ResiliLink dMRV Platform

SusHi Tech Tokyo 2026

Booth: Innovation Zone · Hall B

Immutable measurement, reporting, and verification infrastructure for climate asset validation.

MRV

✓ ISO 14064-2 · Project GHG Quantification	✓ ISO 14067 · Product Carbon Footprint	✓ Gold Standard / Verra VCS Aligned

5MW	99.9%	<1s	0
HHFS Capacity	Uptime SLA	Telemetry Latency	Data Gaps

01 / ARCHITECTURE /

The Security Sandwich

A three-layer cryptographic trust chain ensuring every data point is tamper-evident, timestamped, and verifiable by any VVB. — 3

LAYER 01 — VVB INTERFACE	**Immutable Audit Ledger** Merkle Hash Chain · Append-only · ISO 14064-2 Aligned · Cryptographic Proofs · VVB-Ready API ✓ VERIFIED
LAYER 02 — SECURE EDGE	**ResiliLink Edge Gateway** Hardware: **Advantech ECU-1051TL** · Backhaul: **Starlink LEO Satellite** MQTT Protocol · TPM Signing · AES-256 Encryption · Zero single-point-of-failure
LAYER 03 — PHYSICAL ASSET	**Solar PV / Sensors** / 5MW Hybrid Hydro-Floating Solar (HHFS) · IEC 61724-1 Meters · Calibrated Pyranometers Inverter Telemetry · PT100 Temperature Sensors

02 / CAPABILITIES /

Built for VVB Trust

Immutable Ledger ■■■■■■■
Cryptographic Integrity
Every data point cryptographically hashed and chained. Once written, the audit record cannot be altered — providing VVBs with an unbreakable evidence chain from sensor to certificate.

Real-Time dMRV ■■■■■■ dMRV
Sub-Second Latency
Continuous 1-second telemetry ingestion from all sensor nodes. No sampling, no gaps. Streaming measurement, reporting, and verification against ISO 14064-2 and ISO 14067.

Starlink Backhaul ■■■■■■
LEO Satellite Uplink
LEO satellite connectivity ensures data transmission from remote HHFS sites with no terrestrial dependency. Resilient by design — connectivity maintained even during grid outages.

TPM-Signed Data TPM■■■■■
Hardware Root of Trust
Advantech ECU-1051TL hardware Trusted Platform Module signs each data packet at the edge — cryptographically binding readings to the physical device and preventing spoofed data injection.

VVB Dashboard VVB■■■■■■■
Audit-Ready Exports
Purpose-built verification interface with audit-ready exports, proof bundles, and timestamp certificates. REST API with OAuth 2.0 for direct integration into VVB audit workflows.

ISO-Aligned MRV ISO■■MRV
ISO 14064-2 / ISO 14067
Methodology traceable to ISO 14064-2 and ISO 14067, Gold Standard, and Verra VCS frameworks. Automated uncertainty calculation built into every reporting period.

03 / DATA INTEGRITY / ■■■■■■

Tamper-Evident by Design

SENSOR READING → EDGE GW ECU-1051TL → STARLINK LEO Uplink → IMMUTABLE LEDGER → VVB AUDIT ✓

Data Provenance / ■■■■■
Every record carries a cryptographic lineage from physical sensor to final certificate — verifiable by any authorised VVB at any time.

Tamper Detection / ■■■■■
Any modification to historical data invalidates the Merkle chain — instantly flagged and traceable to the exact record, time, and node.

Continuous Audit / ■■■■■
Audit-ready data bundles generated automatically for each monitoring period — no manual compilation, no reporting gaps.

04 / TRUST METRICS / ■■■■

Performance & Compliance

99.9%	**Platform Uptime SLA** Guaranteed availability across all monitoring nodes and API endpoints.
<1s	**Data Latency** Sensor-to-ledger pipeline including cryptographic signing and MQTT transmission.
100%	**Audit Completeness** Zero data gaps across all monitoring periods since platform deployment.
ISO	**14064-2 & 14067** Full methodology compliance with project GHG and product carbon footprint standards.

05 / TECH SPECS / ■■■■

Technical Specifications

STANDARD / PROTOCOL	IMPLEMENTATION	STATUS
ISO 14064-2	Project-Level GHG Quantification & Reporting	✓ **Compliant**
ISO 14067	Product Carbon Footprint Standard	✓ **Compliant**
IEC 61724-1	PV System Performance Monitoring	✓ **Implemented**
MQTT v5.0	IoT Telemetry Transport Protocol	✓ **Active**
AES-256	Data Encryption at Rest and In Transit	✓ **Active**
TPM 2.0	Hardware Root of Trust — Advantech ECU-1051TL	✓ **Active**
Starlink LEO	Satellite Backhaul Connectivity	✓ **Active**
Merkle Chain	Append-only Immutable Audit Ledger	✓ **Active**
OAuth 2.0	REST API Authentication for VVB Integration	✓ **Available**
Gold Standard	Voluntary Carbon Market Framework Alignment	✓ **Aligned**
Verra VCS	Verified Carbon Standard Framework	✓ **Aligned**

Supremesoft (M) Sdn Bhd
YOUR RELIABLE SOLUTION PROVIDER

P3-3A, Shaftsbury Square,
Persiaran Multimedia,
63000 Cyberjaya, Selangor, Malaysia.

info@supremesoft.com.my

Request a Live Demo

Schedule a technical validation session. We will walk your team through the full cryptographic audit trail, live data API, and proof bundle generation.

Live Demo:
resililink-tokyo-demo.s3.ap-southeast-5.amazonaws.com