



Dallas high speed 8051 Microcontroller Development Board

User Manual

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Thank you for purchasing the 8051 development board. This unit has been carefully engineered and tested to provide superior performance. This document covers the features operations of this unit.

This is an easy-to-use board using the popular Dallas DS89C450 microcontroller. The board includes everything you need to learn, develop or using for an application.

Features

- **Small Size**
- **Can be easily power from an AC \pm DC source or Battery**
- **5 Indicator LED's**
- **Onboard power regulation and filter circuit**
- **Included Serial Port Programmer for programming the Microcontroller.**
- **5 Switches including 1 Reset Switch**
- **Included PC-MCU serial link for communication with PC**
- **Provided with standard .1" header pins to be used with other circuits.**
- **Pull-up resistor array for PORT0 selectable through jumper.**
- **Programmer, Serial port and Power Supply are provided externally which helps keeping the board size small.**
- **General Purpose area of 34*11 provided onboard for further development.**
- **Includes DS89C450 microcontroller.**



Setting up the Board

Providing Power Supply

- You can provide the power supply to the board from any DC source from 6V to 20V.
- The microcontroller is preprogrammed for Blinking LED's, so when you provide the power supply (included) the 5 LED's should start blinking.
- To provide the supply from AC adapter, a connector is included which is used to connect to DC jack. Use only DC jacks which have GND / \pm VE at the center pin. The other type DC source will damage the regulator on the board.
- To give supply other than power supply provided open the screws, insert the supply wires and fasten them again. See the polarity while giving the power supply.



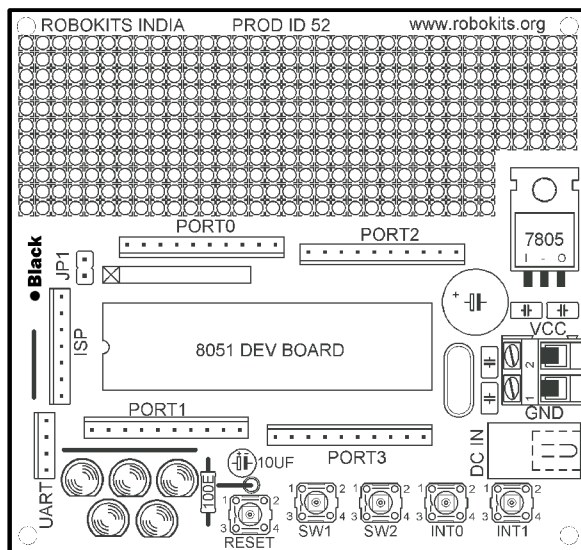
Connecting the Serial Link

- Connect the PC-MCU serial link to serial port.
- Insert the female header in the board as shown in figure. (Match the black wire)
- You can communicate with microcontroller with PC software like Hyper Terminal. Set appropriate baud rate and com port to setup the communication.

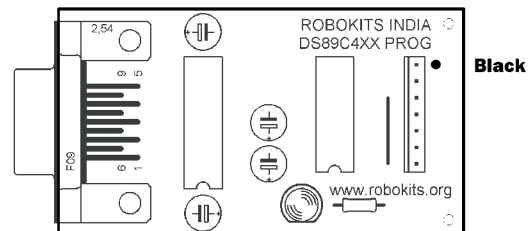
Programming the Microcontroller

- To program the microcontroller use the provided programmer.
- Inset the programmer port to serial port of your pc.
- Inset the female header to the board as shown below. (Black wire matching on both boards)
- You can use the programming software Microcontroller TookKit (MTK) to program the microcontroller. See step by step installation setup procedure below.

Step 1: Connect the power source and connect the programmer as shown below.



Connecting ISP + Serial Link to Microcontroller Board

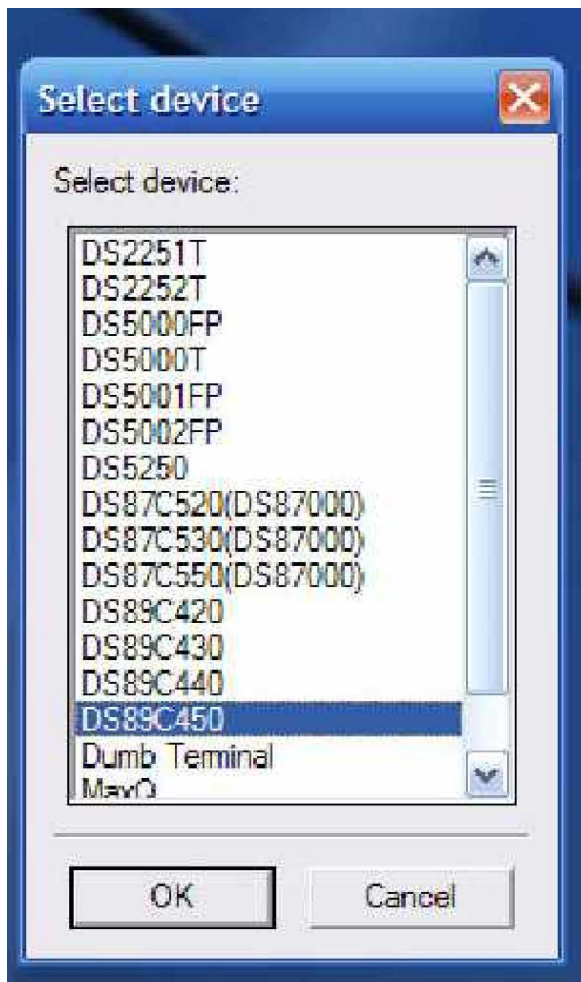


Connect the 7 Pin connector according to the image. Match Black wire at specified pin on both the boards.

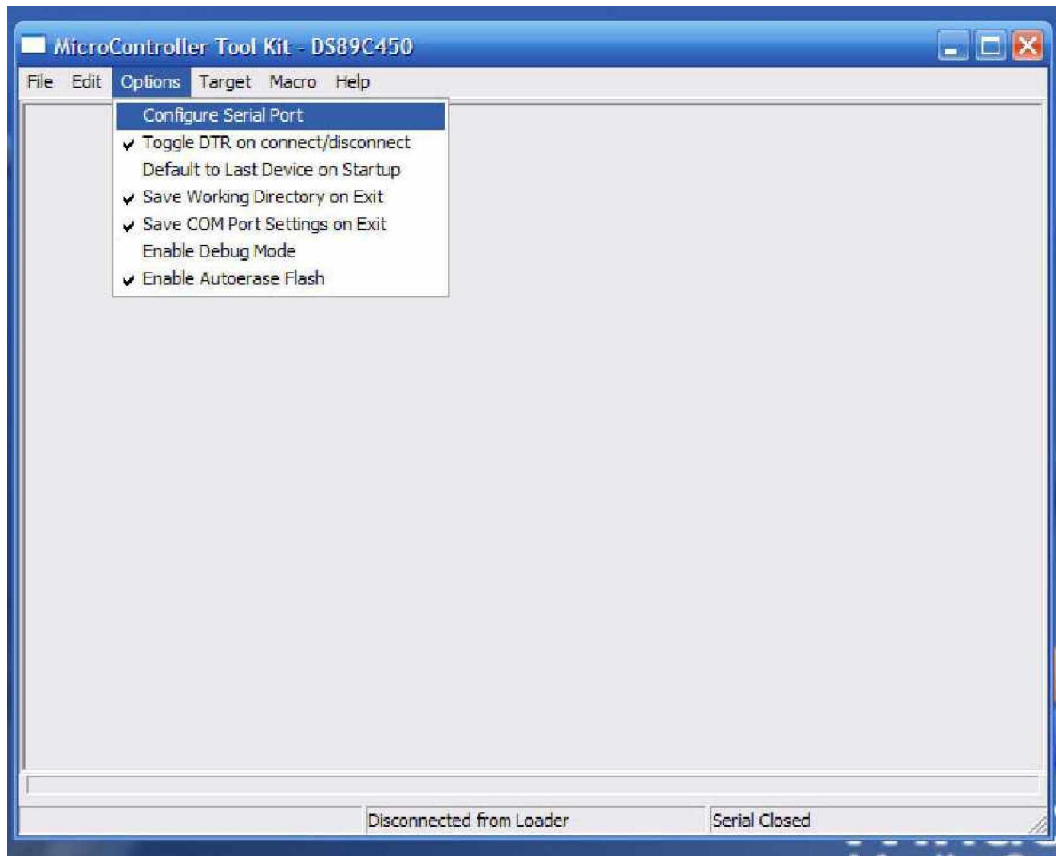
Step 2: Install the PC software. Run exe file



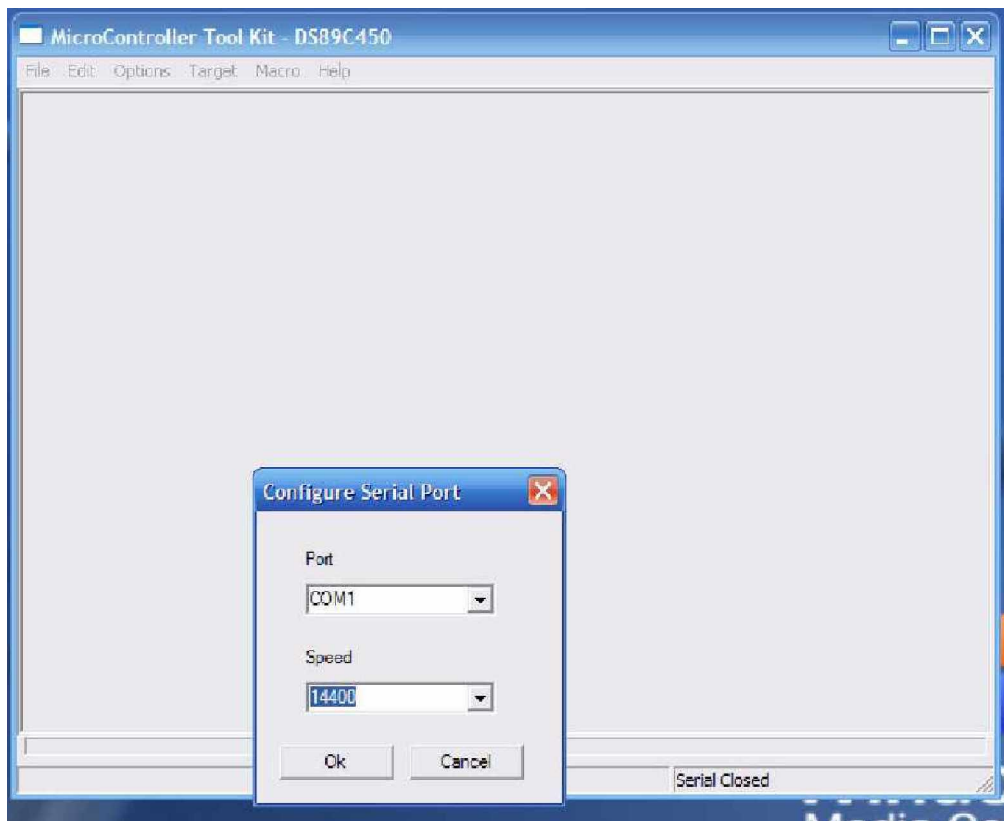
Step 3: After successfully installing open the Microcontroller Toolkit from Programs Menu. Select the microcontroller DS89C450.



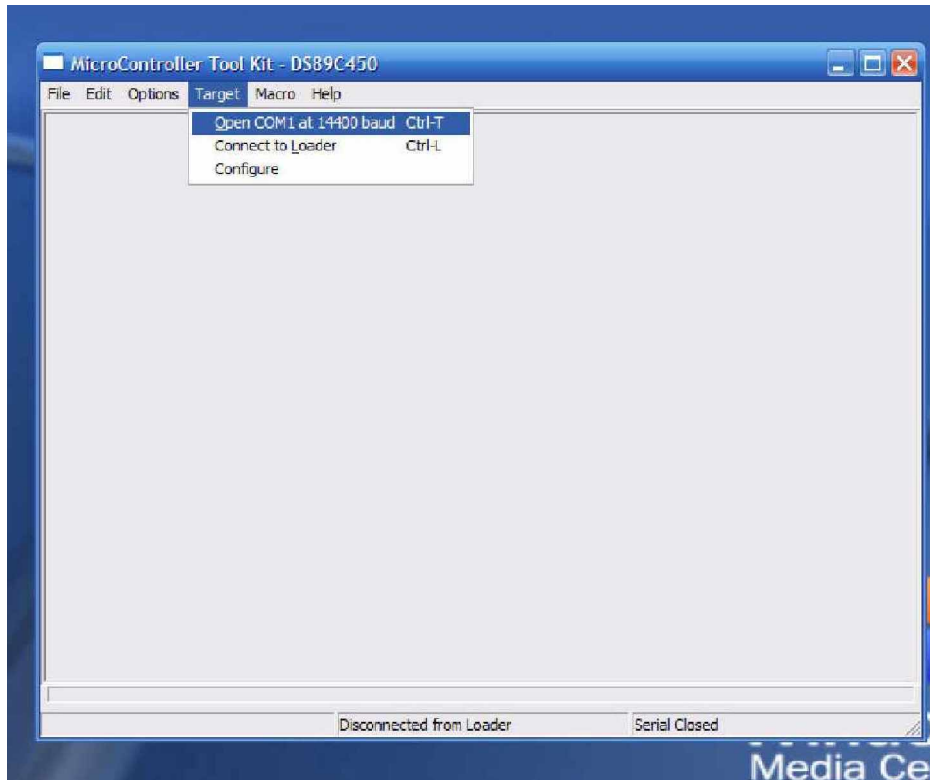
Step 4: Go to Option > Configure Serial Port Menu



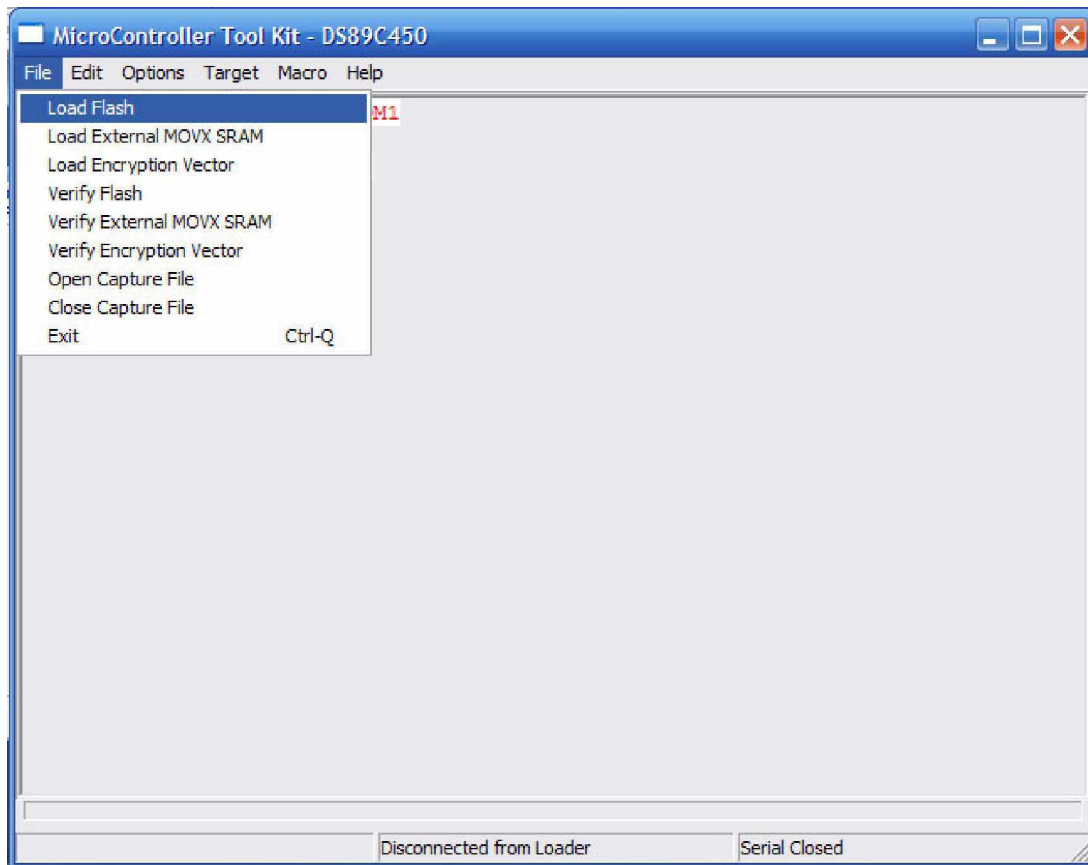
Step 5: Select your current com port (See Device Manager if you don't know the serial port number). Set the baud rate to 14400.



Step 6: Lastly go to Target > Open Com(Port No) at 14440 baud. And then give, Target > Connect to Loader.



Step 7: After connecting to loader now you can go to file and program/verify/erase the chip. To load a compiled hex file to chip you can go to load flash option.





Service and Support

Service and support for this product are available from Robokits India. The Robokits Web site (<http://www.robokits.org>) maintains current contact information for all Robokits products.

Limitations and Warrantees

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