THE OPERATOR SERIES

Field Ops Single Source of Truth — Version 2.0

INTERNAL / RESTRICTED

Bridging biological operators and the autonomous silicon mesh

The essential tools required for Human Technicians to diagnose, repair, and authorize autonomous nodes.

1. Rugged Mobility

2. Hardware-Backed Identity

3. Spectrum Analysis

The essential tools for diagnosis, repair, and authorization

Sovereign Deck

SKU:	RIOS-OP-DECK
Role:	Mobile Diagnostics & Cyberdeck
Core:	Intel N5100 / 10.1" Rugged Tablet
Environment:	Kali Linux (Field Edition)
Key Feature:	Integrated SDR (100kHz-1.7GHz)
MSRP:	$1,299.00

Sovereign Key

SKU:	RIOS-KEY-01
Role:	Human Root of Trust & Signing
Core:	YubiKey 5C NFC (Custom)
Environment:	FIDO2 / PIV / OpenPGP
Key Feature:	NFC + USB-C Interface
MSRP:	$75.00

Uncompromising mobile diagnostics for harsh field conditions

Purpose-Built Chassis: Drop-tested to 1.5m with reinforced corners.

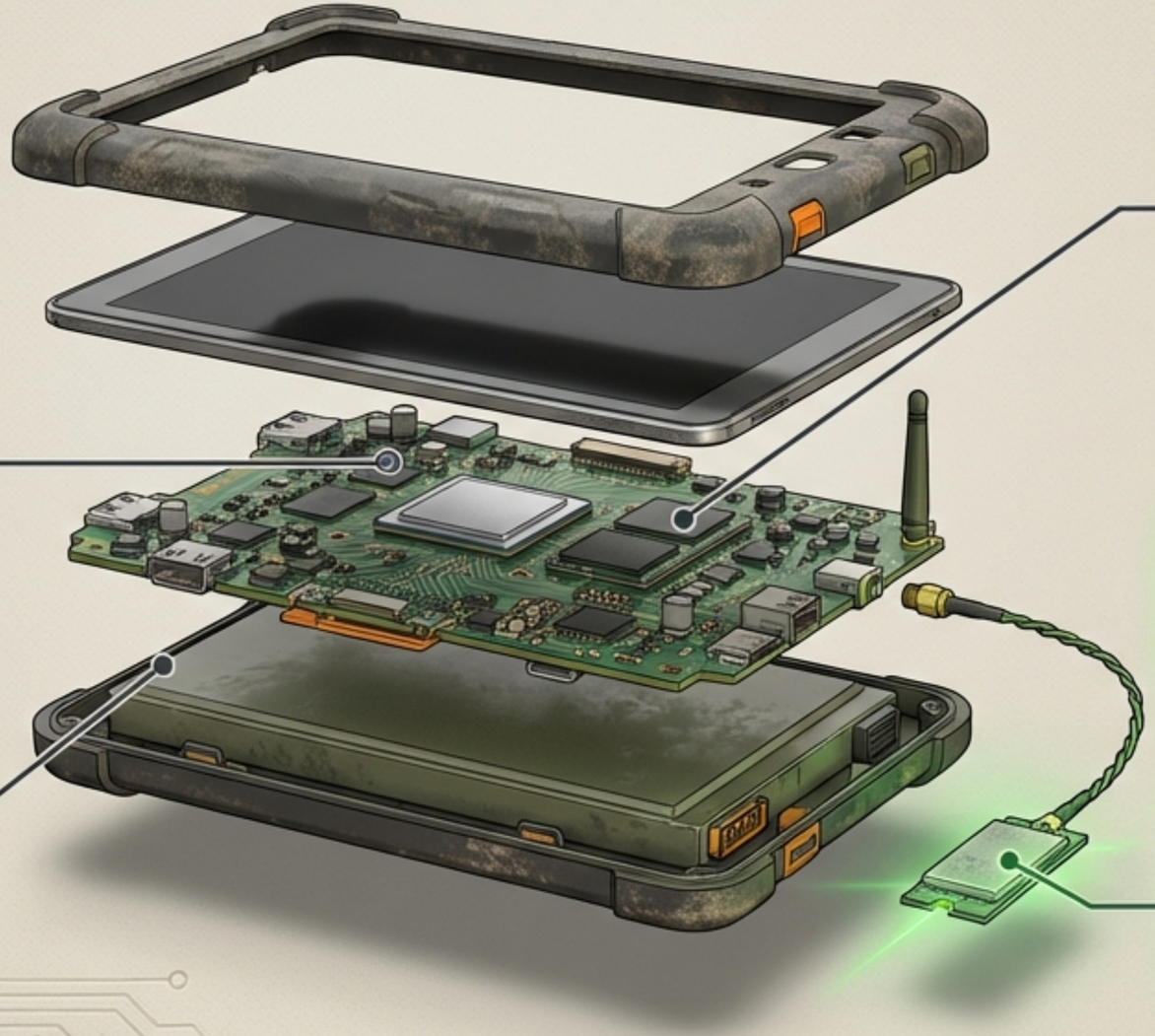
Sunlight Readable Display: 10.1" IPS (1920x1200) pushing 800 nits.

Tactical Connectivity: Wi-Fi 6, Bluetooth, and optional LTE modules.

Engineered for endurance and integrated spectrum analysis

Compute:
Intel® Celeron® N5100 (Jasper Lake, Quad-Core, Fanless).

Memory/Storage:
8GB LPDDR4x RAM / 256GB SSD
(User Replaceable).



Power:
Hot-swappable 5000mAh battery providing 8+ hours of continuous runtime.

The Special Sauce:
Integrated RTL-SDR.
Connected via internal USB header to an RTL2832U module and SMA antenna pig-tail.

Allows operators to visualize RF spectrum (915MHz LoRa / 2.4GHz Wi-Fi) to debug interference or fingerprint machinery.

Specialized software payload for offline tactical operations

HempGrade AI (Mobile)

Uses the rear camera to grade biomass samples offline via a quantized TensorFlow Lite model.

SDR++

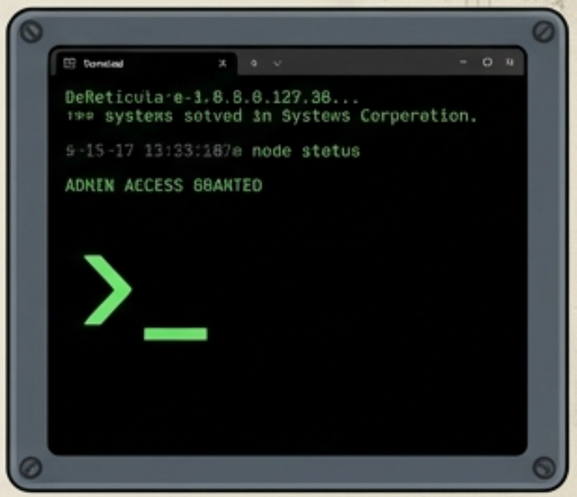
JetBrains Mono

Visualizer for the internal radio receiver. Detects rogue nodes or interference sources.

Wireshark

JetBrains Mono

Ships with pre-configured filters optimized for RIOS/Locutus protocol traffic.



DeReticular Admin CLI

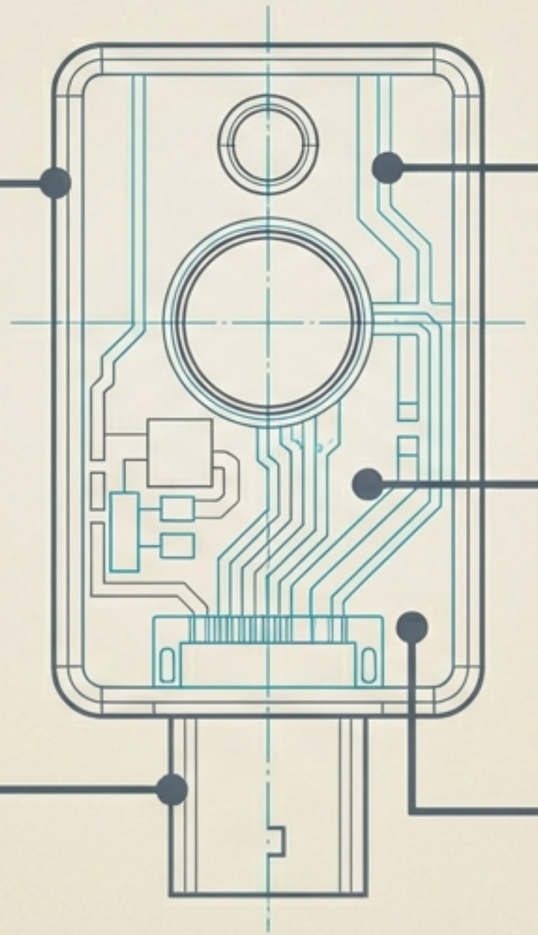
Integrated tools to securely SSH into Nomad/Sentry nodes via USB serial tethering.

The absolute center of network security and human authentication

Hardware-backed identity built on indestructible cryptographic foundations

Physical Durability: IP68 (Water/Dust Resistant), Crush Resistant.

Dual Interface: USB-C for Deck/Sentry connection; NFC for Phone/Tablet connection.



FIDO2 / WebAuthn: Enables passwordless login to Sentry Dashboards.

OpenPGP: Stores the `4096-bit RSA Private` Key used to cryptographically Sign maintenance logs on the Locutus Ledger.

PIV: Smart Card login protocols for secure SSH access.

The absolute proof of physical human presence

No Cloud Passwords

Remote login to a Sentry Node is physically impossible without the key (or a registered backup). It mandates physical human presence.

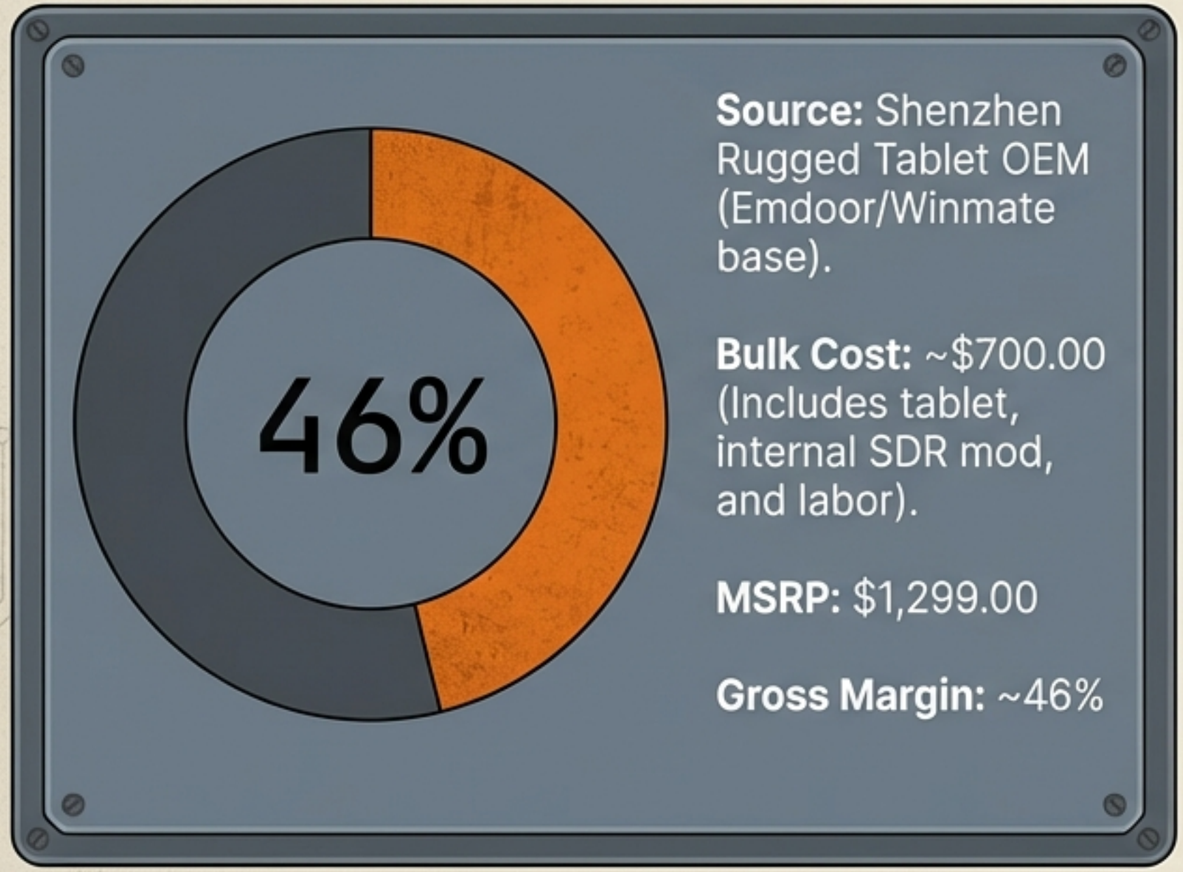
Cryptographically Non-Transferable

The Sovereign Badge (NFT) is permanently bound to the Public Key on the device.

Identity equals Hardware

Selling or transferring the physical key transfers the operational identity completely.

Sustainable unit economics across the Operator hardware tier

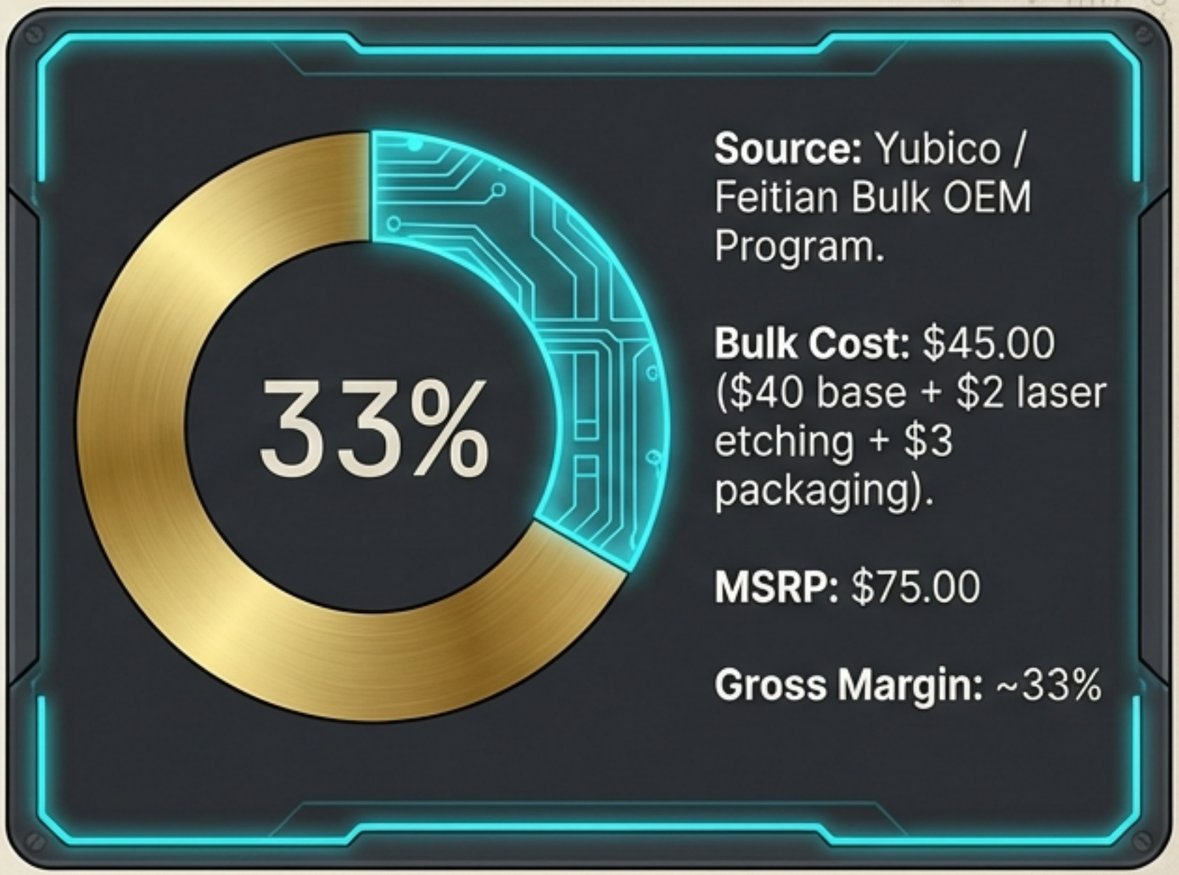


Source: Shenzhen Rugged Tablet OEM (Emdoor/Winmate base).

Bulk Cost: ~$700.00 (Includes tablet, internal SDR mod, and labor).

MSRP: $1,299.00

Gross Margin: ~46%



Source: Yubico / Feitian Bulk OEM Program.

Bulk Cost: $45.00 ($40 base + $2 laser etching + $3 packaging).

MSRP: $75.00

Gross Margin: ~33%

Standardized production workflows from raw materials to field-ready kits

Deck SOP

1. Intake
Verify screen brightness and digitizer health.

2. The Mod
Install internal USB SDR module; route SMA connector to top auxiliary port.

3. Flashing
Wipe Windows 11 IoT; install Kali Linux Field Edition.

4. Calibration
Test SDR receiver against a known 915MHz reference signal.

5. Kitting
Pack with Hand Strap, Charger, and Telescopic Antenna.

Key SOP

1. Intake
Receive bulk tray of keys.

2. Etching
Laser etch DeReticular Logo on touch sensor surround.

3. Provisioning
Keys ship BLANK to prevent supply chain attacks. User generates keys via PC Claiming Ceremony.

4. Packaging
Seal in tamper-evident blister pack with Lanyard and Recovery Seed card.

Engineered mitigations for operational and compliance vulnerabilities

Risk ID	Vulnerability	Mitigation
R-DECK-01 (Software Complexity)	Kali Linux is difficult for non-Linux users.	**Mitigation:** Field Mode UI. OS boots into a simplified launcher menu (Scan, Grade, Repair), hiding the command line.
R-KEY-01 (Loss of Identity)	User loses their only **Sovereign Key**.	**Mitigation:** Redundancy. Identity Manager allows registering 2 keys to the same NFT identity. Marketing pushes Backup Key sales.
R-SDR-01 (Legal Compliance)	Listening to certain frequencies is illegal in some jurisdictions.	**Mitigation:** Frequency Lock. SDR software defaults to ISM bands (915MHz/2.4GHz) and requires a liability waiver on first boot.

Defined boundaries for hardware warranties and field support

Standard Return Policy

14-Day Standard Return across all hardware. (Note: Sovereign Key must be completely wiped/reset prior to return).

Sovereign Deck Coverage

1-Year Hardware Warranty. Explicitly includes screen replacements for functional defects, but strictly excludes physical abuse.

Sovereign Key Coverage

1-Year Hardware Warranty.