Resistive Touch Screen Controller Datasheet

The Next Generation of Resistive Controllers

Key Features

- 4/5/8-wire analog resistive Controller boards and chipset
- Updatable firmware
- Wide OS driver platform support
- ELO/3M compatible
- Combo USB/RS232 boards available
- Complete cabling options
- Standard mounting holes
- Wider environmental window

Chipset Solution

- Ideal for space restricted applications
- Reference Circuit Diagrams
- I2C/USB/RS232 Interfaces supported
- USB HID Support

A D Metro offers a complete range of resistive touch sensor controller solutions. From discrete controller boards to integrated chipset solutions, A D Metro has the right solution for integrating a 4/8/ or 5-wire sensors into your touch device.

A D Metro controller boards are a proven and reliable way to connect a resistive touch sensor to your PC using RS232 or USB. Our boards come with complete cabling options and drivers for all popular platforms as well as being Microsoft Windows Touch ready.

The controller boards feature superior touch sensitivity and accuracy. The bundled touch toolkit provides complete control over the touch functionality and calibration. The latest revision of the controller boards has improved quality, larger environmental window, in-service firmware upgrades, and faster data rates. All products meet the latest green ROHS requirements and have FCC and CE certifications.

For Industrial systems and mobile devices that require a low cost, compact design then ready-to-go chipset solution is the best way forward. With complete integration guide and reference circuit diagrams integration of our resistive chipset into your system board couldn't be easier.

The touch drivers support most touch technologies including Capacitive, SAW and IR, providing significant benefit to organizations with a mixed touch implementation. Drivers for our controllers can be downloaded from our website at www.admetro.com\downloads. If the driver for your platform is not there please just drop us an email.

AD Metro

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Technical Specifications

Device Specifications

Circuit board dimension.................20mm x 75mm (0.79" x 2.95")
Power requirement...................................DC +5V (100mA typical)
50mV peak to peak maximum ripple and noise
Interface......................Bi-directional RS232 serial communication
USB 1.1 Full Speed
Protocol (RS232)..........................No parity, 8 data bits, 1 stop bit
9600 baud (N,8,1,9600)
Resolution...............................2048 x 2048 (4096 x 4096 capable)
Report rate RS232...Max180 point/sec
Report rate USB...Max200 point/sec
Response time...Max 20 sec
Regulatory approvals...FCC-B, CE
Green product..RoHS compliant
MTBF...200,000 hrs
Attached cable...180cm shielded cable
with 9-pin D-sub or USB-A connector

Environmental Specifications

Operating temperature...-25°C to +85°C
Storage temperature.. -25°C to +85°C
Relative humidity........................95% at 60°C RH non condensing

4/8-wire Electrical Specifications

EMI...Unaffected by environmental EMI
Panel resistance..200~900Ω
Pin to pin on same layer, touch resistance under 3kΩ

5-wire Electrical Specifications

EMI...Unaffected by environmental EMI
Panel resistance...50~200Ω
Pin to pin on same layer, touch resistance under 3kΩ

Product Information

Warranty...1 year

Operating System Compatibility

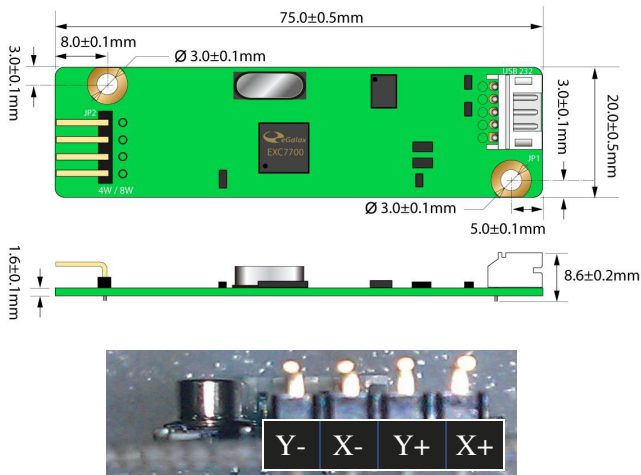| OS	Version	Interfaces
Windows	Windows 7, Vista, XP, 2000, ME, 98 Windows CE (up to 7.0) Windows Embedded Windows XP Tablet PC edition	RS232/ USB
Windows	Windows NT4, 95	RS232
Linux	Supports Kernel 2.4.x / 2.6.x / 3.x with XFree86.4.x / xorg (up to X server 1.11.x) Supports most Linux distribution 32/64 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

Controller Part Numbers

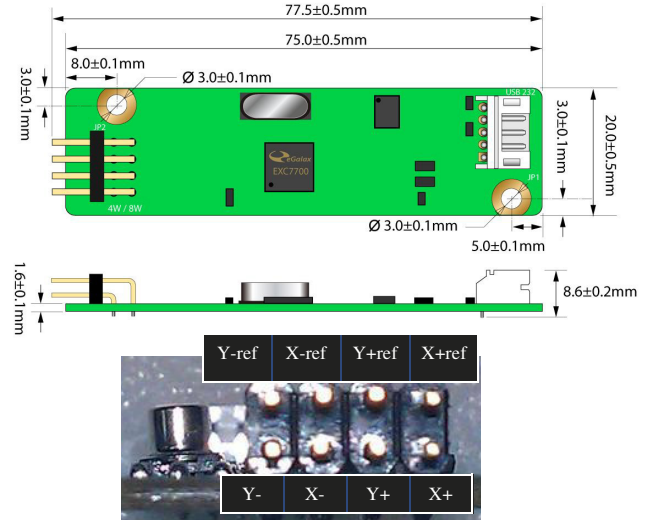| Part number	Description
AD-MER4040CPBG	4-wire combination controller
AD-MER4040RPBG	4-wire RS232 controller
AD-MER4040UPBG	4-wire USB controller
AD-MER4080CPBG	8-wire combination controller
AD-MER4080RPBG	8-wire RS232 controller
AD-MER4080UPBG	8-wire USB controller
AD-MER4050CEBG	5-wire Elo-type combination controller
AD-MER4050REBG	5-wire Elo-type RS232 controller
AD-MER4050UEBG	5-wire Elo-type USB controller
AD-MER4050CMBG	5-wire 3M-type combination controller
AD-MER4050RMBG	5-wire 3M-type RS232 controller
AD-MER4050UMBG	5-wire 3M-type USB controller

Cable Part Numbers

Part number	Description
10-CARS-INT	RS232 internal cable (bare leads)
10-CARS-EXT	RS232 external cable (power thief)
10-CARU-EXT	USB cable
10-CAR-SPLIT	Y-splitter

A D Metro controllers are supplied with one cable. When ordering a controller please specify which cable is desired. Extra cables are sold separately.
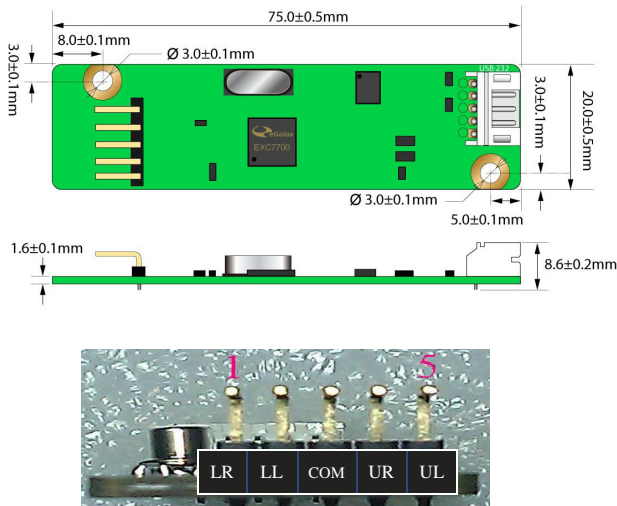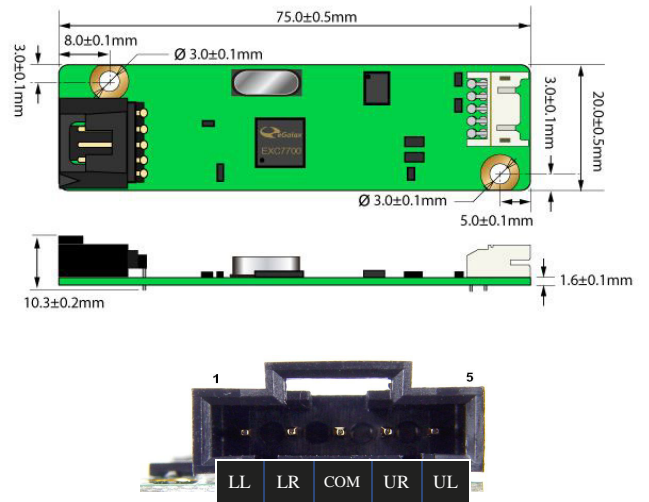
4-wire Controller Board and Panel Pin Assignment

75.0±0.5mm
8.0±0.1mm
Ø 3.0±0.1mm
3.0±0.1mm
3.0±0.1mm
20.0±0.5mm
USB 232
EXC7700
JP2
JP1
4W / 8W
Ø 3.0±0.1mm
5.0±0.1mm
1.6±0.1mm
8.6±0.2mm

Y-	X-	Y+	X+

8-wire Controller Board and Panel Pin Assignment

77.5±0.5mm
75.0±0.5mm
8.0±0.1mm
Ø 3.0±0.1mm
3.0±0.1mm
3.0±0.1mm
20.0±0.5mm
USB 232
EXC7700
4W / 8W
Ø 3.0±0.1mm
5.0±0.1mm
1.6±0.1mm
8.6±0.2mm

Y-ref	X-ref	Y+ref	X+ref

Y-	X-	Y+	X+

5-wire Controller Board and Panel Pin Assignment
Elo-type

75.0±0.5mm
8.0±0.1mm
Ø 3.0±0.1mm
3.0±0.1mm
3.0±0.1mm
20.0±0.5mm
USB 232
EXC7700
Ø 3.0±0.1mm
5.0±0.1mm
1.6±0.1mm
8.6±0.2mm

1   5

LR	LL	COM	UR	UL

5-wire Controller Board and Panel Pin Assignment
3M-type

75.0±0.5mm
8.0±0.1mm
Ø 3.0±0.1mm
3.0±0.1mm
3.0±0.1mm
20.0±0.5mm
EXC7700
Ø 3.0±0.1mm
5.0±0.1mm
10.3±0.2mm
1.6±0.1mm

1   5

LL	LR	COM	UR	UL

Controller Wafer Pin Assignment
RS232 & USB

RS232 Interface
G V G TX RX
1   5

USB Interface
G V G D+ D-
1   5
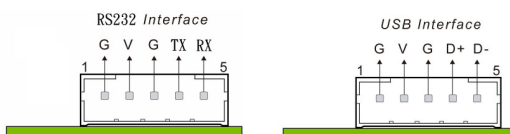
Controller Wafer Pin Assignment
Combination & Y-splitter

USB Interface
G V G D+ D-
1   5

1   5
G V G Tx Rx
RS232 Interface

RS232
USB