# ELEMENTZ ENGINEERS GUILD PVT LTD

## Embedded Module Manufacturers and Distributors

# USBasp-8051 USB PROGRAMMER

## USER GUIDE

# Contents

# Overview

USBasp serial programmer will allow you to painlessly transfer hex programs to AT89S51/52 series 8051 microcontrollers.

It is an In-System Programmer designed to program the 8051 core which support on target programming. Currently AT89S51/52 series are supported by the programmer. The programmer allows to download the hex code into the target without using additional hardware and IC swapping from Zif-Sockets.

# Features

- Microcontroller - ATmega8

- Operating Voltage - 5V

- VCC Enable-Disable Feature

## Module SnapShot

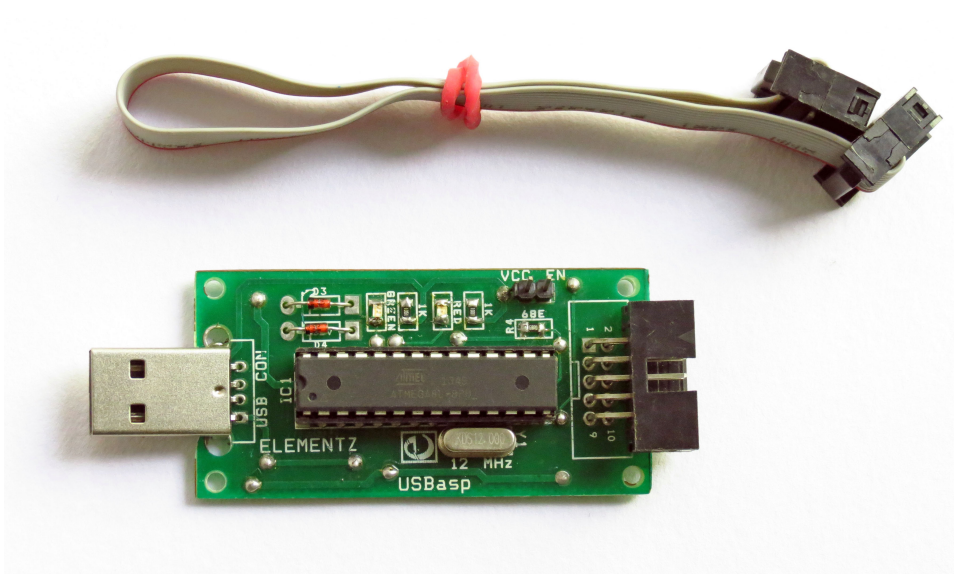Following figure contains the Snapshot of the USBasp-8051 serial programmer.



Figure 1: Front View

# Connection Details

## How to connect

Connect the USBasp serial programmer to the pc with male to male usb connector. +5V for the microcontroller chip will be provided directly from usb if VCC_EN pin is shorted.

Connect the target board to the USBasp serial programmer using ICSP Connector.

Remarks  While Programming, its better to use External Power Source, because USB port can only supply maximum current of 500mA. Short the pins VCC and EN for powering the target board.
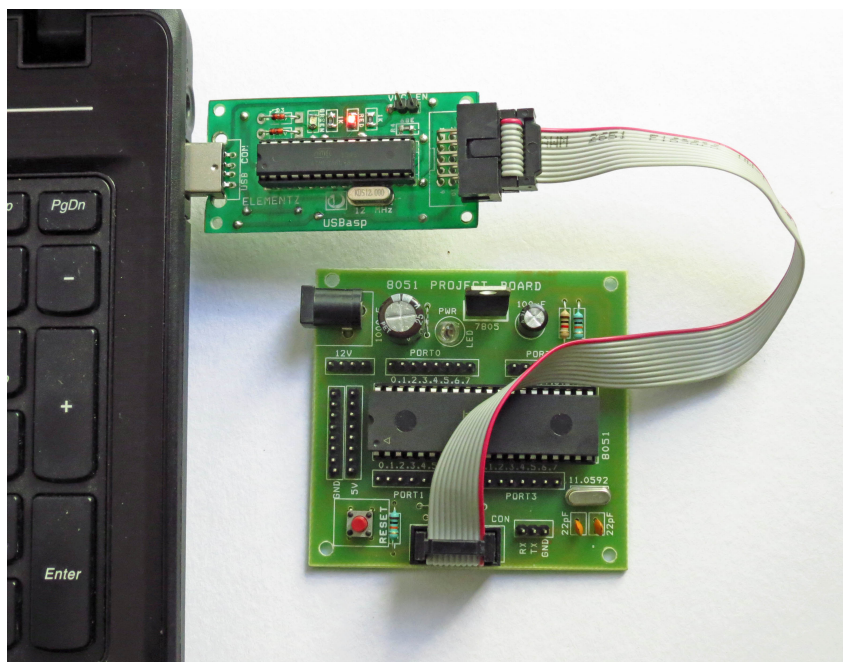
Figure 2: Connection through USB

# Installing the drivers

Extract the software provided to any preferred location in your computer.Select the driver and show the path from the device manager.

On Windows 7

- Right click on My computer

- Select **Manage → Device Manager → Other devices → Usbasp**.

- Right click on Usbasp and select **Properties → Update driver → Browse my computer for driver software**.

- Click on it and browse for the **win-driver → libusb_1.2.4.0**.

On Windows XP, the Add New Hardware wizard will open:

- When asked **Can Windows connect to Windows Update to search for software?** select **No, not this time**. Click next.

- Select **Install from a list or specified location(Advanced)** and click **next**.

- Make sure that **Search for the best driver in these locations** is checked; uncheck Se **arch removable media**; check, **Include this location in the search** and browse to the **windriver → libusb_1.2.4.0** directory extracted from the support CD. Click **Next**.

- The wizard will search for the driver and should install the drivers successfully.

You can check that the drivers have been installed by opening the Windows Device Manager (in the Hardware tab of System control panel). Look for "ELEMENTZ 8051 PROGRAMMER" in the LibUSB-Win32 Devices section.
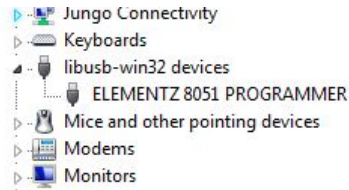


Figure 3: Device Tree View

It should look like this, after installing the drivers successfully.

# Configuring ProgISP

Connect the USBasp Serial Programmer to the pc using usb connector. Open ProgISP by double-clicking the "progisp" application.

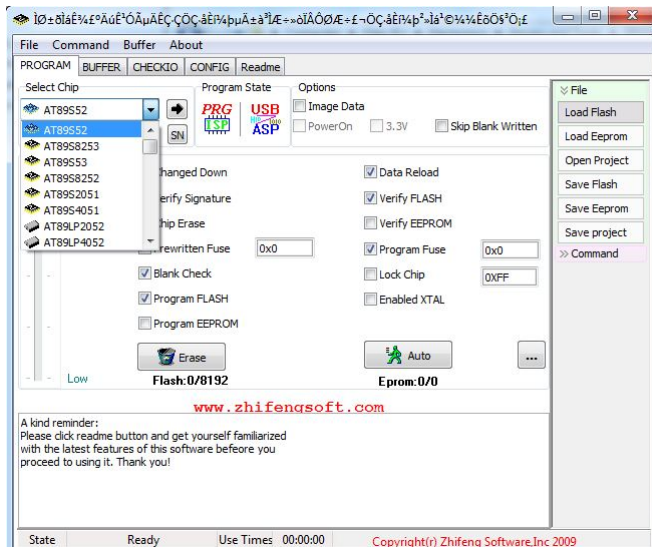Select the device by clicking **Select Chip** drop down.



Figure 4: General Configuration

Load the hex file by clicking **Load Flash** and browse to the file.

Click **Auto** button to program the Microcontroller.