DE_RETICULAR // HORIZEN_BOOST_APP

The Octagon Privacy Layer

Migrating Sovereign Rural Infrastructure to Confidential Edge Compute.

NODE 1: USA

NODE 4: UGANDA

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The Transparency Paradox

THE CONFLICT

Rural infrastructure projects are starved for capital. To access DeFi liquidity, they must provide verifiable proof of operations. However, industrial clients demand absolute sovereignty and privacy.

THE GAP

Current solutions force a choice: Total Transparency (Surveillance) or Total Privacy (Opaque/Unfundable). Industries like AgTech and Healthcare cannot use Edge AI if it means leaking proprietary data.

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THE HORIZEN STRATEGY

From ‘Rural Cloud’ to Confidential Cloud

We are applying to upgrade our stack into a Privacy-Preserving AI Network. By utilizing Horizen’s L3 infrastructure and hardware TEEs, we enable “Blind Compute”—processing sensitive data without the node operator ever seeing it.

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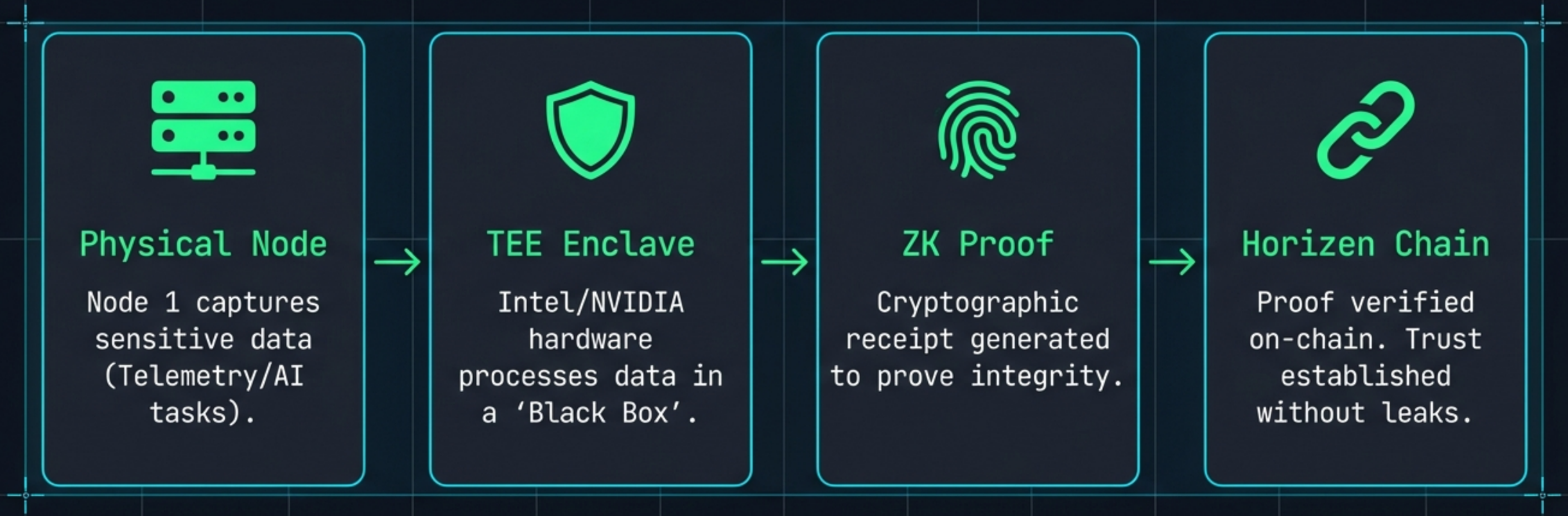
The Supermatch: DeReticular x Horizen



Result: Verifiable, Confidential Edge Compute at Scale.

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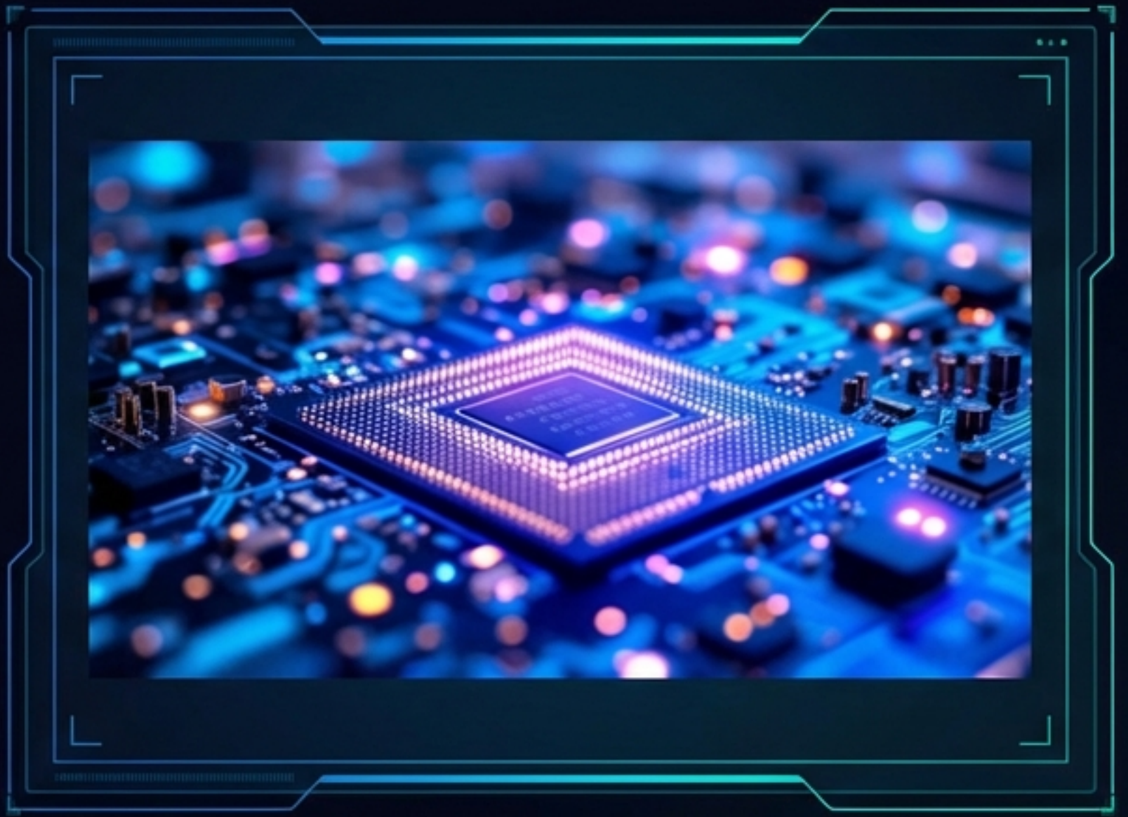
The Privacy Stack

- **Layer 1: Hardware Root of Trust**
  Intel SGX & NVIDIA Confidential Compute chips create a hardware-enforced "Black Box" (TEE).
- **Layer 2: Inference Engine**
  AI models run inside the TEE. Data enters encrypted, is processed, and leaves encrypted.
- **Layer 3: Horizen Verification**
  Node 1 generates a "Remote Attestation" quote. Horizen verifies this proof on-chain to confirm code integrity.



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Node 1: Infra in a Suitcase

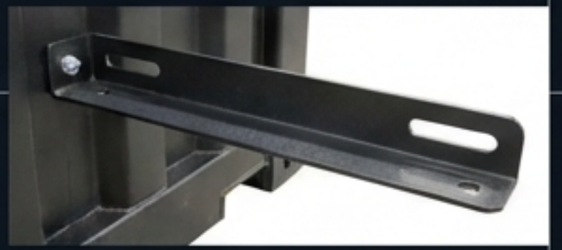
STATUS: OPERATIONAL // USA

The pilot campus and testbed for RIOS integration. A ruggedized, deployable stack designed for harsh environments.

- **Compute:** Intel Xeon + NVIDIA A2/L4 (TEE Ready)
- **Connect:** Starlink + 5G Mesh
- **Power:** Solar + Plasma Gasification

Product Dimensions
Other Physical Features

- Arrives fully assembled and ready for immediate use
- 5-35in adjustable mounting depth
- 3,300lb weight capacity (stationary)
- Supports standard 19 in. rack-mountable equipment
- G-Shape Mounting Rail Profile
- Square Mounting Hole Type (For Cage Nuts)



The shipping container uses a hold-down bracket that can be reused for added safety and stability in permanent setups

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RIOS: Rural Infrastructure Operating System

Operation Octagon

JetBrains Mono
A philosophy of replacing fragile linear infrastructure with resilient, self-reliant ‘Sovereign Nodes’ designed to survive grid failures.

Off-Grid Power

JetBrains Mono
Nodes are powered by Waste-to-Energy (Plasma Gasification) and Solar, ensuring 99.9% uptime independent of the national grid.

Industrial Compute

JetBrains Mono
High-performance edge compute clusters embedded in rural environments to process data at the source (The Edge).

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Unlocking "Blind Compute" Markets

AgTech

Farmers can upload yield maps for AI analysis without exposing proprietary land data to competitors.

Rural Healthcare

Clinics can run diagnostic AI on patient data locally (HIPAA compliant) without data leaving the secure enclave.

DeFi Lending

Undercollateralized lending based on “Proof of Solvent Operations” verified by Zero-Knowledge proofs.

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150-Day Execution Plan: The Volume Play

30

Hello World

DEPLOYMENT

Deploy “TEE Attestation Service” on Horizen.

Generate first cryptographic quote from Node 1 hardware.

75

50k Transactions

AUTOMATION

Machine-driven volume.

Node 1 submits a privacy proof for every AI heartbeat (~670 proofs/day).

120

100k Transactions

SCALING

Onboard Node 4 (Uganda).

Two nodes running continuous inference heartbeats doubles network volume.

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Secured Assets

Node 1: USA

STATUS: LIVE PILOT

Operational campus serving as the primary testbed for software/hardware integration.

Node 4: Uganda

STATUS: SECURED

7,000-acre industrial site designated for ‘Agra Dot Energy’ scaling. This is the volume engine for the Horizen network.

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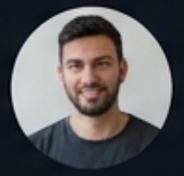
Built By Experts

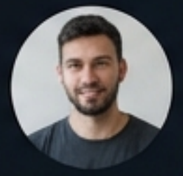
Michael Noel

PROJECT LEAD & ARCHITECT



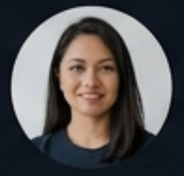
Ash Aly

STRATEGIC GROWTH & WEB3



John Watkins

SYSTEMS ENGINEERING



Linda Abeja

OPS & COMMUNITY

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The Ask

$100,000

(In ZEN Allocation)

Funding the engineering of the **TEE-to-Blockchain Bridge** to make DeReticular the first "Confidential DePIN" anchor tenant on Horizen.

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