**Touch Screen**

**Product ID:** touch screen



Cost effective solution and easy to use resistive touch screen technology,
which can be operated in commercial, medical or industrial applications
and children's toys. We offer digital,analog and capacitivetouch screens.

**Specifications:**

* Matrix Type
	+ -Operation Voltage：DC5V
* -Activation Force：10g~100g
* -Surface Hardness：3H
* -Operating Humidity：15%~85%RH
* -Operation & Storage Temp：-20~+70 degree
* -Structure： Film +Film /Film + Glass /Film + Film + Glass
* -Various Standard Sizes： 1.4"~21"
* -Finger Touch：1 Million touches(For 4 Wire &Matrix)
* -Finger Touch：35 Million touches (For 5 Wire)
* -Transparency：82+/-5%
* -Linearity：1.5% less (Analog)
* -Pen Hitting：100,000 touches
* -Contact Bounce：5ms
	+ Capacitive Type
		- -Operation Voltage:DC5V
	+ -Size Range: 5"~21"
	+ -Activation Method: Finger
	+ -Activation Force: 90%(AR coating finished)
	+ -Operation Temp: -20 ~ +70 degree (20%RH ~ 85% RH)
	+ -Storage Temp: -40 ~ +85 degree (10%RH ~ 90% RH)
	+ -Constant Temperature / Humidity:70 degree
	+ (90%RH,1500hrs )
	+ -Surface Hardness: >7H
	+ -Life Time: 200 million touches

**Features:**
.Resisitive type/Capacitive type

**Main Products:**
Membrane Swtiche, Touch Screen, Silicone Rubber

<http://www.spectrah.com/product/touch_screen_resistive_4_wire_touch_screen_tr4_series/resistive_4_wire_touch_screen_catalog.pdf>

<http://www.elcomdesign.com/contact-us.htm>

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| Spectrah 4-wire touch products offer customer a wide range of glass size, ease of integration, responsiveness, and high reliability and durability. They are the ideal solution for POS, voting machine, and industrial automation. Spectrah also provides complete signal controllers, cable kits, and excellent technical support to help customers easily integrate touch panel in the display systems. |

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| Resistive 4-wire Touch Screen TR4-03811030 (Size: 3.8”, Frame Size: 95mm x 69.5mm)  Resistive 4-wire Touch Screen TR4-05714050 (Size: 5.7”, Frame Size: 132.5mm x 104.7mm)  Resistive 4-wire Touch Screen TR4-06414082 (Size: 6.4", Frame Size: 146.90mm x 117.20mm)   Resistive 4-wire Touch Screen TR4-07014030 (Size:TBD)  Resistive 4-wire Touch Screen TR4-08414055 (Size: 8.4", Frame Size: 188.9mm x 141.7mm)  Resistive 4-wire Touch Screen TR4-10414055 (Size: 10.4”, Frame Size: 225.4mm x 174.0mm)  Resistive 4-wire Touch Screen TR4-12114055 (Size: 12.1”, Frame Size: 263.0mm x 199.0mm)  Resistive 4-wire Touch Screen TR4-305814061 (Size: 5.88", Frame Size: 140.00±0.30mm x 104.00±0.30mm)  Resistive 4-wire Touch Screen TR4-310319056 (Size: 10.39", Frame Size: 225.21±0.38mm x 171.59±0.38mm)  Resistive 4-wire Touch Screen TR4-405714050 (Size: 5.7”, Frame Size: 132.5mm x 140.7mm)  Resistive 4-wire Touch Screen TR4-406414035 (Size: 6.4”, Frame Size: 142.0mm x 110.6mm)  Resistive 4-wire Touch Screen TR4-407014070 (Size: 7.0”, Frame Size: 165.0mm x 104.0mm)  Resistive 4-wire Touch Screen TR4-408414050 (Size: 8.4”, Frame Size: 186.2mm x 142.0mm)  Resistive 4-wire Touch Screen TR4-410414050 (Size: 10.4”, Frame Size: 225.3mm x 174.0mm)  Resistive 4-wire Touch Screen TR4-412114150 (Size: 12.1”, Frame Size: 261.4mm x 198.8mm)<http://www.allproducts.com/computer/onetouch/capacitive_touch_screen_t01.html><http://picinf.blogspot.com/2010/03/multiplexed-led-display-4-digit-with.html>[VB6 RS-232 serial communication example program](http://microcontroller51.blogspot.com/2010/03/vb6-rs-232-serial-communication-example.html) Many student asked for VB6 program for serial communication.This is a short lesson or tutorial on the development of your own application program for computer to send and recive data from microcontroller (any, the microcontroller side program is not discussed here).What you need is written in steps;Step # 1:You need a computer with visual basic 6 plat form installed on it.Open the VB6 application from programs to write a code.You will notice following message on screen, choose Standard exe and press OK,( This is default)http://3.bp.blogspot.com/_CvxN91KM3Rc/S46iSwGLAFI/AAAAAAAAAgQ/AGwsDFvqLxY/s400/RS-232-vb6-program-1.JPGSTEP#2:Here a form is open, you will need to add a component required for serial communication. Normally it is not visible in tools and we have to bring it in tools from components. This VB6 library built in.1. right click on the bar of tools available for you to use on left side of the application and press add components. OR2. Press control+T to open the component window OR3. Go to project menu and click on componentsBy using either way , you will open the component window as shown below.Now Find "Microsoft comm control 6" and check the option and press "OK"http://3.bp.blogspot.com/_CvxN91KM3Rc/S46iSuKkFxI/AAAAAAAAAgI/lMntYdBosvU/s400/RS-232-vb6-program-2.JPGSTEP#3Place the texts boxes and command buttons by drag and drop method from tool bar. Resize them. and make the form as shown in the figure below.http://1.bp.blogspot.com/_CvxN91KM3Rc/S46iSWZfxSI/AAAAAAAAAgA/NKK_tnTA9ME/s400/RS-232-vb6-program-3.JPGSTEP#4copy the following code and paste it in the code section and compile , run it.You can receive the byte stream of any length. the incoming string will be shown in text1. Then i have use Mid function to split the string to acquire one byte and then shown in the other text boxes.In this program i have send only one byte , but you can send as many as you wish.The com setting is 9600,N,8,1 mean baud rate is 9600, the byte will of 8 bits and one stopping bit and now parity bit is used ion this communication. Make you micro controller set accordingly.Enjoy it, if you want to ask any questions , please write in comments. I will check and answer them.Option ExplicitDim strInBuff as String ' The incoming data from the serial port will be stored in this stringDim temp1 as Integer ' The only one parameter in this program you will send out from PCPrivate Sub Form\_Load()With MSComm1.CommPort = 1 .RThreshold = 1 .RTSEnable = True .Settings = "9600,N,8,1".InputLen = 127.SThreshold = 1 ' .PortOpen = True End Withtemp1 = 100 ' You can declar and use as many varaible whose value is required to send from ' 'PC but here as only one is required , so i have declared only one.End Sub'When some data is recived in the serial port of the PC (computer) the following function will be excecutedPrivate Sub MSComm1\_OnComm()' Different events are occured , when data come , these includes some errors also (if they occur in communication, but normally RS-232 have not problems)Select Case MSComm1.CommEvent' ErrorsCase comEventBreak Case comEventCDTO Case comEventCTSTO Case comEventDSRTO Case comEventFrame Case comEventOverrun Case comEventRxOver Case comEventRxParity Case comEventTxFull Case comEventDCB ' EventsCase comEvCD Case comEvCTS Case comEvDSR Case comEvRing Case comEvReceive ' The data (incoming from outside world to PC through RS-232 port is stored in ''MSComm1.Input , which is a string, each time we read from thisstrInBuff = MSComm1.Input ' after reading it requires free from any data, otherwise all the data will be gathhered and it will 'overflow, result in runtime errorMSComm1.Input = ""Text1.text = strInBuff ' what ever we get is displayed in a textText2.text = Asc(Mid(strInBuff , 1, 1)) ' getting one byte and speratly displaying in other 'text for other possible use, for this MID function is usedText3.text = Asc(Mid(strInBuff , 2, 1))Case comEvSend Case comEvEOF End SelectEnd Sub' if you wish to send a byte to microcontroller from pc, then use following code, and in the same 'way using loop or other methods you can send more bytes, if u need??Private Sub Command3\_Click()MSComm1.OutBufferCount = 0MSComm1.Output = Chr$(temp1)End Sub' opening the com port for communication with microcontroller or other worldPrivate Sub Command1\_Click()If (MSComm1.PortOpen = False) ThenMSComm1.PortOpen = TrueEnd IfEnd Sub' closing the com port if its no need for further communicationPrivate Sub Command2\_Click()If (MSComm1.PortOpen = True) ThenMSComm1.PortOpen = FalseEnd IfEnd Sub' at the form closing or exit or unloading, again port is rechecked, if it is open then it will close 'now, for the use of any other program' This important, and many user or programmer forget this point. otherwise you will need to 'restart the computer for again use of this serial port even in this program or any other program.Private Sub Form\_Unload(Cancel As Integer)If (MSComm1.PortOpen = True) ThenMSComm1.PortOpen = FalseEnd IfEnd Sub8051 Project, 8051 projects,ADC0804,adc0808,adc0809,microcontroller projects, at89c51 projects, 8051 serial port communication |
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