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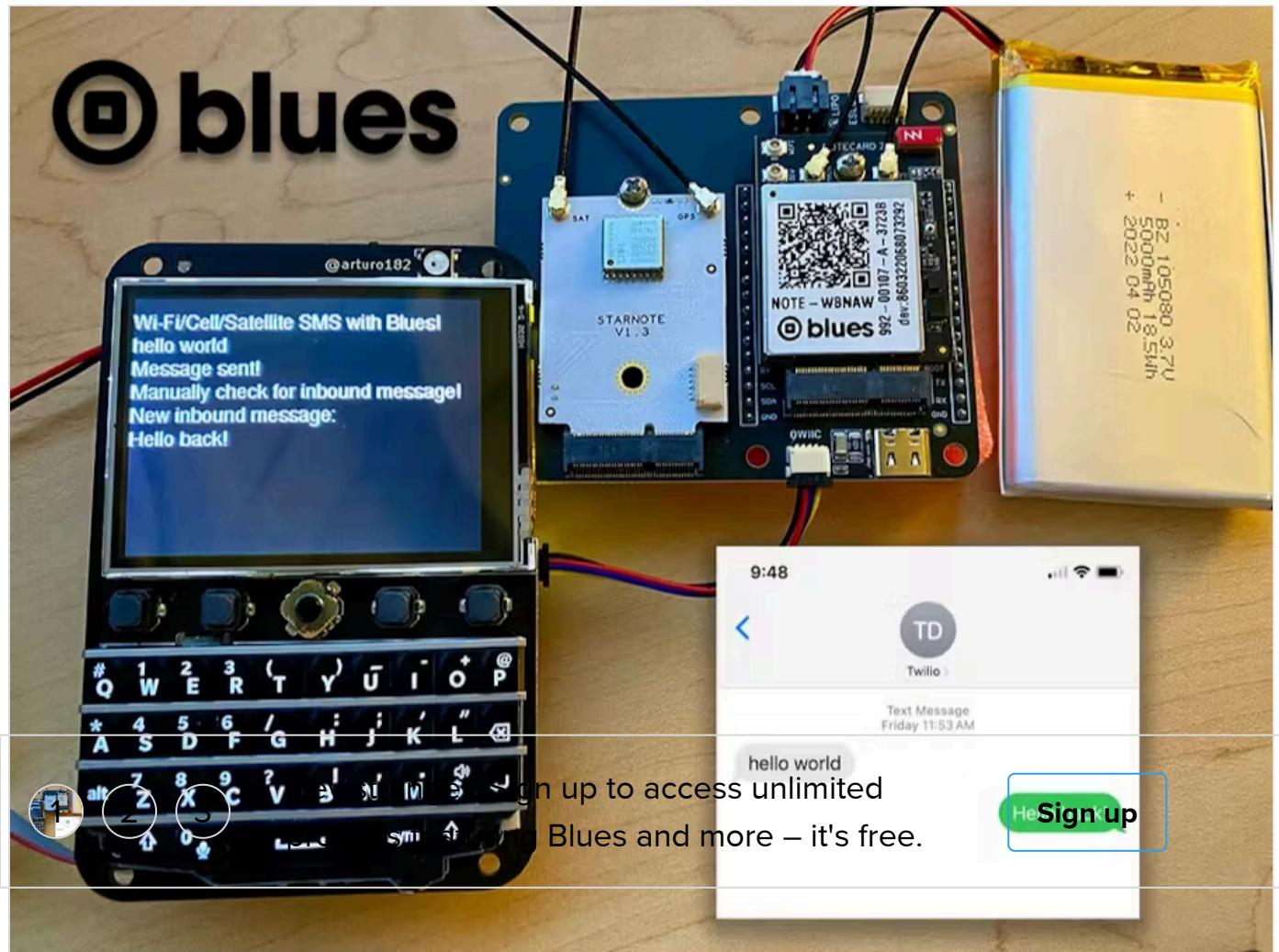
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 Rob Lauer (/rob-lauer) ✓
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Two-Way Satellite Messaging with Blues Starnote

Learn how to incorporate low-cost satellite connectivity in your project using the Blues Starnote alongside a Blues Notecard.

Intermediate(/projects?difficulty=intermediate) Full instructions provided 3 hours 3,232



(<https://events.hackster.io/im/pactspotlights>)

Ad

(<http://help.hackster.io/knowledgebase/what-are-these-ads>)

Things used in this project

Hardware components

Blues Starnote (Satellite)



(/blues-wireless/products/blues-starnote-satellite?ref=project-2140e8) × 1

s=BAhJIhM1MTIwNTUzUSU19AvMjDAY6BkVG%0A

Blues Notecarrier XS



(/blues-wireless/products/blues-notecarrier-xs?ref=project-2140e8) × 1

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Blues Notecard



(Cell+WiFi) (/blues-wireless/products/blues-notecard-cell-wifi?ref=project-2140e8) × 1

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Blues Swan (/blues-



wireless/products/blues-swan?ref=project-2140e8) × 1

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Software apps and online services



Twilio SMS Messaging
API (/twilio/products/sms-
messaging-api?
ref=project-2140e8)

<https://www.twilio.com/sms>



Blues Notehub.io (/blues-
wireless/products/blues-
notehub-io?ref=project-
2140e8)

<https://products.buy.blues.io/starnote?ref=project-2140e8>

Story

If you're anything like me, you probably assume that wireless connectivity for embedded devices starts and ends with Wi-Fi. Maybe cellular if you get ambitious. But satellite? No way. The hardware costs and monthly minimums alone are too expensive, not to mention the ridiculous per/KB data fees.

That's definitely what I thought, at least until the Blues Starnote (<https://shop.blues.com/products/starnote>) came around.



[▼ Read more](#)



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Code

Gist

[🔗 \(https://gist.github.com/rdlauer/81d222b5a47e63e14f63f77f34793950\)](https://gist.github.com/rdlauer/81d222b5a47e63e14f63f77f34793950)

```
1 #include <Arduino.h>
2 #include <Adafruit_GFX.h>
3 #include <SPI.h>
4 #include <Wire.h>
5 #include <Adafruit_ILI9341.h>
6 #include <Fonts/FreeSans9pt7b.h>
7 #include <Adafruit_NeoPixel.h>
8 #include <BBQ10Keyboard.h>
9 #include <Notecard.h>
10 #include "base64.hpp"
11
12 #define TFT_CS 9
13 #define TFT_DC 10
14 #define NEOPIXEL_PIN 11
15 #define productUID "your-product-uid"
16 #define serialDebug Serial
17
18 HardwareSerial stlinkSerial(PIN_VCP_RX, PIN_VCP_TX); // using optional STLINK
19 Adafruit_ILI9341 tft(TFT_CS, TFT_DC);
20 Adafruit_NeoPixel pixels(1, NEOPIXEL_PIN, NEO_GRB + NEO_KHZ800);
21 BBQ10Keyboard keyboard;
```

Credits



Rob Lauer (/rob-lauer) ✓

26 projects • 135 followers

(/rob-lauer) Senior Director of Developer Relations @ Blues
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redirect_to=%2Fmessages%2Fnew%3Frecipient_id%3D1767662&source=user_contact)



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Comments

Please log in or sign up to comment.



(/zakir-jaafar) **Zakir Jaafar (/zakir-jaafar)**
1 year ago

Great stuff. Don't you need a local telco account with a telco number to send/receive SMS?



(/rob-lauer) **Rob Lauer (/rob-lauer)** ✓
1 year ago

You can reserve a local number directly through Twilio.



(/zakir-jaafar) **Zakir Jaafar (/zakir-jaafar)**
1 year ago

Yes. I see you have used Twilio from the beginning even though you are via wifi. Ok, thanks for this.

I can see your comparison with Swarm and others. I was toying with Swarm but never managed to get it going. So, yours is a good alternative. Are any Discord or other groups already using your stack? Nothing beats a group to support if I want to test this out.



(/rob-lauer) **Rob Lauer (/rob-lauer)** ✓
1 year ago

There is a pretty active forum at <https://discuss.blues.com/> (<https://discuss.blues.com/>) but nothing on discord (yet!)



(/bradspry)

Brad Spry (/bradspry)

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A timely, great thing for communication during disasters like we have in western North Carolina right now... (Helene)

(/mohamedalitennich)

Mohamed ali Tennich (/mohamedalitennich)

6 months ago

Thanks for sharing this good project with us . I'm computer engineering student and you've inspired me to use the starnote in my final year project

1 thank

Similar projects you might like



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Smart Helmet powered by Blues Wireless Notecard (/sobhitpanda25/smart-helmet-powered-by-blues-wireless-notecard-b337dc)

Multiple Authors ▾

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⑧ 932



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ujjval rathod (/ujur007) ✓

8

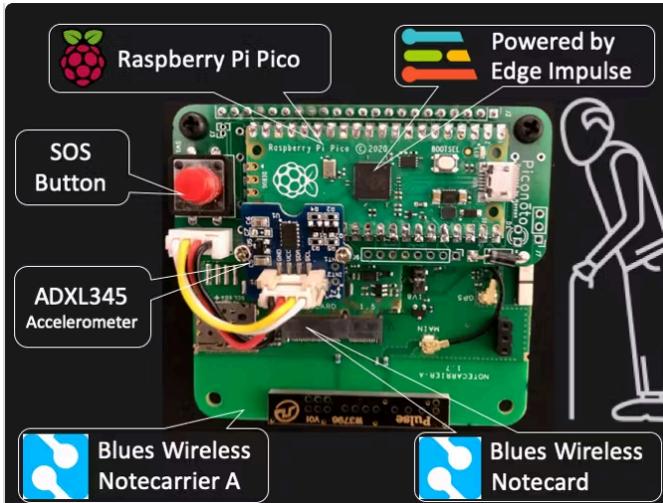
⑧ 890



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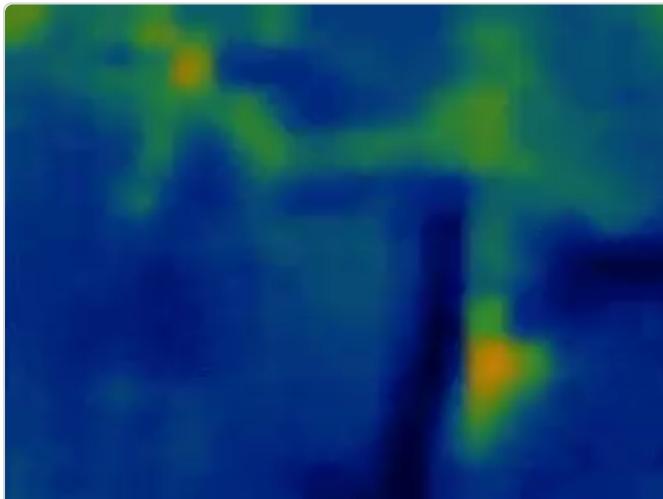
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Naveen (/naveenbskumar) ✓

57

15K



(/rob-lauer/thermal-image-anomaly-detection-with-tinyml-36831c)

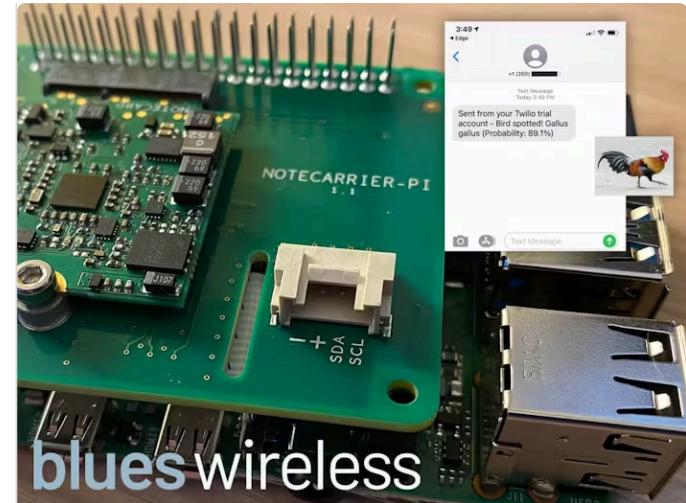
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7.9K



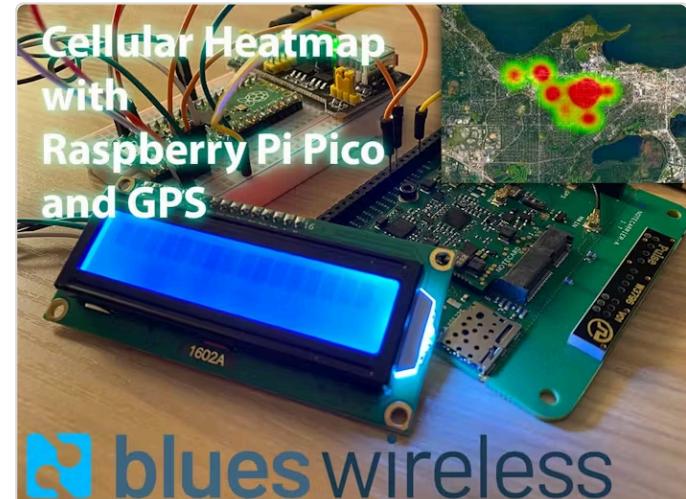
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13K



(/rob-lauer/cellular-signal-heatmap-with-raspberry-pi-pico-and-gps-1e16df)

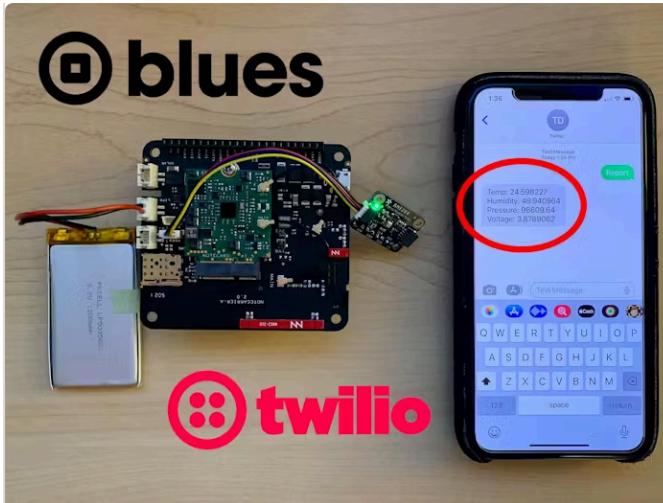
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Remotely Query Sensor Data via SMS

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1.7K



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Host-free Smart Parking Lot Help Request Device

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Team Blues ✓

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1.5K



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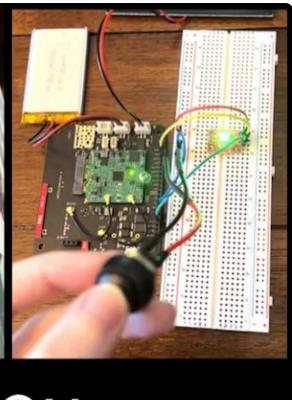
element14

(<https://www.element14.com>)

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blues

Parking Lot Help Request