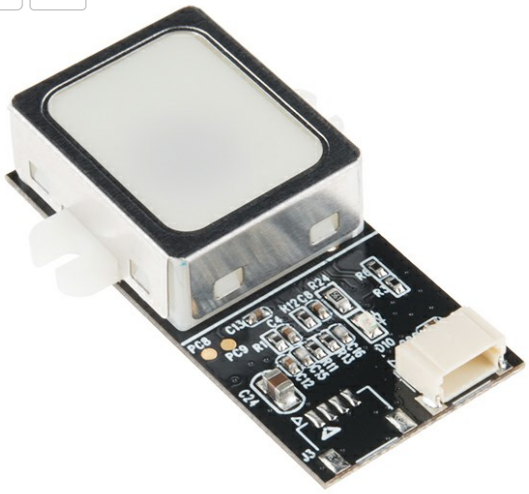






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3D Download: Sketchup, STL, IGES, Blender, Solidworks

Previous Versions

Fingerprint Scanner - TTL (GT-511C3)

SEN-11792

13

DESCRIPTION FEATURES DOCUMENTS

Fingerprint scanners are awesome. Why use a key when you have one right at the tip of your finger? Unfortunately, they're usually unreliable or difficult to implement. Well not anymore! We've found this great fingerprint module from ADH-Tech that communicates over TTL Serial so you can easily embed it into your next project.

The module itself does all of the heavy lifting behind reading and identifying the fingerprints with an on-board optical sensor and 32-bit CPU. All you need to do is send it simple commands. To get started, just register each fingerprint that you want to store by sending the corresponding command and pressing your finger against the reader three times. The fingerprint scanner can store different fingerprints and the database of prints can even be downloaded from the unit and distributed to other modules. As well as the fingerprint "template," the analyzed version of the print, you can also retrieve the image of a fingerprint and even pull raw images from the optical sensor!

This is the updated version of the GT-511 which has an increased memory capacity. The module can store up to 200 different fingerprints (that's 10x more than the old version!) and is now capable of 360° recognition.

The module is small and easy to mount using two mounting tabs on the side of the sensor. The on-board JST-SH connector has four signals: Vcc, GND, Tx, Rx. A compatible JST-SH pigtail can be found in the related items below. Demo software for PC is available in the documents below, simply connect the module to your computer using an FTDI Breakout and start the software to read fingerprints!

Note: The module does not come with a cable, if you do not have a 4-wire JST-SH pigtail, you can add PRT-10359 to your cart, or check in the *Recommended Products* section below.

GET STARTED WITH THE FINGERPRINT SCANNER GUIDE

Fingerprint Scanner - TTL (GT-511C3) Product Help and Resources

VIDEOS SUPPORT TIPS SKILLS NEEDED

SparkFun Fingerprint Scanner

PUBLISHED ON FEBRUARY 8, 2013

COMMENTS 143 REVIEWS 13

Customer Reviews

3.4 out of 5

Based on 13 ratings:

5 star	4
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3 star	3
2 star	0
1 star	3

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1 of **1** found this helpful:

Some fuctions are not working

about 3 years ago by Member #658951 verified purchaser

In my projects I need to use functions GetTemplate and SetTemplate. Tech.support said that everythting works, but it's wrong.

Fuctions GetTemplate and SetTemplate are not working on arduino…

It;s very sad.

1 of **1** found this helpful:

It scans...

about 2 years ago by Member #391234 verified purchaser

OK. The specs are light on this one even with the 36-page spec sheet. I had to request the hardware hookup "FPS_Connection.jpg" from Sparkfun; shouldn't that be on the site? On the product's page, there is a note that says "A compatible JST-SH pigtail can be found in the related items below," but the one I picked was wrong. Plus you need a 6-pin, which is not mentioned. There should really be a ready-made JST to FTDI cable for this product. The empty pad next to the JST doesn't look like the photo on the site. It may be another JST pad which would make direct soldering a snap! 'Still looking into that one. Sparkfun does not know for sure. Then there's the code. The OEM code is very similar to the GitHub code and parsing through that was a bit of a chore, but hey; it saves a bunch of coding time and works right out of the box! Bonus! Overall, the scanner portion is a bit large, but is scans and recognizes prints very well.

5 of **6** found this helpful:

Awesome little sensor!

about 3 years ago by Member #196150 verified purchaser

This is a nice little fingerprint scanner. The only reason I'm giving this 4 stars is that there is no indication of it being 3V3. It does have a 3V3 regulator on it, though. Also, it has some sort of protection against overvolting a pin. I accidentally supplied 5V to a 3V3 pin, and it turned off. I removed the wire, and it worked again.

0 of **2** found this helpful:

don't forget to buy the damn JST cable

about 2 years ago by Member #12826 verified purchaser

Got 2 pieces. Forgot to buy the damn connector. Tried to desolder the connector to solder wires (I needed to prototype quickly). Destroyed the PCB tracks (a bit of heat or just "staring at it" is enough to destroy the tracks ;-)

with a sharp & hot knife, was able to expose the connector pins and solder wire-wrap wires to the pins. It was enough to test it. Looks promising, recognized rotated fingerprints. Documentation does not show the pinouts though you can find it elsewhere.

A bit overpriced because the original , in Taiwan costs bucks.

DON'T FORGET TO BUY THE CONNECTOR!!!

All OK as expected

about 2 years ago by Member #656905 verified purchaser

)k. Thank you, looking forward to our next cooperation.

Miroslav

★★★★☆ performance

about 2 years ago by Member #746823 ✔ verified purchaser

The fingerprint its working perfectly and we are happy continue with great job

---

★★★★★ Absolutely perfect

about a year ago by Member #862361 ✔ verified purchaser

We received the part without any problem into Switzerland. It was connected to an USB-UART VCP with CP2102 - we started the software demo - everything worked perfect without any problems. We will now create our own software for personalized project management. Thanks to the Sparkfun team. Remark: Page 39 is missing from the data sheet so we downloaded it from Taiwan.

> ROB-24601 replied on November 9, 2016:
>
> Glad you're enjoying the unit, and thanks for the heads up regarding the datasheet. I've put in a request to get that updated. Happy hacking!

---

0 of **1** found this helpful:

★☆☆☆☆ Awful

about 9 months ago by Member #1024242 ✔ verified purchaser

After 3 scanning, the sensor didn't work anymore, the function *Open()* waits for an answer in vain. The JST cable is not included (even if it's actually specify, it's a shame considering its difficult availability) Awful

> Kansukee/f replied on July 5, 2017:
>
> Sorry to hear about the issues with the scanner. Have you contacted our technical support department @ techsupport@sparkfun.com? They're usually really good at helping to get these functioning if the device is still hanging on the Open() function.

★★★☆☆ Works great but be careful...

about 8 months ago by Member #1049382 ✔ verified purchaser

The scanner works great and does exactly what you would hope a fingerprint scanner would do. Really pretty disappointed the connector is not included. For as inexpensive as that little thing is, I'd really like to see Sparkfun make it included. Its virtually impossible to use the scanner without it. Also, be careful with it. After hooking this up to my project I managed to snap off a tiny component from the back of the PCB. I have no idea if this was truly my fault or a defective scanner but either way, I'm stuck getting another one overnighted to me to finish my project on time.

---

0 of **1** found this helpful:

★★★★★ Nice fingerprint scanner

about 3 years ago by Member #233851 ✔ verified purchaser

Planning to use this for security access. I've been experimenting with it a little and find that it is sometimes finicky about registering a fingerprint but it is very accurate as far as recognition/rejection. It's easily interfaced to a Raspberry Pi, Arduino, or Microchip PIC processor.

★★★★☆ Impressed !

about 4 months ago by Member #1174597 ✔ verified purchaser

This is the first serious components i bought on sparkfun and i was really happy to play with this scanner. Very good product, not problem to install or anything. Works prefectly with the FTDI breakout.

Bad points: - i Had to buy a 4-wire JST-SH to connect the FTDI breakout - Shipping cost are a bit expensive if you're not in the us.

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0 of **1** found this helpful:

★★★★★ Works great

about 3 years ago by Member #99846 ✔ verified purchaser

Easy to use.

START SOMETHING.

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SUBSCRIBE TO NEWSLETTER

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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For which department?

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Please include your email address if you'd like us to respond to a specific question.

email address

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