

# **ATouch Technologies Co., Ltd.**



Specification of  
4 Wire Analog Resistive  
RS-232 Control Board  
Model No. : 4WR232L



## 4 WIRE ANALOG RESISTIVE RS-232 CONTROL BOARD

### A. Application

This specification applies to the following

**RS-232 Control Board for 4 Wire Analog Resistive Touch Panel.**

**Model No. : 4WR232L**

### B. Environmental Conditions

1. **Operating Temperature Range**  
-10°C ~ 60°C
2. **Operating Temperature Humidity**  
5% to 95% RH (no dew falls)
3. **Storage Temperature Range**  
-25°C ~ 85°C
4. **Storage Temperature Humidity**  
5% to 95% RH (no dew falls)

### C. Electrical Characteristics

1. **Power Requirement**  
+5V DC ( ±10%)
2. **Power Consumption**  
Operating : 80~90mA  
Non-operating : 120~130 mA  
Max. current : 140mA  
Min. current : 80mA
3. **Expend Power**  
124 mA
4. **Interface**  
Serial RS-232
5. **Baud Rate**  
9600



## 4 WIRE ANALOG RESISTIVE RS-232 CONTROL BOARD

### 6. Electrostatic Protection

Per EN 61000-4-2, 1995 : Meets Level 4  
(15 kV air / 8 kV contact discharges).

### 7. Touch Resolution

4096 x 4096

### 8. Conversion Time

Approximately 10 ms per coordinate set.

## D. Mechanical Characteristics

### 1. Dimensions

PCB board outside dimension : 84 (L) x 53 (W) x 11 (H) mm.

Mounting hole located 4mm horizontally and vertically inside each corner. Refer to Appendix A.

### 2. Standard Cables, Connectors and Pin Definitions

- Standard external RS-232 cable connecting the controller with the computer serial port. Refer to Appendix B.
- Serial Connector 1 : P2  
2.0 pitch 5 pin connector on board for connection with RS-232 port.  
Refer to Appendix A.
- Serial Connector 2 : P4  
2x5 male header with pins on 2.54mm centers for connection with RS-232 port.  
Refer to Appendix A.
- Touchscreen Connector : P5  
1x4 male header with pins on 2.54mm centers for connection with the touch panel.  
Refer to Appendix A.
- Power connector : P3  
1x2 header with pins on 2.54mm centers.



### E. LED Diagnostic Characteristics

A green LED indicates controller status as follows:

Action and Condition	LED status	Function
The control board is connected with host, not touch panel yet.	Light continuously	The control board is in normal condition.
No touch	Snuff out	Untouched state
Touch	Light	Touched state

### F. Software Driver

Under Windows : Mouse emulation.

Support Operating System

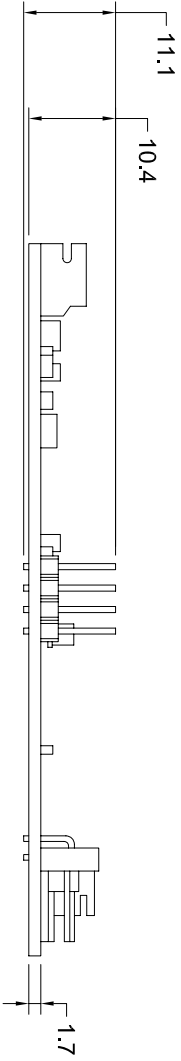
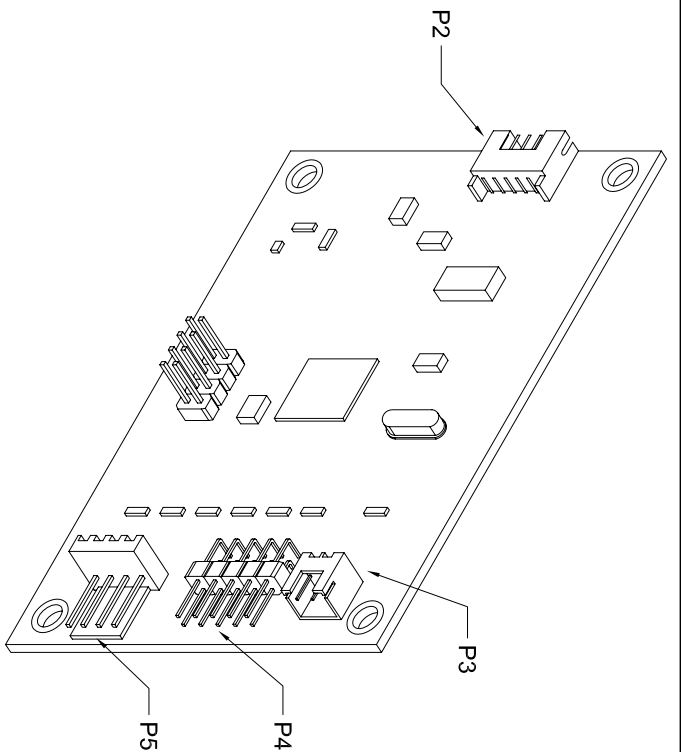
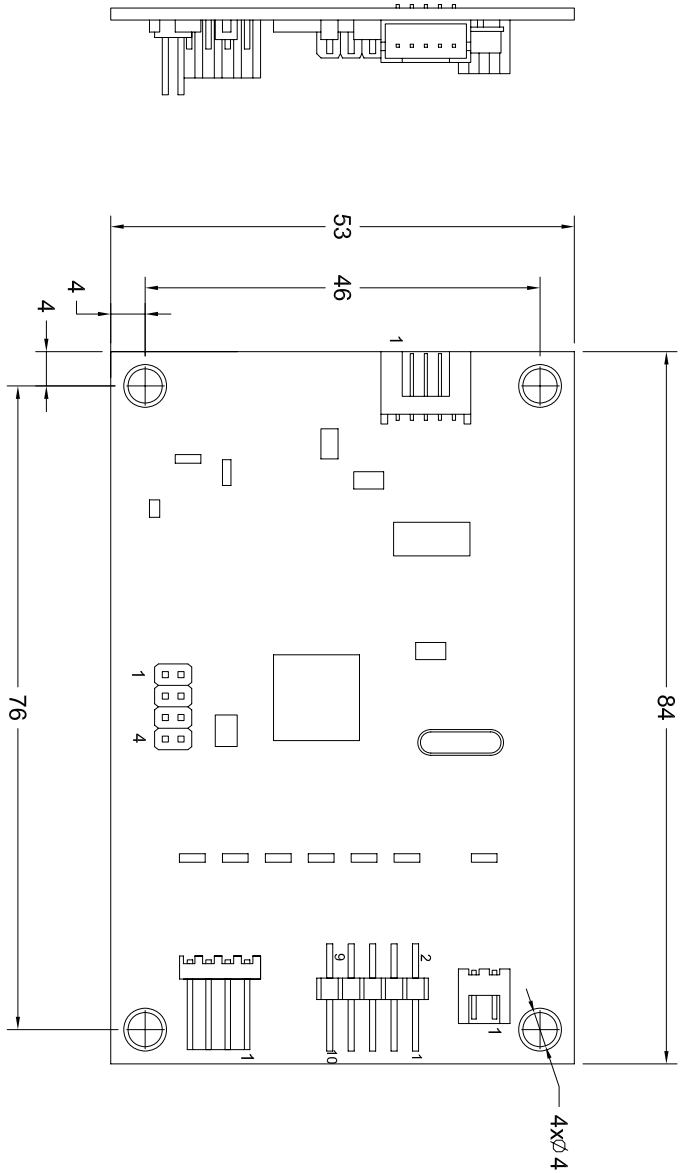
- Microsoft Windows NT4.0/XP/2000/ME/98/95
- Linux : Red Hat 9.0, Mandrake 10.0, SuSE9.2, Fedora Core I &II & III, Yellow Dog 3. x
- MS-DOS

### G. Reliability

The following characteristics are generated by evaluating test samples after 2 hours leaving in the room condition when each of the reliability tests finishes.

Test Item	Result	Remark
Storage Temperature-high	85°C for 240hours	At ambient humidity
Storage Temperature-low	-25°C for 240hours	
Thermal Shock	-10°C (1 hr.)~ 60°C (1 hr.) 10cycles	
High Temp./Humidity Test	60°C/95%RH : 240hours	

# Appendix A Dimension Drawing and Pin Definitions of Connectors



**CONNECTOR P2**

PIN #	SIGNAL NAME
1	CTS
2	TXD
3	RXD
4	GND
5	+5V

**CONNECTOR P3**

PIN #	SIGNAL NAME
1	GND
2	+5V

**CONNECTOR P5**

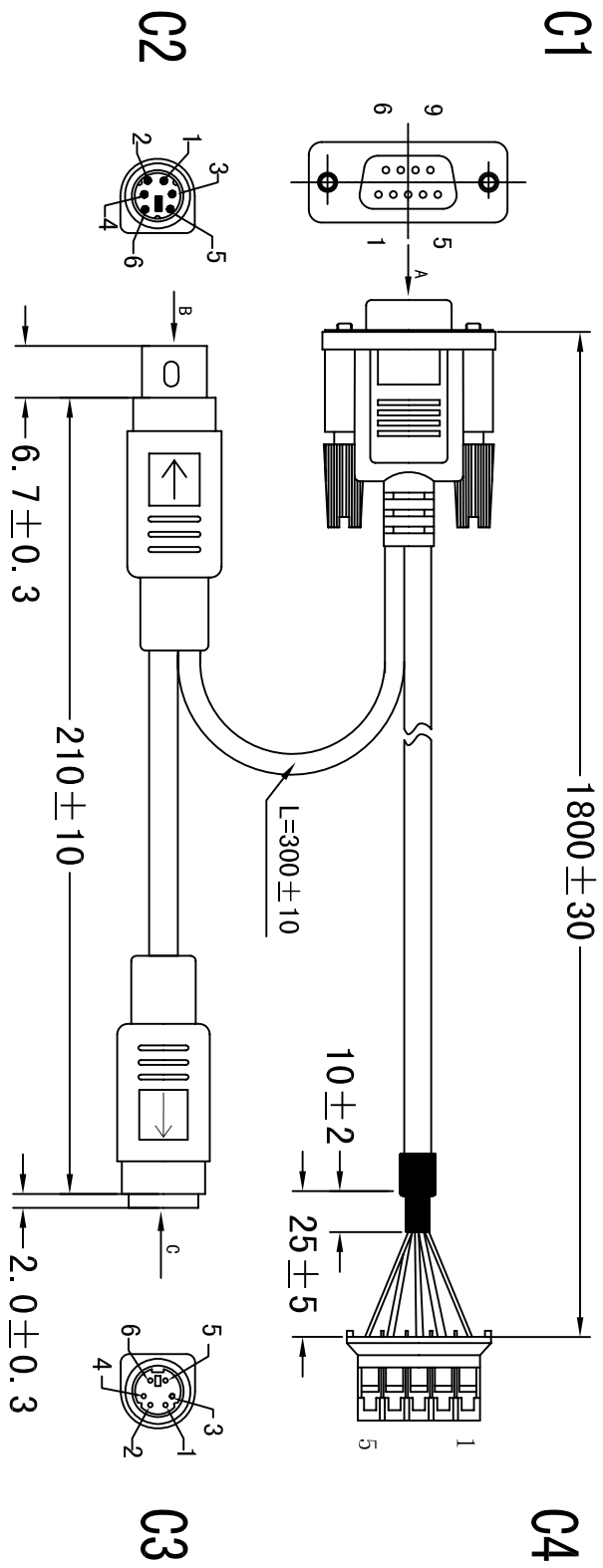
PIN #	SIGNAL NAME
1	YD
2	XL
3	XR
4	YU

**CONNECTOR P4**

PIN #	SIGNAL NAME
1	RIK to +5V
2	RIK to +5V
3	TXD
4	NC
5	RXD
6	CTS
7	NC
8	NC
9	GND
10	NC

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P/N:	4WR232LA5		
DRAWN BY	HATTE	DIMENSION UNIT	ISSUE DATE
CHECKED BY	ANSON	SCALE	REV
		NOT TO SCALE	A

# Appendix B Standard External RS-232 Cable



## MATERIAL LIST:

### CONNECTOR:

- C1:DB9 FEMALE PVC MOLDED COLOR:BLACK.
- C2:MINI DIN 6PIN MALE PVC MOLDED COLOR:BLACK.
- C3:MINI DIN 6PIN FEMALE PVC MOLDED COLOR:BLACK.
- C4:2.0PITCH SPIN HOUSING COLOR:WHITE.

### CABLE:

- UL2464 #26\*6C+AE OD:5.0mm COLOR:BLACK.
- UL2464 #26\*4C+AE OD:5.0mm COLOR:BLACK.
- UL2462 #26\*5C+AE OD:5.0mm COLOR:BLACK.
- CORE:
- 12\*5.6\*20mm PVC MOLDED COLOR:BLACK

## PIN ASSEMBLY

C3	C2	C1	C4
1	1	2	2
2	2	3	3
3	3	5	4
4	4	RED	5
5	5	ORANGE	+5V
6	6	GREEN	1
SHELL	GND	SHELL	CTS

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DESCRIPTION:MD6F/MD6M/DB9F/PH5	ISSUE:05/9/27
PART No.:CAB232E6B5	PAGE:1 OF 1
DRAWN BY:HA TTIE	REV:A
CHECKED BY:ANSON	UNIT:mm