, 1 GB RAM, DIN-rail PC w/ PC/104+

Accessories
- UNO-FPM11-BE: UNO-1100 series VESA mount kit
- PCLS-DIAGAW10: Advantech Remote Monitoring & Diagnosis Utility

Features
- Onboard Intel Atom N270 1.6 GHz processor
- Onboard 512 KB battery-backup SRAM
- Onboard system & I/O LED indicators
- 2 x RS-232 and 1 x RS-232/422/485 ports with automatic flow control
- 2 x 10/100Base-T RJ-45 ports
- 3 x external USB and 1 x internal USB for dongle and flash drive
- PC/104+ expansion slots option
- DIN-rail design for easy installation in field cabinet
- Windows CE 6.0, Windows WES 2009, and Linux ready solution
- Supports boot from LAN function
- Fanless design with no internal cabling
- Isolation between chassis and power ground
**UNO-1172A/AE**

Intel® Atom™ D510 DIN-rail PCs with 3 x LAN, 2 x COM, VGA, Mini PCIe, PC/104+

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**Features**
- Onboard Intel Atom D510 1.66 GHz processor
- Onboard 1 MB battery-backup SRAM
- Onboard system & I/O LED indicators
- System diagnosis through LED and digital output, remote power control through digital input
- 2 x RS-232/422/485 ports with automatic flow control
- 3 x 10/100/1000Base-T RJ-45 ports with teaming function support
- 4 x external USB
- PC/104+ expansion slots option
- 1 x Mini PCIe slot for WLAN card and Fieldbus card
- Windows® 7, Windows CE, XP Embedded and Linux support
- Supports Boot from LAN function
- Fanless design with no internal cabling
- Isolation between chassis and power ground

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**Introduction**

UNO-1172A/AE are Intel Atom DIN-rail PCs with innovative system diagnostic features. The system diagnosis and remote power control through digital input lines enable users to control and monitor system status remotely. They also provide alarm notices including over temperature, over voltage, battery power fail, power status on both system onboard LED and digital output. Three Gigabit Ethernet interfaces with teaming function support allow users to uplink two ports with data transmit fault tolerance and downlink one port to field devices. Their compact size, small footprint, front accessible I/Os allow convenient wiring and easy installation in field cabinets as well.

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**Specifications**

**General**
- **Certification**
  - CE, FCC Class A, UL, CCC
- **Dimension (W x H x D)**
  - UNO-1172A: 85.5 x 152 x 139 mm (3.4” x 6.0” x 5.5”)
  - UNO-1172AE: 111 x 152 x 139 mm (4.4” x 6.0” x 5.5”)
- **Enclosure**
  - Aluminum + SECC
- **Power Consumption**
  - 24 W (Typical)
- **Power Requirement**
  - 10 – 38 Vdc (e.g. +24 V @ 2 A) (Min. 48 W), AT/ATX
  - Power mode by jumper selection and BIOS AT simulation (support system reboot automatically after power recovery)
- **Weight**
  - UNO-1172A: 1.6 kg
  - UNO-1172AE: 2.0 kg
- **OS Support**
  - WES Windows XP Embedded, Windows XP & Windows 7, Windows CE, Linux, XPe
  - Fanless design with no internal cabling
  - Remote Management
- **System Design**
  - Built-in Advantech DiagAnywhere agent on Windows CE, XPe
  - Supports Boot from LAN function
  - Remote control: Power On/Off, Reset

**System Hardware**
- **CPU**
  - Intel Atom D510 1.66 GHz
- **Memory**
  - 2 GB DDR2 SDRAM built-in
- **Battery Backup SRAM**
  - 1 MB
- **Indicators**
  - System LEDs for Power, CF, LAN (Active, Status), Serial (Tx, Rx), Diagnosis (Alarm: over temperature, over voltage, alarm for battery backup SRAM, alarm for RTC battery), Programmable (while disable Serial Tx&Rx), Buzzer for Diagnosis (programmable)
- **Keyboard/Mouse**
  - 1 x PS/2
- **Storage**
  - SSD: 1 x internal type I/II CompactFlash slot
  - HDD: 1 x internal ATA HDD bracket
- **PC/104 Slot**
  - 2 x PC/104+ slot, supports 3.3 V & +5 V
  - (Only for UNO-1172AE, one PC/104+ with HDD)
- **Mini PCI**
  - 1 x Mini PCI (UNO-1172AE)
- **Display**
  - DP15 VGA connector, 1600 x 1200 @ 85 Hz
  - Programmable 7-tier event handler, from 1 to 255 seconds for each tier
- **Mini PCIe**
  - 1 x Mini PCIe

**I/O Interface**
- **Serial Ports**
  - 2 x RS-232/422/485 with DB9 connectors, automatic flow control
  - 2 x RS-232 (Optional, pin header)
- **Serial Port Speed**
  - RS-232: 50 ~ 115.2 kbps
  - RS-422/485: 50 ~ 115.2 kbps (Max)
- **LAN**
  - 3 x 10/100/1000Base-T RJ-45 ports (supports Wake on LAN, built-in boot ROM)
  - 4 x USB, EHCI Rev. 2.0 compliant
- **USB**
  - 2 x USB, USB 2.0 compliant
- **Digital Input**
  - 2-ch. wet/dry contact, 70 Vdc over-voltage protection, 0 – 50 Vdc input range and Interrupt handling
- **Digital Output**
  - 6-ch D0-120 mA max/channel sink current
  - - Keep output status after system hot reset
  - - 5 ~ 40 Vdc output range and 10 kHz speed
- **System Diagnoses**
  - Remote monitoring: over system temperature, over voltage, battery power fail, power status
  - Remote control: Power On/Off, Reset

**Environment**
- **Ingress Protection**
  - IP40
- **Operating Temperature**
  - -5 ~ 60°C (14 ~ 140°F)
  - -20 ~ 80°C (-4 ~ 176°F)
- **Storage Temperature**
  - -5 ~ 85°C (-50 ~ 185°F)
- **Operating Humidity**
  - 0 ~ 95% (non-condensing)
- **Storage Humidity**
  - 0 ~ 95% (non-condensing)
- **Shock Protection**
  - IEC 60068-2-27
- **Vibration Protection**
  - IEC 60068-2-64 (Random 1 Oct./min, 1hr/axis.)
  - CompactFlash: 50 G @ wall mount, half sine, 11 ms
  - HDD: 20 G @ wall mount, half sine, 11 ms

**Ordering Information**
- **UNO-1172A-A33E**
  - UNO-1172A: Intel Atom D510 1.66 GHz, 2 GB RAM DIN-rail PC
  - Intel Atom D510 1.66 GHz, 2 GB RAM DIN-rail PC w/ PC/104+

**Accessories**
- **UNO-FPM11-BE**
  - UNO-1100 Series VESA Mount Kit
- **PCLS-DIAGAW10**
  - Advantech Remote Monitoring & Diagnosis Utility
Introduction
UNO-2173A/AF are Embedded Automation Computers equipped with Intel Atom N270 1.6 GHz CPUs, Gigabit Ethernet ports, rich I/O, and 1 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 (-20 ~ 70°C), providing high performance and high versatility with low power consumption. The UNO-2173A/AF are economic new computing platforms for manufacturing executing systems, facility automation, in-vehicle, and industrial thin client applications.

Specifications
General
- Certification: Energy Star, CE, FCC class A, UL, CCC
- Dimension (W x D x H): 255 x 152 x 59 mm (10" x 6.0" x 2.3")
- Enclosure: DIN-rail, Wallmount, VESA
- Mounting: Isolation between chassis and power ground
- Industrial Grounding: Fanless design with no internal cabling
- Power Consumption: 15 W (Typical)
- Power Requirements: 9 ~ 36 VDC (e.g. +24 V @ 1.5 A) (Min. 36 W), ATX
- Weight: 2.5 kg
- Remote Management: Fanless design with no internal cabling

System Hardware
- CPU: Intel Atom N270 1.6 GHz
- Memory: 1 GB, 2 GB DDR2 SDRAM built-in
- Indicators: LEDs for Power, CF, LAN (Active, Status), Serial (Tx, Rx)
- Keyboard/Mouse: 1 x PS/2
- Storage: 1 x front-accessible type II CompactFlash® slot
- HDD: 1 x built-in 2.5" SATA HDD/SSD bracket
- Display: DB15 VGA connector, 1600 x 1200 @ 85 Hz
- LVDS with backlight control (UNO-2173AF)
- Watchdog Timer: Programmable 256 levels timer interval, from 1 to 255 sec
- Expansion Slot: 1 x Mini PCIe

I/O Interface
- Serial Ports: UNO-2173A: 2 x RS-232
- Serial Port Speed: 50 ~ 115.2 kbps
- LAN: 2 x 10/100/1000Base-T RJ-45 ports (Built-in boot ROM in flash BIOS) (One LAN port in UNO-2173A)
- USB Ports: 4 x USB 2.0 (2 ports on UNO-2173A)
- Audio: 5.1 channel HD audio (Only for UNO-2173A)

Environment
- Humidity: 95% @ 40°C (non-condensing)
- Operating Temperature: IEC 60668-2-2 with 100% CPU/ I/O loading
- -20 ~ 70°C (-4 ~ 158°F)
- Ingress Protection: IP40
- Shock Protection: IEC 60668-2-27
- Vibration Protection: Compal Flash: 50 G @ wall mount, half sine, 11 ms

Reserved Functions
- Battery Backup SRAM*: 1 MB
- Printer Port*: 1 x printer port pin head
- USB*: 1 x internal pin head

Ordering Information
- UNO-2173A-A12E: Intel Atom N270 1.6 GHz, 1 GB RAM Computer w/ front I/O
- UNO-2173A-A13E: Intel Atom N270 1.6 GHz, 2 GB RAM Computer w/ front I/O
- UNO-2173AF-A12E: Intel Atom N270 1.6 GHz, 1 GB RAM Computer
- UNO-2173AF-A13E: Intel Atom N270 1.6 GHz, 2 GB RAM Computer

Accessories
- UNO-FPM21-AE: UNO-2000 series VESA mount kit
- 968EMW0021: Mini PCIe card for WLAN
- 190002715N040: Rear panel of UNO-2173A for Antenna
- 190002715N020: Rear panel of UNO-2173AF for Antenna
- 1700001854: SMA/IPEX cable 11CM
- 1750002322: 5dBd Dipole Antenna
- PCLS-DIAGAW10: Advantech Remote Monitoring & Diagnosis Utility

Online Download: www.advantech.com/products

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800-999-7378
## Specifications

### General
- **Certification**: Energy Star, CE, FCC Class A, UL, EMI, C-Tick Class A, BSMI
- **Dimensions (W x D x H)**: UNO-2174A: 255 x 152 x 50 mm (10” x 6.0” x 2.0”); 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 VDC (e.g. +24 V @ 1.5 A) (Min. 36 W), ATX
- **Weight**: 2.5 kg
- **OS Support**: Windows XP/7, WES7, WES-2009, CE 6.0, Linux, QNX
- **Remote Management**: Fanless design with no internal cabling
- **System Design**:  

### System Hardware
- **CPU**: UNO-2178A: Intel Atom D510 Dual Core 1.66 GHz
- **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
- **Display**: DB15 VGA connector
- **Expansion**: 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 Slot**: 2 x Mini PCIe
- **Printer Port**: 1 x Printer port (UNO-2174A)

### Daughterboard (Additional purchase required)
- **Expansion Slot**: PC/104+ and PCI-104 support (+5 & 3.3V power)
- **PCI-104 slot**: (HDD slot is not available when PCI-104 slot is being used)
- **Mini PCIe card slots**: 2 x Mini PCIe card slots and 1 x SIM slot support
- **System Status LED Indicators**: Programmable 256 levels timer interval, from 1 to 255 sec
- **Fanless Design**: with no internal cabling
- **Isolation**: between chassis and power ground
- **Power Requirements**: 9 ~ 36 VDC (e.g. +24 V @ 1.5 A) (Min. 36 W), ATX
- **Weight**: 2.5 kg
- **OS Support**: Windows XP/7, WES7, WES-2009, CE 6.0, Linux, QNX
- **Remote Management**: Fanless design with no internal cabling
- **System Design**:  

### 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)
- **LAN**: 2 x 10/100/1000Base-T RJ-45 ports, 6 x USB 2.0 ports
- **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
  - **CompFlash**: 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, 1Hz/(axis.)
  - **CompFlash**: 2 Grms @ 5 ~ 500 Hz
  - **HDD**: 1 Gms @ 5 ~ 500 Hz

### Ordering Information
- **UNO-2174A-A23E**: Intel Atom N450 1.6 GHz, 2 GB RAM Automation Computer
- **UNO-2178A-A33E**: Intel Atom D510 1.66 GHz, 2 GB RAM Automation Computer

### Accessories
- **UNO-FPM21-AE**: UNO-2000 series VESA mount kit
- **PCLS-DIAGAW10**: Advantech Remote Monitoring & Diagnosis Utility
- **UNO-PCM23-AE**: 1 x PCI-104 and 1 x PC/104+ Expansion board
Introduction
UNO-2172 and UNO-2182 are high-performance Pentium M/ Core 2 Duo grade controllers that support PCI-104 expansion, serial communication ports and several other networking interfaces. They support Windows WES2009 OS, which offers a pre-configured image with optimized onboard device drivers. Windows WES2009 delivers the power of the Windows operating system in componentized form. You can seamlessly integrate your applications into Windows WES2009 and speed up your system development with application-ready platforms that provide rich networking interfaces to fulfill diverse requirements.

Specifications

General
- **Certification**: CE, FCC Class A, UL, CCC
- **Dimension (W x D x H)**: 255 x 152 x 69 mm (10" x 6.0" x 2.7")
- **Enclosure**: Aluminum
- **Mounting**: DIN-rail, Wallmount, VESA
- **Industrial Grounding**: Isolation between chassis and power ground
- **Power Consumption**: UNO-2182: 35 W (Typical)
- **Power Requirements**: 9 ~ 36 Vdc (e.g. +24V @ 2A) (Min. 48 W), ATX
- **Weight**: 3.0 kg
- **OS Support**: Windows 2000/XP, Win7, WES7, WES-2009, XPe, Linux, QNX
- **System Design**: Fanless with no internal cabling

System Hardware
- **CPU**: UNO-2182: Intel Core 2 Duo L7400 1.5 GHz
  UNO-2172: Intel Pentium M 1.6 GHz, Celeron M 1.5 GHz
- **Memory**: UNO-2172: 1 GB DDR2 SDRAM built-in
  UNO-2182: 2 GB DDR2 SDRAM built-in
- **Indicators**: LEDs for Power, IDE, Alarm for battery backup SRAM, LAN (Active, Status) and Serial (Tx, Rx)
- **Battery Backup SRAM**: 512 KB
- **Keyboard/Mouse**: 1 x PS/2
- **PC/104 Slot**: 2 x PC/104 slot, supports -5 & 3.3V power
- **Storage**: CF: 1 x external type I/II CompactFlash slot
  HDD: Built-in one 2.5" SATA/IDE HDD bracket
- **Display**: DVI-I supports DVI and VGA for dual display
- **Audio**: Mic in, Line in, Line out
- **SATA**: 1 x internal, 1 x external SATRA 1.0
- **Watchdog Timer**: Programmable 256 levels timer interval, from 1 to 255 sec

I/O Interface
- **Serial Ports**: 2 x RS-232, 2 x RS-232/422/485 with DB9 connectors
- **Serial Port Speed**: Automatic RS-485 data flow control
  RS-232: 30 ~ 115 kBps
  RS-422/485: 50 ~ 921.6 kbps (Max.)
- **LAN**: 2 x 10/100/1000Base-T RJ-45 ports (supports wake on LAN and built-in boot ROM in flash BIOS)
- **USB Ports**: 2 x USB, EHCI, Rev. 2.0 compliant

Environment
- **Humidity**: 95% @ 40°C (non-condensing)
- **Operating Temperature**: IEC 60608-2-2, 100% CPU/ I/O loading
  UNO-2172: -20 ~ 50°C (-4 ~ 122°F) @ 5 ~ 85% RH.
  UNO-2182: -10 ~ 60°C (14 ~ 140°F) @ 5 ~ 85% RH.
- **Shock Protection**: CompactFlash: 50 G @ wall mount, half sine, 11 ms
  HDD: 20 G @ wall mount, half sine, 11 ms
- **Vibration Protection**: CompactFlash: 2 G rms @ 5 ~ 500 Hz
  HDD: 1 G rms @ 5 ~ 500 Hz

Ordering Information
- **UNO-2172-C22BE**: Intel Celeron M 1.5 GHz, 1 GB RAM Automation Computer
- **UNO-2172-P22BE**: Intel Pentium M 1.6 GHz, 1 GB RAM Automation Computer
- **UNO-2182-D13BE**: Intel Core 2 Duo 1.5 GHz, 2 GB RAM Automation Computer

Accessories
- **UNO-PCM22-AE**: 2 x PC/104 expansion kit for UNO-2100 series
- **UNO-FPM21-AE**: UNO-2000 series VESA mount kit
- **PCLS-DIAGAW10**: Advantech Remote Monitoring & Diagnosis Utility

Features
- Onboard Intel Core 2 Duo 1.5 GHz (L7400)/ Pentium M 1.6 GHz/ Celeron M 1.5 GHz processors
- Onboard 512 KB battery-backup SRAM
- 2 x RS-232 and 2 x RS-232/422/485 ports with automatic flow control
- 2 x 10/100/1000Base-T Ethernet
- DVI-I supports dual display
- Audio with Mic in, Line in, Line out
- 2 x USB 2.0 ports
- PCI-104 expansion
- Windows® WES 2009, WES 7 ready solution
- Supports one SATA HDD and one external eSATA devices
- Onboard system status LED indicators
- Supports wake on LAN and boot from LAN function
- Fanless design with no internal cabling
- Isolation between chassis and power ground

I/O Interface
- Serial Ports
  - 2 x RS-232, 2 x RS-232/422/485 with DB9 connectors
  - Automatic RS-485 data flow control
- Serial Port Speed
  - RS-232: 30 ~ 115 kBps
  - RS-422/485: 50 ~ 921.6 kbps (Max.)
- LAN
  - 2 x 10/100/1000Base-T RJ-45 ports (supports wake on LAN and built-in boot ROM in flash BIOS)
- USB Ports
  - 2 x USB, EHCI, Rev. 2.0 compliant

Environment
- Humidity
  - 95% @ 40°C (non-condensing)
- Operating Temperature
  - IEC 60608-2-2, 100% CPU/ I/O loading
    - UNO-2172: -20 ~ 50°C (-4 ~ 122°F) @ 5 ~ 85% RH.
    - UNO-2182: -10 ~ 60°C (14 ~ 140°F) @ 5 ~ 85% RH.
- Shock Protection
  - CompactFlash: 50 G @ wall mount, half sine, 11 ms
  - HDD: 20 G @ wall mount, half sine, 11 ms
- Vibration Protection
  - CompactFlash: 2 G rms @ 5 ~ 500 Hz
  - HDD: 1 G rms @ 5 ~ 500 Hz

Ordering Information
- UNO-2172-C22BE
  - Intel Celeron M 1.5 GHz, 1 GB RAM Automation Computer
- UNO-2172-P22BE
  - Intel Pentium M 1.6 GHz, 1 GB RAM Automation Computer
- UNO-2182-D13BE
  - Intel Core 2 Duo 1.5 GHz, 2 GB RAM Automation Computer

Accessories
- UNO-PCM22-AE
  - 2 x PC/104 expansion kit for UNO-2100 series
- UNO-FPM21-AE
  - UNO-2000 series VESA mount kit
- PCLS-DIAGAW10
  - Advantech Remote Monitoring & Diagnosis Utility
UNO-2184G/2174G/GL are high-performance Intel 2nd generation Core i7-2655LE/847/807UE grade controllers that support PCI-104 with daughterboard expansion, 3 x display, 6 x USB, and 2 x Mini PCIe socket. They also feature WLAN, 3G expansion and compatibility with Windows 7. The 4 x Gigabit LANs on the UNO-2184G support teaming function with fault tolerance, link aggregation, and load balance features. The UNO-2184G also supports PoE module for vision inspection to fulfill any graphic application.

### Features
- **Serial Ports**: 2 x RS-232, 2 x RS-232/422/485 with DB9 connectors; automatic RS-485 data flow control
- **Serial Port Speed**: RS-232: 50 ~ 115.2 kbps
- **LAN**: 4 x 10/100/1000Base-T RJ-45 ports
- **USB Ports**: 6 x USB 2.0 (2 x USB 3.0 connector)
- **Power Consumption**: UNO-2184G: 40 W (Typical)
- **Shock Protection**: UNO-2184G: 15G (perpendicular)
- **Vibration Protection**: UNO-2184G: 3 Grms @ 50 ~ 550 Hz

### Specifications
#### General
- **Certification**: CE, UL, RoHS, CCC, CSA, FCC
- **Dimension (W x D x H)**: 255 x 152 x 69 mm (10" x 6.0" x 2.7"
- **Enclosure**: Aluminium
- **Mounting**: DIN-rail, Wallmount, VESA
- **Power Consumption**: UNO-2184G/2174G/GL: 30 W/ 20 W (Typical)
- **Power Requirements**: 9 ~ 36 Vdc (6 x +24V @ 3A) (Min. 72W), AT/ATX
- **Weight**: 3.0 kg
- **OS Support**: Windows® WES2009, WES 7 ready solution
- **System Design**: Fanless with no internal cabling (except COM3/COM4)
- **Remote Management**: Built-in Advantech DiagAnywhere agent on WES2009 / WES7

#### System Hardware
- **CPU**: Onboard Intel Celeron 847/807UE 1.1 GHz/1.0 GHz
- **Memory**: Onboard Intel Celeron 847/807UE 1.1 GHz/1.0 GHz
- **Indicators**: Onboard Intel Celeron 847/807UE 1.1 GHz/1.0 GHz
- **Keyboard/Mouse**: 1 x PS/2
- **PCI/104 Slot**: PCI-104 slot, supports +5 & 3.3V power
- **Storage**: CF: 1 x CF card slot
- **Display**: 1 x DVI-I, 1 x HDMI, 1 x DP (2 x independent displays)
- **Audio**: Mic in, Line in, Line out
- **Watchdog Timer**: Programmable 256 levels timer interval, from 1 to 255 sec
- **Mini PCIe Expansion**: 2 x Mini PCIe slots with 1 x SIM card

#### I/O Interfaces
- **Serial Ports**: 2 x RS-232, 2 x RS-232/422/485 with DB9 connectors; automatic RS-485 data flow control
- **Serial Port Speed**: RS-232: 50 ~ 115.2 kbps
- **LAN**: 4 x 10/100/1000Base-T RJ-45 ports
- **USB Ports**: 6 x USB 2.0 (2 x USB 3.0 connector)
- **Power Consumption**: UNO-2184G: 40 W (Typical)
- **Shock Protection**: UNO-2184G: 15G (perpendicular)
- **Vibration Protection**: UNO-2184G: 3 Grms @ 50 ~ 550 Hz

### Ordering Information
- **UNO-2184G-D44E**: Intel Core i7-2655LE 2.2 GHz, 4 GB RAM Automation Computer
- **UNO-2184GP-D45E**: Intel Core i7-2655LE 2.2 GHz Automation Computer w/ 4 Ports Gigabit PoE
- **UNO-2184G-D45E**: Intel Core i7-2655LE 2.2 GHz, 8 GB RAM Automation Computer
- **UNO-2174G-C54E**: Intel Celeron M 847 1.1 GHz, 4 GB RAM Automation Computer
- **UNO-2174GL-C44E**: Intel Celeron M 807UE 1.0 GHz, 4 GB RAM Automation Computer

### Accessories
- **UNO-FPM21-AE**: Mini PCIe card for WLAN
- **968EMW0021**: SMA-PeX cable 11CM
- **1700001854**: 5dBi Dipole Antenna
- **UNO-PCM24-AE**: 2 x PCI-104 expansion board

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**NEW**

Intel® Celeron® Automation Computers
with 4 x LAN, 2 x Mini PCIe, DVI/DP/HDMI

Intel® Core™ i7 Automation Computers
with 4 x LAN, 2 x Mini PCIe, DVI/DP/HDMI

**UNO-2184G**

**UNO-2174G/GL**

**ORDERING INFORMATION**

**UNO-2184G-D44E**
Intel Core i7-2655LE 2.2 GHz, 4 GB RAM Automation Computer

**UNO-2184GP-D45E**
Intel Core i7-2655LE 2.2 GHz Automation Computer w/ 4 Ports Gigabit PoE

**UNO-2184G-D45E**
Intel Core i7-2655LE 2.2 GHz, 8 GB RAM Automation Computer

**UNO-2174G-C54E**
Intel Celeron M 847 1.1 GHz, 4 GB RAM Automation Computer

**UNO-2174GL-C44E**
Intel Celeron M 807UE 1.0 GHz, 4 GB RAM Automation Computer

**Accessories**

**UNO-FPM21-AE**
Mini PCIe card for WLAN

**968EMW0021**
SMA-PeX cable 11CM

**1700001854**
5dBi Dipole Antenna

**UNO-PCM24-AE**
2 x PCI-104 expansion board
UNO-3072LA

Intel® Atom™ N270 Automation Computer with 2 x PCI, 2 x GbE, DVI

Introduction
UNO-3072LA is an Atom-based Embedded Automation Computer with two PCI slots that provides excellent power consumption capabilities. The Gigabit LAN supports the learning function with fault tolerance, link aggregation, and load balancing. Different from general industrial PCs, the UNO-3072LA is more compact and reliable with a fanless and cableless design. It is designed with an open platform which can fulfill any demanding requirement from the industrial field, and it is an ideal solution for industrial automation and control. The UNO-3072LA supports Windows XP Embedded OS, which offers a pre-configured image with optimized onboard device drivers. Windows XP Embedded delivers the power of Windows operating system in componentized form.

Specifications

General

- **Certification**: CE, FCC class A, UL, CCC
- **Dimension (W x H x D)**: 140 x 238 x 177 mm (5.5” x 9.3” x 7.0”)
- **Enclosure**: Aluminum + SECC
- **Mounting**: Wallmount, Stand, Panel
- **Industrial Grounding**: Isolation between chassis and power ground
- **Power Consumption**: 20 W (Typical)
- **Power Requirement**: 9 – 36 VDC (e.g., -24 V @ 2 A) (Min. 48W), ATX, AT/ATX power mode by Jumper selection and BIOS AT simulation (support system reboot automatically after power recovery)
- **Weight**: 4.5 kg
- **OS Support**: WES, Windows XP Embedded, Windows Vista/XP, Windows 7, Windows CE 6.0, Linux, QNX
- **Remote Management**: Built-in Advantech DiagAnywhere agent on Windows CE/XP
- **System Design**: Fanless with no internal cabling

System Hardware

- **CPU**: Intel Atom N270 1.6 GHz
- **Memory**: 1 GB/2 GB DDR2 SDRAM built-in
- **Expansion Slots**: 2 x PCI V2.2 slots (Note: The heat dissipation from the PCI cards may affect thermal performance)
- **PCI Slot Power**: 12 V @ 2A, -12V @ 0.5 A, +5V @ 4 A, -3.3 V @ 4 A (total combined power consumption on the PCI slots should be less than 20W)
- **Indicators**: LEDs for Power, Standby, HDD, Rx/Tx for COM ports (can be used as programmable LED)
- **Audio**: AC 97, Line Out
- **Storage CF**: 1 x internal type I/II CompactFlash slot
- **HDD**: 1 x external type I/II CompactFlash slot
- **Display**: Built-in one 2.5” SATA HDD/SSD bracket
- **Display**: Single DVI-I display (DVI-D + VGA independent)
- **Watchdog Timer**: Programmable 256 level timer interval, from 1–255 sec

I/O Interface

- **Clock**: Battery-backup RTC for time and date
- **LAN**: 2 x 10/100/1000Base-T RJ-45 ports (Intel 82574L, supports Wake on LAN, Teaming, built-in boot ROM, and 100E1588 hardware support)
- **Serial Ports**: 2 x RS-232/422/485 with DB9 connectors, automatic RS-485 data flow control, 2 x RS-232 (optional)
- **Serial Speed**: RS-232 Speed: 50 bps – 115.2 kbps, RS-422/485 Speed: 300 bps – 921.6 kbps (Max)
- **USB Ports**: 5 x USB 2.0 (one internal), 2 x USB 2.0 pin header
- **Optional I/O**: PS/2 KB/MS, 2 x COM-232, 2 x USB 2.0, LPT

Environment

- **Operating Temperature**: (IEC 60068-2-1, 100% CPU/I/O loading)
  - -10 – 60°C (14 – 140°F)
  - -20 – 70°C (-4 – 158°F)
- **Humidity**: 95% @ 40°C (non-condensing)
- **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, 1/hr/axis.)
  - CompactFlash: 2 Gms @ 5 – 500 Hz
  - HDD: 1 Gms @ 5 – 500 Hz

Ordering Information

- **UNO-3072LA-A12E**: Intel Atom N270 1.6 GHz, 1 GB RAM Automation Computer
- **UNO-3072LA-A13E**: Intel Atom N270 1.6 GHz, 2 GB RAM Automation Computer

Accessories

- **PCLS-DIAGAW10**: Advantech Remote Monitoring & Diagnosis Utility
- **9663308401E**: USB x 2 for UNO-3000 Series
- **9663308402E**: LPT x 1 for UNO-3000 Series
- **9663308403E**: RS232 COM port x 2 and PS2 x 1 for UNO-3000 Series
Introduction
UNO-3072A and UNO-3074A are Dual Core Atom-based Embedded Automation Computers with up to four PCI slots that provide an excellent performance to power consumption ratio. They are also equipped with two IEEE 1394b bilingual interfaces which allow users to connect their own devices for machine vision. Critical data can be saved on the battery backup SRAM. They also support two HDD bays with RAID 0/1. The design with an open platform can fulfill demanding requirements from the industrial field, especially for machine vision or motion controllers.

Specifications

General
- Certification: CE, FCC class A, UL, CCC
- Dimension (W x H x D): UNO-3072A: 140 x 238 x 177 mm (5.5" x 9.3" x 7.0")
- Enclosure: Aluminum + SECC
- Mounting: Wallmount, Stand, Panel
- Industrial Grounding: Isolation between chassis and power ground
- Power Consumption: 25 W (Typical, no add-on card)
- Power Requirement: 9 – 36 Vdc (e.g. +24 Vdc 3A), ATX, AT/ATX power mode by jumper selection
- Weight: UNO-3072A: 4.5 kg / UNO-3074A: 5.0 kg
- System Design: Fanless with no internal cabling
- Remote Management: Built-in Advantech DiagAnywhere agent on Windows CE/ WE2209

System Hardware
- CPU: Intel® Atom™ D510 1.66 GHz
- Memory: 2 GB DDR3i SDRAM built-in
- Battery Backup SRAM: 512 KB
- Expansion Slots: UNO-3072A: 2 x PCI V2.2 slots
- PCI Slot Power: 12 V @ 3 A, 12 V @ 0.8 A, 5 V @ 6 A
- Indicators: x3.3 V @ 6 A (total combined power consumption on the PCI slots should be less than 40W)
- Audio: AC 97, Line Out
- Storage: 1 x internal type II CompactFlash slot
- Display: 1024 x 768 @ 60 Hz
- Watchdog Timer: Programmable 256 level timer interval, from 1–255 sec

I/O Interface
- LAN: 2 x 10/100/1000Base-T RJ-45 ports (Intel 82574L, supports Wake on LAN, Taining, built-in boot ROM, and IEEE1394 hardware support)
- Serial Ports: 2 x RS-232/422/485 with DB9 connectors, automatic RS-485 data flow control, 2 x RS-232 (optional)

Features
- Onboard Intel Atom D510 1.66 GHz processor
- Dual IEEE-1394 for vision inspection devices
- AT/ATX power mode by jumper selection
- Onboard 512KB Battery- backup SRAM
- 2 x RS-232/422/485 ports with automatic flow control
- 2 x 10/100/1000Base-T RJ-45 ports with teaming function support
- Up to four PCI expansions
- 4-ch isolated DI, 4-ch isolated DO
- Dual SSD/HDD with onboard RAID 0/1 support
- Fanless design with no internal cables
- Isolation between chassis and power ground
- Front-accessible I/O design
- 1 x internal USB for dongle and flash drive

Intel® Atom™ D510 1.66 GHz processor with 2 x PCI, 2 x GbE, and FireWire

Intel® Atom™ D510 Automation Computer with 4 x PCI, 2 x GbE, and FireWire

Ordering Information
- UNO-3072A-A33E: Intel Atom D510 1.66 GHz, 2 GB RAM Automation Computer with 2 x PCI
- UNO-3074A-A33E: Intel Atom D510 1.66 GHz, 2 GB RAM Automation Computer with 4 x PCI

Accessories
- PCLS-DIAGAV10: Advantech Remote Monitoring & Diagnosis Utility
- 1960044253N000: Top cover of UNO-3000 Series w/ 2 x PCI
- 1960045707N010: Top cover of UNO-3000 Series w/ 4 x PCI
- 9663308401E: LPT x 1 for UNO 3000 Series
- 9663308402E: RS232 COM port x 2 and PS2 x 1 for UNO 3000 Series
- 9663308403E: RS232 COM port x 2 for UNO 3000 Series
**Introduction**

UNO-3082 and UNO-3084 are high performance Core 2 Duo Embedded Automation Computers with up to four expansion slots for PCI express or PCI support. The Gigabit LAN on the UNO-3082/3084 supports Teaming function with fault tolerance, link aggregation, and load balance features. They are also equipped with two IEEE 1394b bilingual interfaces which allow users to connect their own devices for machine vision application. Critical data can be saved on the battery backup SRAM. They also support two HDD bays with RAID 0/1.

**Specifications**

### General
- Certification: CE, FCC class A, UL, CCC
- Dimension (W x H x D): UNO-3082: 157 x 238 x 177 mm (6.2" x 9.3" x 7.0")
  UNO-3084: 168 x 238 x 177 mm (7.6" x 9.3" x 7.0")
- Enclosure: Aluminum x SECC
- Mounting: Wallmount, Stand, Panel
- Industrial Grounding: Isolation between chassis and power ground
- Power Consumption: 40 W (Typical, no add-on card)
- Power Requirement: 9 ~ 36 VDC (e.g. +24 V @ 5 A), ATX, AT/ATX power mode by jumper selection and BIOS AT simulation (support system reboot automatically after power recovery)
- Weight: UNO-3082: 4.5 kg / UNO-3084: 5.0 kg
- System Design: Fanless with no internal cabling
- Remote Management: Built-in Advantech Diagnose/Zero agent on Windows CE/KPe

### System Hardware
- CPU: Intel Core 2 Duo L7500 1.6 GHz
- Memory: 2 GB/4 GB DDR3 RAM built-in
- Battery Backup SRAM: 512 KB
- Expansion Slots: UNO-3082: 2 x PCI V2.2 slots
  UNO-3084: 1 x PCIe plus 3 x PCI V2.2 slots
- PCI Slot Power: 12 V @ 3 A, 12 V @ 0.8 A, 5 V @ 6 A
- Indicators: LEDs for Power, Standby, HDD, SRAM battery, Rx/Tx for COM ports
- Audio: AC 97, Line Out
- Storage: CF: x 1 internal type II CompactFlash slot
  HDD: Two built-in 2.5" SATA HDD brackets with support for RAID 0 and RAID 1
- Display: Dual DVI-I (independent) or DVI-D + Dual VGA-cloned displays
- Watchdog Timer: Programmable 256 level timer interval, from 1 ~ 255 sec

### I/O Interface
- LAN: 2 x 10/100/1000Base-T RJ-45 ports (Intel 82574L, supports Wake on LAN, Trimming, built-in boot ROM, and IEEE1588 hardware support)
- Serial Ports: 2 x RS-232/422/485 with DB9 connectors, automatic RS-485 data flow control, 2 x RS-232 (optional)
- Serial Speed: RS-232 Speed, 50 bps - 115.2 Kbps, RS-422/485 Speed, 300 bps - 921.6 Kbps (Max)
- USB Ports: 5 x USB 2.0 (2 on internal), 2 x USB 2.0 pin header
- IEEE 1394 (Firewire): 2 x type B (Bilingual)
- Optional I/O: PS/2 KB/MS, 2 x COM-232 (with packing), 2 x USB 2.0, LPT
- Digital Input: 4-ch. contact Di0 - Di3
- Digital Output: 4-ch. DO0 - DO3
- Wake on LAN: 1,500 Vrms, 200 ma/channel sink current
- Temperature Protection: 100 kHz, 10 kHz, 1 kHz, 100 Hz
- Venting: Top cover of UNO-3084 with venting hole
- Top cover of UNO-3082 with venting hole
- Hot-swappable cover

### Features
- Onboard Intel Core 2 Duo L7500 1.6 GHz processor
- Dual DVI-I to support up to 3 displays
- Dual IEEE-1394 for vision inspection devices
- AT/ATX power mode by jumper selection
- Onboard 512KB Battery backup SRAM
- 2 x RS-232/422/485 ports with automatic flow control
- 2 x 10/100/1000Base-T RJ-45 ports with teaming function support
- Up to three PCI and one PCIe expansion
- 4-ch isolated DI, 4-ch isolated DO
- Dual SSD/HDD with onboard RAID 0/1 support
- Fanless design with no internal cables
- Isolation between chassis and power ground
- Front-accessible I/O design
- 1 x internal USB for dongle and flash drive

### Environment
- Operating Temperature: (IEC 60068-2-14; min test temp 0°C, 3 cycle, 0°C to 55°C)
- Storage Temperature: -20 ~ 70°C (-4 ~ 176°F)
- Humidity: 95% @ 40°C (non-condensing)
- Shock Protection: IEC 60068-2-27
- Vibration Protection: IEC 60068-2-64 (Random 1 G @ min, 11 ms)

### Ordering Information
- UNO-3082-D24E: Intel Core 2 Duo, 2 G RAM, 2 x PCI Automation Computer
- UNO-3084-D24E: Intel Core 2 Duo, 4 G RAM, 3 x PCI, 1 PCIe Automation Computer
- UNO-3082-D23E: Intel Core 2 Duo, 2 G RAM, 2 x PCI Automation Computer
- UNO-3084-D22E: Intel Core 2 Duo, 4 G RAM, 3 x PCI, 1 PCIe Automation Computer

### Accessories
- PCLS-DIAG(NO): Advantech Remote Monitoring & Diagnosis Utility
- 1960042529393: Top cover of UNO-3082 with venting hole
- 1960457070120: Top cover of UNO-3084 with venting hole
- 96633380401: USB 2.0 for UNO-3000 Series
- 96633380402: LPT x 1 for UNO-3000 Series
- 96633380403: RS232 COM port x 2 and PS/2 x 1 for UNO-3000 Series

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**UNO-3082**

**UNO-3084**

**Intel® Core™ 2 Duo Automation Computer with DVI, 2 x PCI and FireWire**

**Intel® Core™ 2 Duo Automation Computer with DVI, 1 x PCIe, 3 x PCI and FireWire**
UNO-3272/3282

Intel® Core™ 2 Duo / Celeron® M Automation Computers with PCI/PCIe, 2 x GbE, 4 x COM, DVI

Introduction
UNO-3272 and UNO-3282 are high-performance Embedded Automation Computers with rich I/Os and PCI/PCIe expansion slots. They feature a rugged design with Gigabit LAN and battery backup SRAM. Different from general industrial PCs, the UNO-3272 and UNO-3282 are more compact and reliable with a fanless, cableless and diskless design. They are open platforms which can fulfill any demanding requirement from the industrial field, and ideal solutions for industrial automation and control. The UNO-3272 and UNO-3282 provide embedded operating system with a pre-configured image that has optimized onboard device drivers, and supports Windows XP Embedded to fulfill the toughest requirements for complete functionality and high reliability.

Specifications

General
- Certification: CE, FCC class A, UL, CCC
- Dimension (W x D x H): 260 x 240 x 130 mm (10.2" x 9.4" x 5.0"
- Enclosure: Aluminum
- Mounting: Wallmount, Desktop
- Power Consumption: 40 W (Typical, L7400, no add-on card)
- Power Requirements: 9 ~ 36 VDC (e.g +24 V @ 5 A), ATX
- Weight: 5.5 kg
- System Design: Fanless with no internal cabling
- Remote Management: Built-in Advantech DiagAnywhere agent on Windows CE/XP

System Hardware
- CPU: Intel Core 2 Duo L7400 1.5 GHz, Celeron M 440 1.86 GHz
- Memory: 1 GB DDR2 SDRAM built-in
- Battery Backup SRAM: 512 KB (UNO-3282)
- Disk: Dual SSD/HDD with on-board RAID 0/1 support
- Expansion Slots: 1 x PCIe plus 1 x PCI or 2 x PCI expansion slots for versatile applications
- Display: Supports up to 1600 x 1200 @ 85 Hz
- Watchdog Timer: Programmable 256 levels timer interval, from 1 to 255 seconds
- LAN: 2 x 10/100/1000Base-T RJ-45 ports (Intel 82573L chip, supports teaming, Wake On LAN function and built-in boot ROM in flash BIOS)
- Serial Ports: 2 x RS-232, 2 x RS-232/422/485 with DB9 connectors, automatic RS-485 data flow control
- Serial Port Speed: RS-232: 50bps ~ 115.2 kbps, RS-422/485: 50bps ~ 921.6 kbps (Max)
- USB: 5 x USB, USB EHCI, Rev. 2.0 compliant (1 is for USB dongle and USB flash inside chassis, UNO-3282 only)

Environment
- Humidity: 95% @ 40°C (non-condensing)
- Operating Temperature (With CF Card): UNO-3272-D12E: -20 ~ 60°C (-4 ~ 140°F), UNO-3272-C32E: -20 ~ 50°C (-4 ~ 122°F)
- Storage Temperature: -20 ~ 80°C (-4 ~ 176°F)
- Shock Protection: IEC 68-2-27
- Vibration Protection: IEC 68-2-6 (Random 1 Oct./min, 1hr/axis), CompactFlash: 5 g rms @ 5 ~ 500 Hz

Ordering Information
- UNO-3272-C32E: Intel Celeron M 1.86 GHz, 1 GB RAM Automation Computer
- UNO-3272-D12E: Intel Core 2 Duo 1.5 GHz, 1 GB RAM Automation Computer

Accessories
- PCLS-DIAGAW10: Advantech Remote Monitoring & Diagnosis Utility

Features
- Onboard Intel Core 2 Duo 1.5 GHz/Celeron M 1.86 GHz processors
- Dual SSD/HDD with on-board RAID 0/1 support
- Onboard 512 KB Battery-backup SRAM
- Optimized thermal design to support -20~60°C operating temparature in full CPU and I/O loads
- 2 x RS-232 and 2 x RS-232/422/485 ports with automatic flow control
- 2 x 10/100/1000Base-T Ethernet ports with teaming function
- 1 x PCIe plus 1 x PCI or 2 x PCI expansion slots for versatile applications
- Both DVI-D and VGA displays to support dual display output
- Onboard system & I/O LED indicators with programmable feature
- Fanless design with no internal cabling
- Isolation between chassis and power ground
- 1 x internal USB for dongle and flash drive

Features
- Display: Supports up to 1600 x 1200 @ 85 Hz
- Watchdog Timer: Programmable 256 levels timer interval, from 1 to 255 seconds
- LAN: 2 x 10/100/1000Base-T RJ-45 ports (Intel 82573L chip, supports teaming, Wake On LAN function and built-in boot ROM in flash BIOS)
- Serial Ports: 2 x RS-232, 2 x RS-232/422/485 with DB9 connectors, automatic RS-485 data flow control
- Serial Port Speed: RS-232: 50bps ~ 115.2 kbps, RS-422/485: 50bps ~ 921.6 kbps (Max)
- USB: 5 x USB, USB EHCI, Rev. 2.0 compliant (1 is for USB dongle and USB flash inside chassis, UNO-3282 only)

Environment
- Humidity: 95% @ 40°C (non-condensing)
- Operating Temperature (With CF Card): UNO-3272-D12E: -20 ~ 60°C (-4 ~ 140°F), UNO-3272-C32E: -20 ~ 50°C (-4 ~ 122°F)
- Storage Temperature: -20 ~ 80°C (-4 ~ 176°F)
- Shock Protection: IEC 68-2-27
- Vibration Protection: IEC 68-2-6 (Random 1 Oct./min, 1hr/axis), CompactFlash: 5 g rms @ 5 ~ 500 Hz

Ordering Information
- UNO-3272-C32E: Intel Celeron M 1.86 GHz, 1 GB RAM Automation Computer
- UNO-3272-D12E: Intel Core 2 Duo 1.5 GHz, 1 GB RAM Automation Computer

Accessories
- PCLS-DIAGAW10: Advantech Remote Monitoring & Diagnosis Utility

Features
- Onboard Intel Core 2 Duo 1.5 GHz/Celeron M 1.86 GHz processors
- Dual SSD/HDD with on-board RAID 0/1 support
- Onboard 512 KB Battery-backup SRAM
- Optimized thermal design to support -20~60°C operating temparature in full CPU and I/O loads
- 2 x RS-232 and 2 x RS-232/422/485 ports with automatic flow control
- 2 x 10/100/1000Base-T Ethernet ports with teaming function
- 1 x PCIe plus 1 x PCI or 2 x PCI expansion slots for versatile applications
- Both DVI-D and VGA displays to support dual display output
- Onboard system & I/O LED indicators with programmable feature
- Fanless design with no internal cabling
- Isolation between chassis and power ground
- 1 x internal USB for dongle and flash drive
## Accessories
### UNO-1000 Series Accessories

#### UNO-FPM11
UNO-1100 Series VESA Mounting Kit

**Features**
- Dimensions: 270 x 162 x 11 mm (W x H x D) (Only extension kit)
- Supports VESA 75 and 100 monitor

**Supported Models**
- UNO: All UNO-1100 series
- FPM: All FPM 12", 15", 17", 19" models

**Ordering Information**
- UNO-FPM11-BE

#### UNO-2000/2100 Series Accessories

#### UNO-DIN21
UNO-2100 Series DIN-rail Kit

**Features**
- Supports DIN-rail mounting (EN50022, 35 x 7.5 mm)

**Supported Models**
- All UNO-2100 series

**Ordering Information**
- UNO-DIN21-BE

#### UNO-FPM21
UNO-2000 Series VESA Mounting Kit

**Features**
- Dimensions: 270 x 162 x 11 mm (W x H x D) (Only extension kit)
- Supports VESA 75 and 100 monitor

**Supported Models**
- UNO: All UNO-2000 and 2100 series
- FPM: All FPM 12", 15", 17", 19" models

**Ordering Information**
- UNO-FPM21-AE

#### UNO-HD20
UNO-2000 HDD Expansion Kit

**Features**
- Dimensions: 188.8 x 106.5 x 21.0 mm (W x D x H) (Only extension kit)

**Supported Models**
- All UNO-2000 series

**Ordering Information**
- UNO-HD20-AE

#### UNO-PCM21
2 x PC/104 Expansion Kit for UNO-2170

**Features**
- Dimensions: 228 x 32 x 152 mm (W x H x D) (Only extension kit)
- Supports two PC/104 modules

**Supported Models**
- UNO-2170

**Ordering Information**
- UNO-PCM21-AE

#### UNO-PCM22
2 x PC/104 Expansion Kit for UNO-2100 Series

**Features**
- Dimensions: 228 x 32 x 152 mm (W x H x D) (Only extension kit)
- Supports two PC/104 modules

**Supported Models**
- UNO-2171, UNO-2172, UNO-2176, UNO-2182

**Ordering Information**
- UNO-PCM22-AE

#### UNO-PCM23
1 x PCI-104, 1 x PC/104+ Expansion Kit for UNO-2174A/2178A

**Features**
- Dimensions: 228 x 32 x 148 mm (W x H x D) (Only extension kit)
- Supports one PC/104+ and one PCI-104 modules

**Supported Models**
- UNO-2174A, UNO-2178A

**Ordering Information**
- UNO-PCM23-AE
## UNO-3000 Series Accessories

### UNO-PM70
- Panel Mounting Kit for UNO-3000 Series
- Supported Models: UNO-3072L, UNO-3072, UNO-3074
- Ordering Information: UNO-PM70-AE

### UNO-SM70
- Stand Mounting Kit for UNO-3000 Series
- Supported Models: UNO-3072L, UNO-3072, UNO-3074
- Ordering Information: UNO-SM70-AE

### UNO-WM72/WM74
- Wall Mounting Kit for UNO-3072/L and UNO-3074
- Supported Models: UNO-3072/3072L (UNO-WM72)
- Ordering Information: UNO-WM72-AE

### UNO-PM80
- Panel Mounting Kit for UNO-3082/3084
- Supported Models: UNO-3072LA, UNO-3072A, UNO-3074A, UNO-3082, UNO-3084
- Ordering Information: UNO-PM80-AE

### UNO-SM80
- Stand Mounting Kit for UNO-3082/3084
- Supported Models: UNO-3072LA, UNO-3072A, UNO-3074A, UNO-3082, UNO-3084
- Ordering Information: UNO-SM80-AE

### UNO-WM80
- Wall Mounting Kit for UNO-3082/3084/3072LA
- Supported Models: UNO-3072LA, UNO-3072A, UNO-3074A, UNO-3082, UNO-3084
- Ordering Information: UNO-WM80-AE

### Expansion Kit USB x 2 for UNO-3000 Series
- Supported Models: UNO-3072LA, UNO-3072A, UNO-3074A, UNO-3082, UNO-3084
- Ordering Information: 9663308401E

### Expansion Kit LPT x 1 for UNO-3000 Series
- Supported Models: UNO-3072LA, UNO-3072A, UNO-3074A, UNO-3082, UNO-3084
- Ordering Information: 9663308402E

### Expansion Kit RS232 COM port x 2 and PS2 x 1 for UNO-3000 Series
- Supported Models: UNO-3072LA, UNO-3072A, UNO-3074A, UNO-3082, UNO-3084
- Ordering Information: 9663308403E

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### Power Adapter and Power Cord Solutions

#### Industrial Grade Power Adapter
(Note: Only for UNO-1000/2000 series)

- **Features**
  - Input voltage: 90 ~ 264 VAC, 47 ~ 63 Hz
  - Output Voltage: 24 Vdc
  - Operating Temperature: -20 ~ 70°C
- **Ordering Information**
  - 1702002600 Power cable US Plug 1.8 M
  - 1702031801 Power cable UK Plug 1.8 M
  - 1702022605 Power cable EU Plug 1.8 M
  - 1702031806 Power cable China/Australia Plug 1.8 M
  - 1757002321 63W AC to DC UNO series power adapter

#### Commercial Grade Power Adapter

- **Features**
  - Input voltage: 100 ~ 240 VAC, 50 ~ 60 Hz
  - Output Voltage: 19 Vdc
  - Operating Temperature: 0 ~ 40°C
- **Ordering Information**
  - 170001524 Power cable 3-pin US type 1.8 M
  - 172031801A Power cable 3-pin UK type 1.8 M
  - 172031803C Power cable 3-pin EU type 1.8 M
  - 1757002962 65W AC to DC power adapter
  - 1757002161 150W AC to DC power adapter
  - PWR-244-AE 96W AC to DC power adapter

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Note: For UNO-3072L-C22BE and UNO-3074-P32CE wall mount requirements, please use the UNO-PM70-AE mounted on the back as a Wall Mounting kit.