

SINGULARITY COMMUNICATION PLATFORM



Software-Based Platform that enables ad-hoc deployment of resilient C4ISTAR networks

Uninterrupted hybrid comms for warfighters

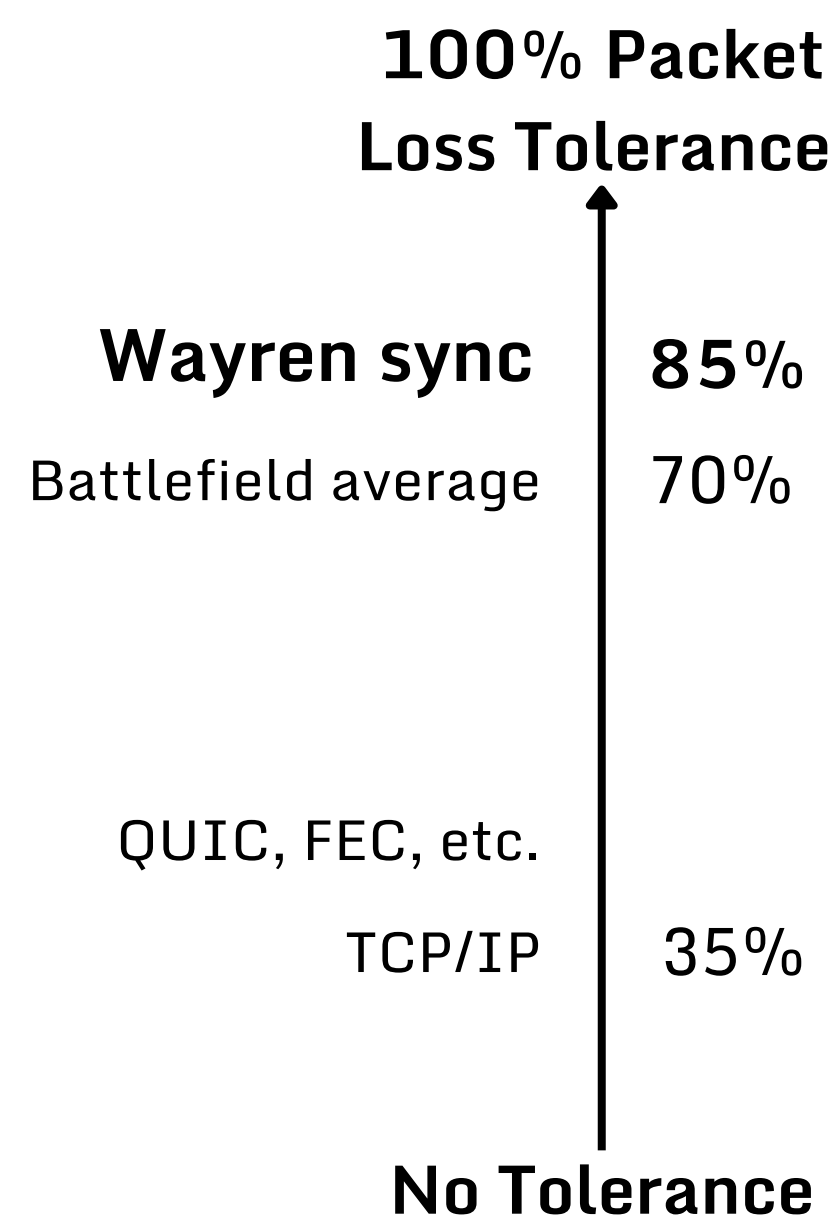
Increases situational awareness, operational efficiency and survivability by ensuring uninterrupted data exchange in austere conditions. The Platform synchronises data in a P2P manner, concurrently utilising hybrid networks such as internet, digital radios, bluetooth and others.

Efficient and resilient

Data sync is resilient to bandwidth limitations and disruptions, being able to operate with more than 85% packet loss. Offline nodes will receive old messages when they come back online and lost messages will be automatically retransmitted.

Runs on any device and C2 system

Runs on phones, tablets, laptops and servers. Connecting everything together using our App, TAK plugin or integrated into existing systems



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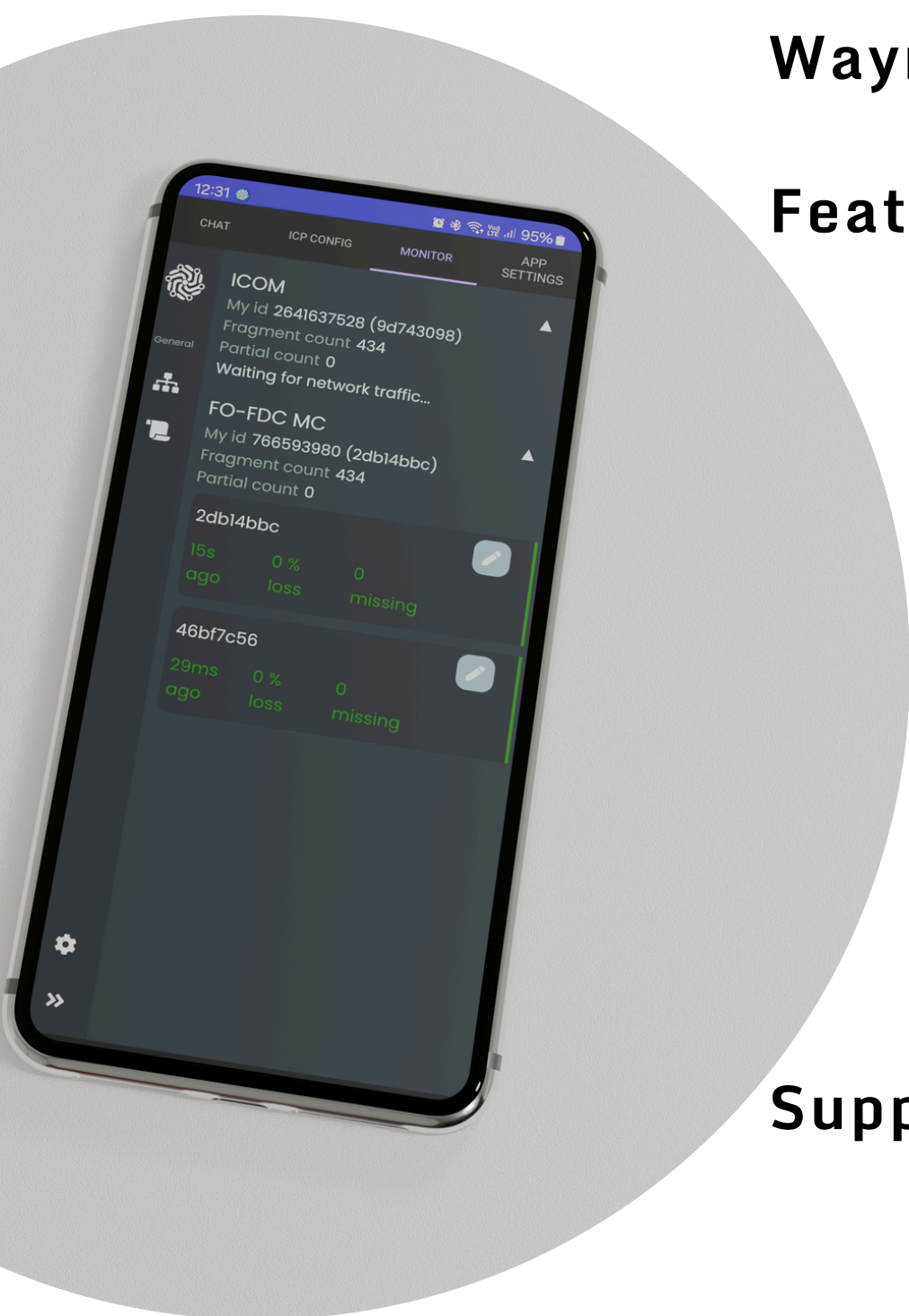
www.wayren.eu



[@wayren](https://www.linkedin.com/company/wayren)



PRODUCT SPECIFICATION



Wayren Singularity

Features

Supported radios

Digital Waveform for analog channel

Supported platforms

Supported applications

Encryption method

Specification

- Platform for distributed hybrid mesh networks
 - Data synchronization that is resilient to bandwidth limitations and communication disruptions.
 - Virtual channels for restricting data to certain network segments
 - Wayren Chat, Network Monitor, Configurator
 - OTA Updates
-
- IP networks and radios
 - Analogue radios with headset capability (requires Wayren Hub)
 - Radios with serial data (Wired or Bluetooth)
 - Other integrations available on request
 - Tested: L3Harris 7850M, ICOM iDAS (IC-F3XXXD), Baofeng UV-5R, Himera G1 Pro
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- 1kbps with error correction and channel equalization
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- Windows, Linux and Android
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- CivTAK (with plugin)
 - TOORU
 - MIMS
 - SDK for integrating other apps
-
- ChaCha20 with 256-bit cipher, other methods available on request

PRODUCT SPECIFICATION

Wayren Hub

Specification

Features

- Interface for different radios and equipment such as laser range finders. Wired or Bluetooth connection with end user device.
- Bridge between multiple radios into one data network including digitalising analogue radios.

I/O

- Bluetooth
- 4 circular metal connectors with caps
 - USB
 - 2x RS232, Analogue*
 - Ethernet
- * Two combined analogue/digital ports

Power delivery

- 83Wh rechargeable battery
- Can operate as a power bank
- Up to one month of charge
- Power button with battery level indicator

Enclosure

- Aluminium with IP67 protection
- 13 x 10 x 5 cm
- MIL-STD-810

Cables

- 1x USB Type C or A
- Others as specified



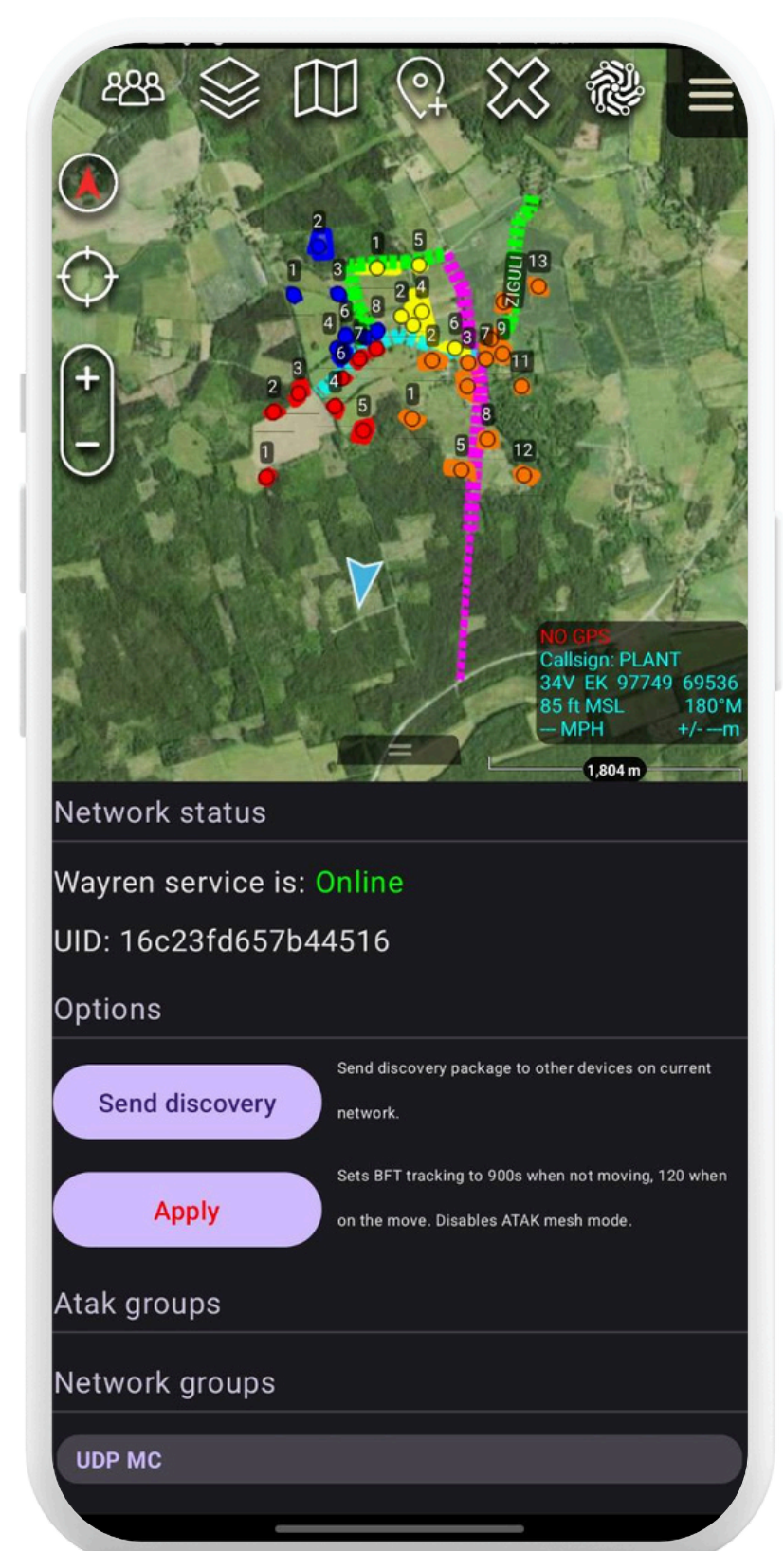
PRODUCT SPECIFICATION

CivATAK plugin Specification

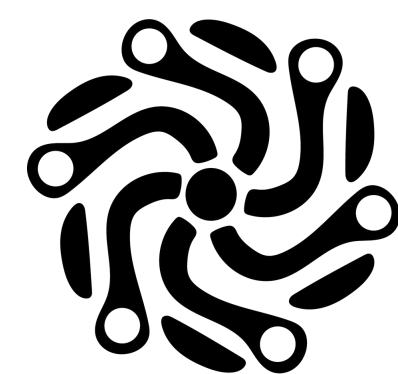
Description Wayren CivATAK plugin provides integration with Singularity capabilities. Enables CivTAK decentralised operation and data synchronization over hybrid networks.

- Features**
- Integrates Singularity capabilities
 - Hybrid-mesh mode
 - No TAK server needed
 - Pre-made configurations
 - Data filtering based on groups and channels
 - Works with common VPN providers (Zerotier) and self-hosted environments (OpenVPN)

- Planned**
- TAK server support
 - Voice messages
 - Radio silence mode



EXAMPLE HUB USE-CASES



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Soldier Equipment Hub



Network Data Bridge



EXAMPLE WAYREN C2 NETWORK



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