

Universal Network Controller UNO-2000/3000

UNO-2000 Series	UNO -2000 Introduction	11-2
UNO-3000 Series	UNO -3000 Introduction	11-4
Software Support		11-6
UNO-2000/3000 Selection Guide		11-7
UNO-3062	Celeron-650 Industrial Front-access Controller w/o Fan with 2 x LAN, 1 x RS-232, 2 x RS-232/422/485, 3 x USB and 2 x PCI slots	11-8
UNO-2160	Celeron-400 UNO with 2xRS-232, 2 x RS-232/422/485, 2xLAN and PC/104 Extension	11-10
UNO-2050	GX1-300 Universal Network Controller with 16 isolated DI/O	11-11
UNO-2052	GX1-300 UNO with 2 x CAN Bus, LAN, USB, RS-232, 16 x DI/O, 2xAI	11-12
UNO-2053	GX1-300 Universal Network Controller with PC Card, 2 x LAN, 2xUSB, 2xRS-232	11-13
UNO-2059	GX1-300 Universal Network Controller with PC Card, 2 x RS-232/485, 2xRS-232/422/485	11-14



UNO-2000 Universal Network Controller



Introduction

If you are looking for a suitable embedded application ready platform (ARP) that can shorten your development time and offer rich networking interfaces to fulfill your extensive needs for different kinds of projects, Advantech's UNO-2000 series is a great solution.

Leveraging field-approved and worldwide accepted real-time OS technology, Advantech's UNO-2000 series provides a Windows CE.NET ready solution and supports several standard networking interfaces, such as the Ethernet, Wireless LAN, and RS-232/422/485 to name a few. Because of its open architecture, great expansion capability and reliable fanless and diskless design, Advantech's UNO-2000 series is an ideal platform to implement diverse custom industrial applications. Applications such as SoftLogic controllers, communication gateways, data loggers, facility monitoring and management devices and fieldbus controllers.

The letters of UNO stands for the three key features of Advantech UNO-2000 products:

- **Universal:**
 - Open hardware architecture: supports most popular operating systems, like Windows and Linux
 - Standard peripherals interface: supports USB, PC/104 and PCMCIA
 - Computing capability: 486 to Pentium computing power
 - Application: suitable for a variety of applications because of its openness and embedded design
- **Network:** Ethernet, modem, wireless LAN and IrDA networking options
- **Control:** Supports complete ADAM I/O & controller series from the ADAM-4000 to ADAM-6000 and Modbus devices over the RS-485 and the Ethernet.

Features

Built-in Real-time Operating System

Advantech's UNO-2000 series is a built-in Windows® CE solution offering a pre-configured image with optimized onboard device drivers. Microsoft Windows® CE is a compact, highly efficient, and real-time operating system that is designed for embedded systems without HDD limitations.

In addition to Windows® CE, the UNO-2000 also supports embedded Linux and XP operating systems.



Efficient Application Development Environment

There is no need to waste time and energy on developing onboard device drivers or use a Platform Builder to build a custom Windows® CE image. They are all done by the Advantech UNO-2000 series! Through the built-in runtime library and software development kit (SDK), the UNO-2000 series leverages your existing Windows-based programming skills to develop applications easily and efficiently.

Standard Communication Interfaces Integrates with Remote I/O Solutions

Advantech UNO-2000 series offers standard communication interfaces for I/O device expansion. They are: RS-232/422/485, Ethernet and Modbus devices. RS-232/422/485 is a widely used interface that is simple, inexpensive to implement, and more than adequate for most simple serial communication devices. The Ethernet connectivity features high communication speed, low wiring cost for I/O connections. And the Modbus/TCP and Modbus/RTU are standard industrial communication protocols that are widely supported by a wide variety of industrial equipment via the Ethernet and RS-485.



Flexible Networking Options

Advantech's UNO-2000 series offers three ways to connect to a network: Ethernet, wireless LAN and modem. The Ethernet port provides high-speed networking capability up to 100 Mbps. Wireless LAN offers you a mobile and scalable network without additional cabling costs, and the modem offers you the most popular and easiest networking way via PSTN.

Easily Added Features for Versatile Applications

The Advantech UNO-2000 series offers you a simpler and more cost-effective solution to fulfill your requirements for specific features by incorporating PC/104, USB and PC card standard interfaces. To maximize your I/O expansion capability, Advantech UNO-2000 is equipped with PC/104, USB and PC card interfaces for connecting numerous peripherals and I/O and communication devices, such as Fieldbus, video, motion, and On-board I/O. This makes the UNO-2000 series a "universal" platform to satisfy various requirements for different projects.

Complete Support for ADAM Remote DA&C

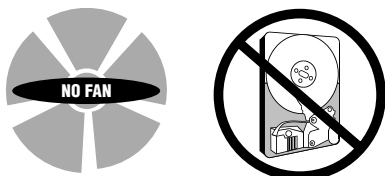
Advantech's ADAM series has been recognized as a leading brand for distributed data acquisition solutions. Today, Advantech's UNO-2000 series has integrated the entire ADAM series ranging from the ADAM-4000, 5000, 5510, 5511, 5000/TCP to the latest ADAM-6000 series to fulfill all your I/O needs via RS-485 and Ethernet networks.

Watchdog Timer Supervisor

Advantech's UNO-2000 series offers a built-in watchdog timer function. It monitors the CPU and your target applications and automatically resets the system. This feature prevents the system from locking up and reduces overall required maintenance.

Proven in Industrial Environments

By eliminating fans, hard disks and other moving parts, Advantech's UNO-2000 series has excellent anti-shock and anti-vibration features, and is specially designed for harsh industrial environments. The operating temperature ranges from 0 ~ 55° C and accepts unregulated voltage input power from 9 to 36 V_{DC}. It is also protected against accidental power supply reversals. In addition, the UNO-2000 series provides DIN-rail and panel/wall mounting kits, making installation more convenient.



No Fan + No Disk = Reliability

Mounting

The UNO-2000 Series of products offers flexible mounting options:



DIN-rail mounting by industrial standard DIN-rails



Panel/wall mounting for flat surfaces

PC/104 Extension (for UNO-2041/2160 only)

The UNO-2041/2160 provides PC/104 extension capability to extend I/O, or communication functions. For example, use Advantech's PCM-3601 PC/104 modem card to add modem communication to the UNO-2041/2160.



Extend I/O or Communication function by PC/104 extension

1

IPPC & AWS

2

TPC

3

FPM

4

ATM

5

DA&C

6

cPCI

7

ADAM-3000

8

eConnectivity

9

ICOM

10

Software

11

UNO-2000/3000

12

VBOX

13

ADAM-4000

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ADAM-5000

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ADAM-6000

16

ADAM-8000

UNO-3000 Front Access Universal Network Controller

NEW



Features

- All-in-one, front-end access industrial PC
- Two free PCI slots provides versatile usage
- Compact design suitable for control cabinet installation
- All PC connections are on one side of the housing, which means it's easy to connect and maintain.
- Equipped with mounting plates on three sides (option)
- Stands up to tough requirements by withstanding high temperatures, vibration and meets standards for electromagnetic emission.
- Battery-backup secures the last state of the system for safety
- Fan-less and HDD-free construction to optimize system reliability
- Featured with off-the-shelf PC connectivity (2 x Ethernet, 4 x USB....)

Introduction

Standard PCs and even some industrial computers, cannot provide the reliability demanded by industrial automation control applications. PCs with a standard OS and off-the-shelf hardware are too fragile and unstable to deliver the reliability demanded in embedded industrial control. But, many engineers have used PCs for advanced functionality, such as analog control and simulation, database connectivity, Web-based applications, and communication with third party devices. Today, UNO-3000 combines the best features of the PC, including the processor, RAM, and powerful software, with the reliability, ruggedness, and distributed nature of the PLC. UNO-3000 has the compact size and ruggedness of a PLC, and the software flexibility and functionality of a PC. It's an ideal platform for sophisticated control and logging in rugged environments.

Open architecture designed for automation

For applications demanding customized control, an UNO-3000 that uses more flexible, off-the-shelf technology is a better option. UNO-3000 uses off-the-shelf components such as an x86 processor, an Ethernet chip set, CompactFlash™, and DRAM. System designers can easily take multiple inputs from sensors thru plug-in data acquisition cards and provide outputs to devices to control the operation. At the same time, the UNO-3000 unit can broadcast the process data through the Ethernet and share the data with operators and managers. By using off-the-shelf components, machine builders can customize the control scheme they use for other machines that require multiple inputs, optimized control, or Ethernet communication. So, UNO-3000 offers the rich I/O connectivity of PCs, including: 2 x 10/100Base-T Ethernet, 2 x RS-232, 2 x RS-232/422/485, 4 x USB, CompactFlash & PC cards extension slots and VGA/DVI interfaces for display panels.

An Industry-proven design

Industrial and mobile applications require controllers with high-vibration specifications and a wide temperature range. The machines or controllers in light industrial environments also require flexible and stable mounting. Many machine builders underestimate the need for a more rugged controller because their end applications are mounted in an industrial enclosure. Advantech UNO-3000 has a special design without the weaknesses of a standard PC. No fan, and no HDD gets rid of dust and vibration problems. While the battery-backup function that secures the last state of the system, makes system crashes less problematic. With a smart mechanical design, UNO-3000 can meet 50 G shock, 0.5 G vibration, up to 60° C operating temperature and almost anything an industrial environment can demand.

Off-the-shelf Universal PCI extension

From a computing point of view, the UNO-3000 series with its PC based Control CPU are high-end machine controllers. From this view, they can be simply operated with the onboard Ethernet interface or with a PC fieldbus card. Two free PCI slots are also available. In addition, Advantech also offers a complete product line for plug-in data acquisition and control I/O cards, motion control cards, GPIB cards, industrial communication and fieldbus communication cards. So, you can get a complete PC-based solution from Advantech.

Front Access Connections

All PC connections are on one side of the housing. The PC can optionally be equipped with mounting plates on three sides and fastened with screws in a control cabinet. All mechanical parts are designed to be simple, and the drivers and plug-in cards are easily accessible without compromising system performance or integrity. The installation options are also well balanced. All PC connections are located on one side, while three mounting sides offer optimum installation variations in the control cabinet for the user.

Designed to Fit Into Control Cabinets

The fully-fledged UNO-3000 could easily be mistaken for a PLC by its look and feel. In completely new "packaging", the smallest UNO only measures 142 x 220 x 390 mm (W x H x D). But the UNO-3000 not only deals with PLC tasks, but also offers all the operating and communication power of a modern PC, with its Intel Celeron or Pentium III processor and Windows Operating System software. So, UNO-3000 is a small, powerful and inexpensive PLC substitute.

On Board DI/O for Counter, Alarm/Event Handling

UNO-3000 features onboard DI & DO. These DIs & DOs can be used as 32-bit counters or to handle alarms and events. Any events can be passed to UNO-3000 through DIs with an additional DI plug-in card. And, UNO-3000 can output alarms through onboard DOs immediately to notify key personell about urgent events.

Flexible Networking Options

The Advantech UNO-3000 series offers three ways to connect to a network: Ethernet, Wireless LAN and Modem. The built-in two Ethernet ports provide high speed networking capability up to 100 Mbps. The PCMCIA extension with PCMCIA wireless LAN module offers you a mobile and scalable network without incurring additional cabling costs. And through UNO-3000 COM ports, industrial modems offers the most popular and easiest networking way via PSTN.

Popular Operating System & Rapid Application Development Environment

The Advantech UNO-3000 series supports the popular off-the-shelf Microsoft Windows 2000/NT/XP operating systems and the Linux operating system. UNO-3000 also features pre-built Microsoft Windows XP embedded or Windows CE solutions offering a pre-configured image with optimized onboard device drivers. Microsoft Windows CE or XP Embedded are compact, highly efficient, and real-time operating systems that are designed for embedded systems without HDD limitations. And, there is no need to waste time and energy on developing onboard device drivers or using the Platform Builder to build a custom Windows CE image, they have all been done for the Advantech UNO-2000 series! Through the built-in runtime library and Software Development Kit (SDK), the UNO-3000 series leverages your existing Windows-based programming skills to develop applications easily and rapidly.

Mounting

The UNO-3000 Series of products offers flexible mounting options.

- Wall Mounting
- Panel Mounting



- Mounted in wall mounted control cabinet

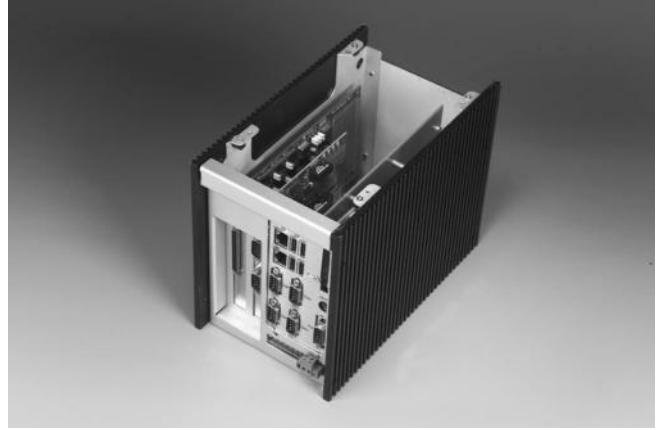


- Mounted on Advantech's Flat Panel Monitor (FPM)



PCI Extension

UNO-3000 provides PCI extension capability to extend I/O, motion control, and fieldbus communication functions.



HDD Extension

It is easy to exchange HDDs without removing other components, such as CPU modules, PCI cards or power modules.



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IPPC & AWS

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TPC

3

FPM

4

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5

DA&C

6

cPCI

7

ADAM-3000

8

eConnectivity

9

ICOM

10

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11

UNO-2000/3000

12

VBOX

13

ADAM-4000

14

ADAM-5000

15

ADAM-6000

16

ADAM-8000

Win CE/XP Embedded Introduction

UNO Embedded OS Introduction

Advantech's UNO-2000 series provides an embedded operating system solution offering a pre-configured image with optimized onboard device drivers. UNO-2000 supports the three most popular operating systems: Windows® CE .NET, Windows XP Embedded and Embedded Linux. These operating system fulfill the toughest requirements of complete functionality, high reliability, minimized cost and low power consumption. UNO quickly proves itself to be a ready -or-application platform that saves you time and energy in launching your projects.

Hard Real-Time Windows CE .NET Meets Time-critical Demands

Windows CE .NET, published by Microsoft, is a robust, compact and highly efficient "hard" 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 .NET supports the latest stack network standard, IPv6 that provides more IP addresses than the previous standard, IPv4. Windows CE .NET possesses robust core OS services and complete networking services to offer users an ideal embedded development platform.

Windows XP Embedded Provides Applications Compatible to Windows XP (UNO-2160/3062 only)

Windows XP Embedded is a componentized version of Windows XP Professional, which is based on Windows XP Professional binaries and features the latest multimedia (Windows Media Player™ 8.0, DirectX® 8.0), browsing (Internet Explorer 6.0) technologies, security, and rich networking functionalities. You can seamlessly integrate specific applications into Windows XP Embedded 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 installed into the embedded device. Embedded Linux is a fully functional OS that features the flexibility of adding or removing modules in kernel at runtime. The other major advantage of Linux is its open source that allows users to save any license or royalty fees. Hence, Embedded Linux is a cost-effective alternative for users.

UNO not only provides an embedded OS platform but also has full driver support, including Windows CE .NET, Windows 98/2000/XP and Linux. Therefore, UNO is an application-ready platform that significantly shortens your research development cycle, expediting time to market.

UNO Windows CE .NET Software Support

Applications and Services Development	<p>The combined Web and application services of Windows CE .NET provide unsurpassed opportunities to build smart, mobile, and connected devices that have access to Windows operating systems, applications, databases, and the Internet.</p> <ul style="list-style-type: none"> ▪ Active Template Library (ATL) ▪ C Libraries and Runtimes ▪ Component Services: Component Object Model (COM) and Distributed Component Object Model (DCOM) ▪ Device Management ▪ Lightweight Directory Access Protocol (LDAP) Client ▪ Microsoft Message Queuing (MSMQ) ▪ Microsoft Foundation Classes (MFC) ▪ Object Exchange Protocol (OBEX) ▪ Simple Object Access Protocol (SOAP) Toolkit ▪ Standard SDK for Windows CE .NET ▪ Microsoft .NET Compact Framework ▪ XML
Applications: End User	<p>Ready-to-use applications perform common tasks based on underlying services, providing rapid application deployment within specific classes of devices, such as mobile handheld devices, data collection devices, and thin clients.</p> <ul style="list-style-type: none"> ▪ Microsoft ActiveSync® ▪ CAB File Installer/Uninstaller ▪ Help ▪ Remote Desktop Connection
Core Operating System Services	<p>Core operating system services contain data on the Windows CE kernel and other features common to all Windows CE platforms. The core operating system services enable low-level tasks from process threads to memory management, and provide some file system functionality.</p> <ul style="list-style-type: none"> ▪ USB Host Support ▪ Kernel Features ▪ Real-Time Support ▪ Fonts
Communication Services and Networking	<p>Windows CE .NET provides networking and communications capabilities that enable devices to connect and communicate securely with other devices and people over both wireless and wired networks.</p> <ul style="list-style-type: none"> ▪ Networking Features: Protected Extensible Authentication Protocol (PEAP), firewall, Network Driver Interface Specification (NDIS) 5.1, utilities, Universal Plug and Play (UPnP), TCP/IP, TCP/IPv6

	<ul style="list-style-type: none"> ▪ Local Area Network (LAN): 802.1x, 802.3, 802.5, Wireless Protected Access ▪ Wide Area Network (WAN): dial-up networking, point-to-point, telephony API ▪ Servers: File Transfer Protocol (FTP), telnet, Web server , Remote Access Service (RAS)
File Systems and Data Stores	<p>File systems and data stores enable devices to compress, store, or read data from RAM or ROM and have varying responsibilities from filtering to partitioning.</p> <ul style="list-style-type: none"> ▪ File System ▪ Registry Storage
Multimedia and Browsing Services	<p>The Internet connectivity modules enable you to build sophisticated Internet access devices. Off-the-shelf protocols are available at various levels to provide multiple Internet access options. Windows CE .NET includes the high performance Microsoft DirectX® API and Microsoft Windows Media® technologies found on desktop computers, enabling high-performance audio, video, and streaming media services on Windows CE .NET-based devices.</p> <ul style="list-style-type: none"> ▪ Internet Explorer 5.5 for Windows CE ▪ Scripting (Microsoft Jscript® 5.5, VBScript 5.5)
Security	<p>Security services supported in Windows CE .NET 4.2 help users to connect securely over networks and between specified devices, enabling better protection of personal content and data.</p> <p>Authentication Services</p> <ul style="list-style-type: none"> ▪ Kerberos ▪ Secure Socket Layer (SSL) <p>Cryptography Services</p> <ul style="list-style-type: none"> ▪ CryptoAPI 1.0 with High Encryption Provider
Shell and User Interface	<p>Ready-to-use, built-in user interfaces (UI) and UI services can save you considerable time when you want to create the sophisticated, easy-to-use, graphical devices that users demand.</p> <ul style="list-style-type: none"> ▪ Graphics, Windowing, and Events ▪ Shell ▪ User Interface (customizable UI, software input panel)

UNO-2000/3000 Series Selection Guide

Model Name	UNO-2041	UNO-2050	UNO-2052	UNO-2053	UNO-2059	UNO-2160	UNO-3062**
CPU	486 MHz	GX1-300 MHz				Celeron 400	
On-Board RAM	32 MB EDO RAM	64/128 MB SDRAM				256/512 MB SDRAM	
Battery-backup RAM	-	-				512 KB	
VGA/KB/MS	Yes						
Serial Ports	2x RS-232 2xRS-232/485	2x RS-232 2xisolated RS-232/422/ 485	2xCAN 1xRS-232	2xRS-232	2xRS-232 2xRS-232/422/ 485	2xRS-232 2xRS-232/422/485	
10/100Base-T Ethernet Ports	Extend one port by PCM-3660	Two	One	Two	One	Two	Two
USB Ports	-	-	One	Two	Two	Two	Four
PC Card Slots	Extend one port by PCM-3110A	-	-	One	One	One	One
Printer Ports	-	-	-	-	-	One	-
PC/104 Extensions	One	-	-	-	-	Two	-
PCI Extensions	-	-	-	-	-	-	Two
On-Board I/O	By adding PC/104 I/O	8-ch isolated DI 8-ch isolated DO	4-ch isolated DI 4-ch isolated DO 2-ch isolated AI	-	-	-	4-ch isolated DI 4-ch isolated DO
Watchdog Timer	No	Yes					
CompactFlash™ Slots	One internal						One external
2.5" HDD Extension	No	Yes					
Operating Systems	DOS Windows® CE .NET	Windows® CE .NET Windows 98/Linux				Windows® XP Embedded Windows® CE .NET Windows 98/2000/XP Linux	
Programming runtime library	Yes						
Software Development Kit	Yes						
Activesync	Yes						
Web server/ E-mail service	Yes						
Modem dial-in(RAS)/dial-up function	Yes						
Mounting	DIN-Rail/Panel/Wall					Panel/Wall	
Anti-vibration	1G w/CF @ IEC 68 section 2-6, sine, 5-500 Hz, 1 Oct./min, 1hr/axis.	2G w/CF, 0.5G w/HDD @ IEC 68 section 2-6, sine, 5-500 Hz, 1 Oct./min, 1hr/axis.				2G w/CF, 0.5G w/HDD @ IEC 68 section 2-6, sine, 5-500 Hz, 1 Oct./min, 1hr/axis.	
Anti-shock	20 G w/ CF @ DIN IEC 68 section 2-27, half sine, 11ms 50 G W/ CF @ Wall/Panel IEC 68 section 2-27, half sine, 11ms						
IP40 Certificate	Yes						
Power Input Range	10-30 V _{DC}	9-36 V _{DC}	9-36 V _{DC}	10-30 V _{DC}	9-36 V _{DC}	9-36 V _{DC}	16-36 V _{DC}
Operating Temperature	0-55° C				-10-55° C @ 5-85% relative humidity		-10-50° C @ 5-85% relative humidity
Related Humidity	95% @ 40° C						
Power Consumption	0.6 A max under +24 V power input or 1.2 A max under +12 V power input						
Power Requirement	1 A typical under +24 V power input or 1.5 A typical under +12 V power input					Max. 35 W	
Dimensions (W x L x H)	188.8 x 106.5 x 35.5 mm (7.5" x 4.2" x 1.4")					220 x 160 x 50 mm (8.6" x 6.2" x 1.9")	140 x 220 x 390 mm (5.5" x 8.6" x 15.3")
Weight	0.8 Kg					1.6 Kg	

Ps. eMbedded Visual C++ 4.0 SP1 and Visual Studio .NET Development Tool can be download from Microsoft website (for MSDN member)

*: Linux supports Kernel version 2.4 ported based on Red Hat development kit.

Available date, please check with Advantech.

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IPC & AWS

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TPC

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FPM

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ATM

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DA&C

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cPCI

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ADAM-3000

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Software

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UNO-2000/3000

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VBOX

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ADAM-4000

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ADAM-5000

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ADAM-6000

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ADAM-8000

UNO-3062

Celeron® 400 Universal Network Controller with Two PCI Slots Extensions

NEW



Features

- On-board Celeron 400 MHz, 256/512 MB SDRAM.
- Provides 512 KByte battery-backup RAM.
- Two RS-232 and two RS-232/422/485 ports with automatic flow control.
- Two 10/100 Base-T RJ-45 port and four USB ports.
- Two free PCI-bus slots extension for versatile applications.
- Windows XP embedded and Windows CE .NET ready solution.
- Window NT/2K/XP driver ready.
- All connectors at front side of housing.
- Flexible mounting plates on three sides (optional).

Introduction

The Advantech UNO-3062 is a Pentium III grade front access controller which provides highly reliable industrial automation control. The UNO-3062 features a special design to offer fanless and HDD-free construction, and is made for installation in a rugged environment. All connections of UNO-3062 are on the front side of the housing, besides, it can be equipped with mounting plates on three sides to offer optimum installation flexibility in control cabinets.

Specifications

- **CPU** Celeron-400 MHz Ultra low-voltage version
- **Memory** 256/512 MB SDRAM on board (Default: 256)
- **Battery-backup RAM** 512 KB
- **BIOS** Award 256KB flash memory, supports Boot-on-LAN function
- **VGA/Keyboard/Mouse** DB-15 VGA Connector, PS/2 keyboard & mouse
- **Clock** Battery-backup RTC for time and date
- **Serial Port** 2 × RS-232 and 2 × RS-232/422/485 with DB-9 connector
- **Automatic RS-485 data flow control**
- **Speed**
 - RS-232: 50 bps ~ 115.2 Kbps
 - RS-422/485: 50 bps ~ 921.6 Kbps
- **LAN** Two 10/100 Base-T RJ-45 Ports
- **USB interface** Four USB ports, USB UHCI, Rev. 1.1 compliant
- **CF Card** One internal CF slot, one external CF slot
- **SSD** One internal Type I / Type II CompactFlash card slot
- **LEDs** Power LED and IDE LED
- **PCI-bus slots** Two PCI-bus Slots
- **4-ch isolated digital input (DIO~DI3)**
 - 2,000 V_{DC} isolation, 2000 V_{DC} ESD protection and 70 V_{DC} over-voltage protection
 - 0 ~ 50 V_{DC} input range and 10 KHz speed
 - Interrupt handling capacity
 - One 32-bit counter/timer
 - Interrupt handling speed: 10 KHz
 - Timer time base: 100 KHz, 10 KHz, 1 KHz, 100 Hz
- **4-ch isolated digital output (DO0~DO3)**
 - 2,000 V_{DC} isolation and 200 mA max / channel sink current
 - Keep output status after system hot reset
 - 5 ~ 40 V_{DC} output range and 10 KHz speed
- **HDD** HDD extension kit is offered for installation of one standard 2.5" HDD (Option)

- **Anti-Shock** 20 G @ Wall mounting, IEC 68 section 2-27, half sine, 11ms w/HDD
50 G @ Wall mounting, IEC 68 section 2-27, half sine, 11 ms w/CF
- **Anti-Vibration** 2 Grms w/ CF @IEC 68 section 2-64, random, 5~500Hz, 1 Oct./min, 1hr/axis.
0.5 Grms w/ HDD @IEC 68 section 2-64, random, 5~500Hz, 1 Oct./min, 1hr/axis
- **Power Supply** 16 ~ 36 V_{DC}
- **Power Consumption** Max. 35 W
- **Operating Temperature** -10~50 °C (14 ~ 122° F) @ 5~85% relative humidity
- **Relative Humidity** 95% @ 40 °C
- **Power Consumption** Max. 35 W
- **Chassis Size** 140 x 220 x 390 mm (5.5" x 8.6" x 15.3")
- **Mounting** Wall/panel mounting
- **Weight** 1.6 kg

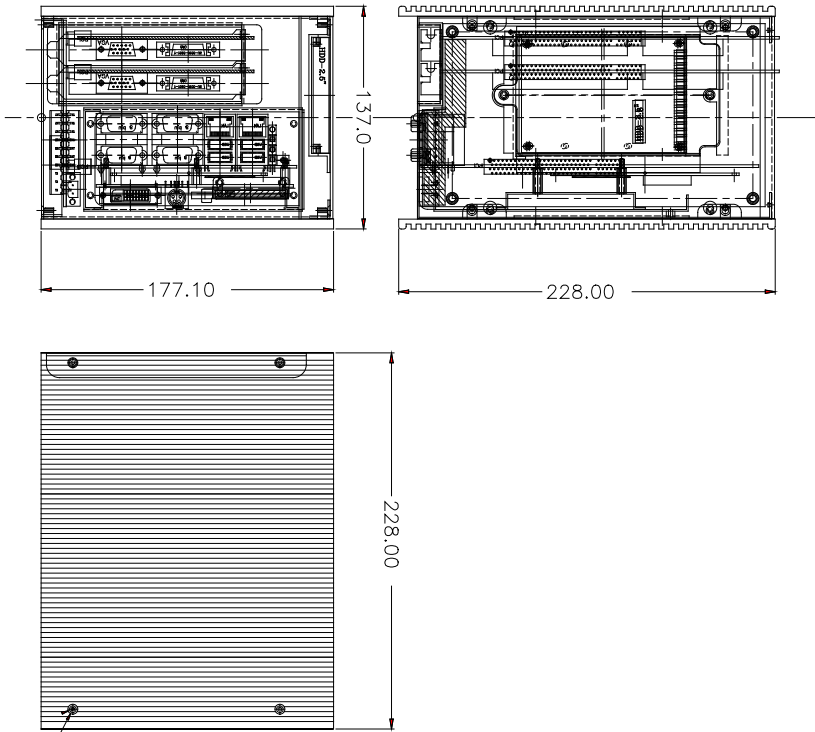
Software

- **OS** Windows® XP Embedded, Windows 98/NT/2000/XP, Linux, Windows CE .NET v4.2

Ordering Information

- **UNO-3062-JDA0** Celeron-400 Universal Network Controller with 2xRS-232, 2xRS-232/422/485, 2xLAN and 2 x PCI-bus Slots

Dimensions



- 1 IPCC & AWS
- 2 TPC
- 3 FPM
- 4 ATM
- 5 DA&C
- 6 cPCI
- 7 ADAM-3000
- 8 eConnectivity
- 9 ICOM
- 10 Software
- 11 UNO-2000/3000
- 12 VBOX
- 13 ADAM-4000
- 14 ADAM-5000
- 15 ADAM-6000
- 16 ADAM-8000

Feature Details

UNO-3062 provides two free universal PCI slots for convenient expansion. These two universal PCI slots could for example be used for data acquisition cards, control plug-in I/O cards, GPIB cards or industrial communication cards. Moreover, UNO-3062 also has two onboard standard RS-232 ports, two RS-232/422/485 ports, two Ethernet ports, CompactFlash extension slots, four DI/Os with counter and alarm handling and VGA for display panels. UNO-3062 has a rich I/O and communication interface which can fulfill diverse requirements.

UNO-3062 has 512 KB of battery backup SRAM that ensures you have a safe place to store critical data. With an LED alarm, it is also convenient to monitor that the battery is charged. You can now write software applications without being concerned that system crashes will erase critical data from the memory.

UNO-3062 supports two embedded operating systems, Windows CE .NET 4.2 and Windows XP embedded, which offer a pre-configured image with optimized onboard device drivers. Windows XP Embedded delivers the power of the Windows operating system in componentized form, so you can seamlessly integrate your applications into Windows XP Embedded.

UNO-2160

Celeron® 400 Universal Network Controller with PC/104 Extension

NEW



Features

- Onboard Celeron® 400 MHz, 256/512 MB SDRAM
- Provides 512 Kbytes of battery-backup RAM
- Supports Lm sensor which can retrieve CPU and board temperature for monitoring purposes
- Two RS-232 and two RS-232/422/485 ports with automatic flow control.
- Two 10/100 Base-T RJ-45 ports.
- Two USB and one type I/II PC Card.
- Two optional PC/104 extensions.
- Supports Modbus/RTU and Modbus/TCP devices.
- Supports ADAM series for remote data acquisition and control
- Windows® XP Embedded ready solution.

Introduction

UNO-2160 is a high performance Pentium III grade controller that supports PC/104 extensions, serial communication ports and several other networking interfaces. UNO-2160 comes with Windows® XP Embedded OS, which offers a pre-configured image with optimized onboard device drivers. Windows® XP Embedded delivers the power of the Windows operating system in componentized form. You can seamlessly integrate your applications into Windows XP Embedded. Speed up your system development with an application ready platform that can provide a rich networking interface to fulfill diverse requirements.

Specifications

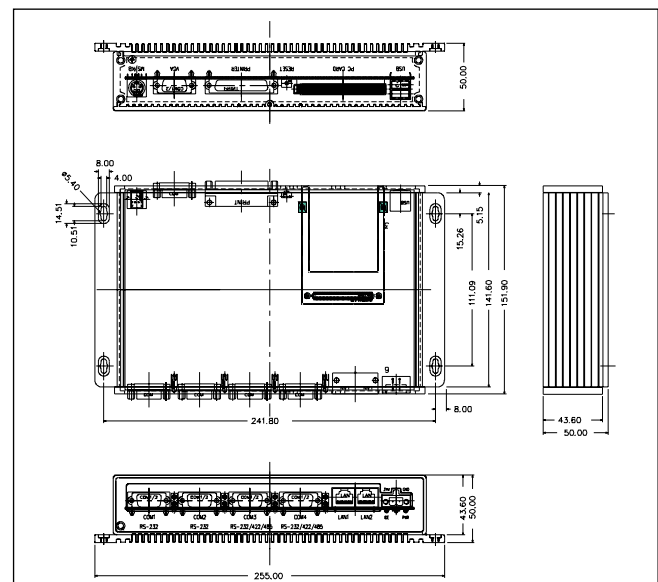
- CPU** Celeron® 400 MHz Ultra low-voltage version, 256/512 MB SDRAM on board (Default: 256 MB SDRAM).
- Battery-backup RAM** 512 KB Battery-backup RAM
- VGA/Keyboard/Mouse** DB-15 VGA Connector, PS/2 keyboard & mouse
- Serial Ports** 2 x RS-232 and 2 x RS-232/422/485 with DB-9 connectors
Automatic RS-485 data flow control
- Serial Port Speed** RS-232: 50 ~ 115.2 Kbps
RS-422/485: 50 ~ 921.6 Kbps
- LAN** Two 10/100 Base-T RJ-45 Ports
- USB Interface** Two USB ports, USB UHCI, Rev. 1.1 compliant
- Printer Port** One printer port
- PC Card** One PC Card slot
Supports CardBus (Card-32) Card and 16-bit (PCMCIA 2.1/JEIDA4.2) Card
Supports +5 V, +3.3 V and +12 V @ 120 mA working power
- SSD** One internal Type I / Type II CompactFlash card slot
- LEDs** Power, IDE, Alarm for RAM Backup Battery
- PC/104** Two PC/104 Extensions. (Option)
- HDD** HDD extension kit for installation of one standard 2.5" HDD
- Anti-Shock** 20 G @ Wall mounting, IEC 68 2-27, half sine, 11 ms w/HDD
50 G @ Wall mounting, IEC 68 2-27, half sine, 11 ms w/CF
- Anti-Vibration** 2 Grms w/CF @ IEC 68 section 2-64, random, 5 ~ 500 Hz, 1 Oct./min, 1 hr/axis.
0.5 Grms w/ HDD @ IEC 68 section 2-64, random, 5 ~ 500 Hz, 1 Oct./min, 1 hr/axis
- Power Supply** 9 ~ 36 V_{DC}
- Power Consumption** Max. 35 W
- Operating Temperature** -10~50° C (14~122° F) @ 5~85% related humidity.
- Relative Humidity** 95% @ 40° C
- Weight** 1.6 kg

- Chassis Size (WxDxH)** 255 x 152 x 50 mm (10" x 6.0" x 2.0")
- Software Options** Windows® XP Embedded, Windows NT/2000/XP, Windows CE .NET V4.2

Ordering Information

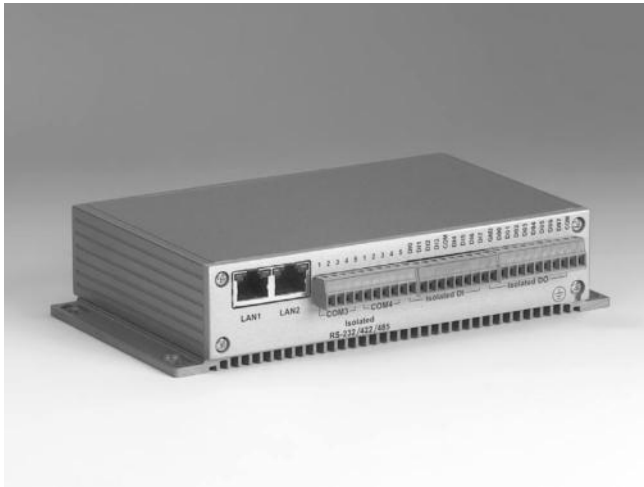
- UNO-2160-JDA0** Celeron® 400 Universal Network Controller with 256 MB SDRAM, 2xRS-232, 2xRS-232/422/485, 2xLAN, 2xUSB and PC Card
- UNO-2160-KDA0** Celeron® 400 Universal Network Controller with 512MB SDRAM, 2xRS-232, 2xRS-232/422/485, 2xLAN, 2xUSB and PC Card
- UNO-PCM21-A** UNO-2100 series PC/104 extension kit

Dimensions



UNO-2050

**GX1-300 UNO with 2xLAN, 2xRS-232
2xIsolated RS-232/422/485, 16xIsolated DI/O**



Features

- On-board GX1-300 MHz, 64/128 MB SDRAM
- Two RS-232 and two-isolated RS-232/422/485 with automatic flow control
- Two 10/100 Base-T RJ-45 port.
- Isolated 8-channel DI and 8-channel DO with counter and timer.
- One programmable diagnostic LED and buzzer.
- Supports Modbus/RTU and Modbus/TCP devices.
- Supports ADAM series for remote data acquisition and control
- Windows CE .NET ready solution.

Introduction

The Advantech UNO-2050 is a 586-grade platform with dual LAN and 16-channel isolated digital I/O and timer/counter. In addition, it also provides two RS-232 and two isolated RS-232/422/485 communication ports with RS-485 automatic flow control functionality. Therefore, the UNO-2050 is an ideal solution for embedded controllers.

UNO-2050 comes with a built-in Windows CE solution offering a pre-configured image with optimized onboard device drivers. Microsoft Windows CE is a compact, highly efficient, real-time operating system designed for embedded systems without mechanical HDD limitations. To expand storage capability, the UNO-2050 allows the addition of an external 2.5" HDD using Advantech's UNO HDD extension kit. It can be used for large data backup requirements and popular OS installations such as Microsoft Windows and Linux OS. Significant anti-vibration (1G w/ HDD) is maintained even with the mechanical HDD inside. UNO-2050 is the perfect embedded application ready platform that can shorten development time and offer a rich networking interface to fulfill diverse application requirements.

Specifications

- CPU** NS Geode GX1-300 MHz, 64/128 MB SDRAM on board
- VGA/Keyboard/Mouse** DB-15 VGA Connector, PS/2 keyboard & mouse
- Serial Ports** 2 x standard RS-232 (COM1/COM2)
2 x isolated RS-232/422/485 (COM3/COM4)
Automatic RS-485 data flow control
RS-232/422/485 (COM3/COM4) with 2000 V_{DC} surge protection & 2000 V_{DC} isolation
Speed: RS-232: 50 ~ 230.4 Kbps
RS-422/485: 50 ~ 921.6 Kbps
- 8-ch isolated digital input** 2,000 V_{DC} isolation, 2,000 V_{DC} ESD protection, 70 V_{DC} over-voltage protection
0 ~ 50 V_{DC} input range and 10 KHz speed; Interrupt handling.
- 8-ch isolated digital output** 2,000 V_{DC} isolation and 200 mA max / channel sink current
Keep output status after system hot reset
5 ~ 40 V_{DC} output range and 10 KHz speed
- Two 16-bit counter timer** Counter source: DI6 & DI7, Pulse output: DO6 & DO7
Can be cascaded as one 32-bit counter/timer
Down counting, preset counting value, interrupt handling
Timer time base: 100 KHz, 10 KHz, 1 KHz, 100 Hz
- LAN** Dual 10/100Base-T RJ-45 Port
- SSD** One internal Type I / Type II CompactFlash card slot
- HDD** Offer HDD ext.kit for inst. of one standard 2.5" HDD.
- Watchdog Timer** Programmable
- Anti-Shock** 20 G @ DIN IEC 68 section 2-27, half sine, 11 ms 50 G @ Wall/Panel IEC 68 section 2-27, half sine, 11 ms.
- Anti-Vibration** 2 G w/ CF @ IEC 68 section 2-6, sine, 5 ~ 500 Hz, 1 Oct./min, 1hr/axis.
1 G w/ HDD @ IEC 68 section 2-6, sine, 12 ~ 300 Hz, 1 Oct./min, 1 hr/axis.

- LED** Power LED, IDE LED and one programmable diagnostic LED and buzzer.
- Power Supply** 9 ~ 36 V_{DC}
- Operating Temperature** -10 ~ 55° (14 ~ 131° F) @ 5 ~ 85% relative humidity.
- Related Humidity** 95% @ 40° C.
- Power Consumption** 0.6 A max @ +24 V input or 1.2 A max @ +12 V input
- Power Requirement** 1 A typical @ +24 V input or 1.5 A typical @ +12 V input
- Chassis Size (WxDxH)** 188.8 x 106.5 x 35.5 mm (7.5" x 4.2" x 1.4")
- Weight** 0.8 kg

Driver Support

- CE** UNO configuration utility. COM port Driver, Digital input / digital output driver. Programmable LED and buzzer Driver. Watchdog timer Driver.
- Linux** Digital input / digital output driver. COM port driver. Programmable LED and buzzer Driver. Watchdog timer Driver.
- Windows 2000/XP** COM port driver, Digital input / digital output driver. Programmable LED and buzzer Driver. Watchdog timer Driver. Modbus/TCP, Modbus/RTU DLL Driver.

Ordering Information

- UNO-2050-GDA0** GX1-300 UNO with 64 MB SDRAM, 2 x LAN, 2 x RS-232, 2 x isolated RS-232/422/485, 16 x isolated DI/O
- UNO-2050CE-GDA1** GX1-300 UNO with 64 MB SDRAM, 2xLAN, 2xRS-232, 2 x isolated RS-232/422/485, 16 x isolated DI/O and Windows CE .NET 4.1 OS.
- UNO-2050-HDA0** GX1-300 UNO with 128 MB SDRAM, 2 x LAN, 2 x RS-232, 2 x isolated RS-232/422/485, 16 x isolated DI/O
- UNO-HD20-A** UNO-2000 HDD extension kit

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IPPC & AWS

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TPC

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FPM

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ATM

5
DA&C

6
cPCI

7
ADAM-3000

8
eConnectivity

9
iCOM

10
Software

11
UNO-2000/3000

12
VBOX

13
ADAM-4000

14
ADAM-5000

15
ADAM-6000

16
ADAM-8000

UNO-2052

GX1-300 UNO with 2xCAN, LAN, USB, RS-232, 8xIsolated DI/O, 2xAI

NEW



CE

Features

- On-board GX1-300 MHz, 64/128 MB SDRAM
- Provides two CAN interfaces
- Provides one 10/100 Base-T RJ-45 port and one USB port
- Isolated 8-channel DI/O and 2-channel AI
- One programmable diagnostic LED and buzzer.
- Supports Modbus/RTU and Modbus/TCP devices.
- Supports ADAM series for remote data acquisition and control
- Windows CE .NET ready solution.

Introduction

The Advantech UNO-2052 is a 586-grade platform that offers dual CAN 2.0B interfaces, digital I/O and thermocouple input functions. Combined with CAN 2.0B interfaces, the UNO-2052 is an ideal solution for automobile and logistics applications.

UNO-2052 comes with a built-in Windows® CE solution offering a pre-configured image with optimized onboard device drivers. Microsoft Windows® CE is a compact, highly efficient, real-time operating system designed for embedded systems without mechanical HDD limitations.

To expand storage capability, the UNO-2052 allows the addition of an external 2.5" HDD using Advantech's UNO HDD extension kit. It can be used for large data backup requirements and popular OS installations such as Microsoft Windows and Linux OS. Significant anti-vibration is maintained even with the mechanical HDD inside. (1 G)

UNO-2052 is the perfect embedded application-ready-platform to shorten development time and offer a rich networking interface to fulfill diverse application requirements.

Specifications

- CPU** NS Geode GX1-300 MHz, 64/128 MB SDRAM onboard
- VGA/Keyboard/Mouse** DB-15 VGA Connector, PS/2 keyboard & mouse
- Serial Port** 1 × standard RS-232
- Speed RS-232** 50 ~ 115.2 Kbps
- USB interface** One USB ports, USB OpenHCI, Rev. 1.0 compliant
- LAN** One 10/100Base-T RJ-45 Ports
- CAN** Dual isolated CAN 2.0B interfaces.
CAN controller: SJA-1000
CAN transceiver: 82C250
- 4-ch isolated digital input** 2,000 V_{DC} isolation, 2,000 V_{DC} ESD protection and 70 V_{DC} overvoltage protection
- 0 ~ 50 V_{DC} input range and 5 KHz speed
Digital input levels:
Dry contact: Logic level 0: Close to GND
Logic level 1: Open
Wet contact: Logic level 0: +2 V max
Logic level 1: +4 V ~ +50V
- 4-ch isolated digital output** 2,000 V_{DC} isolation and 200 mA max / channel sink current
Keep output status after system hot reset
5 ~ 30 V_{DC} output range and 5 KHz speed
Open collector to 30 V
30 mA max. load
Power dissipation: 300 mW
- 2-ch thermocouple input** Input type: Thermocouple: T/K/J-type.
Input range: +15 mV, +50 mV, +100 mV, + 500 mV, +1 V, +2.5 V, +20 mA
-T/C type and temperature range:
J 0 ~ 760°C, K 0 ~ 1370°C, T -100 ~ 400°C
E 0 ~ 1000°C
- SSD** One internal Type I / Type II CompactFlash™ card slot
- HDD** Offer HDD ext. kit for inst. of one standard 2.5" HDD.
- Watchdog Timer** Programmable.

- LED** Power LED, IDE LED and one programmable diagnostic LED and buzzer.
- Power supply** 9 ~ 36 V_{DC}
- Anti-Shock** 20 G @ DIN IEC 68 section 2-27, half sine, 11 ms 50 G @ Wall/Panel IEC 68 section 2-27, half sine, 11 ms.
- Anti-Vibration** 2 G w/ CF @ IEC 68 section 2-6, sine, 5 ~ 500 Hz, 1 Oct./min, 1 hr/axis.
1 G w/ HDD @ IEC 68 section 2-6, sine, 12 ~ 300 Hz, 1 Oct./min, 1 hr/axis.
- Operating temperature** -10 ~ 55° @ 5 ~ 85% relative humidity.
- Related Humidity** 95 % @ 40° C
- Power consumption** 0.6 A max @ +24 V input or 1.2 A max @ +12 V input
- Power requirement** 1 A typical @ +24 V input or 1.5 A typical @ +12 V inp.
- Operating temperature** -10 ~ 55° C (14 ~ 131° F)
- Chassis size (WxDxH)** 188.8 x 106.5 x 35.5 mm (7.5" × 4.2" × 1.4")
- Weight** 0.8 kg

Driver Support

- CE** UNO configuration utility. DI/O & AI driver. CAN driver. Programmable LED and buzzer Driver. Watchdog timer Driver.
- Linux** DI/O & AI driver. CAN driver. Programmable LED and buzzer Driver. Watchdog timer Driver.
- Windows 2000/XP** DI/O & AI driver, CAN driver. Programmable LED and buzzer Driver. Watchdog timer Driver. Modbus/TCP, Modbus/RTU DLL Driver.

Ordering Information

- UNO-2052-GDAO** GX1-300 UNO with 64MB SDRAM, 2xCAN bus, LAN, USB, RS-232, 8xDI/O, 2xAI
- UNO-2052CE-GDAO** GX1-300 UNO with 2xCAN bus, LAN, USB, RS-232, 8xDI/O, 2xAI and Windows CE .NET 4.1 OS.
- UNO-2052-HDAO** GX1-300 UNO with 128MB SDRAM, 2xCAN bus, LAN, USB, RS-232, 8xDI/O, 2xAI
- UNO-HD20-A** UNO-2000 HDD extension kit

UNO-2053

**GX1-300 UNO with PC Card,
2xLAN, 2xUSB, 2xRS-232**



Features

- Onboard GX1-300 MHz CPU, 64/128 MB SDRAM
- Two standard RS-232 and one DB-15 VGA connector.
- Two 10/100 Base-T RJ-45 ports.
- Two USB and one type I/II PC Card slots.
- Supports Modbus/RTU and Modbus/TCP devices.
- Supports ADAM series for remote data acquisition and control
- Supports Wireless LAN PCMCIA modules.
- Windows CE .NET ready solution.

Introduction

The Advantech UNO-2053 is a 586-grade platform that offers dual LAN, dual USB and PC card interfaces to fulfill user's diverse communication needs. In addition, it also offers two RS-232 communication ports on board. Therefore, the UNO-2053 is an ideal solution for data gateway applications.

UNO-2053 comes with a Windows® CE OS offering a pre-configured image with optimized onboard device drivers. Microsoft Windows® CE is a compact, highly efficient, real-time operating system designed for embedded systems without mechanical HDD limitations.

To expand storage capability, the UNO-2053 allows the addition of an external 2.5" HDD using Advantech's UNO HDD extension kit. It can be used for large data backup requirements and popular OS installations such as Microsoft® Windows and Linux OS. Significant anti-vibration is maintained even with the mechanical HDD inside. (1 G)

UNO-2053 is a perfect embedded application ready platform that can shorten your development time and offer a rich networking interface to fulfill diverse requirements.

Specifications

- **CPU** NS Geode GX1-300 MHz, 64/128 MB SDRAM on board
- **VGA/Keyboard/Mouse** DB-15 VGA Connector, PS/2 keyboard & mouse
- **Serial Port** 2 x standard RS-232
- Speed: RS-232: 50 ~ 115.2 Kbps
- **USB Interface** Two USB ports, USB OpenHCI, Rev. 1.0 compliant
- **LAN** Dual 10/100Base-T RJ-45 Ports
- **PC Card** One PC Card slot
- Support CardBus (Card-32) Card and 16-bit (PCMCIA 2.1/JEIDA4.2) Card
- Support +5 V, +3.3 V and +12 V @ 120 mA working power
- **SSD** One internal Type I / Type II CompactFlash card slot
- **HDD** HDD extension kit is offered for installation of one standard 2.5" HDD.
- **Watchdog Timer** Programmable.
- **LEDs** One Power LED and one IDE LED.
- **Power Supply** 10 ~ 30 V_{DC}
- **Anti-Shock** 20 G @ DIN IEC 68 section 2-27, half sine, 11 ms
50 G @ Wall/Panel IEC 68 section 2-27, half sine, 11 ms.
- **Anti-Vibration** 2 G w/ CF @ IEC 68 section 2-6, sine, 5 ~ 500 Hz, 1 Oct./min, 1 hr/axis.
1G w/ HDD @ IEC 68 section 2-6, sine, 12 ~ 300 Hz, 1 Oct./min, 1 hr/axis.
- **Operating Temperature** -10 ~ 55° C (14 ~ 131° F) @ 5 ~ 85% related humidity.
- **Related Humidity** 95 % @ 40°C.
- **Power Consumption** 0.6 A max under +24 V power input or 1.2 A max under +12 V power input

- **Power Requirement** 1 A @ +24 V power input
1.5 A @ +12 V power input
- **Chassis Size (WxDxH)** 188.8 x 106.5 x 35.5 mm (7.5" x 4.2" x 1.4")
- **Weight** 0.8 kg

Driver Support

- **CE** UNO configuration utility, Watchdog timer Driver.
- **Linux** Watchdog timer Driver.
- **Windows 2000/XP** Watchdog timer Driver.
Modbus/TCP, Modbus/RTU DLL Driver

Ordering Information

- **UNO-2053-GDA0** GX1-300 Universal Network Controller with 64 MB SDRAM, PC Card, 2 x LAN, 2 x USB, 2 x RS-232
- **UNO-2053CE-GDA1** GX1-300 Universal Network Controller with 64 MB SDRAM, PC Card, 2 x LAN, 2 x USB, 2 x RS-232 and Window CE .NET 4.1 OS.
- **UNO-2053-HDA0** GX1-300 Universal Network Controller with 128 MB SDRAM, PC Card, 2 x LAN, 2 x USB, 2 x RS-232
- **UNO-HD20-A** UNO-2000 HDD extension kit

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IPPC & AWS

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TPC

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FPM

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ATM

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DA&C

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cPCI

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ADAM-3000

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eConnectivity

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ICOM

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Software

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UNO-2000/3000

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VBOX

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ADAM-4000

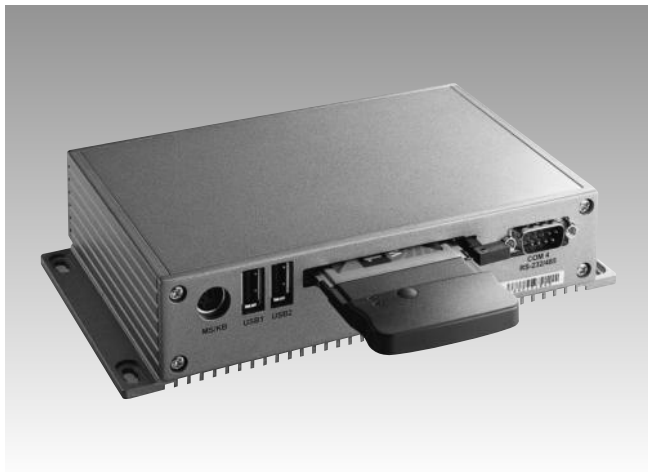
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ADAM-5000

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ADAM-6000

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ADAM-8000

UNO-2059

**GX1-300 UNO with PC Card, LAN, 2xUSB,
2xRS-232/485, 2xRS-232/422/485**



Features

- Onboard GX1-300 MHz, 64/128 MB SDRAM
- Two RS-232/485 and two RS-232/422/485 ports with automatic flow control.
- One 10/100 Base-T RJ-45 port.
- Two USB ports and one type I/II PC Card.
- One programmable diagnostic LED and buzzer.
- Supports Modbus/RTU and Modbus/TCP devices.
- Supports ADAM series for remote data acquisition and control
- Supports Wireless LAN PCMCIA modules.
- Windows CE .NET ready solution.

Introduction

Advantech's UNO-2059 is a 586-grade platform that offers USB and PC card interfaces to fulfill user's I/O device expansion needs. In addition, it also offers two RS-232/485 and two RS-232/422/485 communication ports on board with automatic flow control functionality. The UNO-2059 is an ideal and compact solution for large computing and communication requirements.

UNO-2059 comes with a Windows® CE OS offering a pre-configured image with optimized onboard device drivers. Microsoft Windows® CE is a compact, highly efficient, real-time operating system designed for embedded systems without mechanical HDD limitations.

To expand storage capability, the UNO-2059 allows the addition of an external 2.5" HDD using Advantech's UNO HDD extension kit. It can be used for large data backup requirements and popular OS installations such as Microsoft Windows and Linux OS. Significant anti-vibration (1G w/ HDD) is maintained even with the mechanical HDD inside.

UNO-2059 is a perfect embedded application ready platform that can shorten your development time and offer a rich networking interface to fulfill your diverse requirements.

Specifications

- **CPU** NS Geode GX1-300 MHz with 64/128 MB SDRAM on board
- **VGA/Keyboard/Mouse** DB-15 VGA Connector, PS/2 keyboard & mouse
- **Serial Port** 2 × standard RS-232, 2 × RS-232/RS-422/485
- Automatic RS-485 data flow control
- RS-422/485 surge protection up to 2,000 V_{DC}
- Speed: RS-232: 50 ~ 230.4 Kbps;
RS-422/485: 50 ~ 921.6 Kbps
- **USB interface** Two USB ports, USB OpenHCI, Rev. 1.0 compliant
- **LAN** One 10/100Base-T RJ-45 Port
- **PC Card** One PC Card slot
- Support CardBus (Card-32) Card and 16-bit (PCMCIA 2.1/JEIDA4.2) Card
- Support +5 V, +3.3 V and +12 V @ 120 mA working power
- **SSD** One internal Type I / Type II CompactFlash card slot
- **HDD** Offer HDD extension kit for installation of one standard 2.5" HDD.
- **Watchdog Timer** Programmable.
- **LED** Power LED, IDE LED and one programmable diagnostic LED and buzzer.
- **Power Supply** 9 ~ 36 V_{DC}
- **Anti-Shock** 20 G @ DIN IEC 68 section 2-27, half sine, 11ms
50 G @ Wall/Panel IEC 68 section 2-27, half sine, 11 ms.
- **Anti-Vibration** 2 G w/ CF @ IEC 68 section 2-6, sine, 5 ~ 500 Hz, 1 Oct./min, 1 hr/axis.
1 G w/ HDD @ IEC 68 section 2-6, sine, 12 ~ 300 Hz, 1 Oct./min, 1 hr/axis.
- **Operating Temperature** -10 ~ 55° C (14 ~ 131° F) @ 5~85% related humidity.
- **Related Humidity** 95 % @ 40° C.
- **Power consumption** 0.6 A max under +24 V power input or 1.2 A max under +12 V power input
- **Power requirement** 1 A typical under +24 V power input or 1.5 A typical under +12 V power input
- **Chassis size (WxDxH)** 188.8 x 106.5 x 35.5 mm (7.5" x 4.2" x 1.4")
- **Weight** 0.8 kg
- **Driver Support**
 - **CE** UNO configuration utility, Programmable LED and buzzer Driver. Watchdog timer Driver.
 - **Linux** Programmable LED and buzzer Driver. Watchdog timer Driver.
 - **Windows 2000/XP** COM port driver
Programmable LED and buzzer Driver
Watchdog timer Driver.
Modbus/TCP, Modbus/RTU DLL Driver.

Ordering Information

- **UNO-2059-GDA1** GX1-300 Universal Network Controller with 64 MB SDRAM, PC Card, LAN, 2 x USB, 2 x RS-232/485, 2 x RS-232/422/485
- **UNO-2059CE-GDA1** GX1-300 Universal Network Controller with 64 MB SDRAM PC Card, LAN, 2 x USB, 2 x RS-232/485, 2 x RS-232/422/485 and Window CE .NET 4.1 OS.
- **UNO-2059-HDA1** GX1-300 Universal Network Controller with 128 MB SDRAM, PC Card, LAN, 2 x USB, 2 x RS-232/485, 2 x RS-232/422/485
- **UNO-HD20-A** UNO-2000 HDD extension kit