



Arduino Uno - R3 SMD

DEV-11224 ROHS ✓

★ ★ ★ ★ ☆ 21

DESCRIPTION

FEATURES

DOCUMENTS

This is the new Arduino Uno R3. In addition to all the features of the previous board, the Uno now uses an ATmega16U2 instead of the 8U2 found on the Uno (or the FTDI found on previous generations). This allows for faster transfer rates and more memory. No drivers needed for Linux or Mac (inf file for Windows is needed and included in the Arduino IDE), and the ability to have the Uno show up as a keyboard, mouse, joystick, etc.

The Uno R3 also adds SDA and SCL pins next to the AREF. In addition, there are two new pins placed near the RESET pin. One is the IOREF that allow the shields to adapt to the voltage provided from the board. The other is a not connected and is reserved for future purposes. The Uno R3 works with all existing shields but can adapt to new shields which use these additional pins.

Arduino is an open-source physical computing platform based on a simple i/o board and a development environment that implements the [Processing/Wiring](#) language. Arduino can be used to develop stand-alone interactive objects or can be connected to software on your computer (e.g. Flash, Processing, MaxMSP). The open-source IDE can be downloaded for free (currently for Mac OS X, Windows, and Linux).

Special SMD Version: Because Atmel is moving more and more of their production capacity to surface mount ICs, the DIP packaged ATmega is becoming more and more difficult to get. To keep up with demand, we now offer the Arduino Uno R3 with an SMD ATmega. The board is identical to the PTH version of the Uno, but you won't be able to remove the ATmega without some hot-air. This change shouldn't affect most users. Besides - when was the last time you managed to destroy an ATmega and needed to repair an Arduino board? Those things are nearly indestructible.

Note: The Arduino Uno R3 requires the [Arduino 1.0](#) drivers folder in order to install properly on some computers. We have tested and confirmed that the R3 can be programmed in older versions of the IDE. However, the first time using the R3 on a new computer, you will need to have Arduino 1.0 installed on that machine. If you are interested in reading more about the changes to the IDE, check out the official [Arduino 1.0 Release notes](#)!

Tags

ARDUINO



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Previous Versions ▾

Arduino Uno - R3 SMD Product Help and Resources

TUTORIALS

SKILLS NEEDED



SparkFun Inventor's Kit
Experiment Guide - v4.0

NOVEMBER 15, 2017

The SparkFun Inventor's Kit (SIK) Experiment Guide contains all of the information needed to build all five projects, encompassing 16 circuits, in the latest version of the kit, v4.0a.

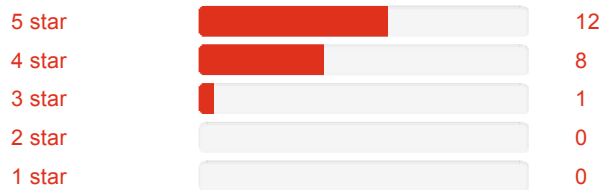
COMMENTS 15

REVIEWS ★★★★★ 21

Customer Reviews

★★★★★ 4.5 out of 5

Based on 21 ratings:



Currently viewing all customer reviews.

1 of 1 found this helpful:

★★★★★ Everything works, no problems with SMD package.

about 2 years ago by **APSBiker** ✓ verified purchaser

I only have limited experience with the Arduino-type boards, but this one works as it should and I haven't encountered any problems, just like the other ones. It runs my laser engraver well and always connects to my laptop when I turn the power on, so it's all good!

2 of 2 found this helpful:

★★★★★ very fun, very simple to use.

about 3 years ago by **Member #484404** ✓ verified purchaser

I am no expert in the use of micro controllers, but I have dabbled. This model I found simply to navigate around. And, as in the past, I greatly appreciate the Sparkfun support around their products.

2 of 4 found this helpful:

★★★★☆ Arduino works fine for small/slow projects

about 3 years ago by **Member #599093** ✓ verified purchaser

I have several Arduinos, now. I just got these SMD versions, and thought I had an issue with them, but it turns out to be an issue with the base Arduino programming IDE.

So, let's talk about that for a minute. For relatively simple things, it's not bad. It uses C code, although the "sketch" is different in minor ways. The Arduino libraries run all processes serially, so if you want to get "high-speed," you are better off writing code that talks to bare metal.

That said, though, my issues I mentioned at the start are due to the absolutely horrible optimizations done by the Base IDE/compiler. I believe they use a stripped-down version of GCC, but man... I can see that I'm either going to have to step over to a different compiler, or start writing lots of assembly code.

However, one of the nice things about the Arduino, aside from a standardized hardware platform, is the bootloader for uploading your programs. This is one of the reasons I'm hesitant to use a different development system, as then I'll be overwriting the bootloader. Not horrible, I guess, but not to my liking...

So, why am I rating this as 3 stars?

Well, on the one hand, it's a nice development platform for little things, and the IDE/development libraries conveniently hide the C code so that beginners and non-programming hobbyists can get into this stuff. That's 5 star thing, there.

However, for people like myself that want to do some "speedy" things on the board... Well, I am having to take

a step backwards if I stick with the stock development environment, and that's sort of a 2 star thing.

Right now I'm researching a better way to write & upload code, so I can get my speedy stuff back.

★★★★☆ Great Product

about 3 years ago by [Member #654792](#) 

I bought this to pair with a relay shield as a simple irrigation controller. Works great, easy to setup and program. I'll be using more Arduino boards as I increase the level of automation around my home.

★★★★★ Well thought design

about 3 years ago by [Member #519320](#) 

I like the connection with the text showing the function on each pinout.

★★★★☆ A good board! and more

about 3 years ago by [Member #687457](#) 

Works great just like any Arduino, the SMD design probably makes it a bit more durable but UNO boards are already virtually unbreakable. I really like the SparkFun Cerberus cable. It's very handy when switching back and forth between devices or to connect several at once and the Moog mod kit saved me a couple trips to different stores, thanks.

I've heard you are opening physical stores, try one in Ft. Collins.
space is the place, noise is the future
John

★★★★☆ As good as always

about 2 years ago by [Member #339359](#) 

I use several Uno R3s and they all perform correctly. The most recent one's use is a duplicate, nothing new, so my review is that it is OK

★★★★☆ As described

about 2 years ago by [Member #607988](#) 

Good product - fast shipping.

★★★★★ First Arduino Board Purchased!

about 2 years ago by [slandry](#) 

This board is a great first example of what the Arduino is all about. Had my first program up and running in minutes. Sparkfun is definitely my first stop for anything embedded.

★★★★★ Fantastic!

about 2 years ago by [Member #804812](#) 

Super high quality device.

And I am not the most careful with my tiny electronics.

Can't wait to get more.

★★★★★ a wonderful gift

last year by [Member #896534](#) 

I bought this for my husband and it worked out perfect for him

★★★★★

about 11 months ago by [omglolbah](#) 

It is an arduino. What else is there to say.. The labeling on the side of connectors is a nice touch in this version.

★★★★★ Great board to have

about 7 months ago by [Member #577993](#) ✓ verified purchaser

This board is versatile. That is the main reason I like it. You can do so much with an Uno. There are fifteen projects in the starter kit alone!

★★★★★ Great Purchase

about 3 months ago by [Member #665187](#) ✓ verified purchaser

This is the best Arduino Uno that I have purchased. I love that it came with a base plate straight out of the box (something that all Arduinos should be equipped with as a default.).

★★★★☆ problem with usb jack

about 3 years ago by [JAMac](#) ✓ verified purchaser

I recently purchased an UNO R3 and it worked fine except that the USB jack would intermittently disconnect when the unit moved causing the unit to re-boot. I swapped it out with an older unit I had from another project and it worked fine no matter how I manipulated it. I guess there is a loose connection in the jack. I plan to return the unit for a replacement.

★★★★☆ Arduino Uno

about 3 years ago by [Steve AVR enthusiast](#) ✓ verified purchaser

I have somewhere an old Arduino Duemilanove but haven't used it for quite some time. I thought I would get a newer Uno and start getting acquainted with Arduino again. Everything seems to work fine though I have only blinked an external led and used a sliding pot to control a servo. Another reviewer noted a USB connection problem. On mine the on board USB jack is very stiff. It takes a little more force than it seems like it should to get the USB cable to fully engage. It is possible that he was not getting the cable fully engaged.



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In 2003, CU student Nate Seidle blew a power supply in his dorm room and, in lieu of a way to order easy replacements, decided to start his own company. Since then, SparkFun has been committed to sustainably helping our world achieve electronics literacy from our headquarters in Boulder, Colorado.

No matter your vision, SparkFun's products and resources are designed to make the world of electronics more accessible. In addition to over 2,000 open source components and widgets, SparkFun offers curriculum, training and online tutorials designed to help demystify the wonderful world of embedded electronics. We're here to help you start something.

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