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.

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.

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.

**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”

**Benefits**
- High Performance
- Low Cost
- Low Power

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

**High Performance - Low Cost - Low Power - USB HID**
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-02 ....................... A D Metro Universal Resistive Controller Board

Operating System Compatibility

<table>
<thead>
<tr>
<th>OS</th>
<th>Version</th>
<th>Interfaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Windows</td>
<td>Windows 8, 8.1, 7, Vista, XP, 2000, ME, 98 Windows CE (up to 7.0) Windows Embedded Windows XP Tablet PC edition</td>
<td>RS232/ USB</td>
</tr>
<tr>
<td>Windows</td>
<td>Windows NT4, 95</td>
<td>RS232</td>
</tr>
<tr>
<td>Linux</td>
<td>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)</td>
<td>RS232/ USB</td>
</tr>
<tr>
<td>Mac</td>
<td>Mac OS9, Mac OS X (Power PC, Intel CPU)</td>
<td>USB</td>
</tr>
<tr>
<td>QNX</td>
<td>QNX RTOS v6.3</td>
<td>RS232/ USB</td>
</tr>
</tbody>
</table>

NOTES:
Technical specifications are subject to change without notice.
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ABOUT US:
Established in 1988, A D Metro designs, manufactures and supplies innovative touch screen technology solutions for original equipment manufacturers (OEMs), system integrators and value added resellers. Everyday A D Metro’s products are touched by millions of people around the world. Our ULTRA product line is the most durable resistive touch screen sensor available on the market and our projected capacitive (PCAP) touch screen solutions simplify design and accelerate time to market.
Contact us, for more information on our innovative touch screen products, enhancements and custom manufacturing solutions.