UNO-2052

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

CE FCC

Features

- On-board GX1-300 MHz, 64/128 MB SDRAM
- Provides two CAN interfaces
- Provides one 10/100Base-T RJ-45 port and one USB port
- Isolated 8-channel DI/O and 2-channel AI
- 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

The Advantech UNO-2052 is a 586-grade platform that offers dual CAN 2.0B interfaces, digital I/O and thermcouple 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 Microsoft Windows CE solution offering a pre-configured image with optimized on-board 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

General

- **Dimensions (WxDxH)** 188.8 x 106.5 x 35.5 mm (7.5″ × 4.2″ × 1.4″)
- **Power Consumption** 15 W (Typical)
- **Power Input** Min. 24 W (9~36 V_{DC}) (e.g +24V @ 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** Power LED, IDE LED, one programmable diagnostic LED and buzzer
- **Keyboard/Mouse** 1 x PS/2
- **Memory** 64/128 MB SDRAM on board
- **Storage** SSD: 1 x internal type I/II CompactFlash® slot
  HDD: extension kit for one standard 2.5″ HDD
- **VGA** DB15 connector

Communications

- **CAN** 2 x isolated CAN 2.0B interfaces.
  CAN controller: SJA-1000
  CAN transceiver: 82C250
- **Digital Inputs** 4 ch. 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 with dry contact:
  Logic level 0: Close to GND, Logic level 1: Open
  Digital input levels with wet contact:
  Logic level 0: +2 V max, Logic level 1: +4 V ~ +50V
- **Digital Outputs** 4 ch. 2,000 V_{DC} isolation and 200 mA max / channel sink current. Keeps 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
- **LAN** 1 x 10/100Base-T with RJ-45 port

- **Serial Ports** 1 x standard RS-232
- **Serial Port Speed** RS-232: 50 ~ 115.2 kbps
- **Thermocouple Inputs** 2 ch. input type: Thermocouple: JKTE type
  Input range: ±15 mV, ±50 mV, ±100 mV, ±500 mV, ±1 V, ±2.5 V, ±20 mA.
  T/C types and temperature ranges:
  J 0 ~ 760° C, K 0 ~ 1370° C
  T -100 ~ 400° C, E 0 ~ 1000° C
- **USB Ports** 1 x USB port, OpenHCI, Rev. 1.1 compliant
- **Watchdog Timer** Programmable.

Environment

- **Humidity** 95 % @ 40° C (non-condensing)
- **Ingress Protection** IP40
- **Operating Temperature** -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

Hardware

- **UNO-2052-GDA0** GX1-300, 64MB SDRAM, 2xCAN, 8xDI/O, 2xAI
- **UNO-2052-HDA0** GX1-300, 128MB SDRAM, 2xCAN, 8xDI/O, 2xAI
- **UNO-HD20-A** UNO-2000 HDD extension kit

Hardware with OS

- **UNO-2052CE-GDA1** UNO-2052-GDA0 with 32 MB CF and CE .NET 4.2

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