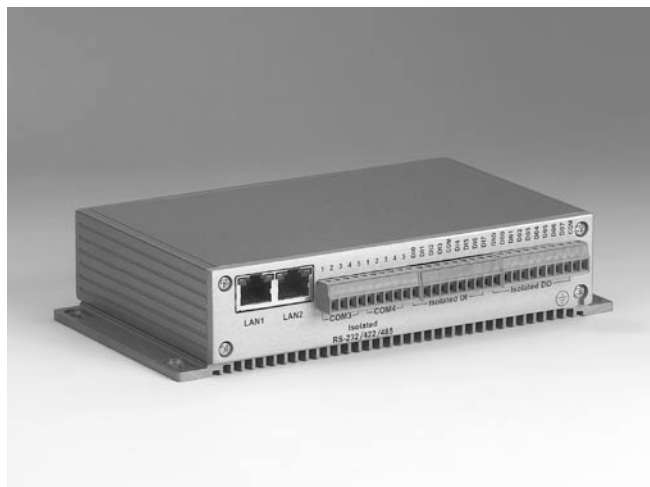


# UNO-2050

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



CE FCC

## 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.
- Windows® CE .NET ready solution.
- Windows® 2000 driver ready and Linux driver support
- Windows® CE .NET 4.2 Binary BSP provided

## Introduction

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

### General

- **Dimensions (WxDxH)** 188.8 x 106.5 x 35.5 mm (7.5" x 4.2" x 1.4")
- **Enclosure** Aluminum
- **Mounting** Wall, DIN 35 rail
- **Power Consumption** 15 W (Typical)
- **Power Input** Min. 24 W (9~36 V<sub>DC</sub>) (e.g +24 V @ 1 A)
- **Weight** 0.8 kg
- **OS Support** Windows® 2000, Windows® CE .NET 5.0, Linux

### System Hardware

- **CPU** NS Geode™ GX1-300 MHz
- **Indicators** LEDs for power, IDE, programmable diagnostic LED, and one programmable buzzer.
- **Keyboard/Mouse** 1 x PS/2
- **Memory** 64/128 MB SDRAM on board
- **Storage** SSD: 1 x internal type I/O CompactFlash® slot  
HDD: extension kit for one standard 2.5" HDD
- **VGA** DB15 VGA connector

### Communications

- **Counter/Timer** 2 x 16-bit: 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: 100/10/1 kHz, 100 Hz
- **Digital Inputs** 8 ch. wet contact after 8 ch. 2,000 V<sub>DC</sub> isolation, 2,000 V<sub>DC</sub> ESD protection, 70 V<sub>DC</sub> over-voltage protection 0 ~ 50 V<sub>DC</sub> input range and 10 kHz speed; Interrupt handling.
- **Digital Outputs** 8 ch. 2,000 V<sub>DC</sub> isolation and 200 mA max/channel sink current. Keeps output status after system hot reset. 5 ~ 40 V<sub>DC</sub> output range and 10 kHz speed
- **LAN** 2 x 10/100Base-T with RJ-45 port

- **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<sub>DC</sub> surge protection & 2000 V<sub>DC</sub> isolation
- **Serial Port Speed** RS-232: 50 ~ 115.2 kbps (COM1/COM2)  
50 ~ 230.4 kbps (COM3/COM4)  
RS-422/485: 50 ~ 921.6 kbps (Max.)
- **Watchdog Timer** Programmable

### Environment

- **Humidity** 95% @ 40° C (non-condensing)
- **Operating Temperature** -10 ~ 55° (14 ~ 131° F)
- **Shock Protection** IEC 68 2-27  
CompactFlash®: 20 G @ DIN, half sine, 11ms, 50 G @ Wall/Panel, half sine, 11 ms
- **Vibration Protection** IEC 68 2-6  
CompactFlash®: 2 Grms @ sine, 5 ~ 500 Hz, 1 Oct./min, 1hr/axis.  
HDD: 1 Grms @ sine, 12 ~ 300 Hz, 1 Oct./min, 1hr/axis.

## Ordering Information

### Hardware

- **UNO-2050-GDA0** GX1-300, 64 MB SDRAM, 16xDI/O, 2xLAN, 4xCOM
- **UNO-2050-HDA0** GX1-300, 128 MB SDRAM, 16xDI/O, 2xLAN, 4xCOM
- **UNO-HD20-A** UNO-2000 HDD extension kit

### Hardware with OS

- **UNO-2050CE-GDA2** UNO-2050-GDA0 with 32 MB CF and CE .NET 4.2