



Innovative
Solutions in Touch Screen Technology

A D Metro Touch Screen Controller Board Datasheet

Universal Analog Resistive Touch Screen Sensor Controller Board

Key Features

- ◆ Universal Resistive Touch Screen Controller
- ◆ 4-, 5-, & 8-wire Sensor Compatibility
- ◆ USB & RS-232 Operation
- ◆ USB HID-Mouse
- ◆ USB Power Option
- ◆ Screens up to 24"

The A D Metro Resistive Touch Screen Controller Board is a feature-rich, high-performance, low-cost, universal analog resistive touch screen control board solution. Based on the Microchip AR1100 Touch Screen Controller it offers USB and RS-232 communication protocols and supports 4-, 5- or 8-wire analog resistive touch screens up to 24". The controller board is easy to integrate into a wide variety of touch sensing applications supporting the USB's HID-Mouse and HID-Digitizer device types, giving it compatibility with most operating systems.

The controller dynamically adapts to the touch screen's electrical characteristics such as sensitivity, contact resistance, and capacitance. It provides advanced touch response, accuracy and performance with up to 150 touch point reports per second of filtered coordinates, accurately tracking motion for applications such as signature capture.

Benefits

- ◆ High Performance
- ◆ Low Cost
- ◆ Low Power

The A D Metro Resistive Touch Screen Controller Board supports displays for industrial controls, self-service kiosks, and POS terminals, as well as smaller mobile, handheld computer and medical devices. Resistive touch provides the advantages of easy integration, low total system cost and the acceptance of finger, glove or stylus input. USB or RS-232 communications provide the industry standard interfaces for attaching touch screens to a computer.

Applications

- ◆ Touch Screen Monitors
- ◆ Kiosk / POS
- ◆ Mobile Computing
- ◆ Healthcare Devices
- ◆ GPS Devices



The controller board offers free driver support for most operating systems and development tools available through the Microchip website. It can be USB powered to simplify design. Selection of USB or RS-232, and 5-wire or 4- and 8-wire operation is achieved through jumpers; and the board is designed to be a fully-functioning touch controller on power-up, automatically defaulting to HID-MOUSE in USB mode.

High Performance - Low Cost - Low Power - USB HID

A D Metro Universal Resistive Controller Board

Technical Specifications

Special Features

- ◆ Supports any size analog resistive touch screen: 1.5" - 24"
- ◆ Power-saving Sleep mode
- ◆ Built-in Drift Compensation
- ◆ 96 Bytes of User EEPROM
- ◆ RoHS Compliant

Power Requirements

Operating Voltage 3.3 - 5.0V ± 5%
 Standby Current <10 uA (UART), <325uA (USB)
 Operating Current <17 mA (no touch), <25 mA (touch)

Environmental Specifications

Operating temperature -40°C to + 85°C
 Storage temperature -40°C to +125°C
 Relative humidity 95% at 60°C RH non condensing

Touch Sensor Support

Analog Resistive 4-wire, 5, wire, and 8-wire
 Lead-to-lead Resistance 50-2000 Ω
 Layer-to-layer Capacitance 0-0.5 uF

Touch Resolution and Report Rate

Resolution (Maximum) 10-Bit
 Reports Per Second (typ.) 150

Communication

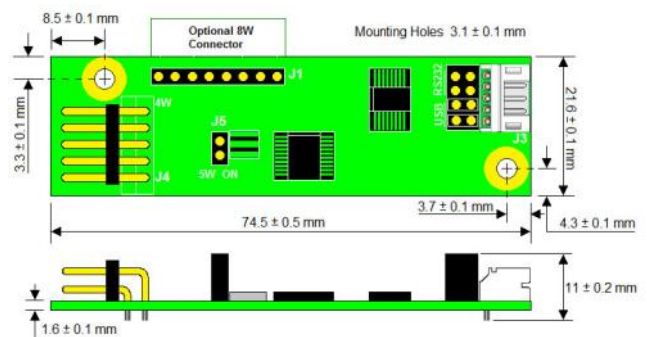
- ◆ UART 9600 Baud
- ◆ USB V2.0 Compliant, Full Speed
 - HID-MOUSE (Default)
 - HID-DIGITIZER
- ◆ USB drivers for Microchip AR1100 are included in all Microsoft Windows operating system versions since XP.
- ◆ Linux and other operating system drivers available for download from the Microchip website.

Part Number

CR-06-DWN-01 A D Metro Universal Resistive Controller Board

Operating System Compatibility

OS	Version	Interfaces
Windows	Windows 8, 8.1, 7, Vista, XP, 2000, ME, 98 Windows CE (up to 7.0) Windows Embedded Windows XP Tablet PC edition	RS232/ USB
Windows	Windows NT4, 95	RS232
Linux	Supports Kernel 2.4.x / 2.6.x / 3.x with XFree86.4.x / xorg (up to X server 1.11.x) Supports most Linux distribution 32/64 bit versions, including: CentOS, Debian, Fedora, Gentoo, Mandrake (Mandriva), Moblin (Meego), Red Hat, Ubuntu, Slackware, SuSE (openSuSE), etc. Android (up to 4.x)	RS232/ USB
DOS	DOS 6.22	RS232
Mac	Mac OS9, Mac OS X (Power PC, Intel CPU)	USB
QNX	QNX RTOS v6.3	RS232/ USB



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NOTES:

Technical specifications are subject to change without notice.
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ABOUT US:

A D Metro, established in 1988, designs and manufactures innovative touchscreen technology solutions. Every day, A D Metro's products are touched by millions of people around the world. Advancing the company's commitment to leading edge touch technology, AD Metro's flagship ULTRA technology is the market leader in pressure activated flexible glass resistive touch sensors. It delivers the most durable and cost effective touch sensor available on the market today. Contact us, for more information on our full line of innovative touchscreen technologies, controllers and custom manufacturing solutions.