

# NoNet: The Definitive Data Backbone for Off-Grid Worlds

Radically affordable, internet-free mesh networks engineered for the world's most challenging environments.



## A Continental-Scale Data Blackout

# 50%

Nearly 50% of rural India lacks internet access. In these underserved regions, billions of critical data points are lost daily. This lack of affordable, reliable networks prevents access to vital geo-specific data in real time.

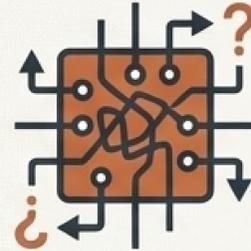


# Why Legacy Systems Fail in the Real World



## Cost Prohibitive

Enterprise nodes cost thousands, making dense networks financially impossible.



## Overly Complex

Difficult setup and maintenance requirements are impractical for remote deployment.



## Fundamentally Fragile

Power-hungry, centralised systems collapse quickly in harsh real-world conditions.



## Limited Coverage

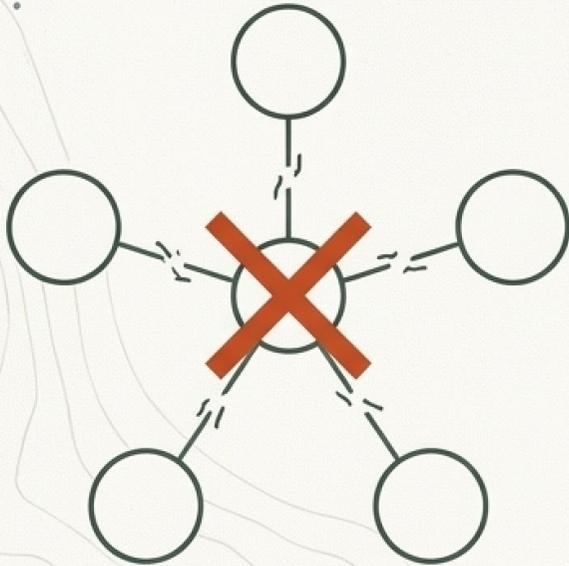
Gateways and subscriptions create coverage gaps, leaving many regions disconnected.

Today's satellite and proprietary mesh solutions are too expensive, complex, and fragile to scale where they are needed most.

# A Fundamentally More Resilient Architecture

## Traditional IoT (Star Network)

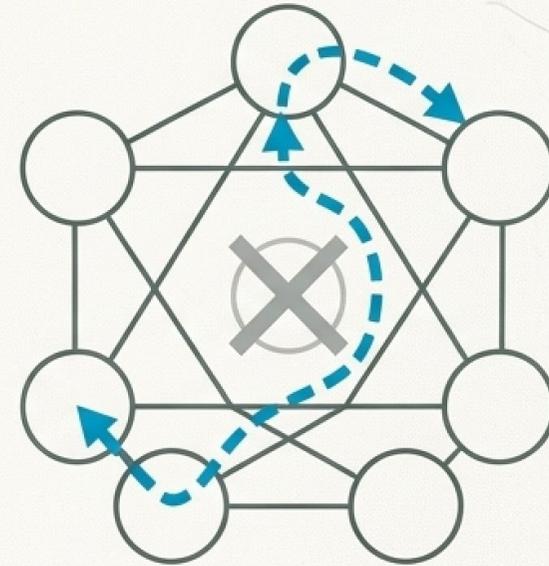
Single Point of Failure



If the central gateway fails, the entire network goes down. All data is lost.

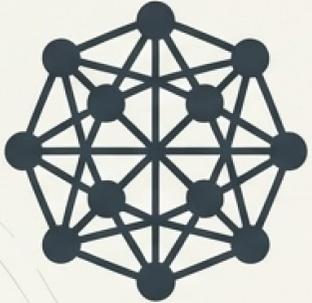
## NoNet (Mesh Network)

Decentralised and Self-Healing



If a node fails, data automatically finds a new path. The network heals itself.

# Four Pillars of Radical Resilience



## Internet-Free Mesh

No Wi-Fi or cellular needed. Nodes form a self-healing mesh network that works anywhere.



## Radical Affordability

At under ₹8,000, nodes are over 90% cheaper than enterprise alternatives (costing over ₹2 Lakh), making mass deployment feasible.



## Decentralised & Self-Healing

No single point of failure. The mesh automatically re-routes data if a node fails, ensuring continuous operation.

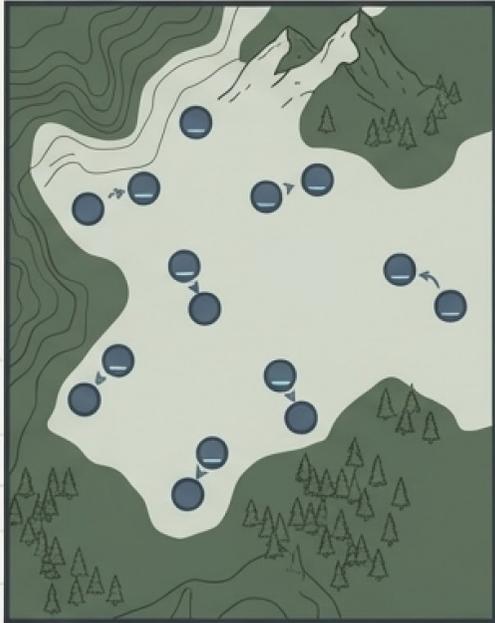


## The Digital Black Box

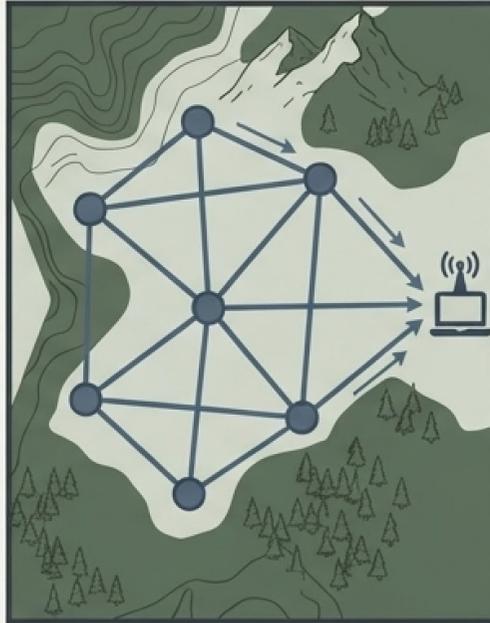
Guaranteed zero data loss. Every node logs all data locally to an SD card, creating a complete record even if the network is down.

# The Self-Healing Lifecycle in Action

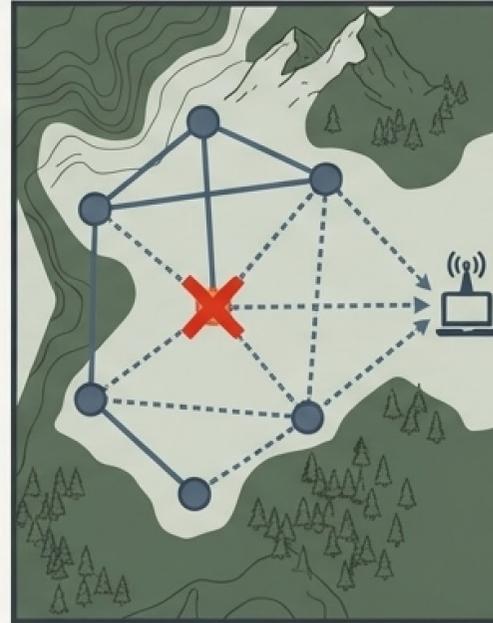
1. Deploy



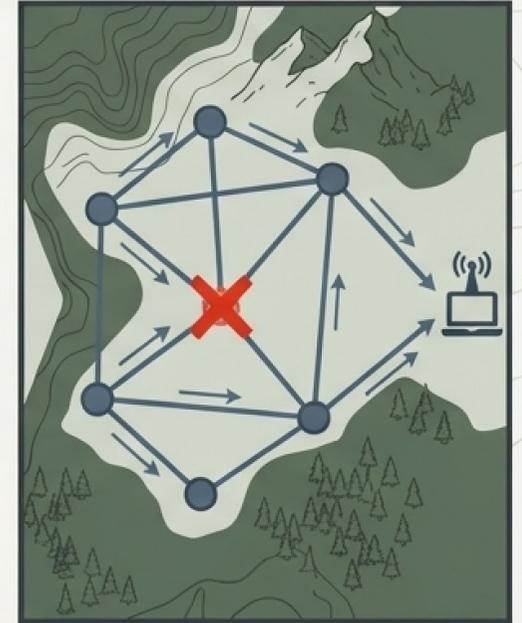
2. Connect



3. Fail

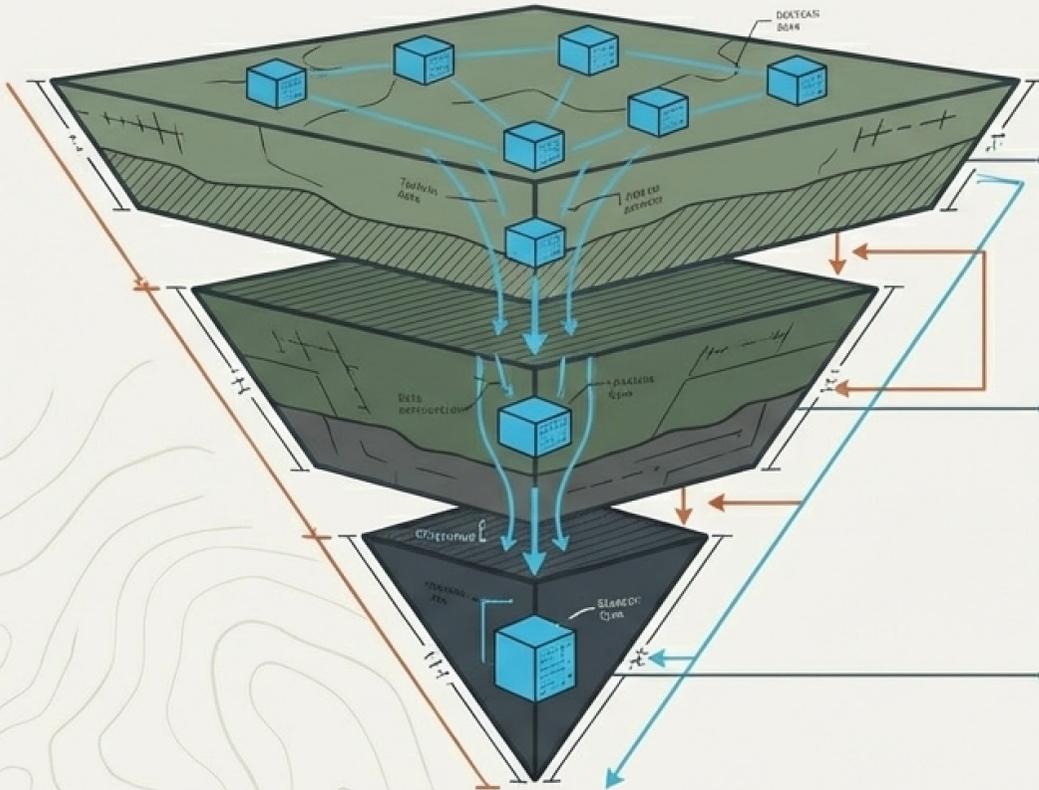


4. Heal



Infrastructure-free communication ensures continuous data flow. The network automatically reassigns roles and restores topology without human intervention when a node drops.

# The Zero Data Loss Safety Net



## Layer 1: ESP-NOW Mesh Communication

Infrastructure-free, low-power peer-to-peer network network for continuous flow.

## Layer 2: LoRa Fallback Layer

Activates instantly when mesh communication fails, providing long-range emergency alert transmission and Beacon Mode for lost device recovery.

## Layer 3: Black Box Data Logging

On-device SD card stores time-stamped sensor data locally, preventing any data loss during total communication failure.

A multi-layered architecture designed to guarantee mission-critical geo-data in any outage.

# Hardware Anatomy: Built for the Wild

**3D Enclosure**  
Rugged, weather-resistant housing designed specifically for harsh field deployment.



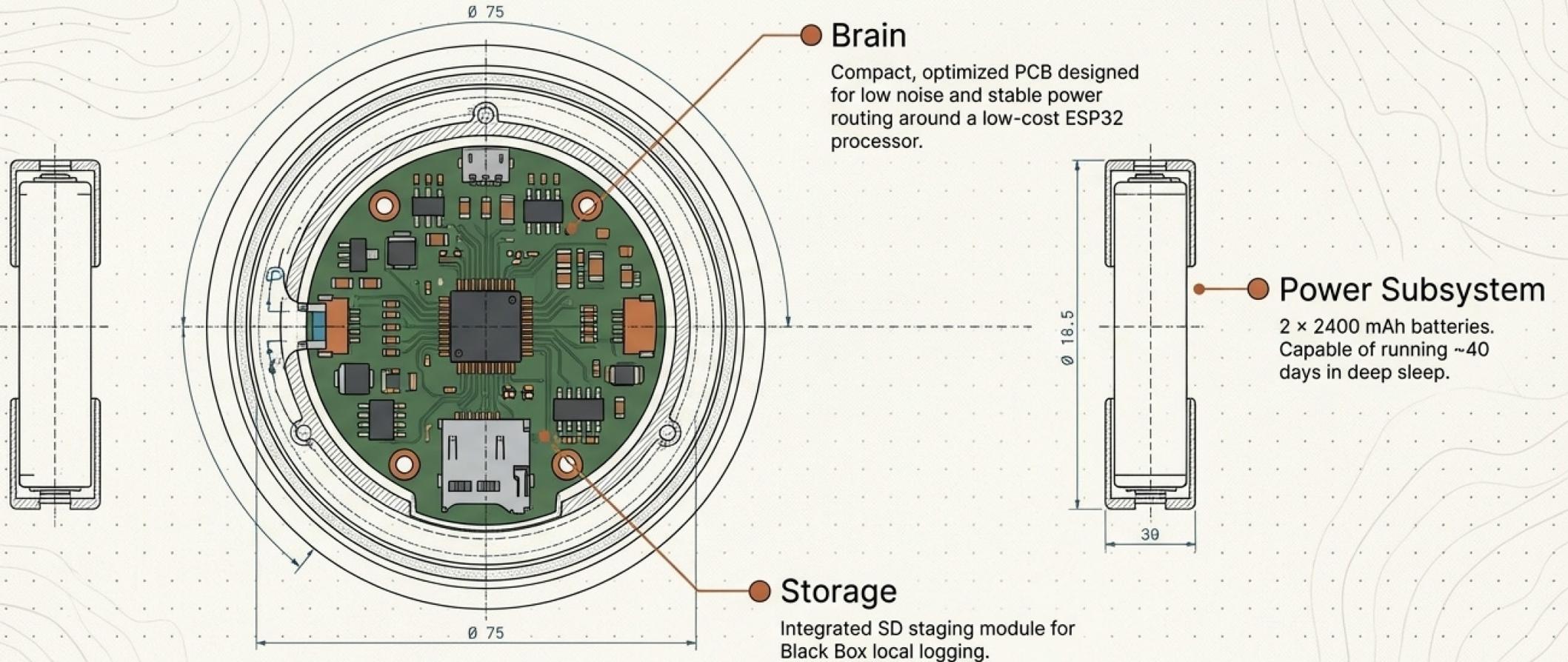
**Dual-Band Antenna**

Integrated custom slot antenna tuned for both ESP-NOW and LoRa bands.

**Flexible TPU Tail**

Improves soil contact and supports embedded strain sensing for high-fidelity data capture.

# Hardware Anatomy: The Core



Scalable deployment built entirely on accessible, high-efficiency components.

# Software: Intelligence at the Edge

Activation graph



## ML-Based Irrigation Intelligence

Real-time anomaly detection generates smart alerts and optimises irrigation decisions per node. Dual Mode Operation balances low-power standby with active sensing. Charcoal Inter

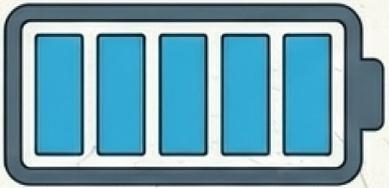
## Secure ESP-NOW OTA Firmware



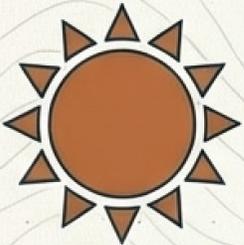
Failsafe over-the-air updates ensure nodes independently verify and recover to stable firmware automatically.

# Feasibility and Unit Economics

## Power Independence



40 Days Deep Sleep



=

2 Hours Peak Sunlight =  
Near-Continuous Operation

Lower latency and stability at higher data rates.

## Radical Affordability

Legacy Enterprise Node (>₹2,00,000)

NoNet Node (<₹8,000)

Radical affordability meets total energy independence.  
Over 90% cheaper than proprietary alternatives.

# Anticipating Field Realities

## Challenge

ML accuracy variation under changing field conditions.

Environmental stress (rain, humidity, soil corrosion).

Network instability in extreme terrain.

## Mitigation

Field data collection loop established for continuous ML retraining.

IP-rated enclosure and specially coated PCB for extended durability.

Integrated LoRa fallback and self-healing mesh logic for guaranteed communication reliability.

# The Ultimate Infrastructure for the Infrastructure-Less



## THE PROBLEM

Billions of critical data points are lost daily in remote regions due to costly, fragile, and complex connectivity systems.

## OUR SOLUTION

NoNet is a radically affordable, internet-free, self-healing mesh network that guarantees zero data loss, even in total network outages.

## THE OPPORTUNITY

We are positioned to capture a significant share of the \$1.9B Asia-Pacific monitoring market, starting with high-value applications in India.