Terra™ Intelligence & Nvirosense Insight

Field-Ready Environmental Intelligence for Modern Agriculture

Your Product's Journey, Not Just Sensor Data

Built on 8 years of field-proven Nvirosense technology, trusted by more than 400 enterprise clients across agriculture, pharmaceuticals, and industry.

NSAGRI

AgriTech: Traditionally IoT focuses on devices. Our focus is on the product ROI, by connecting environmental conditions, crop performance & workflow insight can improve value from vine to wine.

NSGXP

GxP & Cold-Chain: Automated, qualification/validation designed for when accuracy and compliance are non-negotiable. Reduce manual oversight, and strengthen end-to-end quality assurance.

NSSCADA

Industrial & SCADA: Beyond monitoring, we provide intelligence that enables active yield optimisation and automated process control across complex industrial operations and systems.

The Intelligence Layer: Beyond Monitoring

- **"Vine-to-Wine" traceability:** Measuring the full product lineage, exposure history and chain-of-custody at every stage. Not just sensor values.
- **Historical & Predictive Models:** Remote sensing plus ground truth. NDVI, NDIR, SMAP, Power pattern insight and forward view.
- **Virtual Device Modelling:** ML estimates for ETO, soil moisture and similar parameters, updated by real time field data.
- **AI-Generated Summaries:** LLM-powered frequent or seasonal reporting. Context aware for growers and researchers. Zero manual reporting effort.

From Anomaly Detection to Control

AI

Driven Control

Smart Automation

Our AI recognises environmental shifts in real time and responds immediately. This includes anomaly detection for HVAC and CO2 control, irrigation adjustments guided by predictive models, and closed loop responses that stabilise conditions without waiting for your manual intervention.

Evolving Our Edge Legacy

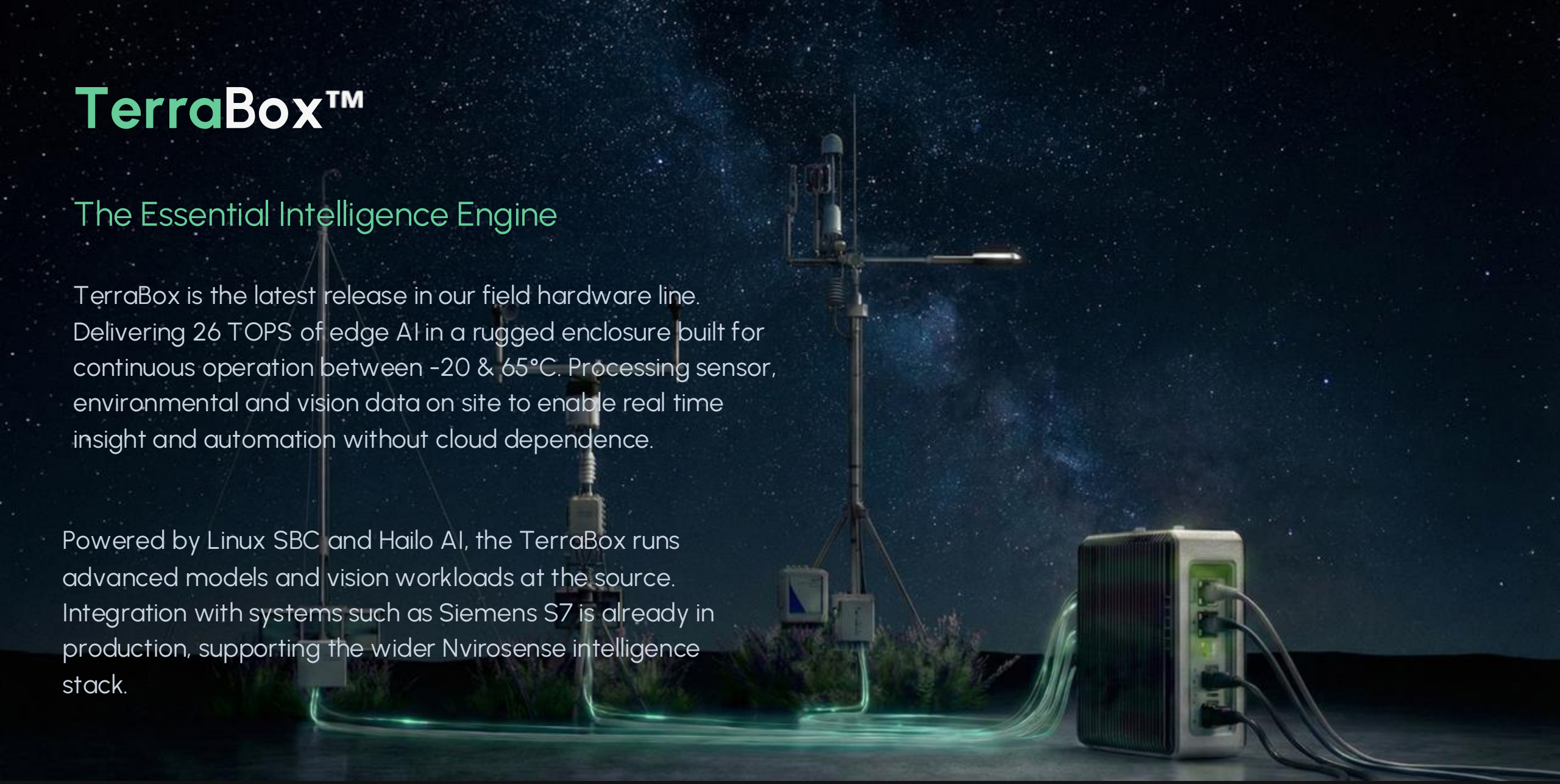
Traditional IoT captures data. Local First turns that data into action, delivering automated control and consistent ROI without human input.

TerraBox™

The Essential Intelligence Engine

TerraBox is the latest release in our field hardware line. Delivering 26 TOPS of edge AI in a rugged enclosure built for continuous operation between -20 & 65°C. Processing sensor, environmental and vision data on site to enable real time insight and automation without cloud dependence.

Powered by Linux SBC and Hailo AI, the TerraBox runs advanced models and vision workloads at the source. Integration with systems such as Siemens S7 is already in production, supporting the wider Nvirosense intelligence stack.



TerraBox: Total Connectivity

Wireless Streams

LoRaWAN, LTE, MeshCore, Thread, WiFi, and BLE with simultaneous multi-stream processing.

Industrial IO

3x RS485 / SDI-12, Modbus RTU / TCP, and BACnet support. Seamless integration with existing systems and controllers.

Vision AI Ready

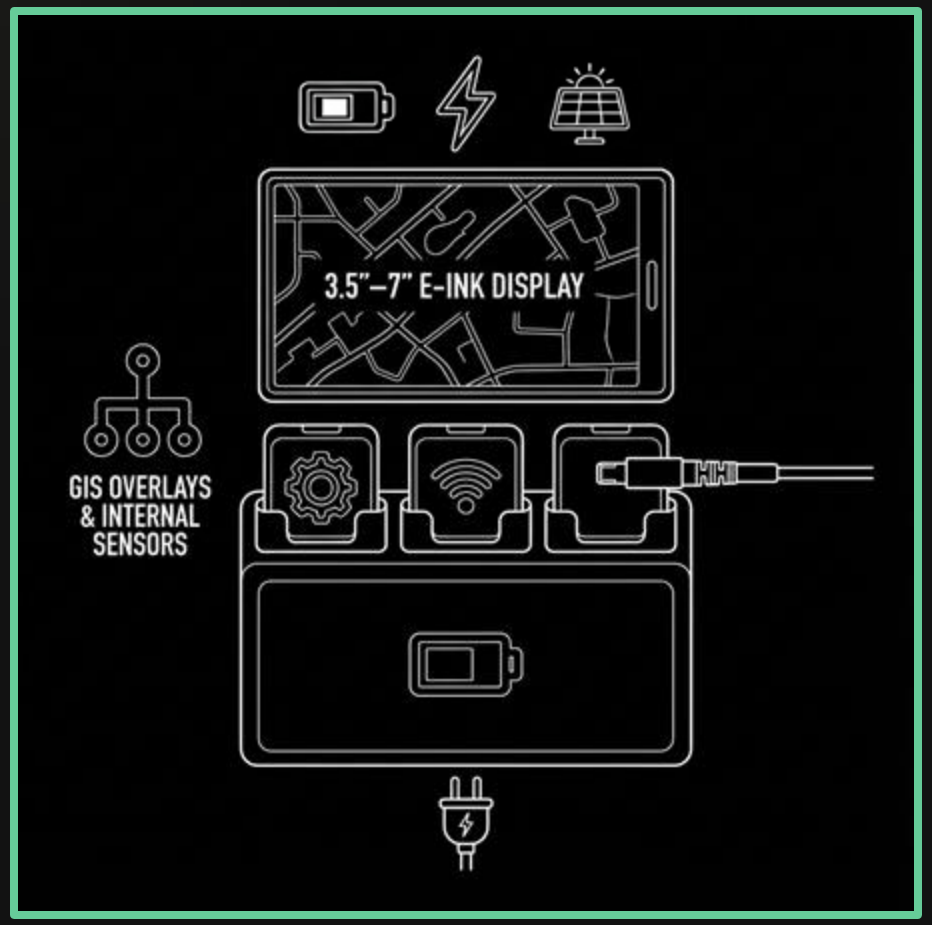
Real-time multi-channel video processing for livestock monitoring, crop analytics, and security applications.

Introducing the TerraSense™ Platform

One ecosystem. **Zero** lock-in.

70+ hardware integrations for fully agnostic **sensing** and **automation.**

TerraSense: Infinitely Adaptable



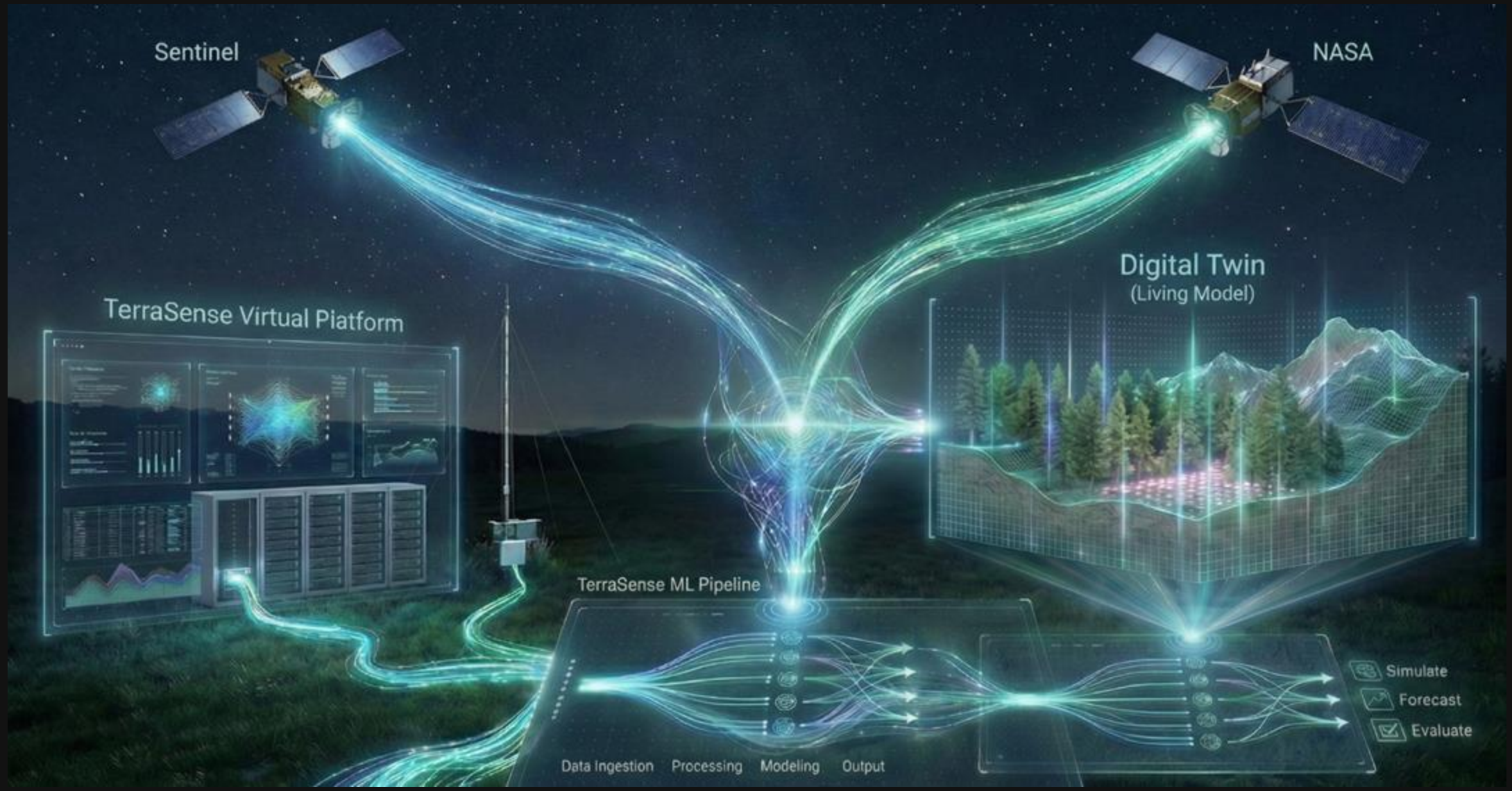
Modular by Design

A universal base with plug-in, hot-swappable sensor modules. Works with GIS overlays, e-ink displays (3.5"–7"), internal sensors, or external probe attachments.

Any Power, Any Protocol

Battery, solar, or wired power with on-board protocol translation. Supports LoRaWAN, Modbus RTU/TCP, SDI-12, RS485, LTE, WiFi, BLE, and more — all handled natively.

The "Terra" Concept: Digital Terraforming



Flexible Service Models

Commissioned Reports

Our team conducts Prospecting and Digital Terraforming studies. You get clear ROI insights without managing any hardware.

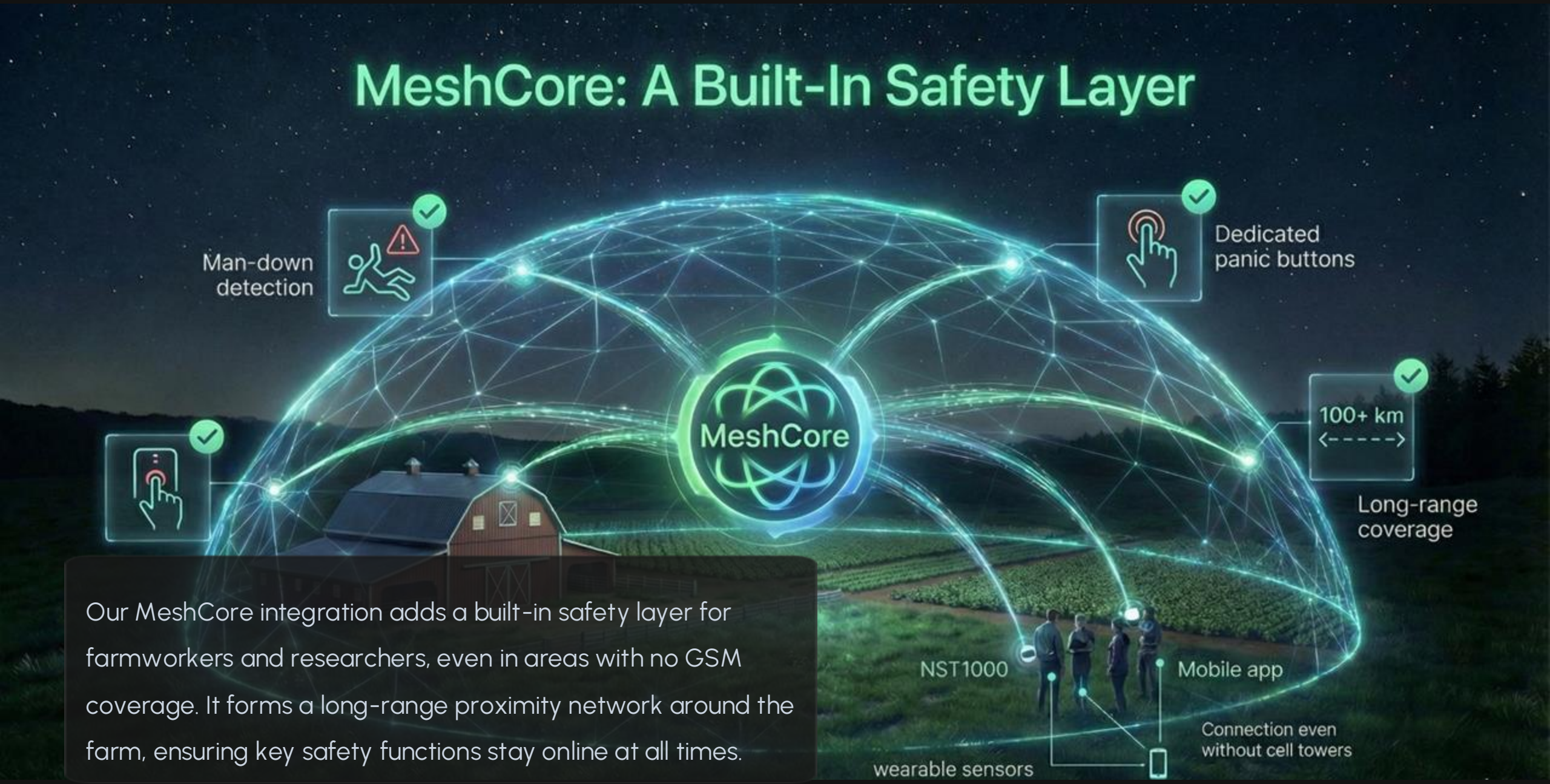
Equipment Hire

Rent Li-cor, HOBO, TerraBox and TerraSense mobile sensors. Ideal for trials and validation without long-term commitments.

Enterprise Deployment

Full deployment of the Nvirosense platform, with continuous monitoring, GxP compliance support, and TerraBox Edge AI for long-term operations.

MeshCore: A Built-In Safety Layer



Our MeshCore integration adds a built-in safety layer for farmworkers and researchers, even in areas with no GSM coverage. It forms a long-range proximity network around the farm, ensuring key safety functions stay online at all times.

Our Ecosystem of Partners

LI-COR Biosciences

Onset HOBO Loggers

Seeed Studio

Thank You

Let's automate your success and improve your product's ROI.

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Resources

All released information is proprietary - images generated with Gemini AI