

LoRaWAN Adventures

Radio Signals in Glarus Süd

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What is LoRaWAN

Long Range Wide Area Network

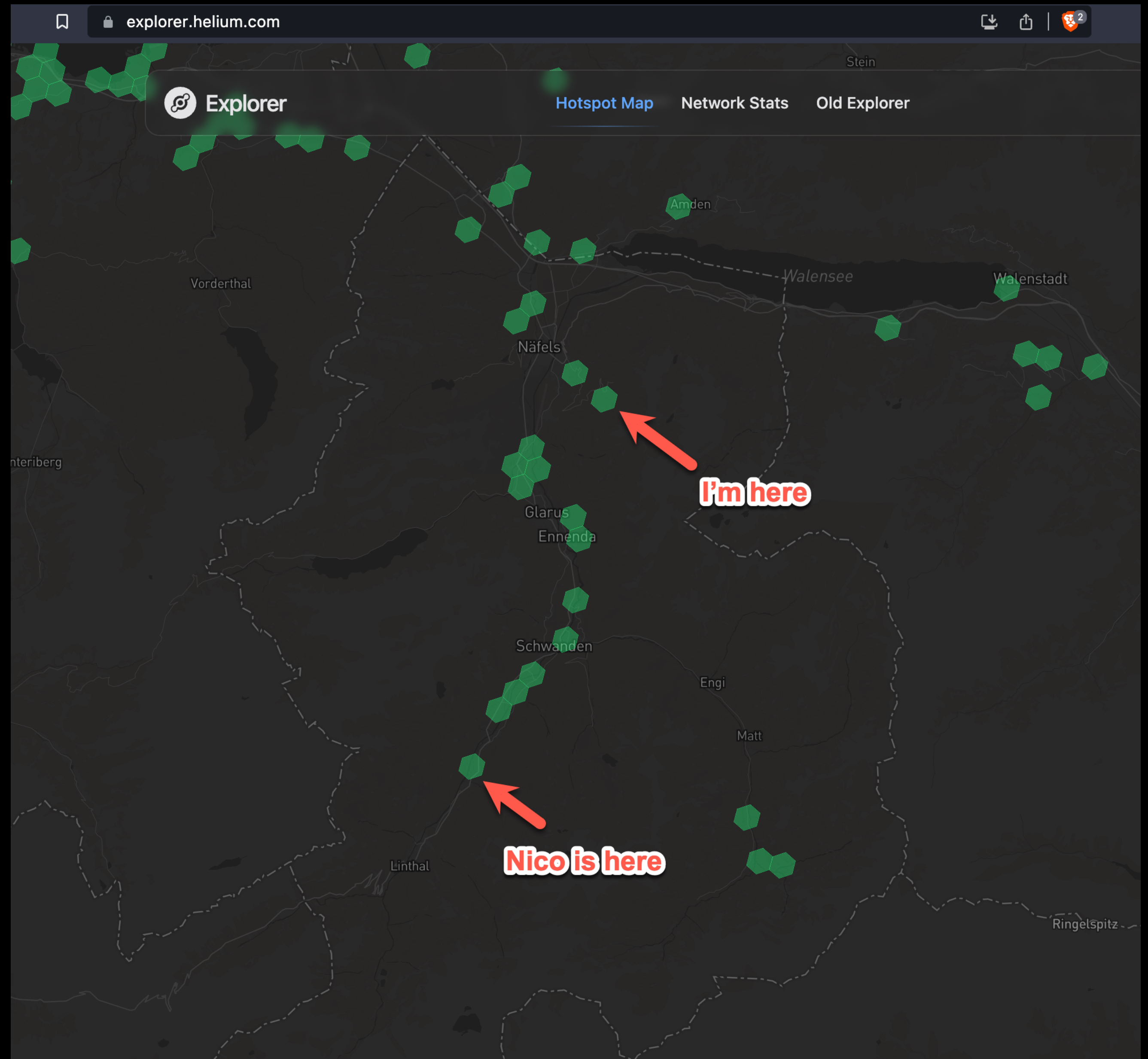
- Low Power Wireless Network Protocol
- Datarate 292bps - 50Kbps
- Frequency 433-434Mhz (ISM Region 1) / 863 - 870Mhz (SRD Band Europe)
- Distance 2 - 40km
- Needs about 10mA on operating, 100nA on Sleep

Helium Network

Decentralized wireless Internet of Things (IoT) network

- Rewarded with Crypto (HNT / IOT)
- Started in 2013
- Cheap for devices (about \$0.10/month)

Helium Explorer



Meshtastic

<https://meshtastic.org>

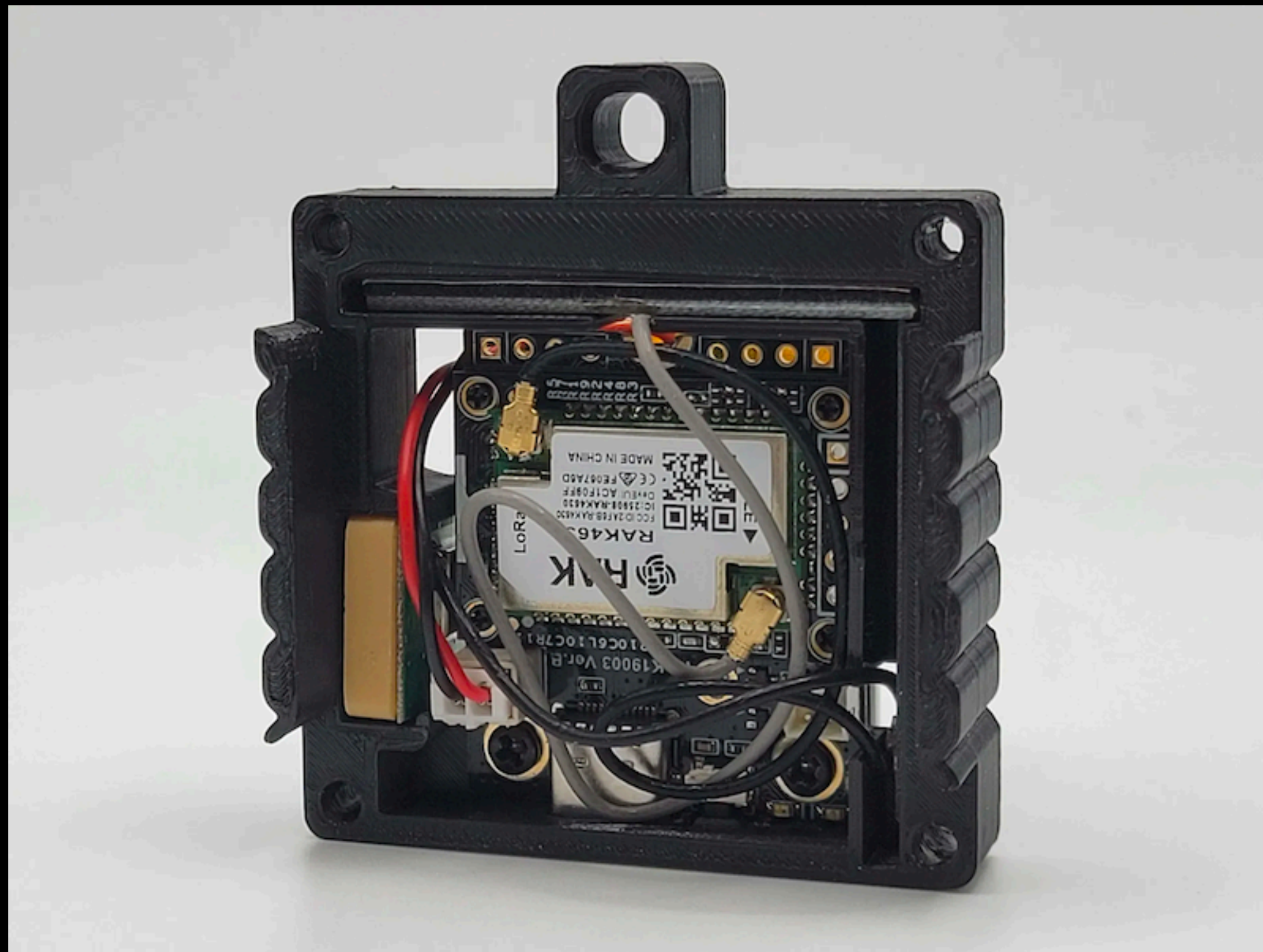
- Opensource Off-Grid Network
- Decentralized mesh network
- Low Power (Well LoRaWAN)

Meshtastic Devices

<https://meshtastic.org/docs/hardware/devices/rak/enclosures>



Meshtastic more devices



Demo Time

- Used Meshtastic Matrix Gateway
- <https://github.com/geoffwhittington/meshtastic-matrix-relay>
- <https://github.com/geoffwhittington/meshtastic-matrix-relay/wiki/Plugins>