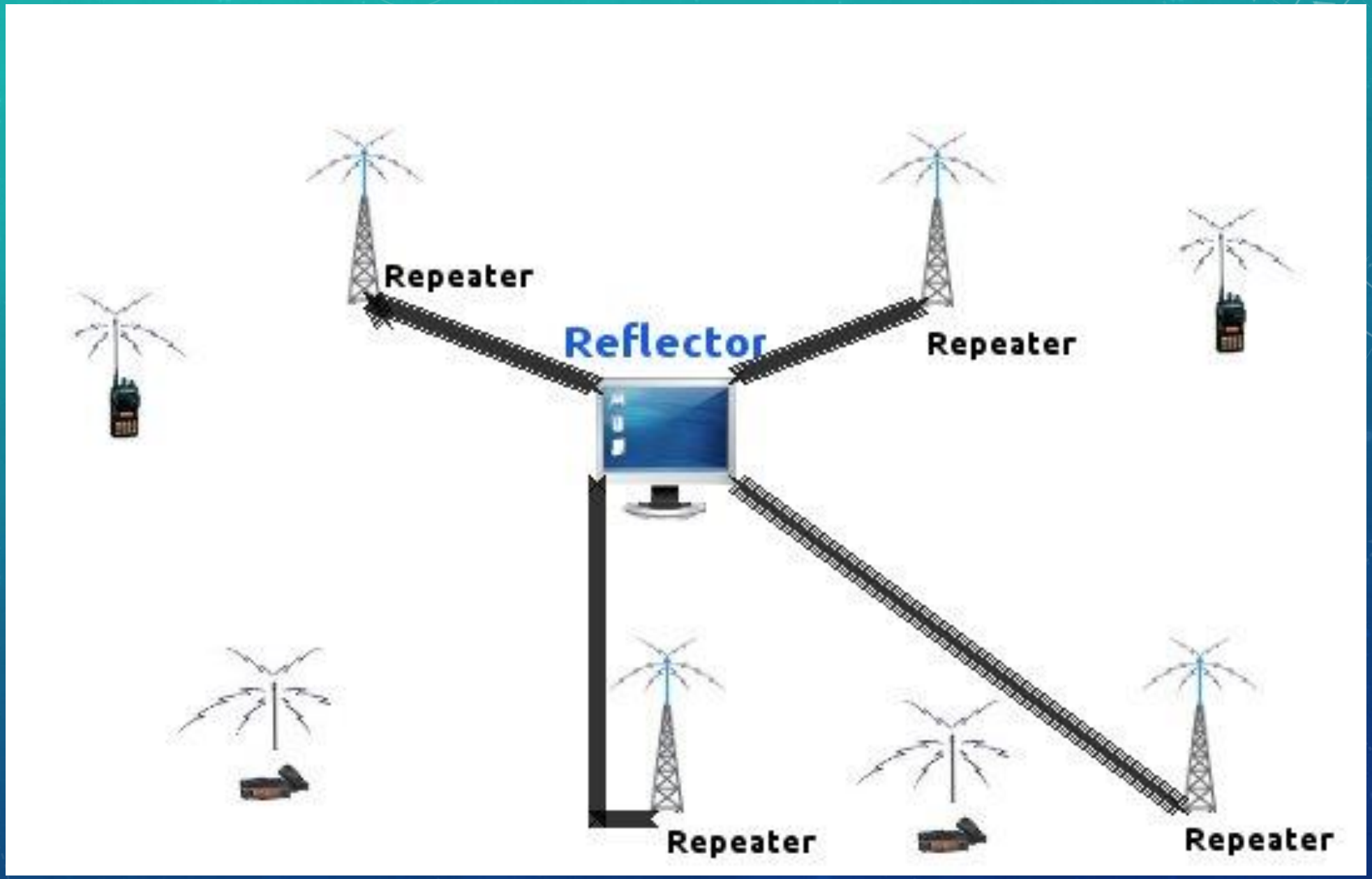
HOW TO BUILD A DIGITAL HOTSPOT ON THE CHEAP

ZUMSPOTS TO THE RESCUE


Repeater
Reflector
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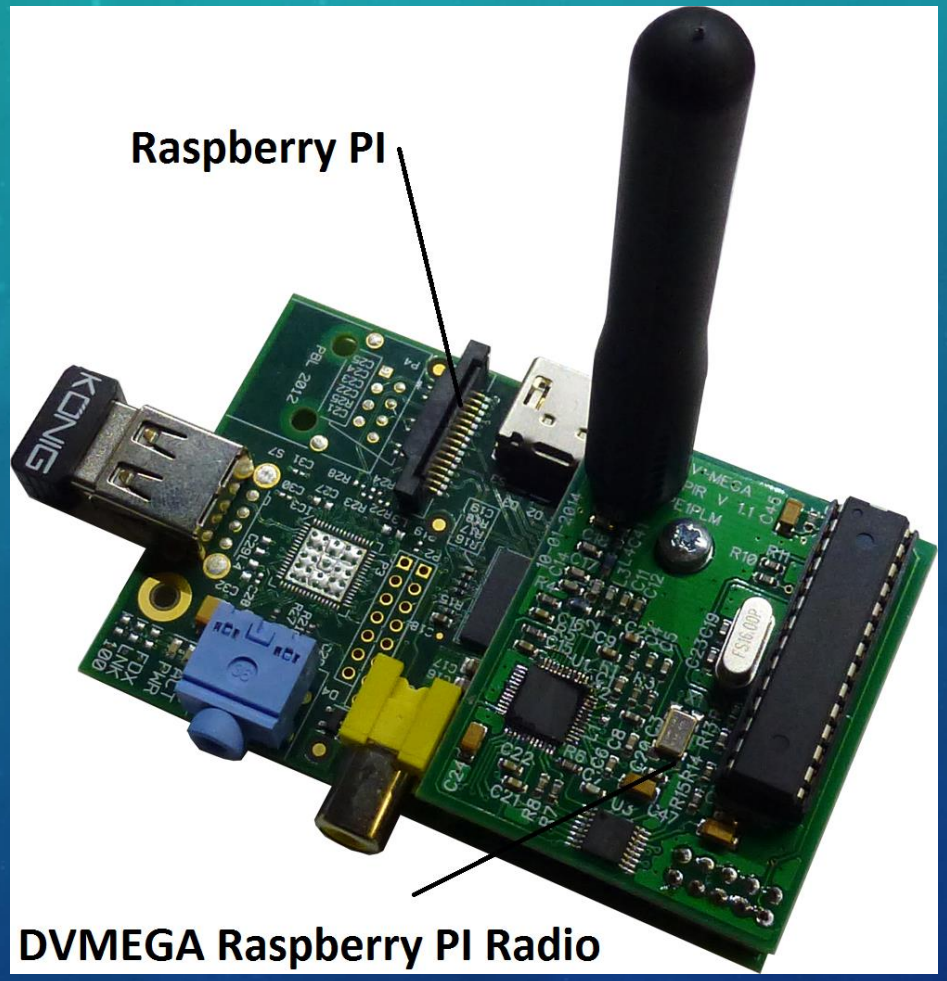
DVRPTR

DVAP

DVMEGA & RASPBERRY PI



DV4MINI

BLUESTACK

OPENSPOT

NANOSPOT


NANO-SPOT
DMR,DStar,C4FM and P25
Digital Hotspot
DMR
Listening
Micro-Node International

In-Stock

Free Shipping!

ZUM Radio ZUMspot Kit

ZUMspot RPi UHF Hotspot Board Kit - With Raspberry Pi Zero - Requires Power Through Micro USB

HRO Discount Price: $129.95*

Buy It

*After Coupons & Promotions.

Tweet Share Pin it Add To Wish List

DO YOU EVEN D-STAR, BRO?

- You'll need a digital radio to use these hotspots
- They work with D-star, C4FM, DMR, P25, and more
- Purchase list: Raspberry Pi Zero W (wireless), SD card, MMDVM board, power supply, and other accessories as needed

BUY THE COMPUTER STUFFS

- Raspberry Pi Zero W (must be W!)
- Also need:
  - Power supply
  - MicroSD Card
  - Optional: HDMI Mini to HDMI cable (for initial setup)
  - Optional: USB OTG Hub - lets you plug in peripherals like keyboard and mouse through a micro USB port for initial setup

https://www.amazon.com/Vilros-Raspberry-Kit-Premium-Essential-Accessories/dp/B0748NK116
https://www.adafruit.com/category/813

Roll over image to zoom in

Vilros Raspberry Pi Zero W Complete Starter Kit-Premium Black Case Edition-Includes Pi Zero W and 7 Essential Accessories

by Vilros

90 customer reviews

Price: $34.99 prime

Your cost could be $24.99. Eligible customers get a $10 bonus when reloading $100.

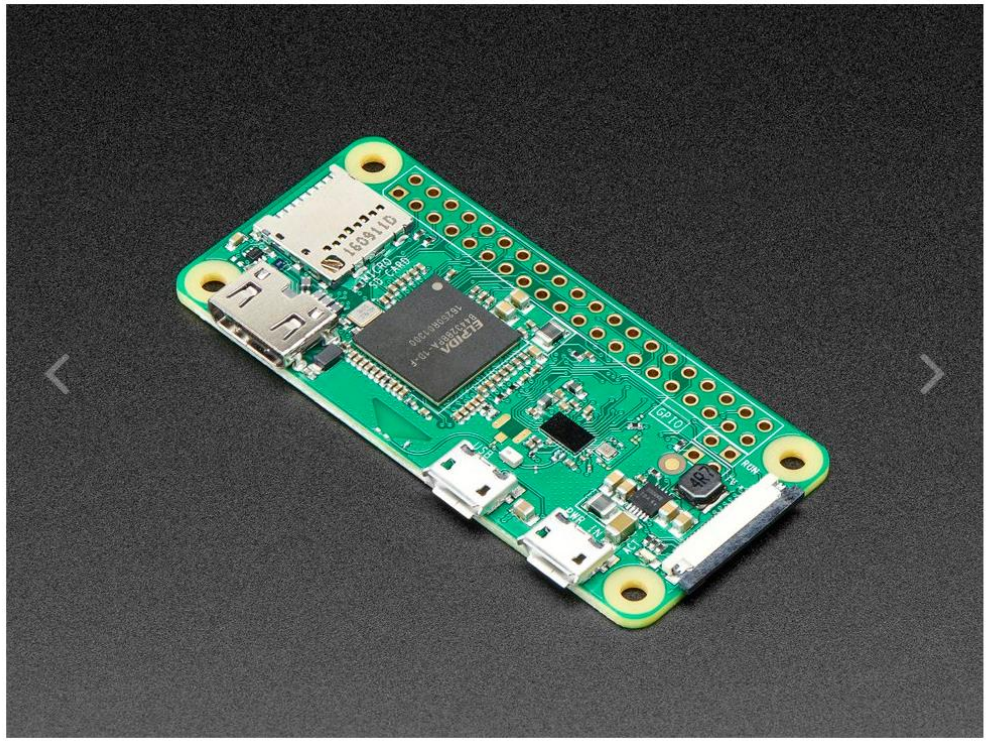
- Includes: Raspberry Pi Zero W -Featuring :802.11 b/g/n wireless LAN-Bluetooth 4.1-Bluetooth Low Energy (BLE)
- 16GB Micro SD Card Preloaded With NOOBS
- 2.5A Power Supply Designed for Raspberry Pi--Premium Black Snap together Case with 3 covers (Closed-GPIO Access -Camera Module Mount) 5ft HDMI to Mini HDMI Cable--Micro USB to USB Adapter
- Heastsink--2x20 Pins Strip Dual Male Header For Raspberry Pi Zero--Camera Module Adapter
- All Parts Covered Under the Vilros 1 Year Warranty

Compare with similar items

New (1) from $34.99 prime

Report incorrect product information.

"Alexa, what's i
Ready when you



Raspberry Pi Zero W

PRODUCT ID: 3400

$10.00

IN STOCK

MAX PER CUSTOMER: 1

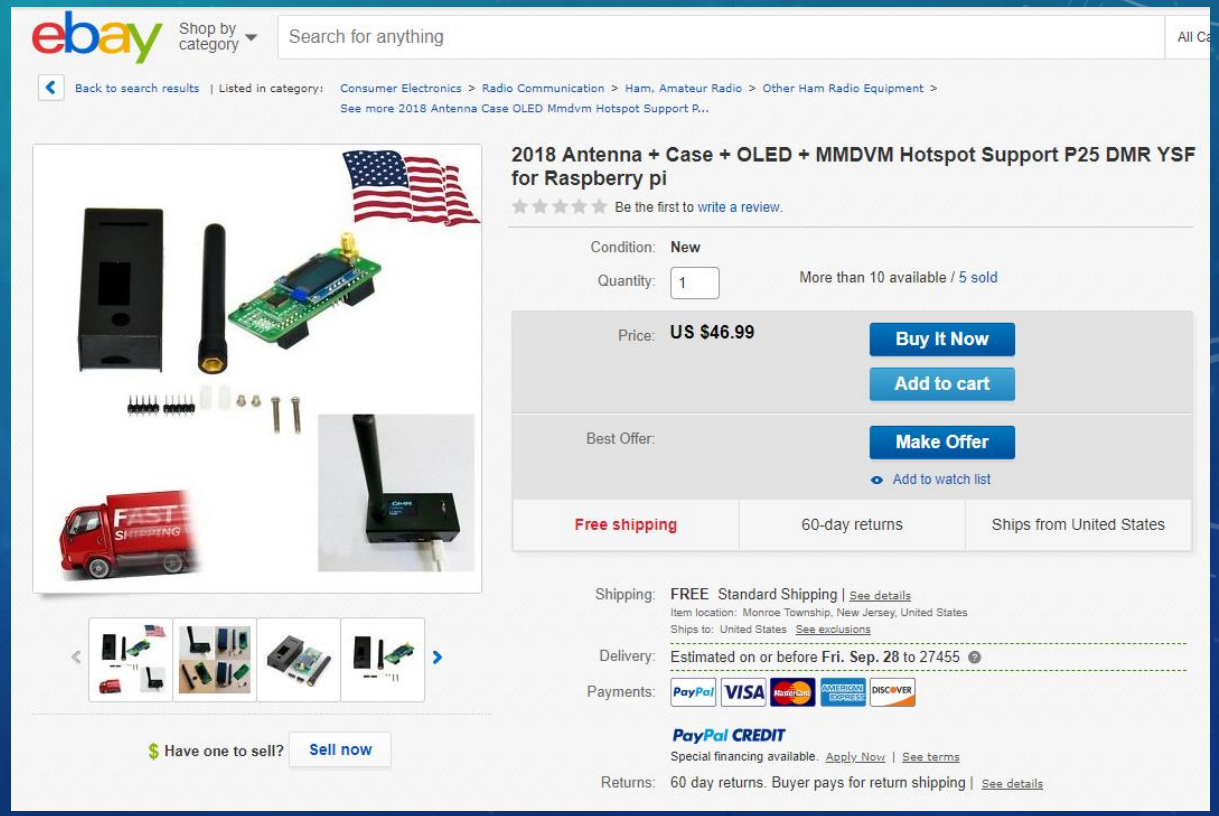
1 ADD TO CART

- Also include 1 x Raspberry Pi Zero v1.3 Camera Cable ($5.95)
- Also include 1 x USB OTG Host Cable - MicroB OTG male to A female ($2.50)
- Also include 1 x Break-away 0.1" 2x20-pin Strip Dual Male Header ($0.95)
- Also include 1 x USB Mini Hub with Power Switch - OTG Micro-USB ($4.95)
- Also include 1 x Tiny OTG Adapter - USB Micro to USB ($2.95)
- Also include 1 x Mini HDMI Plug to Standard HDMI Jack Adapter ($2.95)
- Also include 1 x Mini HDMI to HDMI Cable - 5 feet ($5.95)
- Also include 1 x Adafruit Raspberry Pi Zero Case ($4.75)
- Also include 1 x Adafruit IO+ Subscription Pass – One Year ($99.00)
- Also include 1 x Color Coded Header for Raspberry Pi ($1.75)

ADD TO WISHLIST

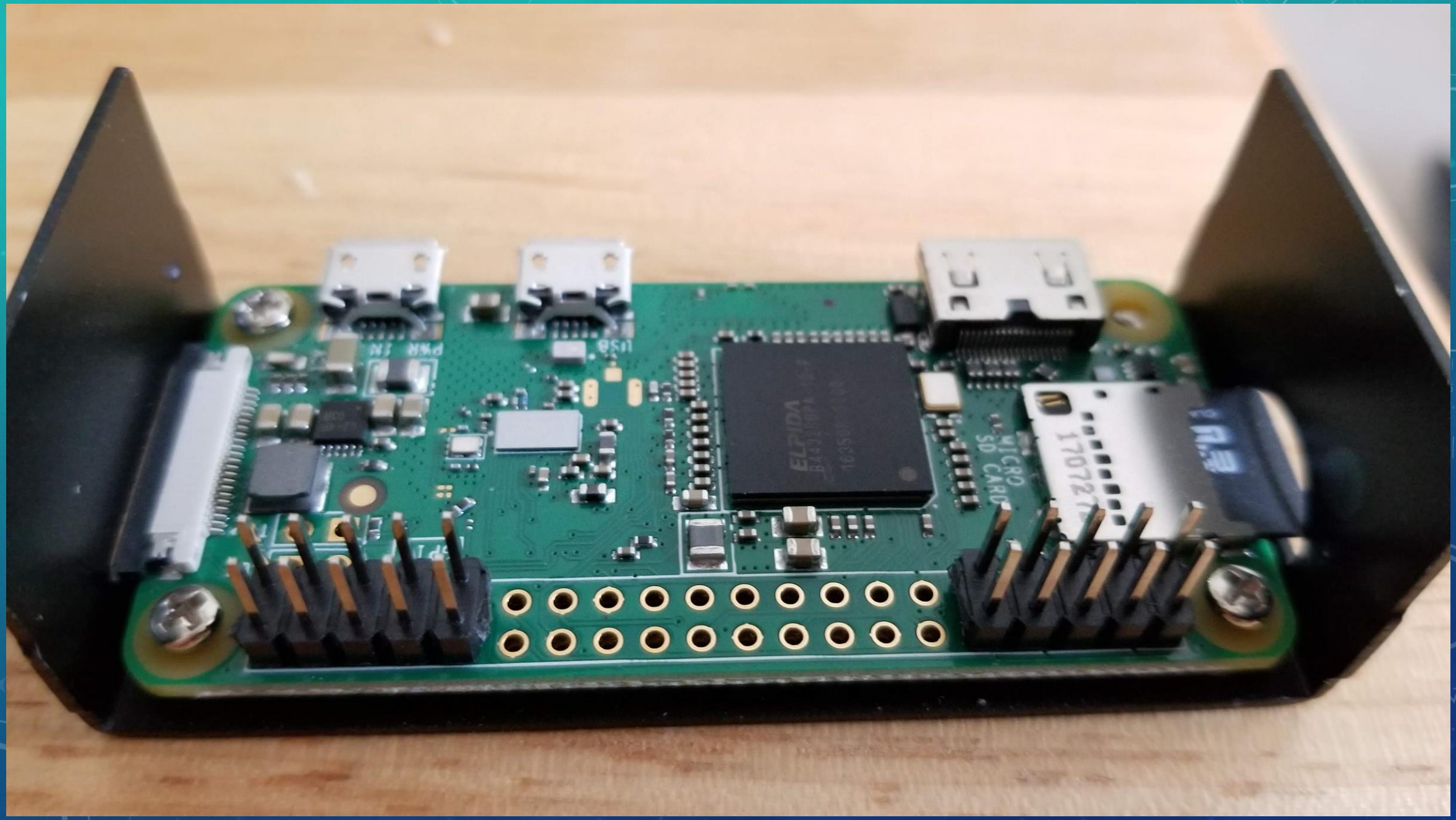
BUY THE RF STUFFS

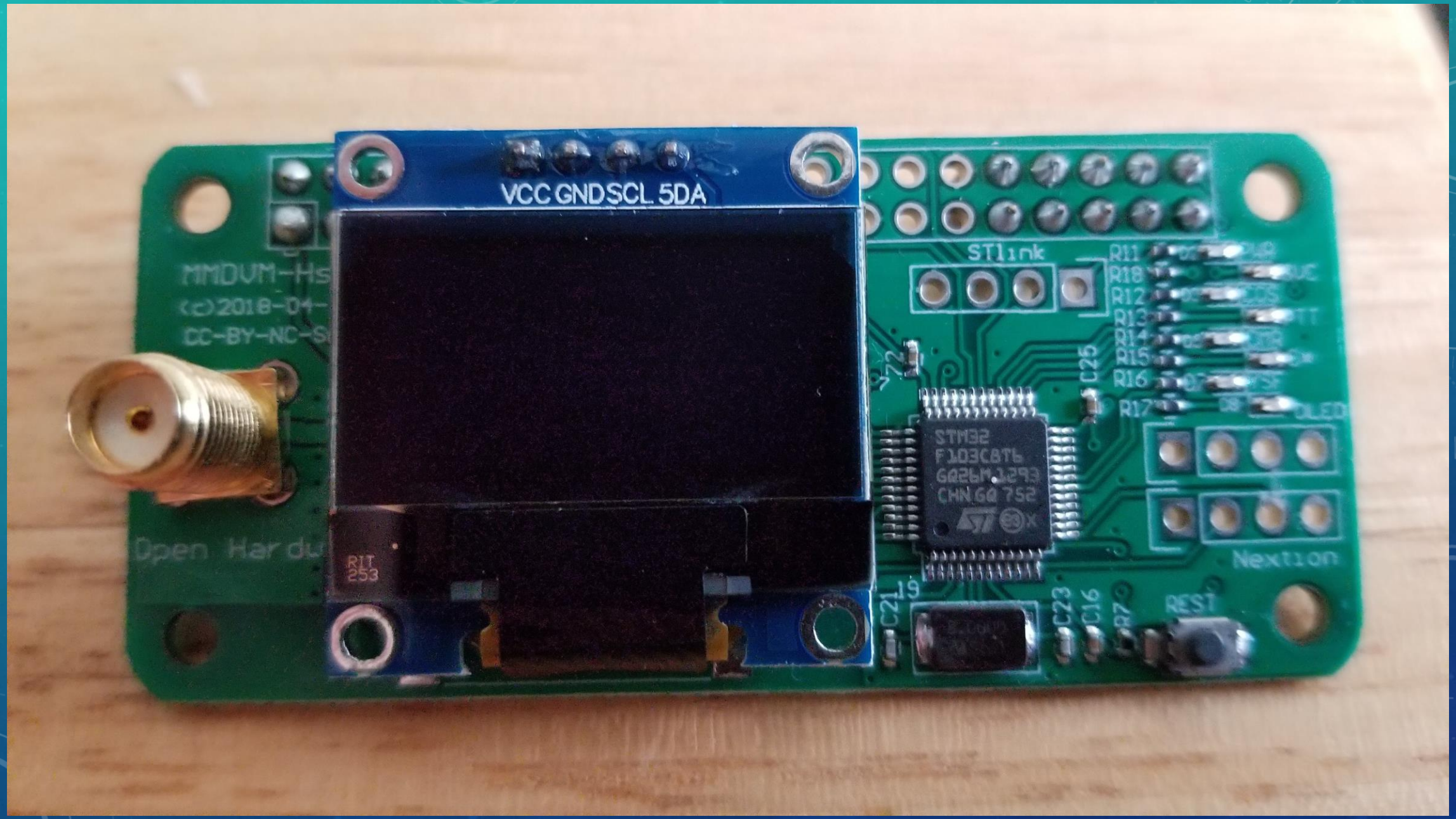
- From eBay
- Look for US sellers, but Chinese sellers could be cheaper if you're willing to wait
- Comes with MMDVM board, case, antenna, and hardware
- $46.99 shipped



INSTALL THE MMDVM HAT ON THE PI

- The MMDVM hat comes with pins that need to be soldered into the through-holes on the Raspberry Pi
- My suggestion is to insert the long side of the pins into the headers on the MMDVM board and use that to hold the short sides into the Raspberry Pi while you solder them
- Use as low heat as possible


ELPIDA
MICRO SD CARD


VCC GND SCL SDA
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R16
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CHN.GQ 752
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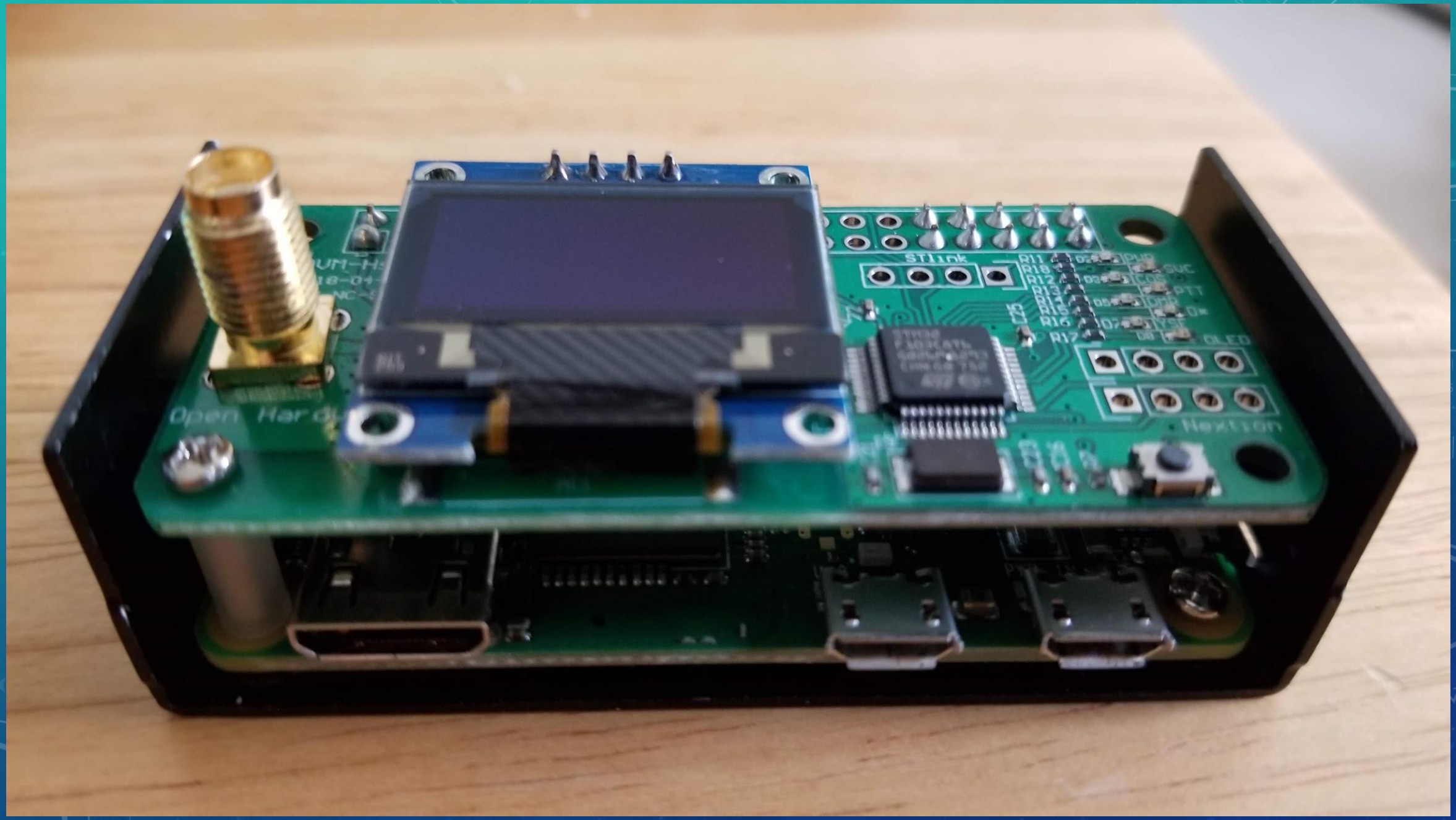

STlink
OLED
Hexiton

BAKE THE PI

- Download the Pi-star image: https://www.pistar.uk/downloads/
- You want the file Pi-Star_RPi_V3.4.x – this is for any version of the Raspberry Pi
- Download Etcher or Win32DiskImager to write the image file to the SD card. You will need an SD card reader (either embedded or USB) to do this.
  - Yes, you will overwrite any existing image or data on that card, even if it came with the Raspberry Pi that way
- Once the image has been written, eject the SD card and insert it into the slot on the Raspberry Pi

Pi-Star Downloads

Images available to Download

Pi-Star_NanoPi_Air_V3.4.16_10-Aug-2018.zip
Pi-Star_NanoPi_V3.4.16_10-Aug-2018.zip
Pi-Star_Odroid_XU4_V3.4.16_10-Aug-2018.zip
Pi-Star_OrangePi_Zero_V3.4.16_10-Aug-2018.zip
Pi-Star_RPi_V3.4.16_10-Aug-2018.zip
dvmega-flash-tools.zip

Information

Remember, all you need to do, is download the zipped version of the image that is most suitable for your Pi / Single Board Computer, Unzip the download, and then flash the image to your SD card (using your prefered image writing tool - see links below for some basic instructions), boot the Pi, wait 30-40 secs and then login to the admin portal in order to finish the setup your Pi-Star.

here: http://pi-star/admin/

Default Username: pi-star
Default Password: raspberry

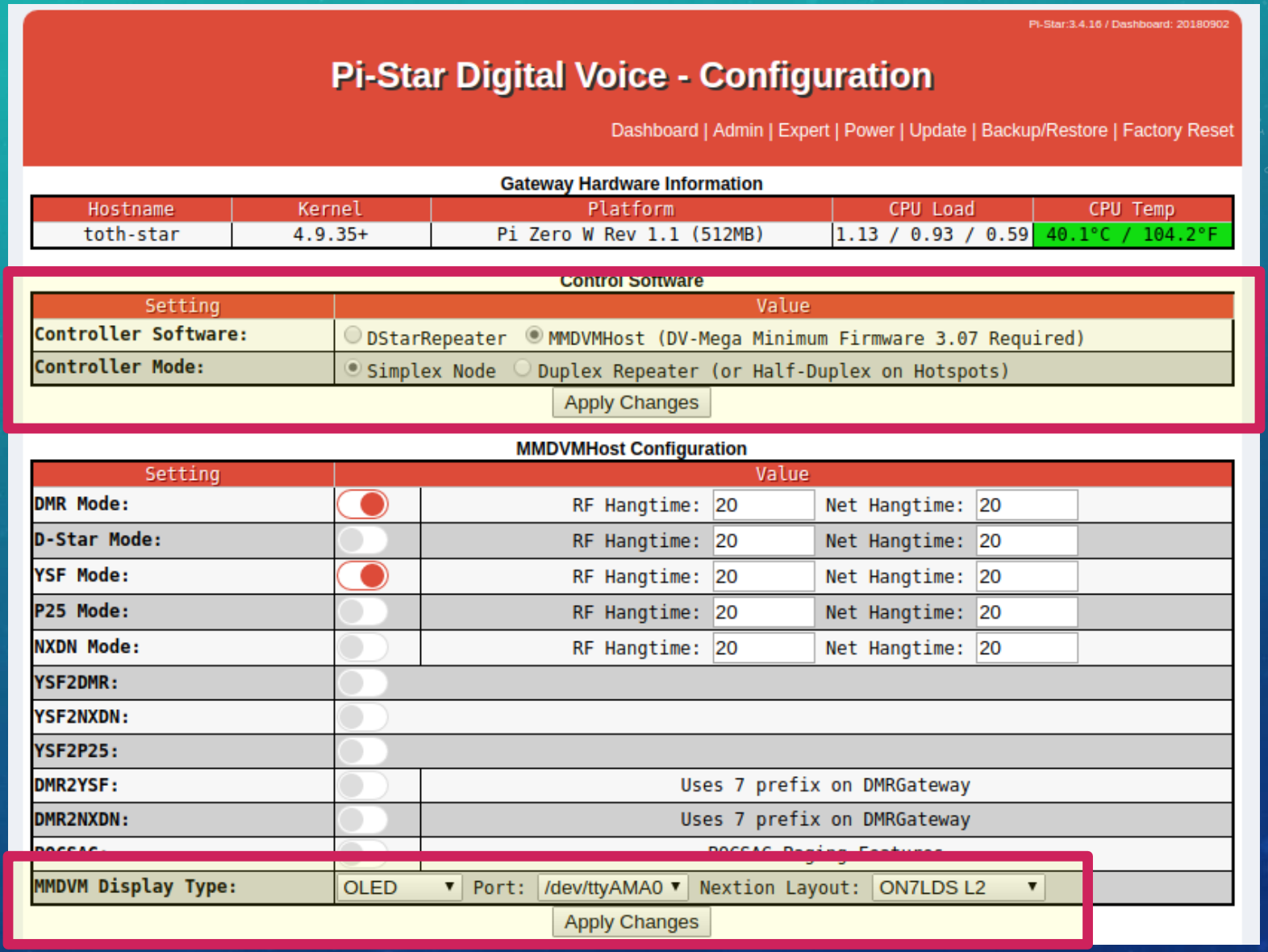
For help getting started, see this *EXCELLENT* video by Craig (W1MSG): Here

Windows Imaging Guide: Here
Mac OS Imaging Guide: Here
Linux Imaging Guide: Here

CONFIGURE PI-STAR

- Once the card is installed, apply power to the Zumspot to power it up
- Wait about a minute and you should see a new Wi-Fi network appear – you'll need to use a laptop or a computer with a Wi-Fi card to see it
- Connect to the PiStar Wi-Fi network
- Open a browser and go to http://pi-star/admin. You might need to go to http://pi-star.local/admin
- Once there, login using Username: pi-star, Password: raspberry

OLED CONFIGURATION AND MODE SELECTION



Pi-Star:3.4.16 / Dashboard: 20180902

Pi-Star Digital Voice - Configuration

Dashboard | Admin | Expert | Power | Update | Backup/Restore | Factory Reset

Gateway Hardware Information

Hostname	Kernel	Platform	CPU Load	CPU Temp
toth-star	4.9.35+	Pi Zero W Rev 1.1 (512MB)	1.13 / 0.93 / 0.59	40.1°C / 104.2°F

Control Software

Setting	Value
Controller Software:	○ DStarRepeater ◉ MMDVMHost (DV-Mega Minimum Firmware 3.07 Required)
Controller Mode:	◉ Simplex Node ○ Duplex Repeater (or Half-Duplex on Hotspots)

Apply Changes

MMDVMHost Configuration

Setting	Value			
DMR Mode:	●	RF Hangtime: 20	Net Hangtime: 20	
D-Star Mode:	○	RF Hangtime: 20	Net Hangtime: 20	
YSF Mode:	●	RF Hangtime: 20	Net Hangtime: 20	
P25 Mode:	○	RF Hangtime: 20	Net Hangtime: 20	
NXDN Mode:	○	RF Hangtime: 20	Net Hangtime: 20	
YSF2DMR:	○			
YSF2NXDN:	○			
YSF2P25:	○			
DMR2YSF:	○	Uses 7 prefix on DMRGateway		
DMR2NXDN:	○	Uses 7 prefix on DMRGateway		
[illegible]	○	[illegible]		
MMDVM Display Type:	OLED ▾	Port: /dev/ttyAMA0 ▾	Nextion Layout: ON7LDS L2 ▾	

Apply Changes

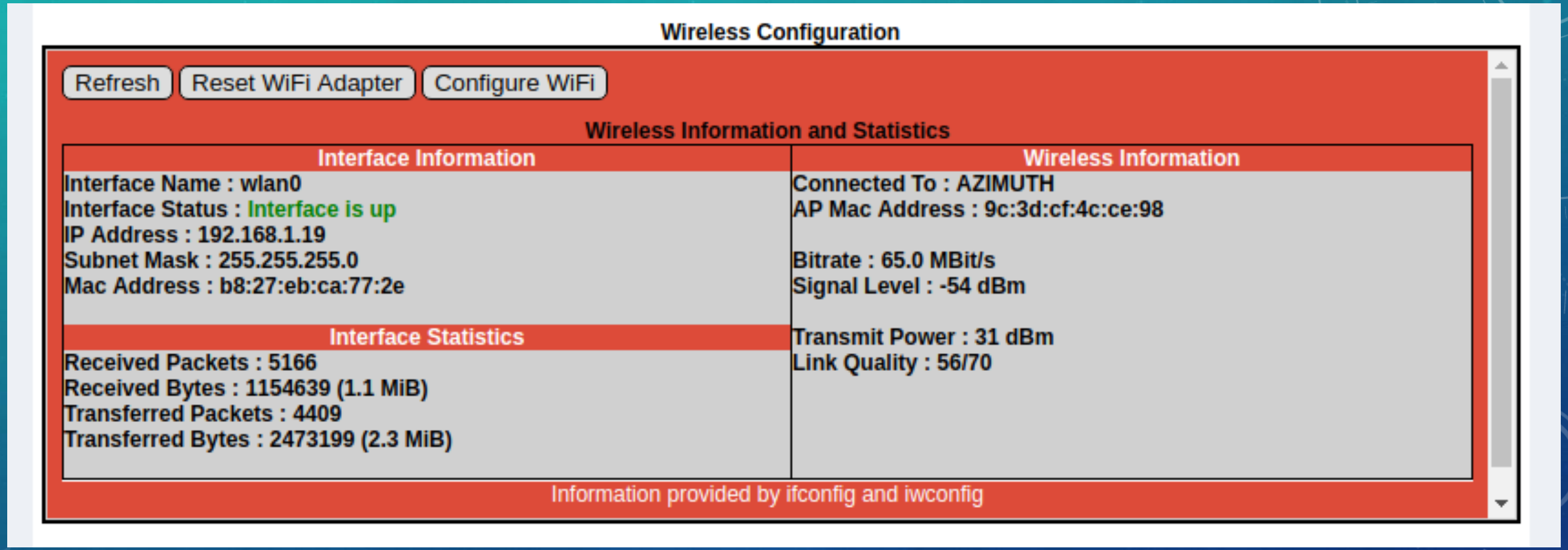
GENERAL CONFIGURATION

General Configuration

Setting	Value
Hostname:	toth-star Do not add suffixes such as .local
Node Callsign:	ND4L
CCS7/DMR ID:	1137129
Radio Frequency:	432.500.000 MHz
Latitude:	36.151281 degrees (positive value for North, negative for South)
Longitude:	-79.83424 degrees (positive value for East, negative for West)
Town:	Greensboro, FM06bd
Country:	United States
URL:	http://carolina.digitallink.us Auto Manual
Radio/Modem Type:	STM32-DVM / MMDVM_HS - Raspberry Pi Hat (GPIO)
Node Type:	Private Public
System Time Zone:	America/New_York
Dashboard Language:	english_us

Apply Changes

WI-FI CONFIGURATION



TROUBLESHOOTING

- No default Wi-Fi network?
  - Connect a keyboard to the OTG cable and plug it into a micro-USB slot
  - Connect the mini-HDMI cable to the Raspberry Pi and connect the other end to your TV
  - Boot the Pi
  - Make changes via the console
  - You must enter Read/Write mode at the command line before any changes can be made permanent. To do that, type `rpi-rw` at the command prompt and hit "Enter."
  - Troubleshoot via command line
- Language is wrong (UK English)
  - At the console on the web page (or SSH console), type `rpi-rw` first, and then `sudo dpkg-reconfigure locales`
  - Follow the on-screen directions to change localization settings including keyboard settings, time zone, etc.
- Can't resolve http://pi-star? Find the IP address on your phone or router and connect to that
- If you change the hostname in the General Configuration area, that will change the URL you need to use in the browser to access the hotspot.

GOOD RESOURCES

- Setup video: https://www.youtube.com/watch?v=B5G4gYDdJeQ
- Awesome page on Pi-Star idiosyncrasies: https://amateurradionotes.com/pi-star-notes.htm
- Questions and answers: https://forum.pistar.uk/