



8051 DEMO BOARD

User's Guide

Table of Contents

Chapter 1:

Introduction

1.1	Welcome	03
1.2	8051 Demo Board	04
1.3	Sample Devices	04
1.4	Why 8051 Demo Board?	05

Chapter 2:

Hardware Details

2.1	MCU ZIP Socket	06
2.2	Power Supply	06
2.3	Display LEDs	07
2.4	Analog Input	07
2.5	Switch	07
2.6	Port Extension Pins	07
2.7	Connector	07

Chapter 3:

	Board Layout and Schematic	08
	Logic Power Contact Us	10

Introduction

1.1 Welcome

Thank you for purchasing the 8051 Demo Board from Logic Power!!

The 8051 Demo Board is a simple board which demonstrates the capabilities of the **40-Pin AT89C51/AT89S8252**. Sample programs are provided to demonstrate the unique features of the supported devices.

The ADVANCE 40-Pin™ Demo Board comes with the following:

- 8051 Demo Board
- Sample devices (AT89C51/AT89S8252)
- CD-ROM, which contains:
 - Sample programs
 - 8051 Demo Board User's Guide

If you are missing any part of the kit, please contact your nearest Logic Power office listed in the back of this user guide for help.

1.2 8051 Demo Board

The 40-Pin Demo board is specially designed for 8-bit 8051MC and MCS-51 microcontrollers. Board also support Atmel microcontroller pin compatibles with 8051.

Key Features:

- 40-Pin Zif Socket for easy inserting and removing the MCU
- ISP connection for connecting demo board with the PRESTO
- 5V DC external power supply for providing the external power to the demo board
- Four Red LEDs connected to PORT2, i.e. 2.7, 2.6, 2.5 & 2.4
- 5K Ω POT connected to the R0.0 pin of PORT0 for analog inputs (Only for inbuilt ADC ICs eg. AT89LP511RD2-ED2-ID2)
- Extra On-board power pins of 5V and GND for providing power to the external device
- PIN number 9 RST pin is used for hardware reset
- INT0 external interrupt switch
- 11.0592 MHz external crystal
- Extra female burg strips for PORT extensions

1.3 Sample Devices

The device type may change but will generally include AT89C51 and AT89S8252, 40-pin DIP device.

1.4 Why 8051 Demo Board?

- 8051 Demo Board is comes with 40-Pin Zip socket which provides easy insertion and remove of MCU.
- Board comes with AT89C51/AT89S8252 and Board also support 40-Pin microcontroller pin compatibles with AT89C51/AT89S8252.
- 5k Ω pot for analog input from VDD to GND.
- ISP connection for connecting demo board with the PRESTO.

Hardware Details

The 8051 Demo Board hardware is extremely simple and is intended to illustrate the ease of use of 8bit AT89C51 and AT89S8252, 40-Pin PIC MCUs. Board also support 40-Pin DIP microcontroller pin compatible with AT89C51 / AT89S8252.

The features of the board hardware elements are as follows:

2.1 MCU ZIP Socket

It's very hard to remove one microcontroller and solder another one on PCB, when first one gets damaged or need to work with different microcontroller. 8051 demo board provides 40-Pin Zip socket to easily add or remove MCU, it provides Zero Insertion Force for adding and removing the MCU.

2.2 Power Supply

- A +5V, 500 mA regulated DC power supply can be connected to the pins provided at the top right of board.
- An internal power supply can also be provided by using PRESTO (Please check particular Programmers User Guide to set an internal power supply, also we recommend you to use an EXTERNAL Power Supply for your demo board).

(To Purchase any programmer/debugger from Logic Power, please email your requirement to the below email Id.: sales@logicpower.in or Buy it from our website directly: www.logicpower.in)

2.3 Display LEDs

Four LEDs are provided on board, connected to the PORT2, i.e. P2.7, P2.6, P2.5 & P2.4 [Enabled through Jumper (J11)]. LED connected on PORT2 is also used for an indication of Power ON, it turns ON, when powered through an external source and while programming the device.

2.4 Analog Input

8051 demo board is provided with 5k Ω , is connected to AN0 channel of A/D module. POT can generate different analog voltage levels from VDD to GND to provide analog input to A/D module.

2.5 SWITCH

Demo board has 2 switches.

- RST switch: - to hard reset the processor.
- INT0 switch:- for external interrupt switch.

2.6 PORT EXTENSIONS

8051 Demo Board is provided with port extensions.

2.7 CONNECTOR

By way of the header connector, the KEIL PRESTO can be connected for low-cost debugging.

Board Layout

The following figures show the parts layout (silkscreen) for 8051 Demo Board.

Figure 3.1 8051 Demo Board Layout

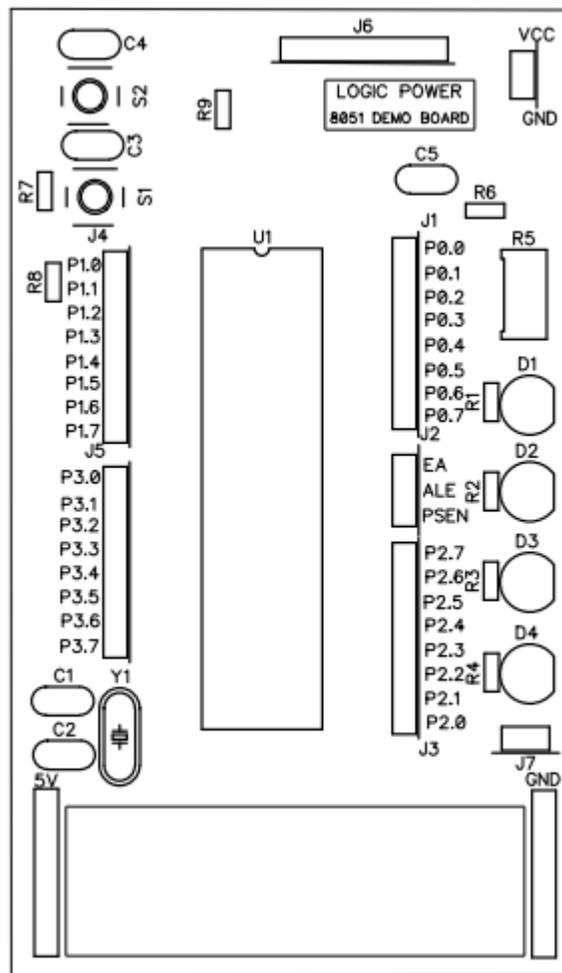


Fig.: 3.1

Figure 3.2. 8051 Demo Board Schematic

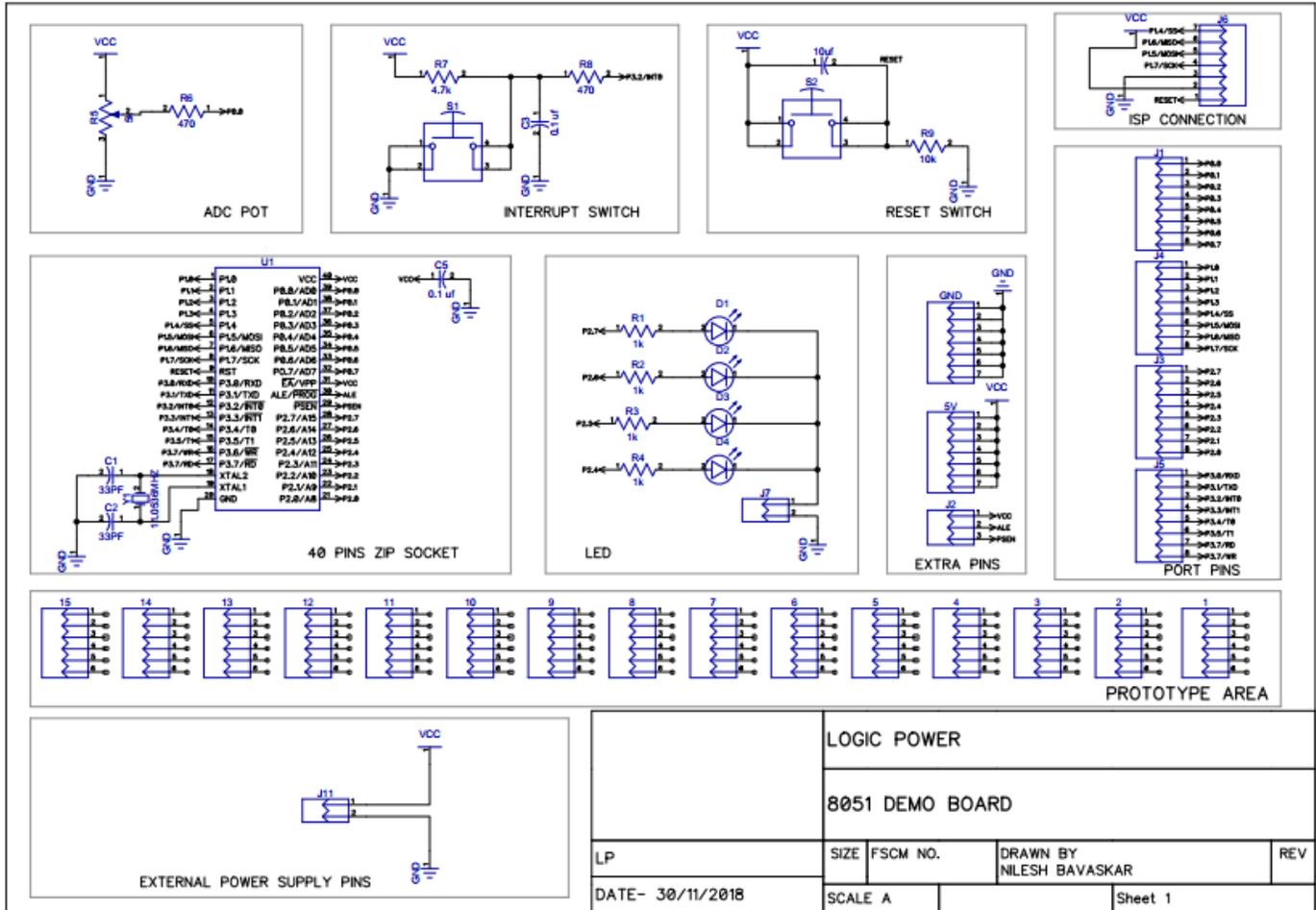


Fig.: 3.2



Please contact us for any query related to our Product.

Pune Office

#8, Sujit Complex,
S.No.60/7/1A/2, Vadgaon Budruk, Near
Vadgaon Bridge, Sinhagad Road, Pune
411041. Maharashtra. India.
Cell. No.: +91-9422943523/8551021420/1
Email Id: sales@logicpower.in

Bangalore Office

#101, Aishwarya Neela, 14th Cross,
Neeladri Nagar, Opp. Ajmera Infinity,
Electronics City, Phase I, Bangalore-
560100. Karnataka. India.
Cell. No.: +91-9972569282
Email Id.: logicpower_blr@logicpower.in