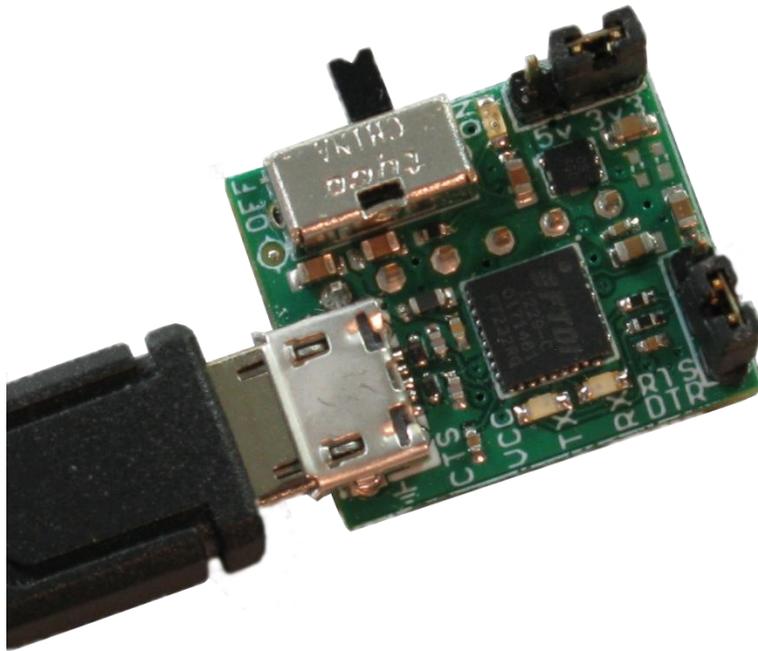
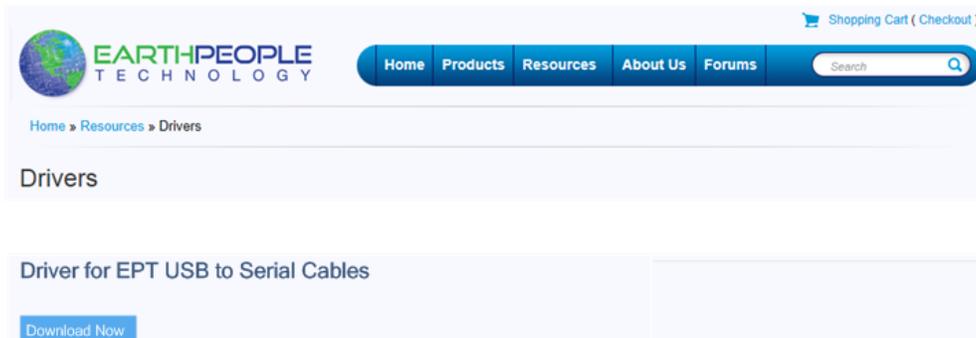


EARTH PEOPLE TECHNOLOGY**VISIPOINT 2
USB To Serial Adapter
User Manual**

The VisiPort 2 is a USB To Serial Adapter Module that is compact in size and programs any Arduino. Its small size allows it to fit into bread board applications where other programmers are too big and bulky. It uses the FTDI VCP driver to behave like a built in COM Port. Once the VisiPort 2 is connected to the PC and the driver is loaded, you can use a serial Terminal application such as HyperSerialPort to set the baud rate, number of data bits, flow control, etc and communicate with your microcontrollers UART serial port.

VisiPort 2 USB Driver

The VisiPort 2 uses the ftdibus.sys driver. This driver is loaded upon connection of the VisiPort 2 to the PC by the ftdibus.inf file. To install these two files onto your PC, use the FTDI Combined Driver Model CDM 2.08.24 WHQL Certified. The installation of the CDM 2.08.24 is easily accomplished using the executable. Just download the executable



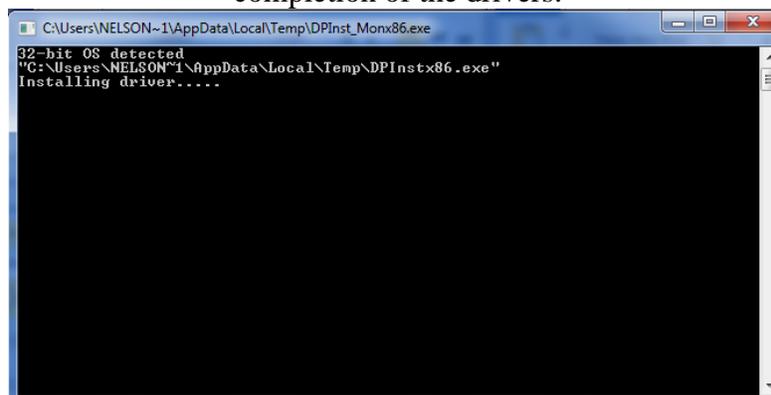
When the download is complete, click Run on the banner to start the install of the driver files.



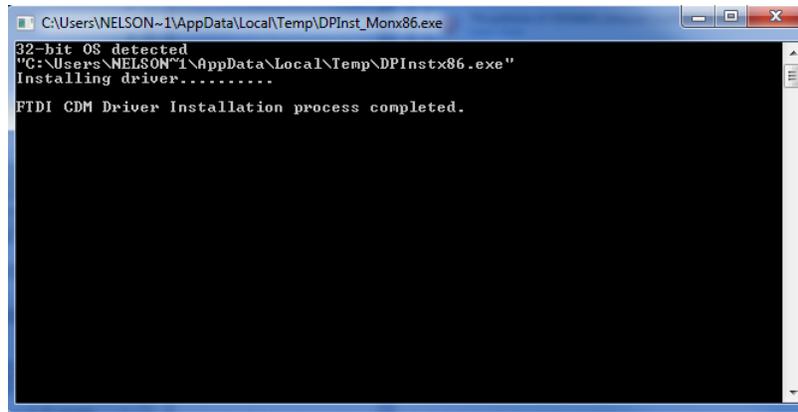
Click on the Run button.



Click on the Run button again. The Console will come up and indicate the installation and completion of the drivers.



The driver files will automatically install in the System Registry.



When this is complete, the drivers are installed and the VisiPort 2 can be connected to the PC and used.

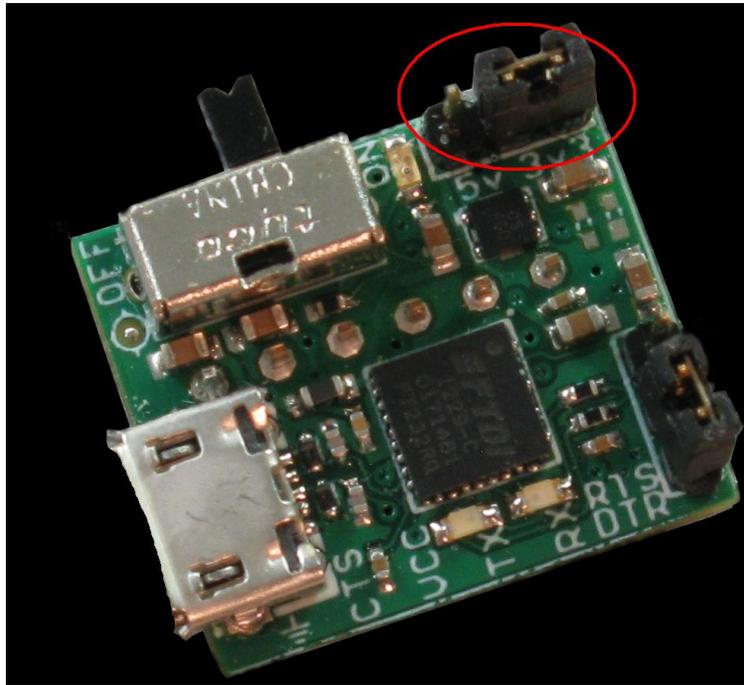
VisiPort 2 Selecting the Jumpers Settings

Once the VisiPort 2 driver is loaded, programming the Arduino is as simple as connecting it to the VisiPort 2 and opening up the Arduino software. The six pin female edge header is designed to connect directly to the Arduino Mini Pro. The pinout matches completely with the TXD and RXD in the correct polarity. You will need to install a six pin male header to the your Arduino Mini Pro.

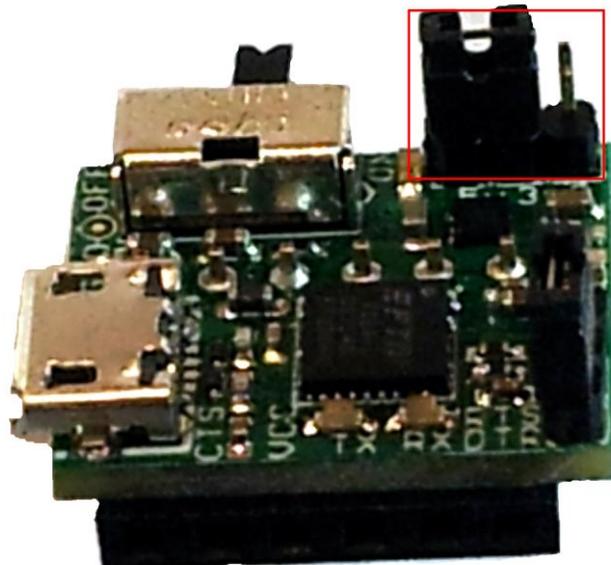


With this header in place, select the correct settings for you Arduino.

If your Mini Pro is the 3.3V version, you will have to select the 3.3V VCCIO on the 5V/3.3V jumper. Just connect the jumper on pins 2 and 3.



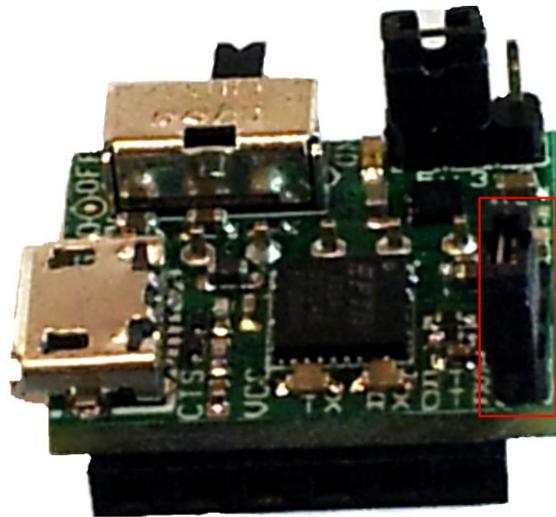
If your Arduino is the 5V version, the select 5V for VCCIO on the 5V/3.3V jumper. Just connect the jumper on pins 1 and 2.



You can also select whether the Auto-Reset feature for the Mini Pro is from the RTS signal or the DTR signal. The DTR signal is asserted by the Arduino IDE before a sketch is uploaded into the Mini Pro Flash memory. The assertion of the DTR signal will cause the Auto-Reset feature

VisiPort 2 USB To Serial Adapter User Manual

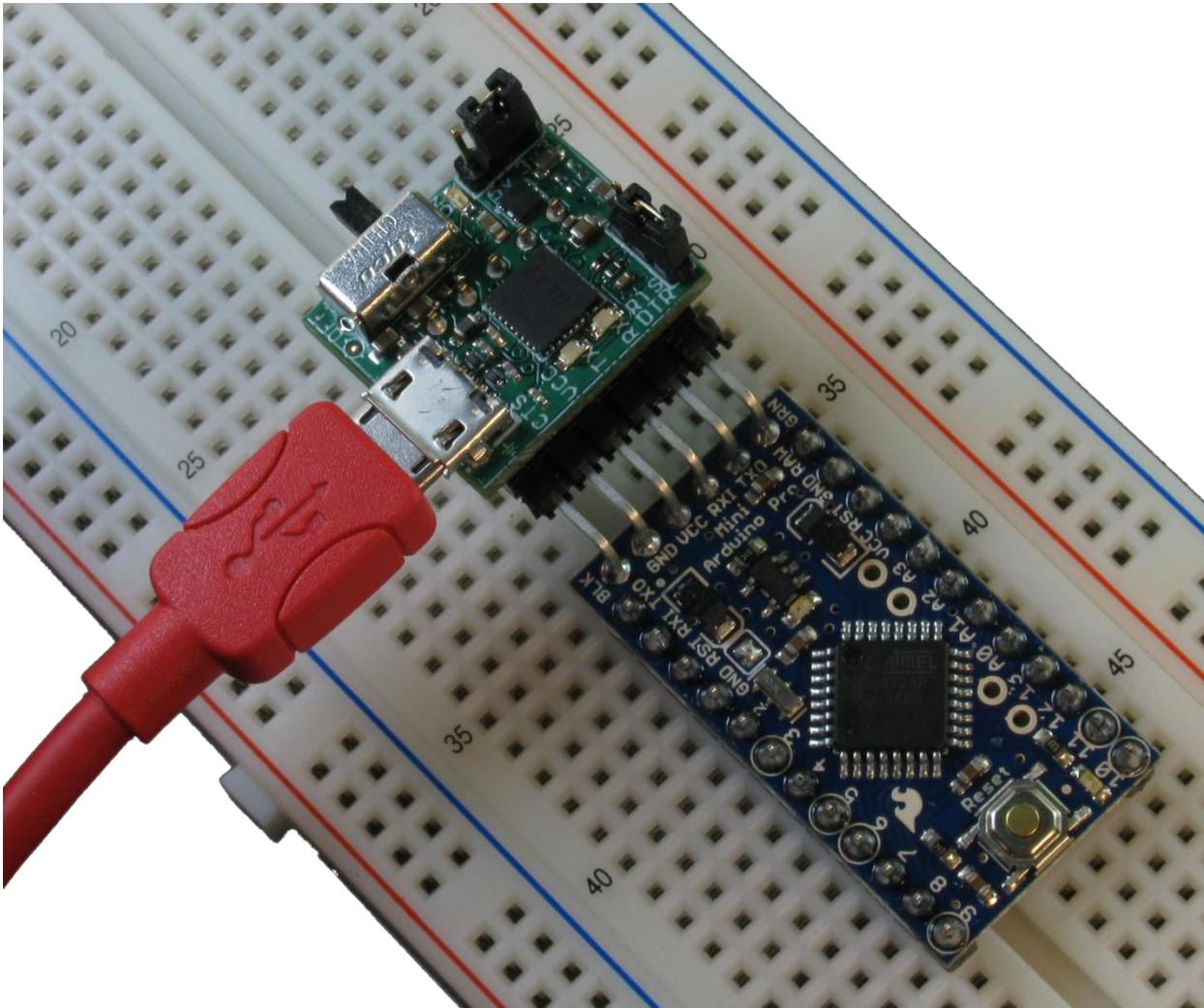
of the Mini Pro to engage and resets the ATmega328 processor. In the reset state, the Arduino IDE can load the sketch into memory by sending commands over the TXD and RXD signals of the VisiPort 2. This is possible because the Mini Pro contains a BOOTLOADER running in its flash memory. The BOOTLOADER is just a simple piece of code that responds to a few pre-determined commands. The RTS signal can also be used to engage the Auto-Reset feature of the Mini-Pro. However, the Arduino doesn't assert the RTS signal on purpose. The RTS signal is asserted when the COM Port is initialized. The Arduino usually initializes the COM Port before sending commands via the VisiPort 2. It is up to the user to find the optimum setting for the DTR/RTS setting.



Make sure to slide the USB power switch to the “On” Position. This switch is only used to disconnect/connect the USB to the VisiPort 2. It does not turn on/off the power to the VCCIO pin. When the USB cable is connected to the VisiPort 2, the power is always applied to the VCCIO pin.

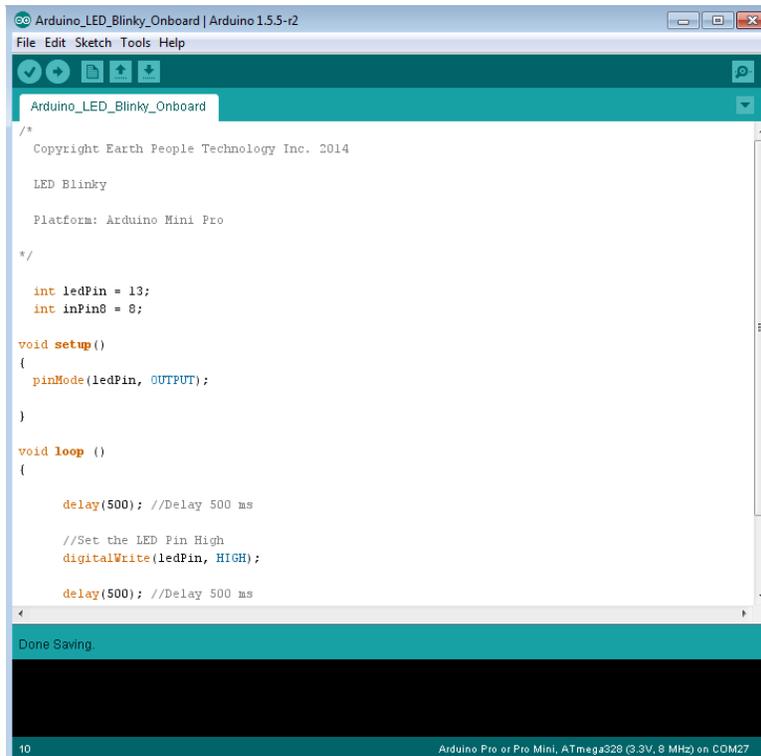
VisiPort 2 Programming the Arduino

Now, we are ready to program the Arduino. Simply plug in the VisiPort 2 and connect the USB Micro B cable to the PC.



Open up an example sketch using the Arduino IDE.

VisiPort 2 USB To Serial Adapter User Manual



```
Arduino_LED_Blinky_Onboard | Arduino 1.5.5-r2
File Edit Sketch Tools Help
Arduino_LED_Blinky_Onboard
/*
 Copyright Earth People Technology Inc. 2014

 LED Blinky

 Platform: Arduino Mini Pro
 */

int ledPin = 13;
int inPin0 = 8;

void setup()
{
  pinMode(ledPin, OUTPUT);
}

void loop ()
{
  delay(500); //Delay 500 ms

  //Set the LED Pin High
  digitalWrite(ledPin, HIGH);

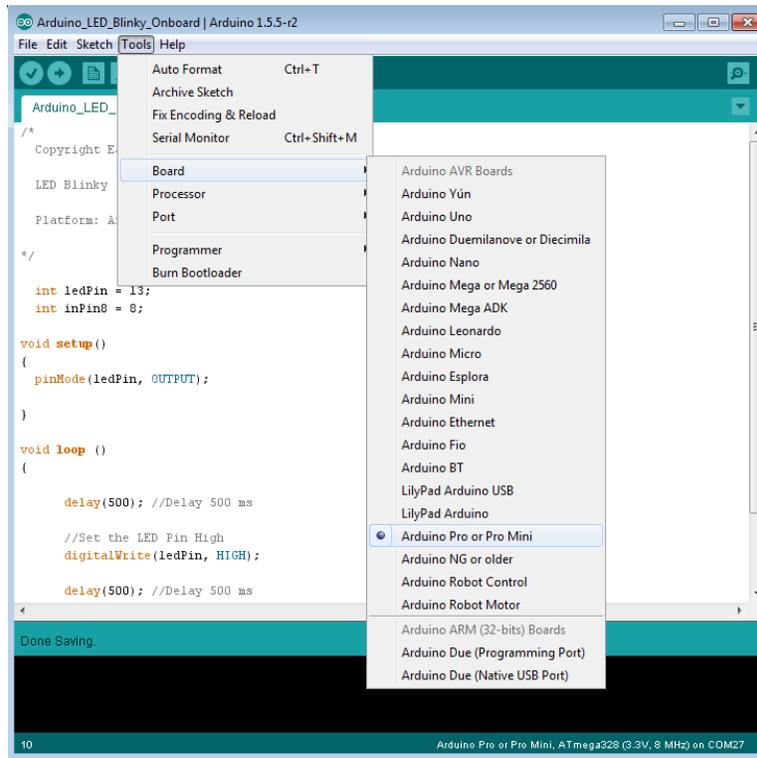
  delay(500); //Delay 500 ms
}

Done Saving.

10 Arduino Pro or Pro Mini, ATmega328 (3.3V, 8 MHz) on COM27
```

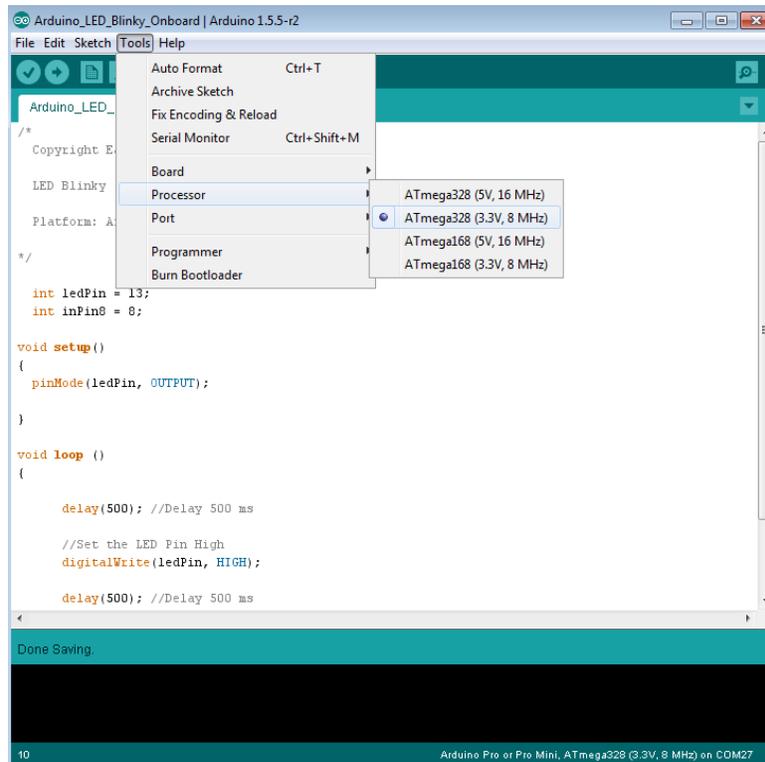
Go to Tools->Board and select your Arduino (in this case the Mini Pro)

VisiPort 2 USB To Serial Adapter User Manual

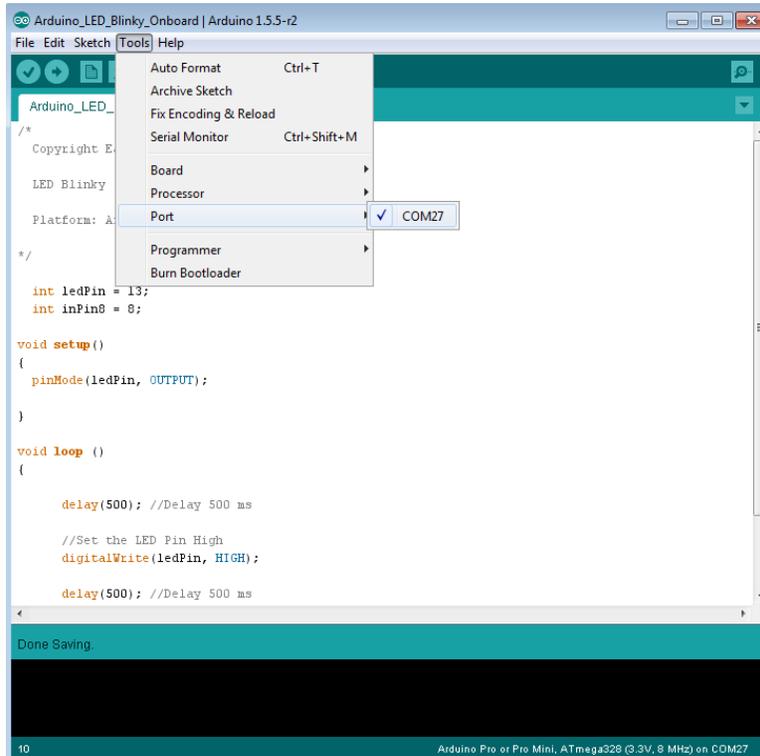


Go to Tools->Processor and select the appropriate processor (in this case the ATmega328 (3.3v, 8MHz))

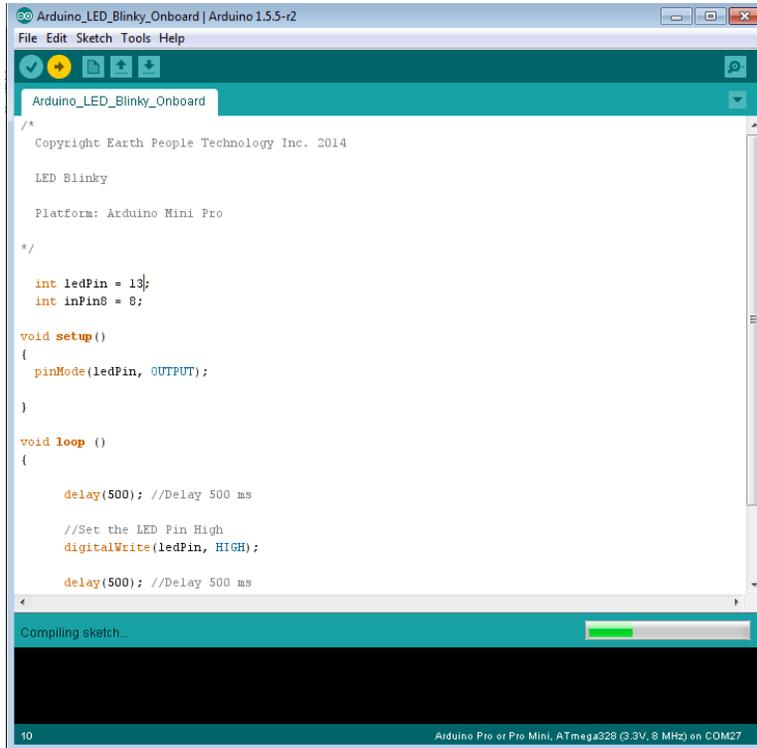
VisiPort 2 USB To Serial Adapter User Manual



Go to Tools->Port and select the COM Port for the Arduino (in this case COM27)



Then press the “Upload” button.



```
Arduino_LED_Blinky_Onboard | Arduino 1.5.5-r2
File Edit Sketch Tools Help
Arduino_LED_Blinky_Onboard
/*
Copyright Earth People Technology Inc. 2014

LED Blinky

Platform: Arduino Mini Pro
*/

int ledPin = 13;
int inPin8 = 8;

void setup()
{
  pinMode(ledPin, OUTPUT);
}

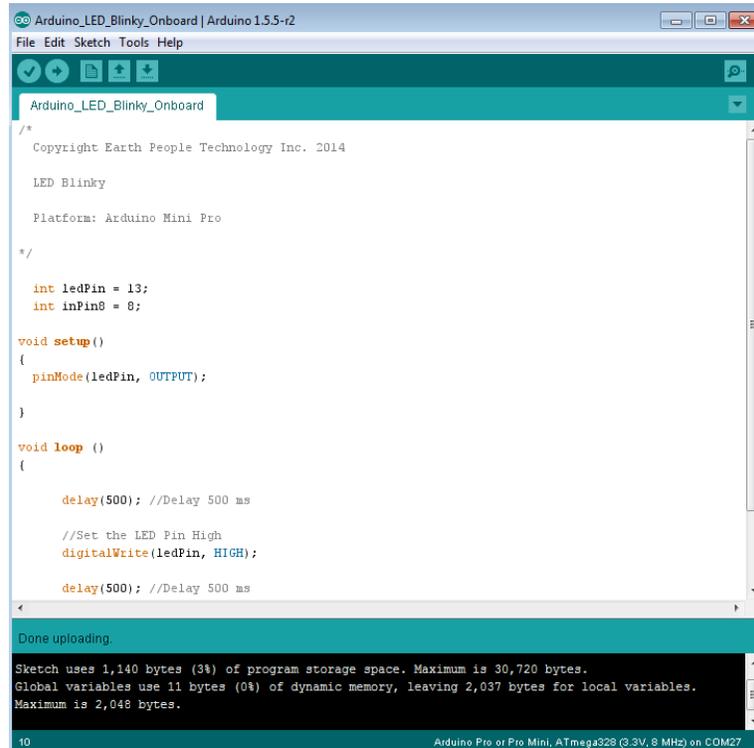
void loop ()
{
  delay(500); //Delay 500 ms

  //Set the LED Pin High
  digitalWrite(ledPin, HIGH);

  delay(500); //Delay 500 ms

  Compiling sketch...
10 Arduino Pro or Pro Mini, ATmega328 (2.3V, 8 MHz) on COM27
```

If everything goes well, you will see the “Done uploading” with no errors.



```
Arduino_LED_Blinky_Onboard | Arduino 1.5.5-r2
File Edit Sketch Tools Help

Arduino_LED_Blinky_Onboard

/*
 Copyright Earth People Technology Inc. 2014

 LED Blinky

 Platform: Arduino Mini Pro

 */

int ledPin = 13;
int inPin0 = 8;

void setup()
{
  pinMode(ledPin, OUTPUT);
}

void loop ()
{
  delay(500); //Delay 500 ms

  //Set the LED Pin High
  digitalWrite(ledPin, HIGH);

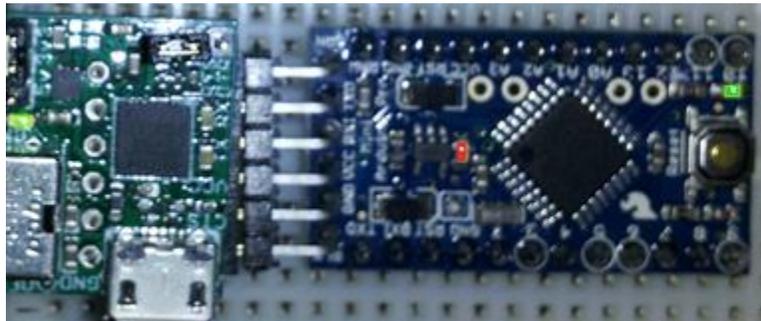
  delay(500); //Delay 500 ms
}

Done uploading

Sketch uses 1,140 bytes (3%) of program storage space. Maximum is 30,720 bytes.
Global variables use 11 bytes (0%) of dynamic memory, leaving 2,037 bytes for local variables.
Maximum is 2,048 bytes.

10 Arduino Pro or Pro Mini, ATmega328 (3.3V, 8 MHz) on COM27
```

Your Arduino is programmed and operational.



VisiPort 2 Communications

The VisiPort 2 provides full duplex serial communications between the PC and the Arduino. To see this in action just send some characters from the Arduino.



```
Arduino_LED_Blinky_Onboard | Arduino 1.5.5-r2
File Edit Sketch Tools Help

Arduino_LED_Blinky_Onboard §

Platform: Arduino Mini Pro

*/

int ledPin = 13;
int inPin8 = 8;
int LoopCount;

void setup()
{
  pinMode(ledPin, OUTPUT);
  Serial.begin(9600); // start serial communication at 9600bps

  LoopCount = 0;
  Serial.println("VisiPort 2 Communications Active!");
}

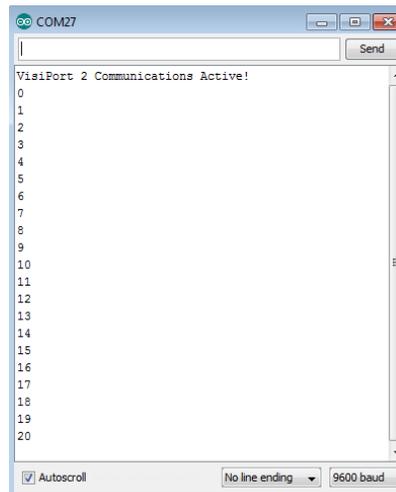
void loop ()
{
  delay(500); //Delay 500 ms

  //Set the LED Pin High
  digitalWrite(ledPin, HIGH);
}

Done uploading.
Sketch uses 3,000 bytes (9%) of program storage space. Maximum is 30,720 bytes.
Global variables use 225 bytes (10%) of dynamic memory, leaving 1,823 bytes for local variables.
Maximum is 2,048 bytes.

21 Arduino Pro or Pro Mini, ATmega328 @ 3V, 8 MHz on COM27
```

Use the Serial Monitor to view these characters.



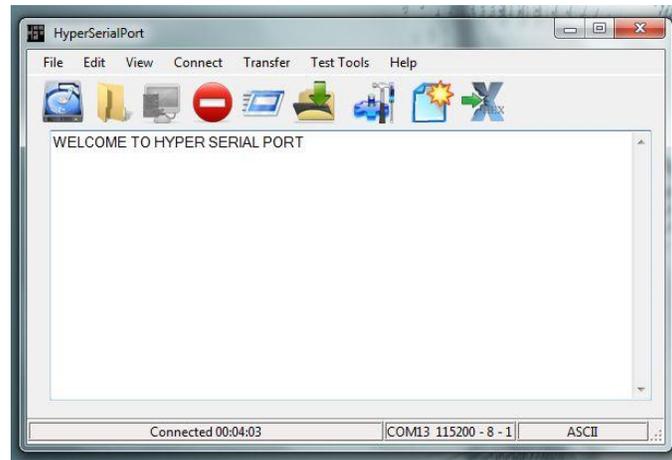
```
COM27

VisiPort 2 Communications Active!
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20

Autoscroll No line ending 9600 baud
```

The Serial Monitor allows you to view characters and send characters from the Arduino. However, it is quite limited in features. A more advanced serial terminal is HyperSerialPort.

VisiPort 2 USB To Serial Adapter User Manual



This serial terminal allows you to connect directly with the COM Port that is associated with the VisiPort 2. It's advanced features include the ability to view the characters received as hex values, freeze the screen, record the serial terminal session, and send complete files to the Arduino.

You can download [HyperSerialPort here](#).