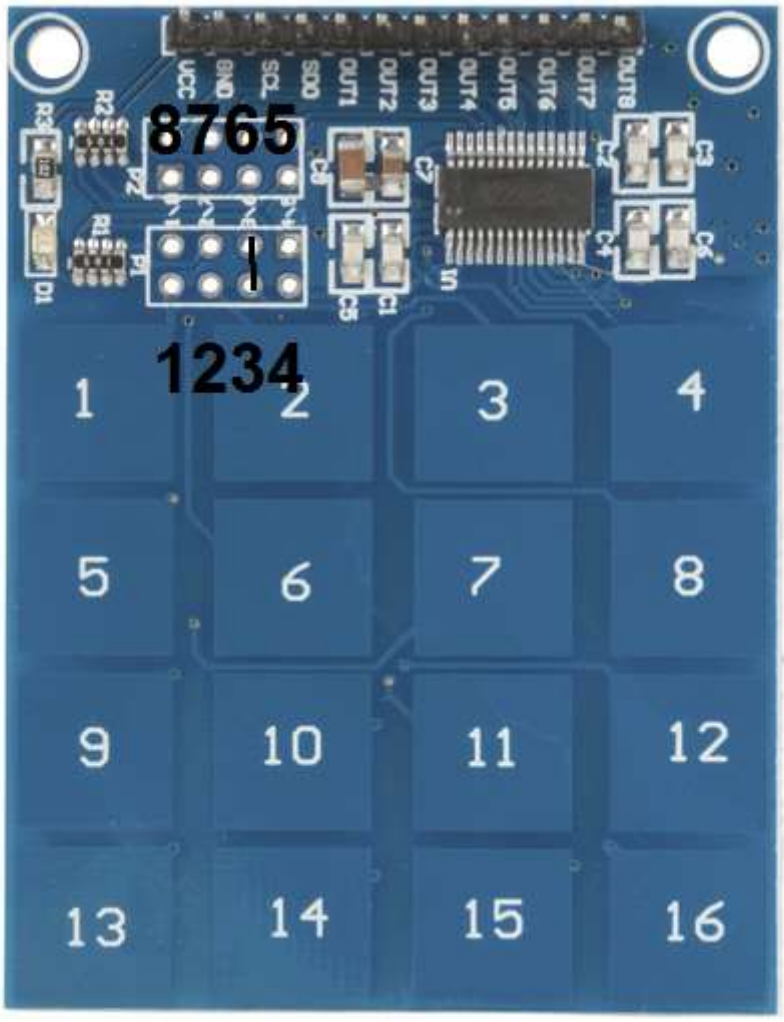
XC4602 Setup and Code

The XC4602 Touch Keypad Module is based on the TTP229 IC, allowing all 16 keys to be read by using only 2 IO pins.

Pin	Arduino pin for sample code	Function
VCC	5V	5V or 3.3V power
GND	GND	Ground
SCL	D8	Serial clock for 2 pin reading
SDO	D9	Serial data for 2 pin reading
OUT1-OUT8		Raw digital key output

By default, the module is set to 8-key mode, and can be changed to 16-key mode by bridging out the two pins (pair 3) indicated below in black. This could be done with a small piece of wire if you wish to solder it, or if you want to experiment with the various modes, you could use headers like HM3211, and make the connections with HM3240 jumper shunts.

In 8-key mode, you can read keys 1-8, but they read as 9-16 (ie if key 1 is pressed, the result is '9').



Code sample:

Make the connections between your Arduino board and the XC4602 (any Arduino board should work fine) as per the table above, and then upload the following sketch to your board:

```
void setup(){
  Serial.begin(9600);
}

void loop(){
  Serial.println(XC4602_read(8,9));      //SCL on 8, SDO on 9
  delay(100);
}

int XC4602_read(int sclpin, int sdopin){ //returns key number or 0 if no
key pressed
  int key=0;                             //default to no keys pressed
  pinMode(sclpin,OUTPUT);
  digitalWrite(sclpin,HIGH);
  pinMode(sdopin,INPUT);
  delay(2);                               //ensure data is reset to first
key
  for(int i=1;i<17;i++){
    digitalWrite(sclpin,LOW);             //toggle clock
    digitalWrite(sclpin,HIGH);
    if(!digitalRead(sdopin)){key=i;}      //valid data found
  }
  return key;
}
```

Open the serial monitor, and the key state will be printed out. Note that by default, the module only supports one keypress at a time. If you want to use the module in your own sketch, you can just copy the XC4602_read() function and call it from your sketch. You can of course change it to work off any digital pins.

To see further functions of the Touch Key Module (and which jumpers to set), check out the datasheet for the TTP229.