

Superpower
validator
nodes with a
custom radio
interface



Ethereum Lora



SUPPORTED BY:

**ETHEREUM
FOUNDATION**

Run a Node Grants
Round 2023



2.6 billion people/33%
global population
without access to the
internet (ITU '23 report)

**Rural areas of the
world are still
excluded from
internet access**

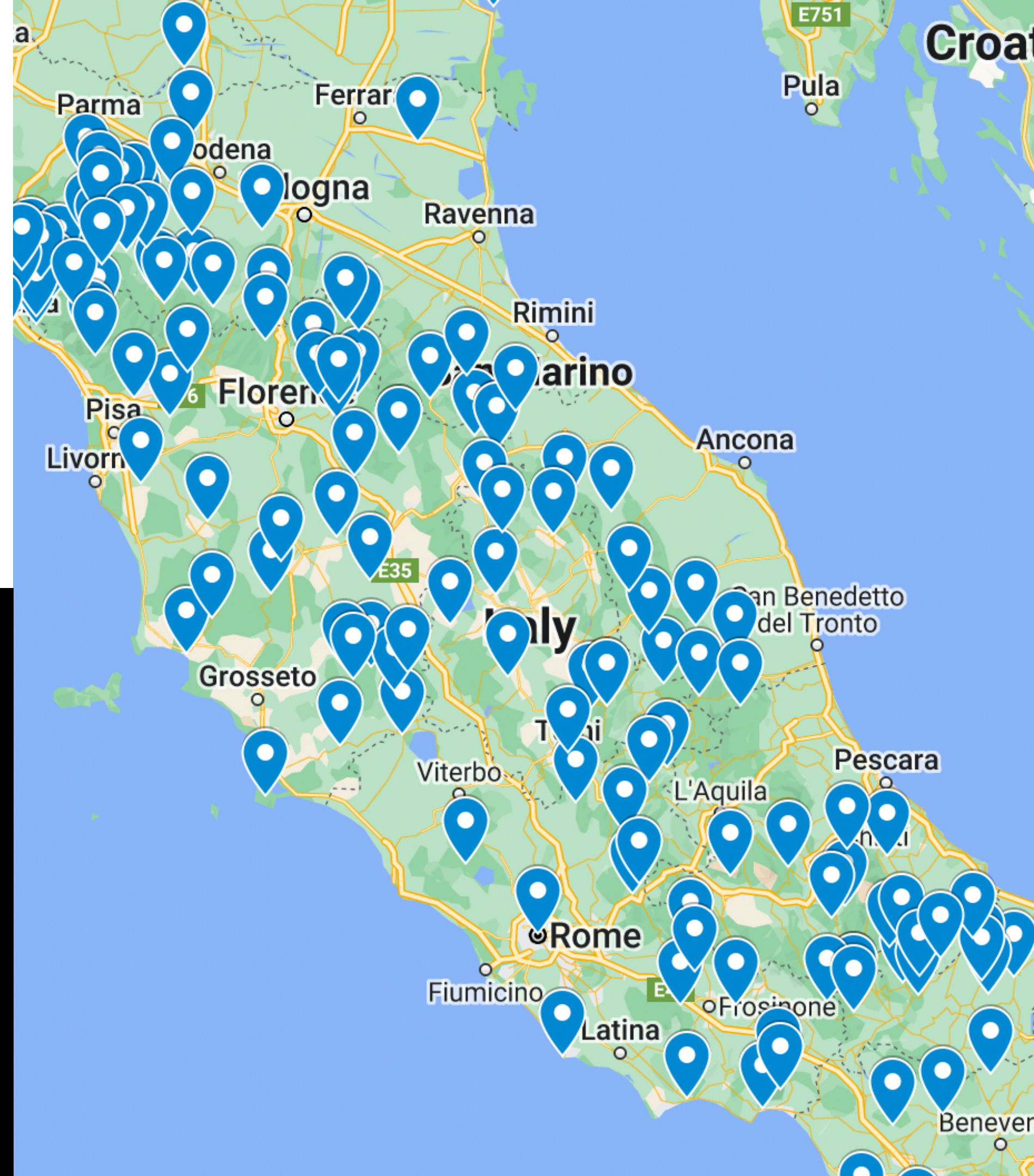
France

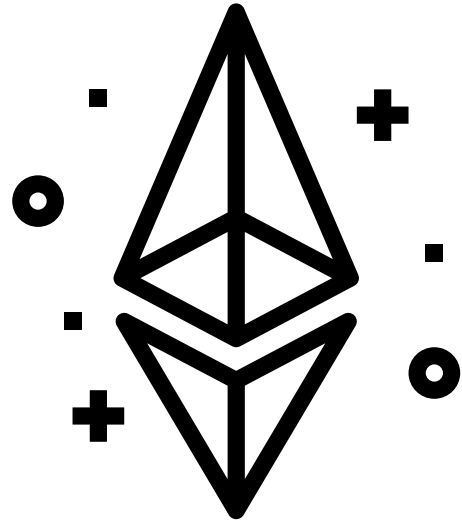
GSM and Internet
connectivity are still a
majour issue



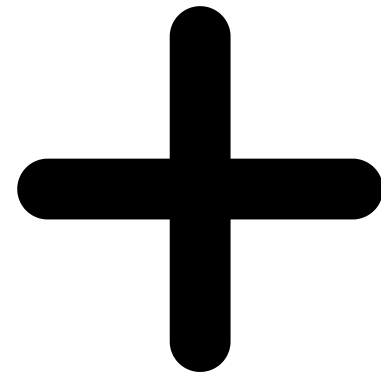
Italy

GSM and Internet
connectivity are still a
major issue

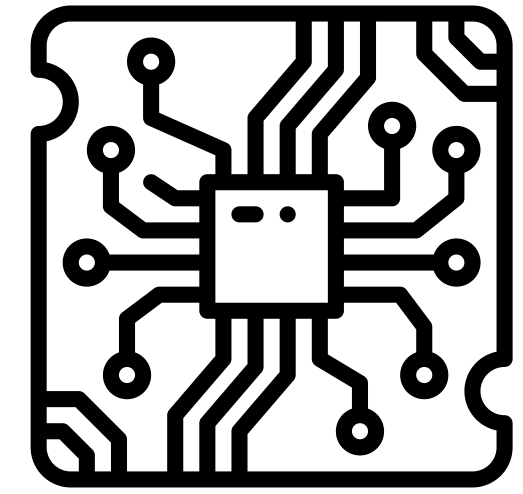
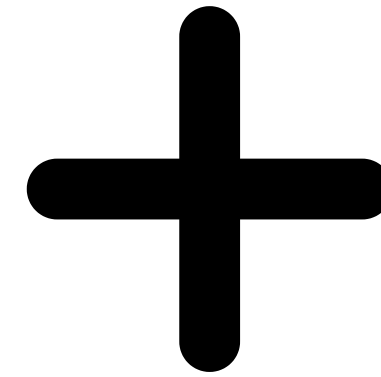




RPC Node



Radio



Adapter

how

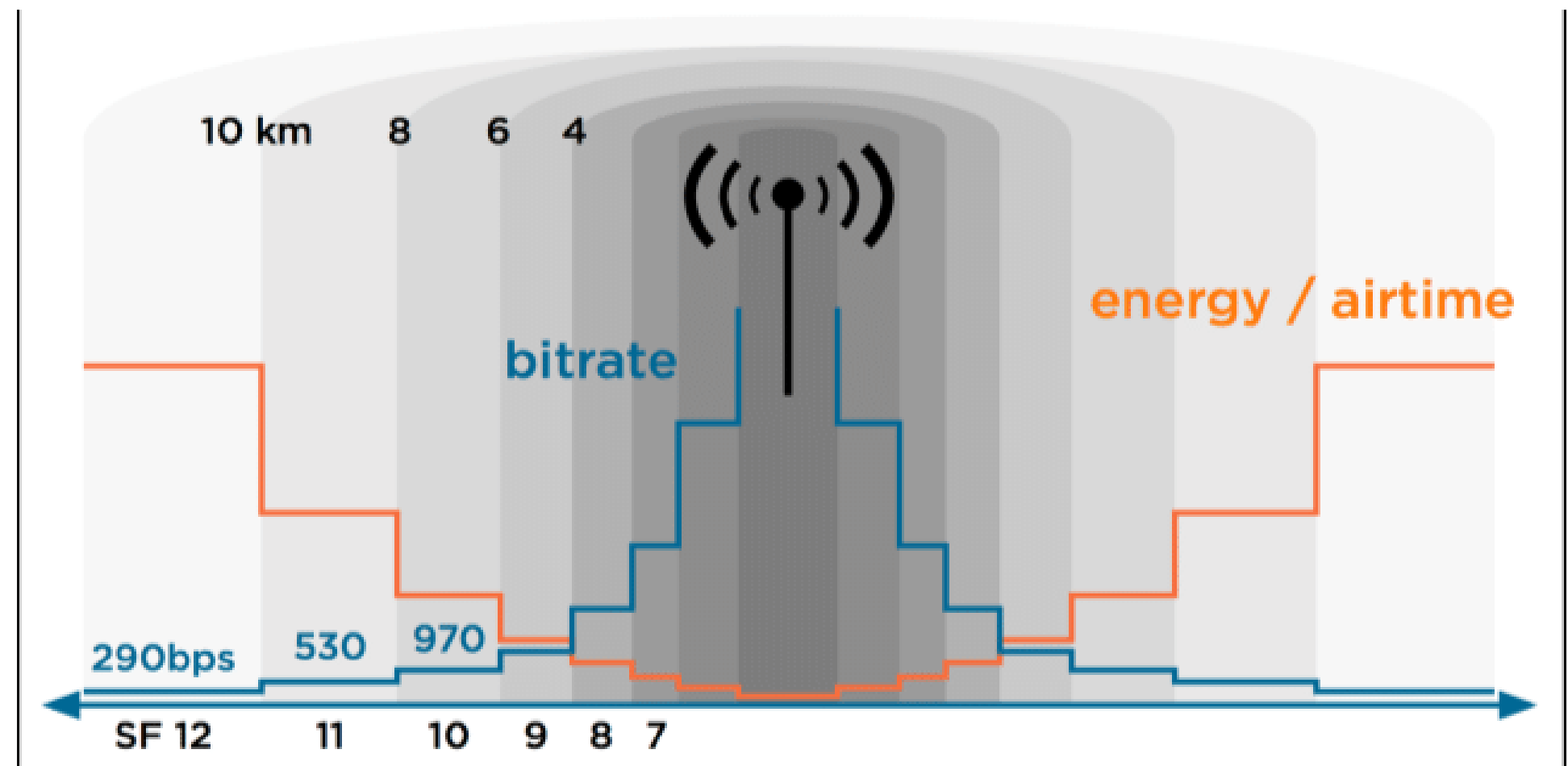
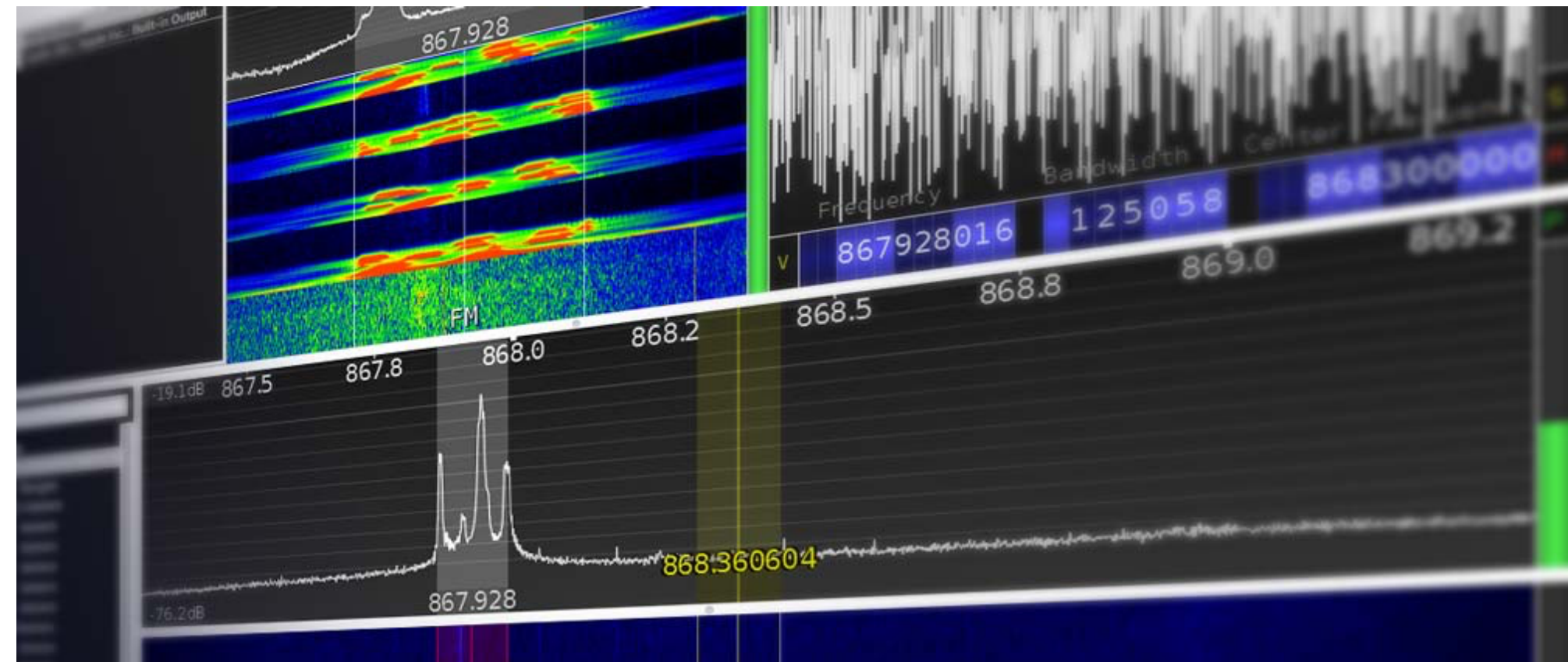
Connecting Ethereum light
and full nodes to users for
under \$30 without the need
for a ham radio license

A portable radio interface
for Ethereum nodes to
provide a radio
connection where
cellular or wifi are not
available

diy

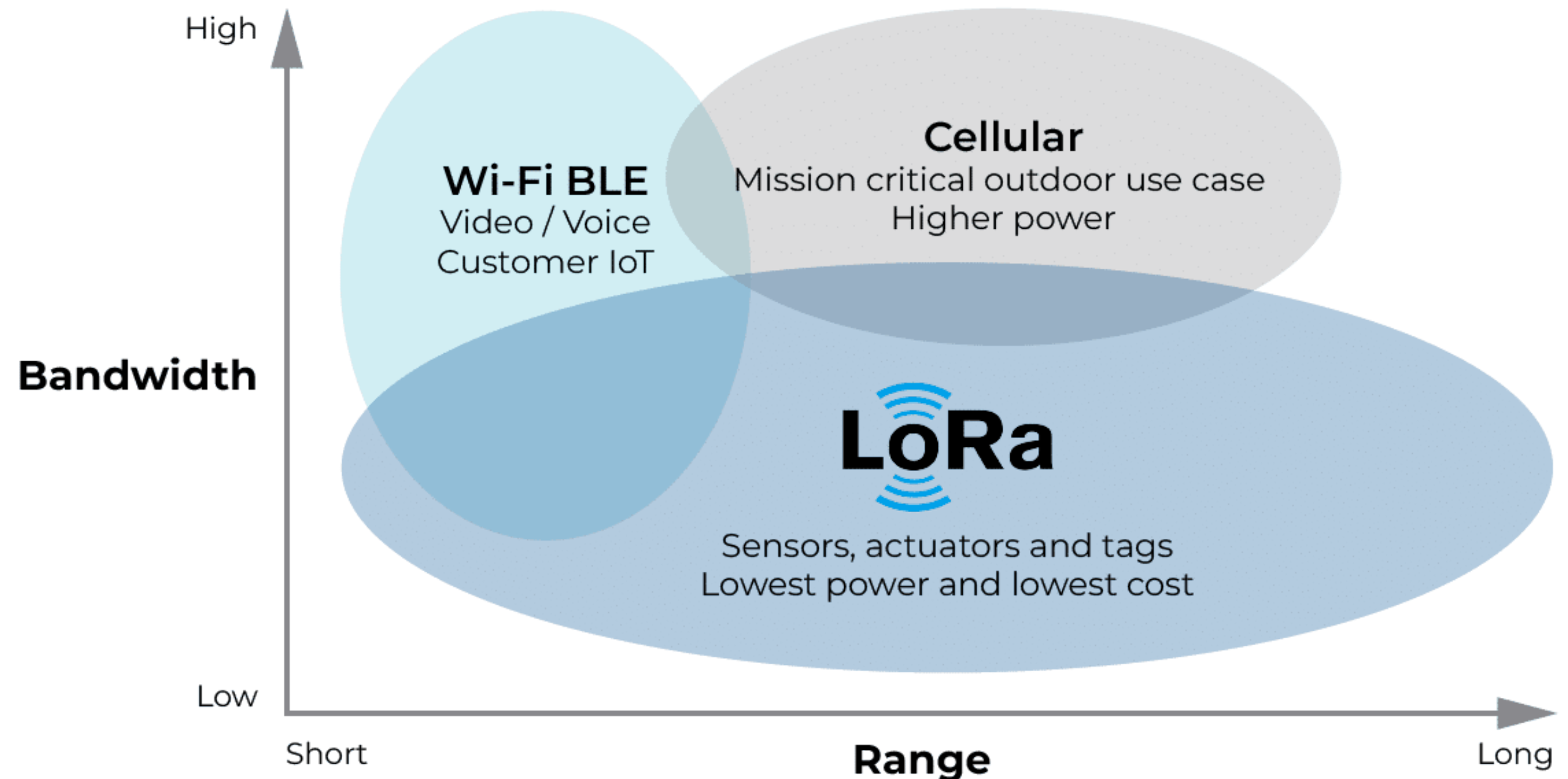


Using LoRa, a long-range and low-power communication protocol, the module can achieve **up to 100km** (in rural areas) or 5km (in urban areas) and 2.4kbps in uplink **with 100mW** or less of transmitted power



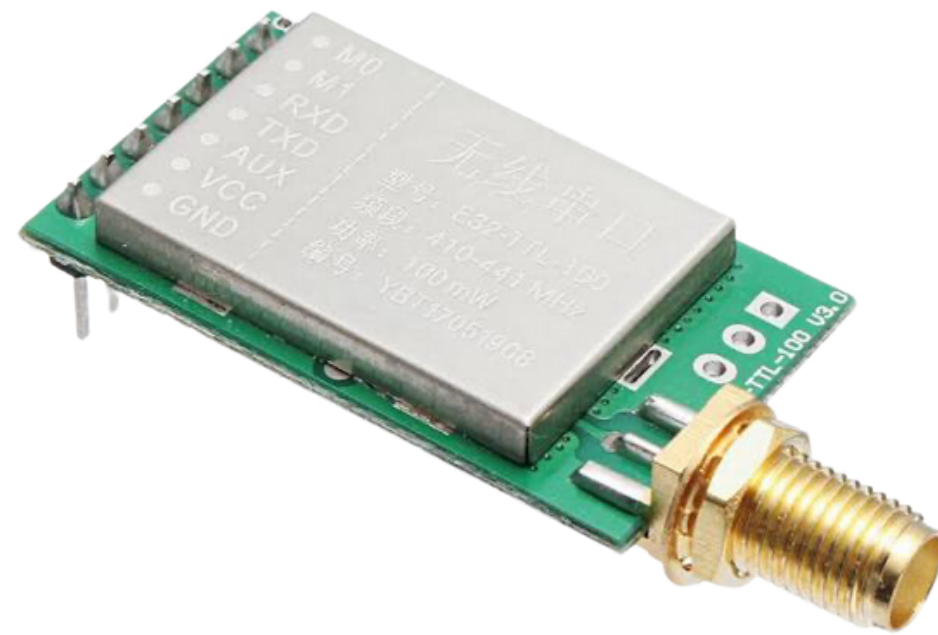
Uses the legal
and free ISM
band, one
node can
cover a small
town

Region	Frequency (MHz)	Region	Frequency (MHz)
Asia	433	Australia	915-928
Europe, Russia, India, Africa (parts)	863-870	Canada	779-787
US	902-928	China	779-787, 470-510

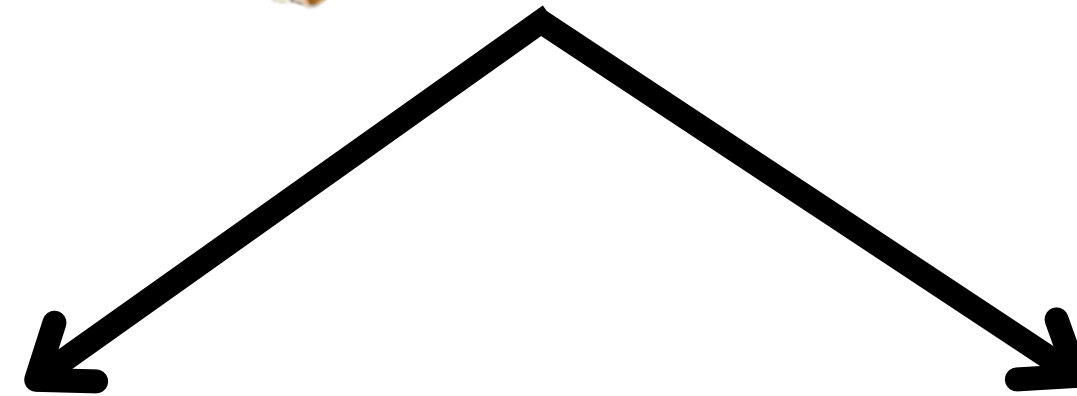
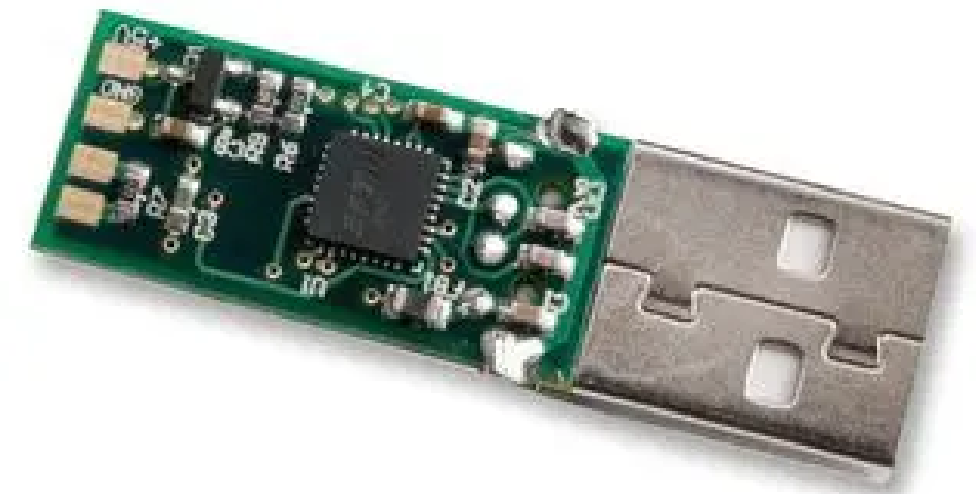


Minimal costs for
the user and for
the node operator

The fiberglass or
a Yagi antenna
(8dbi gain) are
recommended for
outdoor usage.

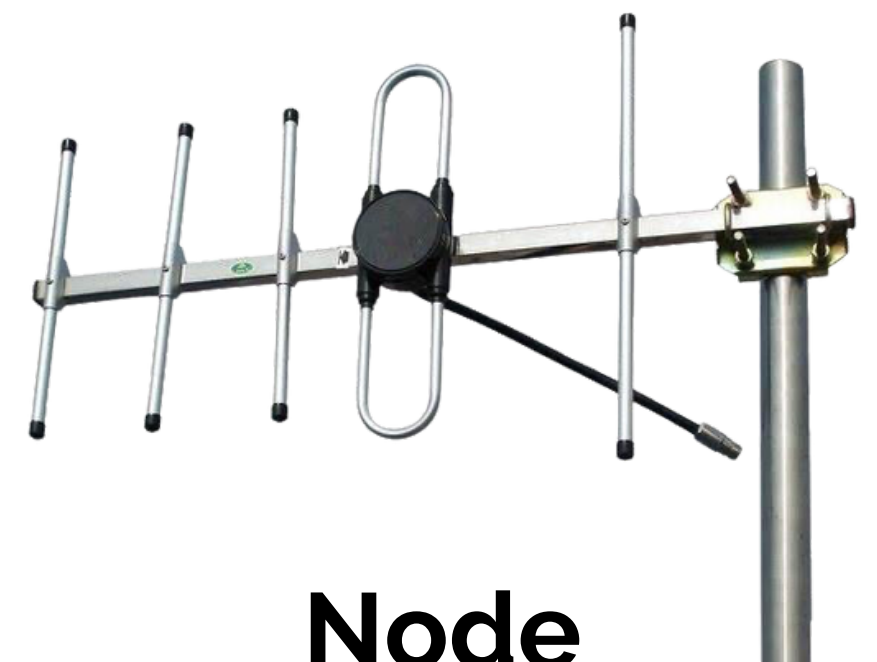


+



Client

\$20



Node

\$60

Thank You



Build your own
or peek into
the codebase

