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Pic18f4550 microcontroller based projects

1. SKIN TEMPERATURE MEASUREMENT



Abstract: This report represents the design and implementation of a skin temperature measurement system. The system aims to measure the skin temperature from a sensor and send it to the...

2. pickit 3 supported devices



Supported Devices Refer to MPLAB IDE v8.76, the following devices are supported: ICSP PIC10F PIC10F200, PIC10F202, PIC10F204, PIC10F206, PIC10F220, PIC10F222 PIC12F PIC12F508, PIC12F509, PIC12F510, PIC12F519, PIC12F609, PIC12HV609, PIC12F615, PIC12FHV615PIC12F629, PIC12F635,...

3. <u>Unipolar Stepper Motor Control From IR Remote Control Using PIC18F4550</u>



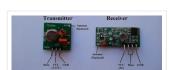
This project shows how to control a 5V unipolar stepper motor from IR remote control uses NEC protocol with PIC18F4550 microcontroller. This controller controls the stepper motor speed and direction...

4. CD-ROM BLDC motor controller using PIC18F4550 and L293D



In the following topic URL we've seen how to control BLDC motor speed and direction of rotation using PIC18F4550 microcontroller and 3-phase bridge circuit:CD-ROM Spindle motor (BLDC) control with PIC18F4550...

5. 433MHz RF remote control system based on PIC microcontroller

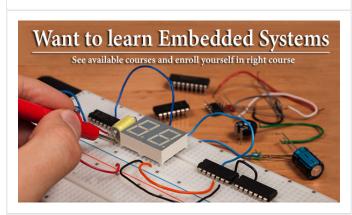


5-Channel RF (Radio Frequency) remote control transmitter/receiver using PIC18F4550 microcontroller Today RF modules are widely used in many applications (wireless data transmission, quadcopter, car remote

control....). This project shows how...

6. Interfacing PIC18F4550 with 1.8" TFT display

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Project Categories



GPS Projects



Internet and LAN Projects



Interfacing(USB) Projects



Metering & Instrument Projects



Sensor - Detector Projects



Motor Based Projects



Phone Based Projects



Robotics and Automation Projects



Camera – Imaging and Video Projects



Game and Entertainment Projects



Home Automation Based Projects

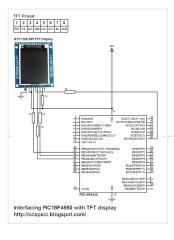


Memory and Storage Projects



RFID Based Projects

Security and Safety Projects



This post shows how to connect ST7735S TFT display to PIC18F4550 microcontroller and display different things (numbers, text, lines, circles). The compiler used is CCS PIC C. To interface...

7. Real time clock with remote control and ST7735 TFT display



(Some knowledge about RC-5 protocol is required) This project shows how to build a remote controlled real time clock with TFT display using PIC18F4550 microcontroller. In this project DS1307 RTC...

8. <u>Display BMP images from SD card on ST7735 TFT screen</u>



This example shows how to display Bitmap (BMP) image files from SD card on ST7735 1.8" (128×160) TFT screen using PIC18F4550 microcontroller and CCS PIC C compiler. To build this...

9. Real time clock with 2 alarms and temperature sensing using PIC18F4550 and DS3231



After the simple interfacing of the PIC18F4550 microcontroller with the DS3231 RTC, now let's add the alarms functionality and temperature monitor to our previous project. Interfacing PIC18F4550 with DS3231 project...

10. Interfacing 16X2 LCD with PIC Microcontroller



In this session we will see how to interface 16×2 LCD to PIC18F4550 microcontroller which is of family PIC18F. You can get information of 16×2 LCD in the session How...

11. How to take input with PIC18F4550 Microcontroller



Any microcontroller based system typically has an input and a corresponding output. Taking simple output with a PIC microcontroller has been explained in LED blinking with PIC18F4550. This article explains how...

12. How to display text on 16×2 LCD using PIC18F4550 Microcontroller



Several automated and semi-automated devices require a message to be displayed in order to indicate their working status. In continuation to LCD interfacing with PIC18F4550, this article explains how to...

13. <u>USB Project :- USB Interface Board Using PIC18F4550</u>





Sound and Audio Projects



Temperature Measurement Based Projects



DIY Projects



Medical and Health based Projects



Battery Based Projects



PWM (Pulse-width modulation)
Projects



Radio Based Projects



Others Project



Calculator Based Projects



Car - Auto Projects



LCD Based Projects



LED Based Projects



Clock and Timer Projects



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Development Board Projects



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Tiny GSM alarm system using PIC16F84A

March 14, 2013



PC Interfacing a GameBoy Camera using PIC18F4620 microcontroller

November 11, 2016



Home Automation and Safety via GSM Remote

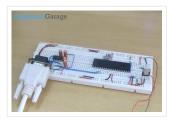
March 14, 2013





USB PROJECT: – USB INTERFACE BOARD USING PIC18F4550 Microcontroller CONTROL – 6 LEDS C# software (4.0 .net framework) PIC18F4550 Firmware – for 6 LED's. TUTORIAL FOR BEGINNERS It's a...

14. How to use inbuilt EEPROM of PIC18F4550 Microcontroller



The EEPROM (ELECTRICALLY ERASABLE PROGRAMMABLE READ ONLY MEMORY) is a very useful memory which can be used for storing data. The data storing and retrieving from any EEPROM memory is...

15. 24 Channel USB Connected LED Controller, upto 1A per Channel using PIC18F4550



24 Channel USB Connected LED Controller, upto 1A per Channel This device is designed to be a versatile high-current LED controller, with the ability to sink or/and source currents up...

16. Electronic Security System With RTC and User Define Pin Code



Hi Guys! This is a project that I made using pic microcontroller its an Electronic PIN Code Security System with real time clock and user define pin code features, this...

17. <u>HDD Clock – Persistence of Vision</u>



1. Quite a few POV clocks out there, why is this special? Well, mainly because it's mine. There are quite a few POV clocks out there on the web using...

18. <u>Ultrasonic Obstacle-avoiding Robot</u>



This is my attempt at designing and building an obstacle avoiding robot! RekaBot (named after a fairy (:) can detect obstacles with an ultrasonic sensor that can move around...

19. How to create custom characters on 16×2 LCD using PIC18F4550



The 16×2 character LCD can also be used to display custom characters other than numerals, alphabets & special characters. Refer LCD interfacing with PIC. Some special shapes like hearts, arrows,...

20. <u>Pinguino Project (a PIC Microcontroller Based Arduino #No Programmer Required)</u>

Hey Guys i am Back after 2 months with Awesome Project, This is a Complete tutorial to make PIC Microcontroller based Arduino, which can run Arduino



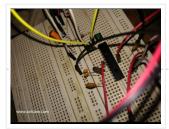
PIC based UPS Schematic / Firmware / PCB Layout

June 15, 2013

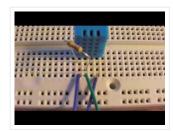


Automatic School Bell

November 23, 2013

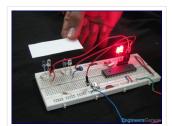


21. DHT22 (AM2302) Digital Humidity and Temperature Sensor Proteus Simulation



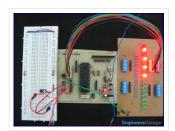
Like the DHT11, the DHT22 is a digital humidity and temperature sensor which has more benefits than DHT11 like: High precision and range. If we want to understand this topic...

22. How to work with inbuilt Analog Comparators of PIC18F4550



Analog comparator is an electronic device which compares the two voltage signals and provides TTL logic output to indicate the larger signal. The analog comparator is used in various applications...

23. How to work with External (Hardware) Interrupts of PIC18F4550



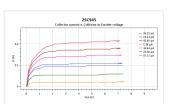
Interrupts are special events that require immediate attention. They cause the processor to cease the running task to serve a special task for which the interrupt event had occurred. After...

24. How to interface 16×2 LCD in 4-bit mode with PIC18F4550



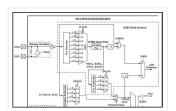
The 16×2 character LCD can work in two modes, namely, 8-bit and 4-bit. These modes basically correspond to the number of data pins used in interfacing LCD. 8-bit mode uses...

25. USB curve tracer for NPN transistors



Curve tracer is an electronic test instrument to analyze the characteristics of transistors and other discrete semiconductors. In this post we construct USB base curve tracer to analyze properties of...

26. PIC USB HID (Human Interface Device) Interfacing



For long time, UART is the only and best way to interface with PC. It is easy to adapt and handle. Though some devices (like: GSM modem etc.) have UART...

27. How to use PIC18F4550 as a SPI Slave Transmitter



The Serial Peripheral Interface (SPI) is a high speed, synchronous, serial communication standard. This communication protocol is basically a Master Slave implementation where the master device controls the clock based...



PIC32 ICSP Programmer v1.0 is based on a simple PIC32MX270F256B microcontroller basic circuit. It connects to a PC via USB 2.0 port and therefore needs no external power supply. It...

29. A Minimal USB CDC ACM aka Virtual Serial Port



This page introduces a minimal firmware that implements a USB Virtual Serial Port for Microchip PIC18F4550 processor. The code has been optimized to use minimal amout of memory (both Flash...

30. Extend PIC Microcontroller's RAM by without using EMI

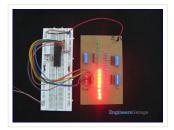
Introduction Virtually all PIC microcontrollers have some banking mechanism to extend addressing to additional memory space. But this external data memory is not directly addressable (except in some high versions...

31. USB:- DC Motor Controller using PIC18F4550 (keyboard)



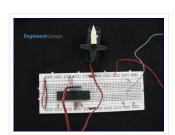
USB:- DC Motor Controller using PIC18f4550 (keyboard) Hello friends, Requirements USB DEMO interface Board L293D motor controller chip Schematic This a small project on controlling D.C motor with USB pic18f4550...

32. How to interface LEDs with PIC18F4550 Microcontroller



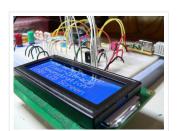
It is necessary to understand basic I/O operations of PIC18F4550 before dealing with its complexities. This article presents a way to take simple output from a PIC microcontroller. This learning...

33. How to interface Servo Motor with PIC18F4550



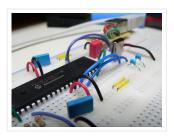
Servo systems use the error sensing negative feedback method to provide precise angular motion. Servo Motors are used where precise control on angular motion is needed. Servo motors are widely...

34. Open Source Framework for USB Generic HID devices based on the PIC18F and Windows



Introduction If you've dabbled with PIC18F microcontrollers and the USB Generic HID standard before (perhaps you've even tried my Building a PIC18F USB device project) then you will have noticed that...

35. Building a PIC18F USB device



Introduction I get a number of emails every month asking about creating USB devices using the PIC18F microcontroller. After looking at projects such as my Atari Joystick USB Adaptor and...

Hello Friends, Welcome back. In the last tutorial we started working with MPLab and HI-TECH C Compiler and written our first C program to blink LED. After compiling the program we...

37. PIC18F4550 - LCD display jhd162a (2×16) Interface



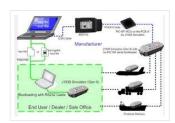
Project: Display control on a LCD (jhd162a)
Requirements jhd162a LCD PIC18f4550 Here in this project the running display of the screen is been controlled by a PIC18f4550 board...

38. C# Software and Firmware, USB INTERFACE BOARD



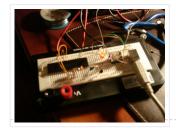
C# Software Application and Firmware for PIC18F4550 Board To continue further with this project you would need to download my version of Firmware to control 6 LED's and a Software...

39. BOOTLOAD THE PIC18F4550 - FIRMWARE UPDATING



BOOTLOAD PIC18F4550 – FIRMWARE UPDATING SETTING THE PIC18F4550 IN RD/WR (BOOTLOAD) MODE FOR BOOTLOADING Loading / updating new code into the USB INTERFACE BOARD can be done with...

40. <u>USocket – USB controlled Socket with PIC18F4550</u>



Introduction The idea of this project is to control (switch off/on) two power sockets with a computer by using its USB port. I've chosen USB in first place because I...

41. First Time Programming a Microcontroller



First Time Programming a Microcontroller In my previous post we have carried out the construction of the base Circuit board for our USB demo Interface Board.So lets begin with out...

42. How to make a JDM Programmer



(PIC18F4550 Programming) Hardware | Schematic | Complete Description This JDM programmer works with a RS232, 9-pin(9 wire) DB9 Serial connector on your computer, and is used for loading Source Code...

43. <u>USB Interface Demo Board Using PIC18F4550</u>



PIC18F4550 USB DEMO INTERFACE BOARD PROJECT This project / USB hardware is quiet easy to make at home with few components, this piece of hardware will be detected by your...



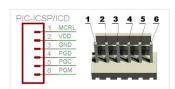
Stepper Motor Tutorial In this tutorial we are going to drive a Single unipolar stepper motor using PIC18F4550 Microcontroller in various different stepping modes. The source code and Project files...

45. <u>PIC18F4550 Tutorial</u>: <u>Blink LED – 2</u>



Hi welcome to my 4th chapter of PIC18F4550 programming. Here we are going to learn another methodology or technique for programming a pic18f microcontroller which would be helpful in future...

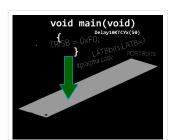
46. PIC18F4550 Tutorial: Blinking an LED



TUTORIALS PIC18F4550 Programming Tutorial in Hardware C PIC Tutorial, Mplab IDE – C18 compiler toolsuite PIC18F4550, Looking the data sheet | Ports PIC18F4550 Programming Blink led method 1

PIC18F4550 programming...

47. PIC18F4550 Programming and Tutorial Hardware C



PIC18F4550 Programming Tutorial in Hardware C PIC Tutorial, Mplab IDE – C18 compiler toolsuite PIC18F4550 tutorial, Looking the data sheet | Ports PIC18F4550 Programming method 1 Project Blink led...

48. Interface single and Dual IR Infrared sensor with PIC18F4550 and LCD



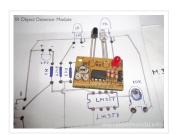
In this another tutorial on sensors for beginners, we are going to interface single and multiple Infrared IR sensors with Arduino Uno development board, working simultaneously and have the status...

49. USB Interface Board Driver Installation PIC18F4550



USB Interface Board Driver Installation Connecting PIC18F4550 First Time This tutorial will try to explain how to make your interface development board to work for the first time. Without a...

50. Infrared (IR) Object Detection Module Circuit Using IR LED and Photodiode

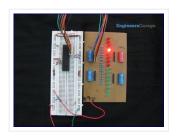


How to make Infrared (IR) sensor Object Detection Module Circuit Using IR LED and Photodiode The IR Object Detection sensor module is quiet easy to make. This sensor circuit below...

51. Whac-a-Veggie using PIC18F4550 microcontroller



Whac-a-Veggie For this year's Trunk 'O' Treat game I wanted to make a something fun and exciting for kids to play so I choose a Whac- a-Mole type game called...



Timers as the name suggests pertain to time-related operations. They are mostly used for exact delay generation. Timers are also used in various other operations like PWM signal generation, auto-triggering...

53. How to interface LCD with PIC18F4550 Microcontroller



The character LCDs are the most commonly used display modules. These LCDs are used to display text using alphanumeric and special characters of font $5\times7/5\times10$. For basic working and operations...

54. <u>USB Stepper Motor Driver using pic microcontoller</u>



USB Stepper Motor Driver In this project we are going to drive a unipolar Stepper motor (5 wire) using USB interface from a PC Computer. This project is an application...

55. Introducing PIC Microcontroller projects



PIC Microcontroller Development Tools History PIC microcontroller Development Board (Completed on 2006-10-28) The ultimate PIC Microcontroller development board. After years of programming PIC microcontroller, I have finally design my super...

56. PIC18F2550 : Blink LED using XC8 Compiler



Welcome to another chapter of PIC18F programming Tutorial. In this chapter we are going to program a simple 28 pin PIC18F2550 microcontroller using mplabx IDE and XC8 Compiler. The concepts...

57. USB Interface Board Tutorial Using PIC18F4550



USB Interface Development Board Tutorial -1
STAGE/PART-1 MAKING OF THE MAIN CIRCUIT
BOARD CONTROL YOUR DEVICES FROM COMPUTER
USING USB PORT – pic18f4550 + MPLAB IDE
INTRODUCTION (USB PROJECT)...

58. Infrared IR Sensor Interface with PIC18F4550 Microcontroller



IR Sensor Interface with PIC18F4550 In my previous project we have made a simple IR sensor Circuit. In this project, as promised before – we are going to demonstrate a...

59. Stepper Motor Speed Control with PIC18F4550



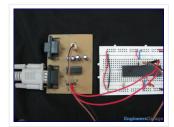
Stepper Motor Drivers USB Stepper Motor Driver Stepper Motor Driver PIC18F4550 – Stepper Motor schematics Stepper Motor Speed Controller Stepper Motor driver PIC18F2550 IR Interterface to Stepper Motor Stepper Motor Speed...

60. Stepper Motor Driver using PIC18F4550 Microcontroller



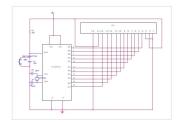
Stepper Motor Tutorial In this tutorial we are going to drive a Single unipolar stepper motor using PIC18F4550 Microcontroller in various different stepping modes. The source code and Project files...

61. How to configure EUSART in PIC18F4550



Both, Parallel and Serial modes of communication have certain advantages and disadvantages over one another. The serial communication is a preferred option due to its ability of long distance communication...

62. Interfacing 16X2 LCD with PIC Microcontroller



In this session we will see how to interface 16×2 LCD to PIC18F4550 microcontroller which is of family PIC18F. You can get information of 16×2 LCD in the session How...

63. RS232 Communication using PIC18F4520's USART – PIC Microcontroller Tutorial

RS232 can be used to communicate between a variety of devices. Like your MCU and a GSM module or a PC. In this tutorial we will demonstrate a link between...

64. The chipKIT™ UNO32™ and MAX32™ development boards for the Arduino™ Community

Microchip Technology Inc., a leading provider of microcontroller, analog and Flash-IP solutions, and Digilent, Inc. announced expanded capabilities for the 32-bit PIC32 microcontroller-based chipKITTM Development Platform for the ArduinoTM community....

65. PIC MICROCONTROLLER PROJECTS AND LCD CIRCUITS



Here is 0 to 99 minutes relay timer using PIC16F628 microcontroller and 16 character LCD display. The microcontroller is PIC16F628A running at 4.0 MHz clock using an external crystal....

66. 18F4550 Programmer in Ten years



It really took me 10 years to build that programmer!! Don't be surprised, I actually started building the original programming circuit of Microchip PIC 16F84 (JDM 2...

67. How to Create a Beer Bottle LED VU Meter



Create your own Beer Bottle LED Volume Unit Meter! This instructable will show you how to create a LED beer bottle VU Meter. A volume unit meter is a device...



Global Positioning System is based on satellite navigation technology. A GPS Receiver provides the accurate location of an object in terms of latitude and longitude. Accurate time calculation with respect...

69. Pinguino Egypt - PIC Based Arduino



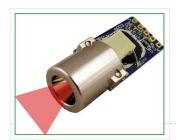
It 's been eleven years since I first started learning and building my first Microchip PIC Microcontroller circuit. I really like this Microcontroller family. Recently, I started reading and trying...

70. How to work with inbuilt ADC Module of PIC18F4550



A microcontroller, a digital device, can read, execute and transmit only digital signals. On the contrary, the outputs of the most of the transducers are analog in nature. Thus it...

71. IR-Sensor Circuit and Interfacing with PIC Microcontroller



An IR sensor is an electronic device, that produces in order to detect some parts of the environs. An infrared sensor can measure the heat of an object as well...

72. PIC Development Board – Hello World Project

Hello friends, welcome to this exciting tutorial were we will begin our journey with latest PIC18F micros from Microchip Technologies. This tutorial will give you information on what software/hardware you...

73. rtc microcontroller



Interfacing an SPI-Interface RTC with a PIC Microcontroller – Maxim Application note describing how to interface an SPI-interface RTC with a PIC microcontroller. . PIC, real time clock, RTC, spi...

74. How to interface RFID with PIC18F4550 Microcontroller



RFID (Radio Frequency Identification and Detection) is widely used everywhere from highly secured defense laboratories to school attendance system. By employing RFID, much secured entry systems can be developed without...

75. Infrared IR Sensor Interface with PIC18F4550 Microcontroller



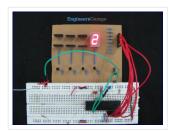
In my previous project we have made a simple IR sensor Circuit. In this project, as promised before – we are going to demonstrate a PIC18F4550 microcontroller interface to IR...

76. How to Build your Own USB PIC Programmer?



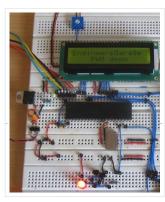
This DIY PIC programmer is a continuation of our PIC programming basics tutorial. By using this USB PIC programmer, you can program microchip PIC series of 10F, 12F, 16F, 18F,...

77. How to interface Seven Segment Display with PIC18F4550 Microcontroller



The seven segments are used to display decimal and hexadecimal (0-9, A-F) values. A seven segment is cheapest option for applications requiring numeric value display as output. Calculators, watches, lift's...

78. How to Glow an LED using PWM with PIC Microcontroller



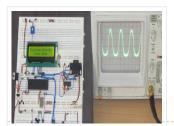
Pulse Width Modulation (PWM) is a technique in which the width of a pulse is modulated keeping the time period of the wave constant. One cycle has a fixed time...

79. How to Implement SPI Using PIC18F4550



The Serial Peripheral Interface (SPI) is a high speed, synchronous, serial communication standard. This communication protocol is basically a Master – Slave implementation where the master device controls the clock...

80. How to Generate Sound using PWM with PIC Microcontroller



Pulse Width Modulation (PWM) is a technique in which the width of a pulse is modulated keeping the time period of the wave constant. The ON time and OFF time...

81. How To Use PIC Microcontroller For Voice Input And Output



Microcontrollers are purely digital devices which work on logic0 and logic1 voltages; still they are widely used for analog signal processing. There are specialized signal processors chips available which are...

82. Blink LED with XC8 compiler using external Oscillator



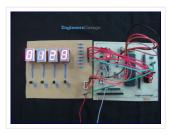
In the simple tutorial we are going to blink few simple led with PIC18F microcontroller, using an external 20MHz crystal oscillator and the '_Delay ()' function of XC8 Compiler. Most...

83. <u>Audio spectrum analyzer using PIC18F4550</u>

Introduction This project implements a real-time audio spectrum analyser using a PIC18F4550 8-bit microcontroller. The spectrum frequency analysis is performed by a highly optimised 16-bit Fast Fourier Transformation (FFT) routine...



84. Seven Segment Multiplexing using PIC18F4550 Microcontroller



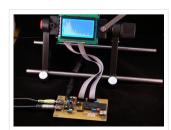
As explained earlier, a seven segment interfaced with PIC uses almost an entire port (minimum 7 pins) to display a value. But a real time application, like watch, calculator etc.,...

85. Minty JDM PIC Programmer using PIC18F4550 microcontroller



Minty JDM PIC Programmer This project details how to build a JDM style programmer to program PIC Microcontrollers using Microchip's ICSP (In Circuit Serial Programming) and freeware software (PICPgm). Total...

86. Spectrum analyzer based PIC18F4550



The project demonstrates the implementation of the sound spectrum analyzer for 8-bit microcontroller PIC18F4550 manufactured by Microchip. Spectrum analysis is performed using an optimized fast Fourier transform algorithm (Fast...

87. How to burn or program PIC Microcontroller?



This DIY PIC programmer is a continuation of our PIC programming basics tutorial. By using this USB PIC programmer, you can program microchip PIC series of 10F, 12F, 16F, 18F,...

88. How to interface GSM Module with PIC18F4550 Microcontroller



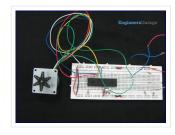
The Global System for Mobile (GSM) communication is the Second Generation of mobile technology. Although the world is moving towards Third and Fourth generation but GSM has been the most...

89. How to display text on 16×2 LCD using PIC18F4550



Several automated and semi-automated devices require a message to be displayed in order to indicate their working status. In continuation to LCD interfacing with PIC18F4550, this article explains how to...

90. How to interface Stepper Motor with PIC18F4550 Microcontroller



A Stepper Motor is a brushless, synchronous DC motor which divides a full rotation into a number of steps. For detailed information on working, types and stepping modes, refer the article on...



PICkit 2 Introduction: There are many PIC programmer available, commercial and DIY devices. As Microchip introduces the new microprocessors the programming software got to be updated accordingly playing catch-up...

92. <u>I2C keypad using PIC18F4550 microcontroller</u>



I2C keypad This instructable explains how to interface with a 4×4 keypad over an I2C bus. I started this project because I wanted some plug and play input and output...

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