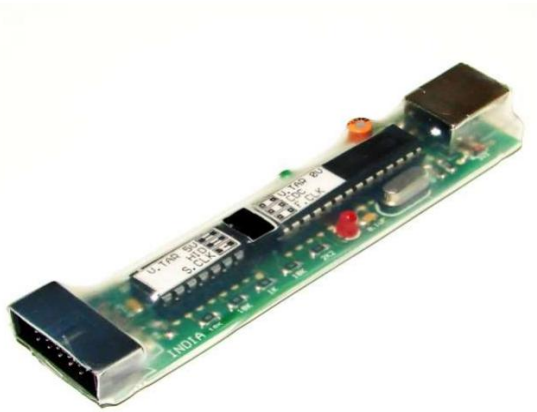
NEX AVR USB ISP STK500V2



Introduction:

NEX AVR USB ISP STK500V2 is a high-speed USB powered STK500V2 compatible In-System USB programmer for AVR family of microcontrollers. It can be used with AVR Studio on Win XP platforms. For Windows7 it can be used in HID mode with **AVRDude** command prompt as programming interface. Its adjustable clock speed allows the programming of microcontrollers with lower clock speeds. The programmer is powered directly from a USB port which eliminates the need for an external power supply. The programmer can also power the target board from a USB port with a limited supply current of up to 100mA.

Note: The USB port of PC provides 5V DC. For 3.3V microcontrollers, please use appropriate voltage regulators.

NEX AVR USB ISP STK500V2 Overview

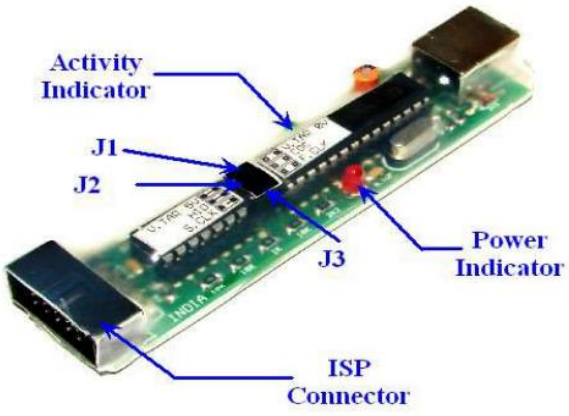


Figure 1: STK500V2 Overview

Jumper Description:
J1: If inserted, provides 5V at VTG (pin no.2) of ISP connector. If removed 0V at VTG (pin no.2) of ISP connector. **In default mode, this jumper is not inserted.**

J2: If inserted, enables UBS HID mode. If removed enables USB CDC mode. **In default mode, this jumper is not inserted.**

J3: If inserted, enables slow clock speed (for 32 KHz to 1MHz speed microcontrollers). If removed enables normal clock speed. **In default mode, this jumper is not inserted.**

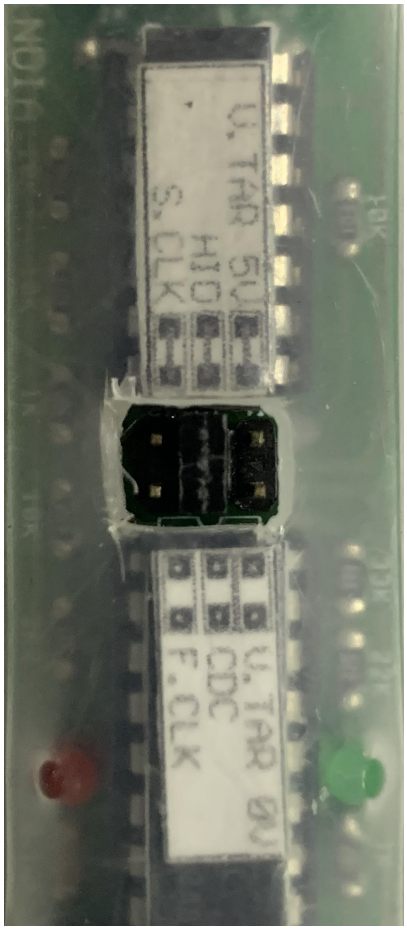


Figure 2: Jumper position in STK500V2

How to flash hex file onto Arduino Uno?

To flash the hex file, you will need the following components:

1. Arduino UNO Microcontroller Board

2. STK Programmer

3. Jumper Wires F/F

4. USB A to B Cable

The steps to be followed are as below:

1. Connect the jumper wires to STK programmer pins - MOSI, MISO, SCK, RESET, VTG and

GND with a respective pin of the Arduino UNO ICSP pins as shown in figure 3.

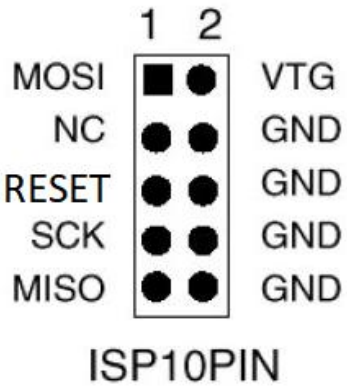


Figure 3: STK Programmer Pinout

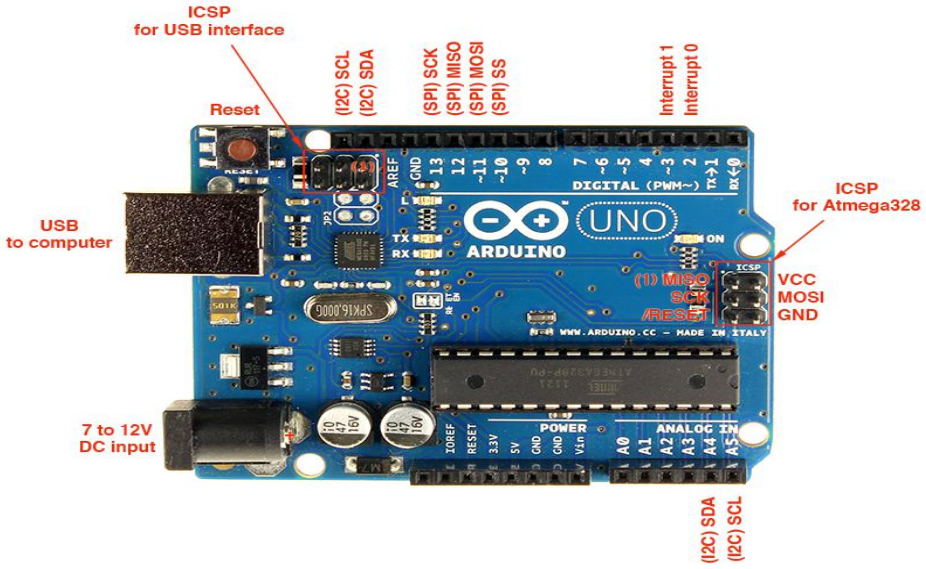


Figure 4: Arduino UNO ICSP Pins

2. To power the STK 500 and Arduino Uno Connect one end of USB Cable A to B to STK programmer and another end of USB cable to the PC USB port and similarly connect the second USB Cable A to B to Ardunio Uno and the other end to the PC USB port.

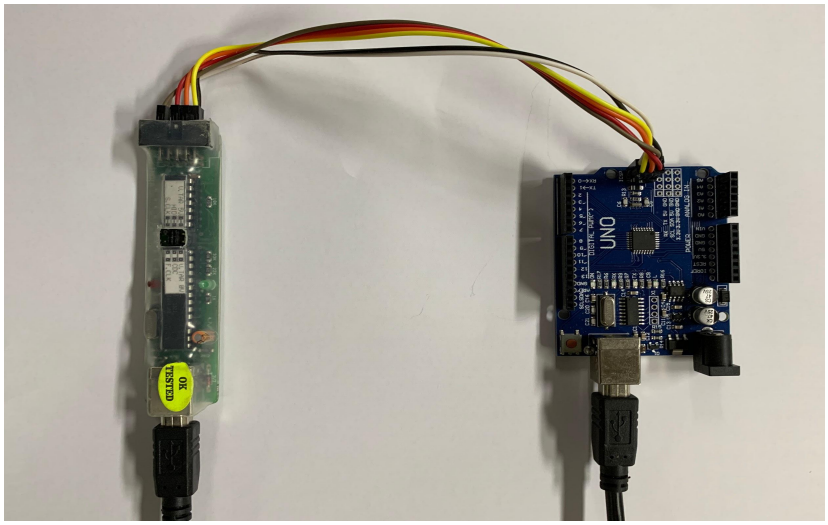


Figure 5: USB Cable and STK Programmer powered

3. Open the AVRDude folder available in the downloaded folder. Type cmd in the address bar and press enter to open the path in command prompt

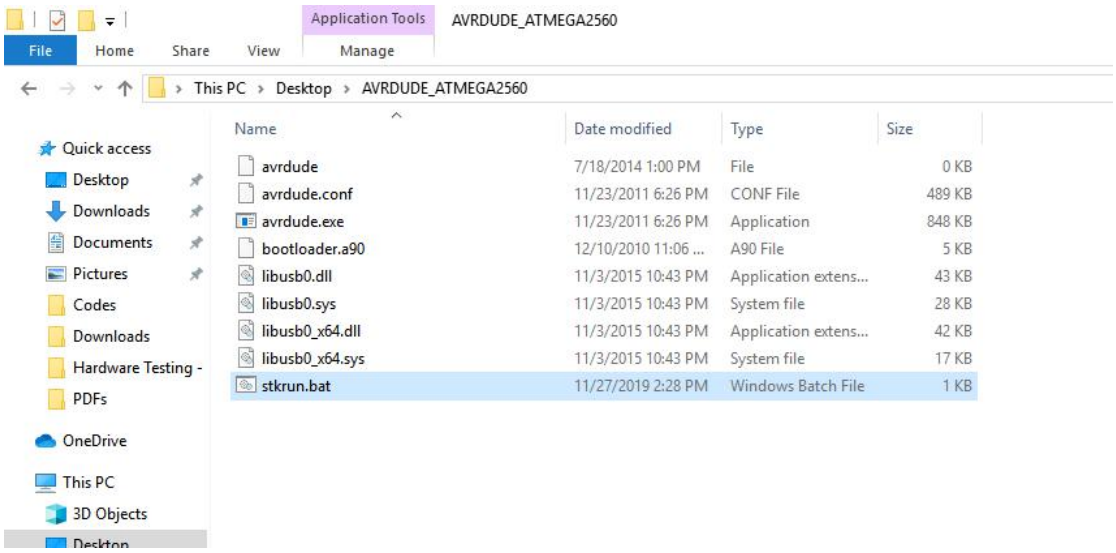


Figure 6: Path in Command Prompt

4. In command prompt, type stkrun<space><file.hex>. You can drag and drop the file on command prompt

Execute the command (Make sure the board is connected to the computer and its power is on). Refer to Figure 7.

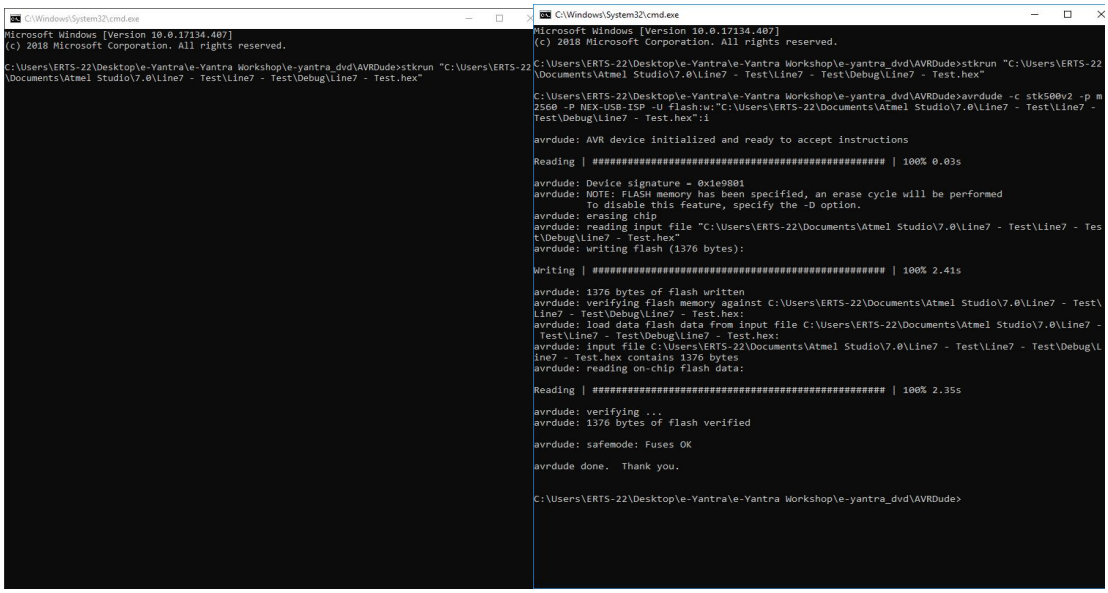


Figure 7: Flashing HEX file