UNO-2050G

AMD Geode™ LX Automation Computer with 2 x LAN, 4 x COM, 8 x DI, 8 x DO

Features

- Onboard AMD Geode LX800 500MHz CPU
- Two RS-232 and two isolated RS-232/422/485 with automatic flow control
- Two 10/100 Base-T RJ-45 ports
- 8-ch Isolated DI and 8-ch Isolated DO with counter and timer
- Windows® CE 5.0 & 6.0, Windows XP Embedded SP2, and Linux ready solution
- Fanless design with no internal cabling
- Isolation between chassis and power ground

Introduction

UNO-2050G is an X86-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-2050G is an ideal solution for embedded controllers.

UNO-2050G is available with a pre-configured Windows CE 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-2050G allows the addition of an external 2.5" HDD using Advantech's HDD expansion 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-2050G 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

- **Certifications** — CE, FCC class A, UL, CCC
- **Dimensions (W x D x H)** — 188.8 x 106.5 x 35.5 mm (7.5" x 4.2" x 1.4")
- **Enclosure** — Aluminum
- **Mounting** — Wallmount, DIN-rail
- **Industrial Groundin** — Isolation between chassis and power ground
- **Power Consumption** — 15 W (Typical)
- **Power Requirements** — 9 ~ 36 V_{DC} (e.g +24 V @ 1 A) (Min. 24 W), AT
- **Weight** — 0.8 kg
- **OS Support** — WES Windows XP Embedded, Windows 2000 & XP, Windows CE 5.0 & 6.0, Linux, QNX
- **System Design** — Fanless design with no internal cabling
- **Remote Management** — Built-in Advantech DiagAnywhere agent on Windows CE / XPe

System Hardware

- **CPU** — AMD Geode LX800 500MHz
- **Memory** — Onboard 256 MB DDR SDRAM
- **Indicators** — LEDs for Power, IDE, Diagnosis (programmable) and LAN (Active, Status)
  Buzzer for Diagnosis (programmable)
- **Keyboard/Mouse** — 1 x PS/2
- **Storage** — SSD: 1 x internal type I/II CompactFlash® slot
  HDD: expansion kit for 2.5" IDE HDD (Optional)
- **Display** — DB15 VGA connector, 1024 x 768 @ 60 Hz
- **Watchdog Timer** — Programmable 256 levels timer interval, from 1 to 255 sec

I/O Interface

- **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 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

- **Digital Outputs** — 8 ch. 2,000 V_{DC} isolation and 200 mA max/channel sink current. Keeps output status after system hot reset.
  5 ~ 40 V_{DC} 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_{DC}
  EFT protection & 2000 V_{DC} 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.)

Environment

- **Humidity** — 95% @ 40° C (non-condensing)
- **Operating Temperature** — (IEC 60068-2-2, 100% CPU/ I/O loading)
  -10 ~ 55° (14 ~ 131° F)
- **Shock Protection** — IEC 68 2-27
  CompactFlash: 20 G @ DIN, half sine, 11 ms,
  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

- **UNO-2050G-G30E** — LX800 500MHz, 256 MB RAM Automation Computer

Accessories

- **UNO-HD20-AE** — UNO-2000 HDD expansion kit
- **UNO-FPM21-AE** — UNO-2000 series VESA mount kit
- **PCLS-DIAGAW10** — Advantech Remote Monitoring & Diagnosis Utility

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