

1. Technical Specification of 5-wire Resistive Touchscreen Panel and Controller

1.1 5-Wires Resistive Touchscreen Panel Technical Specification

Technology	5- wire Resistive Touchscreen
Construction	Glass, uniform resistive coating, polyester coversheet, transparent insulating dots, conductive coating
Deviation of Error	Less than 3.5 mm)
Resolution	4096 X 4096
Touch Point Density	100,000 touchpoints/in2 (15,500 touchpoints/cm2)
Touch Activation Force	20-120 grams)
Response Time	Less than 5 milliseconds
Surface Hardness	Moths 3
Life Time	More than 35 million touches in one location without failure
MTBF	Over 50,000 hours
Dust-Proof and Water-Proof	Meet NEMA 4 and 12, and IP 65 standards
Light Transmission	≥87%
Operating Temperature	-20°C to 80°C
Storage Temperature	-40°C to 80°C
Operating Humidity	<95%
Storage Humidity	<95%
Operating Altitude	10,000 feet above sea level
Storage Altitude	50,000 feet above sea level
Chemical Resistance	Acetone, Methylene chloride, Methyl ethyl ketone, Isopropyl alcohol, Hexane, Turpentine, Mineral spirits, Unleaded Gasoline, Diesel Fuel, Motor Oil, Transmission Fluid, Antifreeze

1.2 Controller technical specification

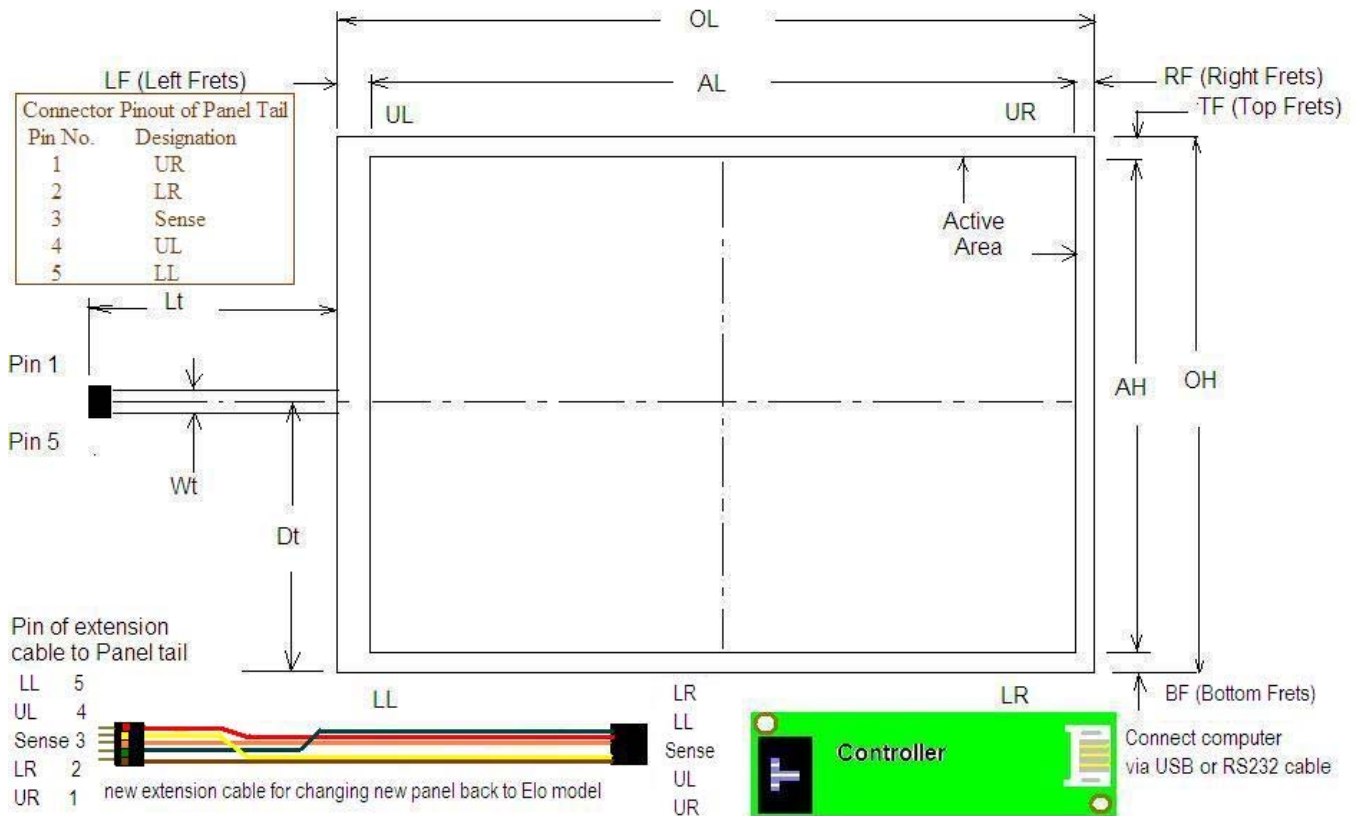
Controller Interface	USB and RS232 interface
Power Requirements	+5VDC (max. 100mA, typical 70mA, 50mV peak to peak max ripple)
Operating Temperature	0 to 70 degrees Centigrade
Storage Temperature	-40 to 80 degrees Centigrade
Relative Humidity	95% at 60 degrees Centigrade
Protocol	RS232: 9600 bauds, None parity, 8 data bits, 1 stop bit
	USB: USB 1.1 Low speed
Resolution	4096 x 4096
Accuracy Tolerance	Max. +/- 0.5% tolerance

Response Time	Max. 35 ms
MTBF	more than 50,000 hours

1.3 Warranty: 3 Year for 5-Wire Resistive Touchscreen Panel and Controller

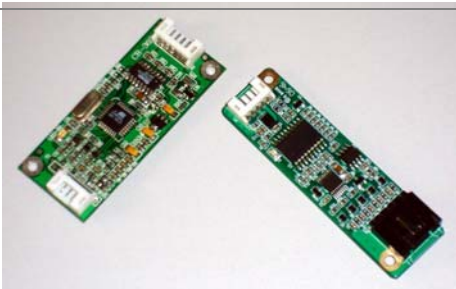
2. Structure of Typical 5-Wire Resistive Touchscreen Panel & Controller

2.1 Typical Mechanical Drawing of 5-Wire resistive touchscreen Panel



Panel Dimension in MM	
Outline	Active Area
OL (Outline Length) x OH (Outline Height)	AL (Active area Length) x AH (Active area Height)
Thickness of Panel: 1.1mm & 2mm & 3mm	
The panel tail comes out from middle left side of the standard 5-wire touchscreen panel;	
Length of Tail is 100mm for size ≤15", 180 mm for size >15"	

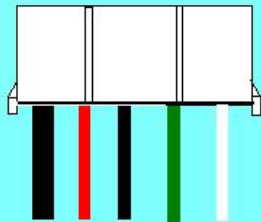
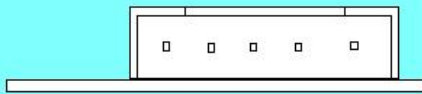
2.2 Structure of Controller



VTtouch 5-Wires Resistive Controller

Pin of Connector for USB & RS232 Controller

1 2 3 4 5

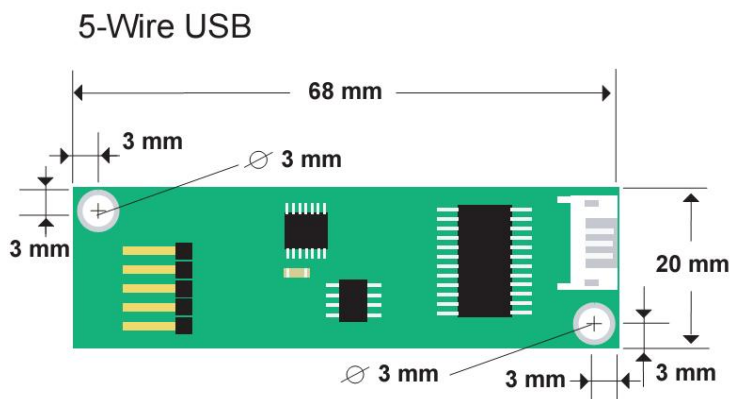


Pin of White Controller Connector	1	2	3	4	5
Function of Pin of USB Controller	Ground	VCC +5VDC	Ground	Data +	Data -
Function of Pin of RS232 Controller	Ground	VCC +5VDC	Ground	Data in	Data out
Cable connector wire color	Black	Red	black	Green	White

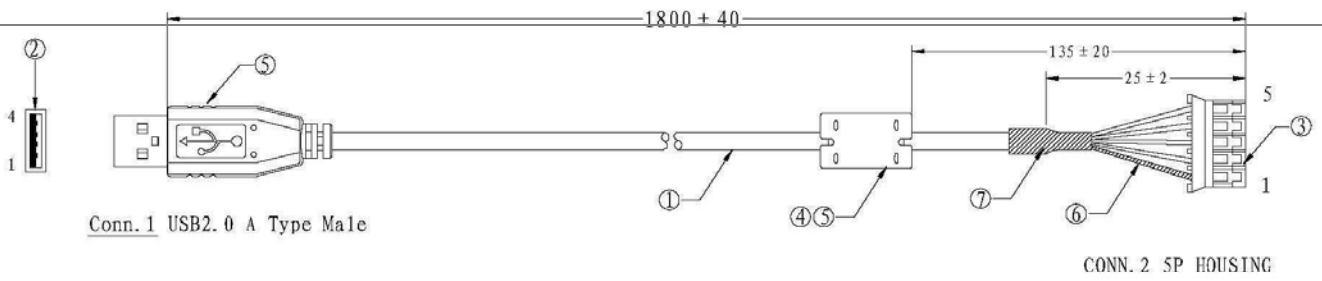
Connector of USB & RS232
Cable goes to USB or RS232
Controller

2.2.1 USB Controller

Resistive Controller



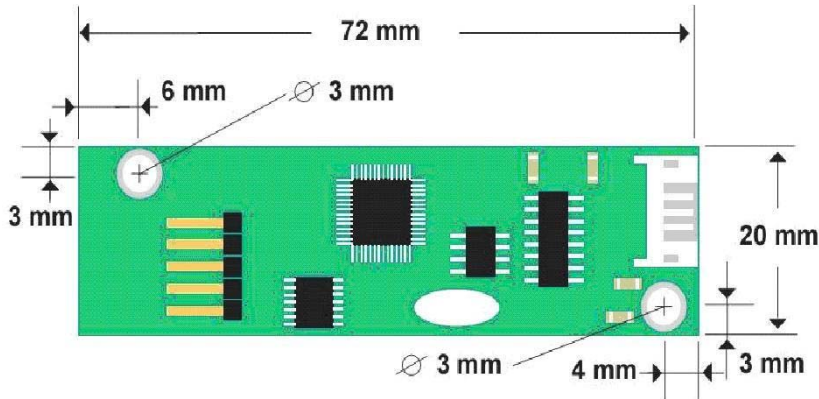
2.2.2 USB Controller Cable



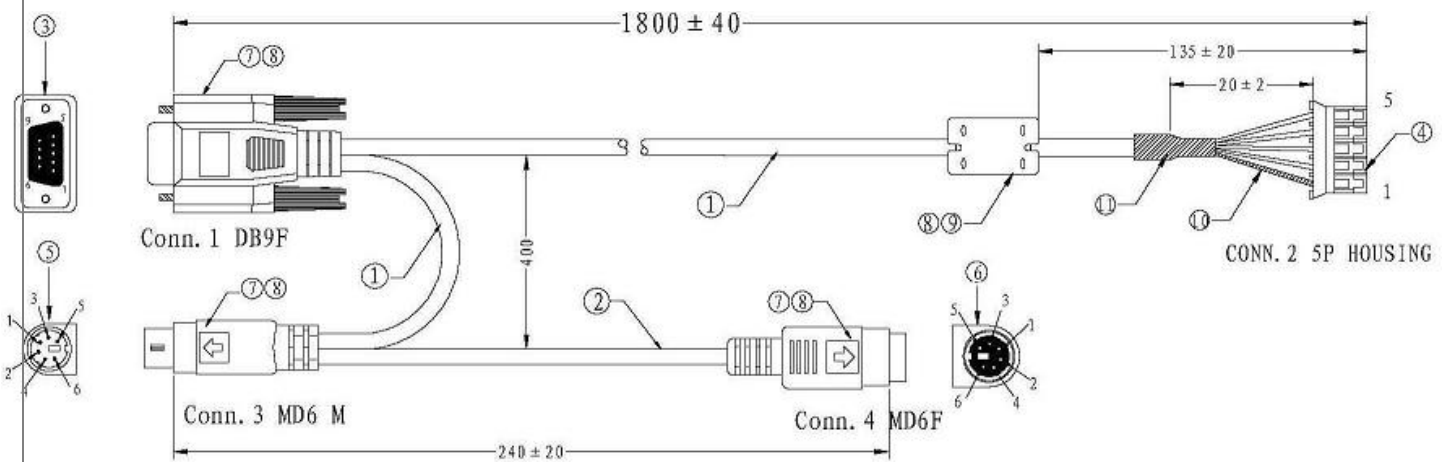
- Electrical Properties:**
- 1. Contact Resistance: 2 ohm max
 - 2. Insulation Resistance: 10Mega ohm;
 - 3. HI-POT: 300V DC/10ms.
 - 4. All Materials With RoHS Standard

2.3.3 RS232 Controller mechanical drawing

5-Wire RS232/ PS2



2.2.4 RS232 Controller Cable



- ELECTRICAL PROPERTIES:**
- 1. Contact Resistance: 2ohm max;
 - 2. Insulation Resistance: 10mega ohm;
 - 3. HI-POT: 300V DC/10ms;
 - 4. All Materials With RoHS Standard

3. Integration Procedure

3.1 Connection of 5-wire Resistive Touchscreen Component

- 3.1.1 Connect controller with 5-wire resistive touch screen via extension cable;
- 3.1.2 Connect the controller to the motherboard via either USB port or RS232 port;
- 3.1.3 Connect the controller to 5VDC power (USB port can provide 5 VDC; Key board port or mouse port can provide 5VDC power for RS232 controller);
- 3.1.4 Install the appropriate touch system driver in correspondence with operation system, (Windows XP, 2K etc.)

3.2 Driver Installation

3.2.1 Available Touch system Drivers that can be downloaded from AKG website: www.akgtech.com

Windows 2000 (for both home version & professional version)

Windows XP (for both home version & professional version)

3.2.2 Driver installation

- Preparation: connecting 5-wire resistive touch screen, controller and application device or computer with correct cable on the integration procedure.
- Load the driver from our website in to application system;
- Find the instruction to complete the driver installation;
- Double click at the setup.exe file to start software driver installation. Then, the setup program will guide user to complete software installation.

3.3 Calibration of 5-Wire Resistive Touch System

Calibration, draw test tools and the linearity curve of the touch screen were listed shown as below for user to do touch screen calibration and touch position test.

