



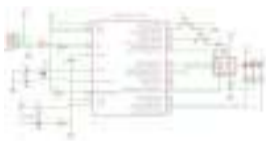



Atmega328 avr based projects list

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These *Atmega328 avr based projects* are explained thoroughly with the help of circuit. Let's take a look at few interesting *Atmega328 avr based projects Projects*:





Here is best top list of *Atmega328 avr based projects*:


-  ECEN1400 Final Project- Sensor Spy Ball This is the final project for ECEN1400: Introduction to Digital and Analog with Professor Alex Fosidck at University of Colorado at Boulder (Spring 2017). The goal of this project was...
-  BUILDING KILOBOTS AND REVISING KILOBOT DESIGN FOR IMPROVING THE OPTICAL RESPONSE I would first like to acknowledge my adviser, Dr. Yanjun Yan, for her patience, kindness, and mostof all her assistance in completing this thesis. I would like to thank Dr....
-  Weeks 11-12: AVR USB Devices and Programming One of the relatively unexplored topics in this week's lecture was USB, the ubiquitous protocol that allows computers to communicate with peripheral devices (containing microcontrollers). Creating a USB device allows...
-  Obsatcle Avoidance Vehicle Using ATmega328P Microcontroller (Arduino) Obstacle Avoidance Vehicle capable of detecting objects, scanning the area and navigating through the less obstructed path. Step 1: Materials Needed Hardware Arduino UNO based on ATmega328 microcontrollerDYP-ME007 ultrasonic sensorServomotorL298N...
5. AVR Projects Collection | 16 ATmega MCU Projects AVR is a family of microcontrollers developed by Atmel beginning in 1996. These are modified Harvard architecture 8-bit RISC single-chip microcontrollers. ATmega series are one of the types of AVR microcontrollers with features like 4-256 KB program memory, 28-100-pin package, extended instruction...
-  ATMEGA328P Microcontroller ATmega328P is one of the high performances AVR technology microcontroller with a large number of pins and features. It is designed by 8-bit CMOS technology and RSIC CPU which enhance its...
-  Understanding Fuse Bits in ATmega328P to Enhance Arduino Programming Efficiency In this tutorial, we are going to talk about fuses. Back when I was in college and learning about all the cool things in electronics, I heard the term fuse...
8. Automatic Water Barrel Filler A relative asked me if I could create something that automates refilling a water barrel used for watering a small garden greenhouse. They didn't want to plug in a pump...




9.  Lora Gateway Based on MicroPython ESP32 Lora has been very popular in recent years. The wireless communication module using this technology is usually cheap (using free spectrum), small in size, energy-efficient and has a long communication...

10.  Wireless Gesture Controlled Robot Using Micro-controller ATmega328 In this wireless gesture controlled robot project I am going to control a robot using hand gestures. This is an easy, user-friendly way to interact with robotic systems and robots. An accelerometer...

11.  VivoGame VivoGame (something like "liveGame" in english) is a funny 2 players game whose goal is hit a target with a automated dart. One player wear a "glasses" that doesn't let...

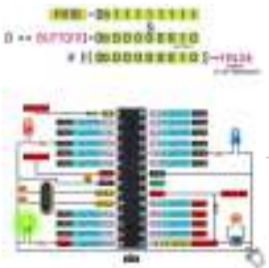
12.  The KIM Uno – a 5€ Microprocessor Dev Kit Emulator The KIM Uno is a portable, software defined dev kit for (retro) microprocessors. But let me introduce the idea of it by going back in time: Back in late 2018 it came...

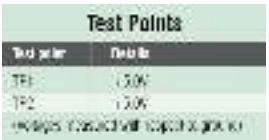
13.  AVR Microcontroller. Pulse Width Modulation. Controller of DC Motor and LED Light Intensity. Pulse Width Modulation (PWM) is a very common technique in telecommunication and power control. it is commonly used to control the power fed to an electrical device, whether it is...

14. AVR Microcontroller Fuse Bits Configuration. Creating and Uploading in the Flash Memory of Microcontroller the LED Blinking Program. <https://youtu.be/6rkRAnkuqM0> In this case we will create simple program in C code and burn it into the memory of the microcontroller. We will write our own program and compile the...



15. AVR Microcontroller. Toggle LED's Using a Push Button Switch. Push Button Debouncing. <https://youtu.be/YIZiwaXxtco> In this section, we will learn How to make program C code for ATmega328PU to toggle the status of the three LED's according to the input from a button...



16.  Microcontroller Projects: Sonar Water-Level Meter Three-fourths of the earth is water, out of which 97 per cent is saline (in oceans, seas and groundwater). The remaining 2.5 per cent to 2.75 per cent is fresh...


Test point	Details
TP1	1.50V
TP2	1.00V


17. FREQUENCY METER CIRCUIT LCR METER ATMEGA328 I have been thinking about building an LC meter for a while since I do not have a multimeter that is capable of measuring inductance and while the multimeters I...

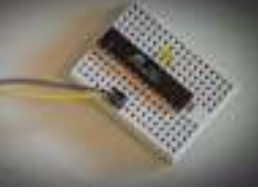



18. Introduction to Arduino UNO (uses AVR ATmega328) Overview Arduino is an Open Source embedded development platform which is easy-to-use. It comprises of Hardware boards and Software tools. Examples of some of the most popular Arduino Hardware boards...





19.  Basic User's Experiment Notes The "Basic User's Experiment Note" is based on the popular 8-bit Atmel AVR ATmega328P microcontroller using AVRJazz 28PIN development board. This e-book covering most of the Atmel AVR ATmega328P microcontroller...
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20.  Franzino is a low cost Arduino standalone board Hardware components: Atmel ATmega328P × 1 16 MHz Crystal × 1 Capacitor 22 pF × 2 Capacitor 100 nF × 5 LED (generic) × 2 Linear Regulator (7805) × 1...
-


21.  Arduino Without External Clock Crystal on ATmega328 Story An Arduino consists of many components like: a linear regulator, USB to Serial microcontroller, debug LED, power LED, reset button, RX & TX LED, crystal oscillator, etc. But a...
-

22.  Reducing Arduino Power Consumption Story When it comes to portable electronics, one of the most important features is how to maximize the battery life. The ATmega328P, used on popular boards like the SparkFun RedBoard,...
-

23.  Gimmick on Barebones Arduino 16MHz Story Did you see this 8MHz no-crystal Arduino? Arduino on Internal Oscillator Crystal as Clock Source by Naman Chauhan is a great project if you can live with 8MHz using...
-

24.  Goldilocks Analogue – Prototyping 3 Following my initial design article, and the follow up design article, I've put quite a lot of thought into how I can make this Goldilocks Analogue device best achieve my stated goals. Pictured...
-

25.  Arduboy Solar Charge Controller, Inverter, PowerBank, Lamp About this Project I have a few solar panels, 12 Volt batteries, transformers and few more stuff laying around for a while crying out aloud to make some good use...
-

26.  Make your own remote temperature/humidity sensor Hardware components: Atmel atmega 328p-pu × 1 ControlEverything.com SI7020-A20 I²C Humidity and Temperature Sensor ±4%RH ±.4°C × 1 433 MHz transmitter / Receiver kit × 1 AMS1117-ADJ voltage regulator ×...
-

27. Bionic Organs/Devices/Limbs Wireless Charging Hardware components: IDT Qi 5W Transmitter Prototype Kit × 1 IDT Qi 5W Receiver Prototype Kit × 1 Atmel Atmega328p × 1 HC-SR04 Ultrasonic Sensor × 1 Hand tools and...
-



28. Transforming your AVR Microcontroller to the I2C or TWI Slave I/O Expander Project The I2C bus (read as I squared C) is one of the most important embedded system serial bus interface first introduced by Philips in 1980; using just two lines called...
-



29. Build your own stopwatch using Maxim MAX7219 Serially Interfaced, 8-Digit LED Display Drivers One of the basic usage of the TIMER peripheral on every microcontroller is to provide the accurate timing mechanism. Using the TIMER peripheral as the basic timing, we could easily...



30. A DIY A4 Laser Engraver made from a scanner and a printer on ATmega328 This "Get Ready For Win98" Laser Engraving Machine it's built using an old scanner, and an old printer. A laser engraving machine is a tool that uses lasers to engrave an...



31. Weeks 11-12: AVR USB Devices and Programming One of the relatively unexplored topics in this week's lecture was USB, the ubiquitous protocol that allows computers to communicate with peripheral devices (containing microcontrollers). Creating a USB device allows...



32. Arduino atmega644/1284 clone This project is about to DIY an Arduino board with an ATMEGA644P or 1284P to have more INPUTS/OUTPUTS than on the atmega328P. You can buy an arduino mega but it's...



33. Small Footprint ATmega328P Board For my Word Clock project, for which I built a custom 8 x 8 LED Matrix with controller, I needed a much smaller footprint DIY-Duino (board for an ATmega328P microprocessor),...



34. Easy Technique for Bootloading Atmega328pu and Atmega328p-pu# Xolcano it is very difficult to bootload Atmega chips when you don't have proper knowledge about device signature ! each chips are associated with its own Signature.at the beginning I found...



35. Getting Started With the ATmega328P In the Internet of Things movement, people across the globe are connecting their stuff – TVs, pets, even houseplants - to the internet and transmitting all sorts of data. If...



36. ATmega DIP40 Minimal Board After I wrote several articles about using ATmega microcontrollers (DIP40) in Arduino environment I had some feedback that I was asked how to be effectively put into operation this project....



37. Program an ATmega168/328 with codebender If you want to use an inexpensive ATmega168 or ATmega328p for your project, but you want the simplicity of the arduino code and codebender, this tutorial will guide you through!...

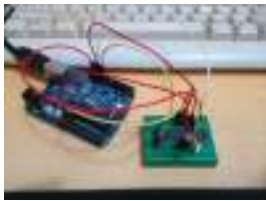



38. AVR Chronograph from concept to PCB A chronograph is a device used to measure the speed of a passing object. In it's simplest form, this involves two sensors of some kind that 'see' the object, some...




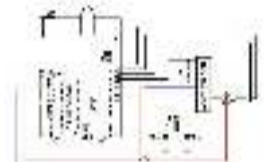
39. Setup Arduino Software for Atmega328P with Internal Crystal on Breadboard A breadboard Arduino will require an Atmega328P controller for these instructions. Note the "P" at the end of the name. You cannot use an Atmega328 because it has a slightly...





40.  Burn BootLoader into Atmega328P using Arduino Diecimila I have an old Arduino Diecimila and some new Atmega328P-PU chips. Shouldn't have but I brought some without bootloader to save some dollars. What next? search instructables to see if...

41.  Bootloading and Mounting Arduino Atmega328 – I made it at TechShop This Instructable shows how to bootload and mount an Atmega328, Atmega328p or Atmega328p-pu for any project. This is a great way to save money by purchasing Atmega328 DIP package microcontrollers...

42.  **Storing Text and Images in a ATmega328P** Use ATmega328 Chip as a Storage Device and Store Text and Images in it Hi everyone! In this instructable, I am going to show you how to store text and images in a small ATmega328P chip. Lets get started! This article is also available...


43.  Burning atmega328-pu and atmega328p-pu bootloader Burning the boot loader in an atmega328 could be somewhat tricky but if u follow these steps correctly youll be able to bootload any type of atmega328 micro controller

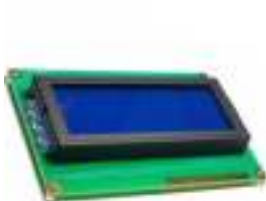
44.  Ultrasonic Spheroid Levitation Device Using Atmega16 Introduction The goal of this project was to design and build a gaming device capable of levitating a ping pong ball at varying heights based on the proximity of the...


45.  Honey I Shrunk The Arduino using ATmega328p As you might be able to tell from recent posts, I've been doing quite a bit of work with an Arduino. I've now got at least one project that I'd...

46. Minimalist Arduino using ATmega328P microcontroller Overview Here at the Transistor, we love the Arduino platform, so we decided to make our own Arduino Clone. The Minimalist Arduino is designed for use in permanent or custom...




47.  HUB ISP – Solving the USB-Only "Chicken or Egg" Problem using ATMEGA328P Many excellent ISP (In System Programming) designs exist for 8 bit AVR microcontrollers. However, most require a pre-programmed microcontroller, or the "Chicken or Egg" problem: you can't program microcontrollers unless...

48.  AVR-GCC LCD library – mixed pin support using Atmega328P Some time ago we have posted alphanumeric AVR-GCC LCD library. It works fine in 8-bit and 4-bit modes. But it has some limitations that some people may find annoying. One...


49.  Dutchtronix AVR Oscilloscope Clock using Atmega328 microcontroller Hardware features: Connects to your analog scope in X-Y mode using BNC cables or probes (1x, 10x) Uses the Atmel AVR Atmega328p with 32KB flashmemory On board 5V power...

50. Analog audio panel for PC using ATmega328 microcontroller Have you ever struggled with audio settings in control panel in middle of a VoIP call? Or, wondered if the other guy can hear you properly? I have. My work...




51.  The \$9 Quasi-duino (Almost-duino) using ATmega328 microcontrol Do you currently have an Arduino and want to make it smaller for cheap? The Quasi-duino is for you (Italian for almost-duino). This makes a functional "almost" Arduino, in a...




52.  Programming Arduino Bootloader without Programmer using ATmega168 microcontroller OH NO!!! You've screwed up and now the Arduino bootloader on your 'duino is gone! What are you going to do? Go spend money for a programmer???




53.  Vintage Toothbrush Timer using ATmega328p My last visit to the dentist convinced me that I should really brush my teeth at least two minutes. I decided to build a special toothbrush timer: it would detect...




54.  The \$9 Quasi-duino (Almost-duino) Do you currently have an Arduino and want to make it smaller for cheap? The Quasi-duino is for you (Italian for almost-duino). This makes a functional "almost" Arduino, in a...




55.  Build a Complete AVR System and Play Mastermind using ATmega328p microcontroller The game Mastermind has been around a long time, and I remember getting a board version with colored pegs when I was a kid. I love this game, as it...




56.  How to Read Binary/Hex Thumbwheel Switch with an AVR Microcontroller This instructable will show you how to read the number on a binary pushwheel or thumbwheel switch using LED's or an AVR microcontroller (I'm using an ATmega328p but this can...




57.  Telnet to your Arduino/AVR! The other day I was wanting to check on one of my AVR's but I was upstairs and god knows it was too much of a hassle to go downstairs...




58.  16-key Keypad Decoding with an AVR MCU This instructable will show you how to interface a 16-key keypad to your AVR microcontroller and read the key when a key is pressed. I'll introduce the keypad first, then...





59.  How to Read Binary/Hex Thumbwheel Switch with an AVR Microcontroller using ATmega328p microcontroller This instructable will show you how to read the number on a binary pushwheel or thumbwheel switch using LED's or an AVR microcontroller (I'm using an ATmega328p but this can...



60.  Build a Complete AVR System and Play Mastermind Using Microcontrollers The game Mastermind has been around a long time, and I remember getting a board version with colored pegs when I was a kid. I love this game, as it...



61.  AVRSH: A Command Interpreter Shell for Arduino/AVR. Ever wanted to be "logged in" to your AVR microcontroller? Ever thought it would be cool to "cat" a register to see its contents? Have you always wanted a way...

62.  Box with a Music Lock using ATmega328P Microcontroller There are a lot of locks out there. There are locks open with a key, with a combination of digits, with various bodily parts, or with a correct geolocation. I...

