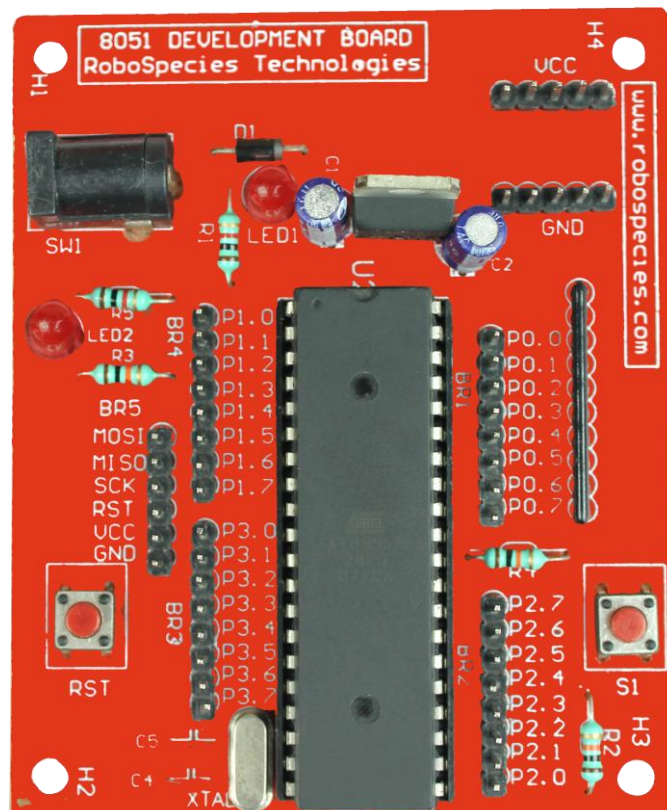


presents

8051 Development Board (RS-1021)



Learn Everything Here

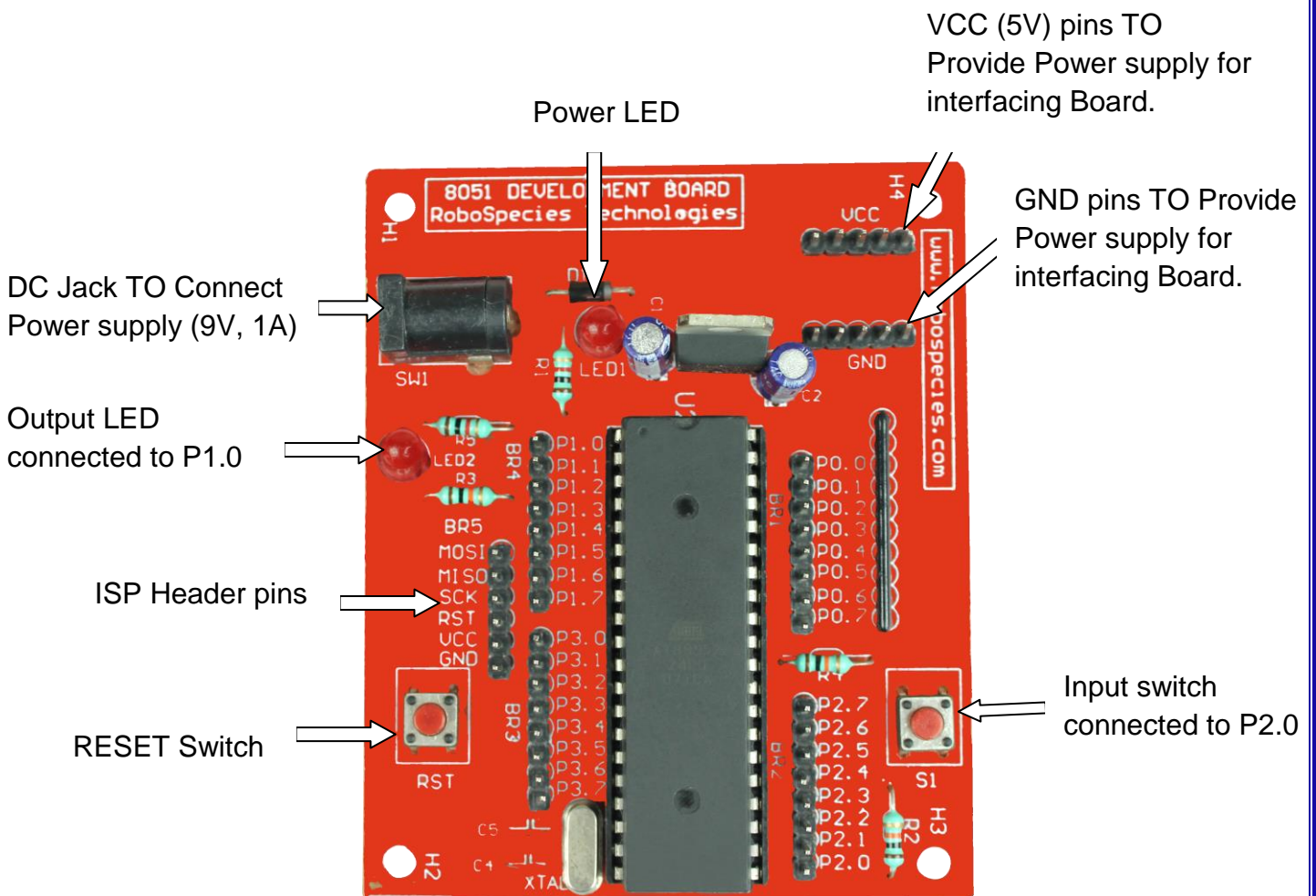
GURAMY

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8051 Development Board RS-1021

8051 development board is based on AT89 family an Intel 8051-compatible family of 8 bit microcontroller (ICs). This development board is basic microcontroller board for quick learning of embedded system. This is ready to use development board, you can design your project with this development board by using input and output pins as per your project requirement. You can use F2F or F2M wires to connect your sensors or Input and Output devices with male connectors that are available on board. This board can be easily power up with 9-12v dc and 1 Amp Adaptor or 9v Li-ion Battery.

Technical Specification



- ✓ 32 Input /Output pins are available on board.
- ✓ 4 Ports, each having 8 pins.
- ✓ Port 0 having pull up resistor.
- ✓ 11.0592 MHz on board crystal oscillator.
- ✓ Red Led as power indicator.
- ✓ A reset switch.
- ✓ All ports accessible through Male Header Pins.
- ✓ 1 Push Button as Input Device internally connected with P2.0.
- ✓ 1 LED as Output Device internally connected with P1.0
- ✓ On board Voltage Regulator with filter and it operates on 5V to 12V DC Power Supply.
- ✓ 5 pins to provide GND to external device.
- ✓ 5 pins to provide 5Volt. DC power supply to external device.
- ✓ In circuit diode to protect MCU from reverse current.
- ✓ DC Jack for Input Power Supply.
- ✓ In circuit diode to protect MCU from reverse current.

How to use 8051 development Board

As AT89S51 microcontroller have 4 Port so we can use male connector to connect Input or Output devices with microcontroller. Example if you want to make pattern then simply there are pins available on board and ready to connect with LEDs. By using no. of LEDs different pattern can be implement on board.

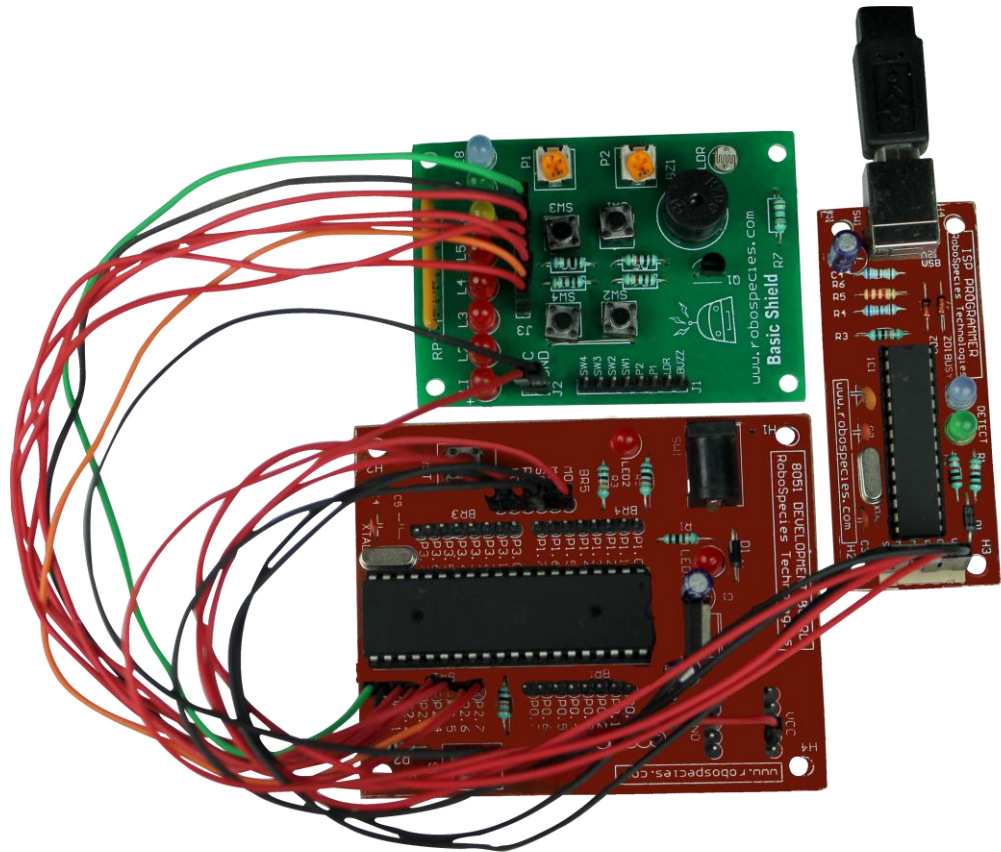
As AT89S51 microcontroller have many features like UART Communication, ISP. MOSI MISO SCK RST VCC and GND as shown in above picture, these pins are also known as ISP pins. On board there is RESET circuitry which can be use in case of restart microcontroller. LED2 is available on board so that you can test your board by doing led blink program corresponds to led pin of controller (i.e. P1.0). This board is based on the Intel 8051 core, the AT89 family remains very popular as it includes low cost, general-purpose microcontroller with industry standard instruction set.

Sample Program: To glow LEDs one by one with the interval of 10msec.

```
# include<reg51.h>
void MSDelay (unsigned int);
void main (void)
{
    while(1)
    {
```

```

P2 = 0xFE;
MSDelay(10);
P2 = 0xFD;
MSDelay(10);
P2 = 0xFB;
MSDelay(10);
P2 = 0xF7;
MSDelay(10);
P2 = 0xEF;
MSDelay(10);
P2 = 0xDF;
MSDelay(10);
P2 = 0xBF;
MSDelay(10);
P2 = 0x7F;
MSDelay(10);
}
}
Void MSDelay
(unsigned int time)
{
    unsigned int i,
    j;
    for (i=0; i < itime; i++)
        for (j=0; j<1275; j++);
}
    
```



OUTPUT:-

Basic Shield is connected as a Output device and this program make all LED glow one by one at every 10msec. delay.

For detailed explanation and understanding buy our complete Robotics Cook Book- "[Robotics Made Easy](#)".

