Isovara product sheets — operators

Oct 10, 2026

Isovara v3 — the monitor you can put your own name on

Isovara v3 is a Wi-Fi environmental monitor and controller that ships under your brand, connects to your Isovara Cloud in minutes, and keeps working with the fleet you already have.

One vendor-signed firmware image runs every brand. Your name, splash screen, logo and setup network live in protected factory settings, so you get a branded product without a custom build, and every update stays signed.

What it does for your customers

- **Watches what matters:** temperature, humidity, barometric or differential pressure, and a remote probe for freezers, coolers and ducts.
- **Acts on it:** two relays with setpoints and hysteresis run heating, cooling or fans on their own, even when the network is down.
- **Knows about defrost:** freezer units hold high-temperature alerts through a defrost cycle instead of waking someone at 3 a.m.
- **Shows status at a glance:** a 1.8-inch color display with your splash screen, plus a local web page that works in any browser.
- **Opens garage doors (Isovara brand):** a two-door controller mode with open/closed sensing.

What it does for you

- **Fast, secure enrollment:** a unit claims itself to a customer's account with a claim code, then talks to your cloud over HTTPS and a TLS-encrypted MQTT channel with its own credentials.
- **Real-time fleet control:** configuration pushes, restarts and "Update now" reach the unit in seconds over the cloud channel.
- **Safe updates:** firmware is signed with Ed25519 and every download is checked by SHA-256 before it can boot. A bad image never becomes the running one.
- **No forklift upgrade:** units that never enroll keep the legacy check-in byte for byte, so mixed fleets run side by side on the same server.
- **Fewer truck rolls:** setup over Bluetooth or a fallback Wi-Fi access point, a full serial command line for technicians, and remote recovery codes.

Specifications

Item	Isovara v3
Processor	ESP32 dual-core, 240 MHz, Wi-Fi and Bluetooth LE
Storage	8 MB flash; optional microSD for CSV logging
Display	1.8-inch 128 × 160 color TFT with backlight control
Built-in sensor	Temperature and humidity (AHT20/AHT25), −40 to 85 °C, 0–100 % RH
Sensor options	Barometric pressure (BMP280/BME280); differential pressure (XGZP6897D); DS18B20 probe on a 1-Wire master, 5 m+ cables; 9 supported configurations
Outputs	2 relays, auto heat / cool / none with setpoint hysteresis
Clock	Network time; optional DS3231 battery-backed clock
Connectivity	Wi-Fi with fallback setup access point; Bluetooth LE setup and discovery
Cloud	Claim-code enrollment, HTTPS device API, MQTT over TLS, signed over-the-air updates
Local integration	Web interface and JSON API; MQTT with Home Assistant auto-discovery; OAuth2 broker sign-in
Branding	Name, splash, logo, setup network and support details, set at the factory with no rebuild, and pushed again to units in the field
Enclosures	Indoor, outdoor and display-less (headless) cases; cable glands; French-cleat wall mount

> **Coming next:** a full thermostat mode (heat / cool / auto with compressor protection) is in design for the same two-relay board.

Isovara Cloud — your monitoring service, under your brand

Isovara Cloud is the platform you run your monitoring business on: your brand, your customers, your prices, your Stripe account. Buy it as a service we run for you, or license it and run it yourself. The platform and its features are the same either way.

Two ways to run it

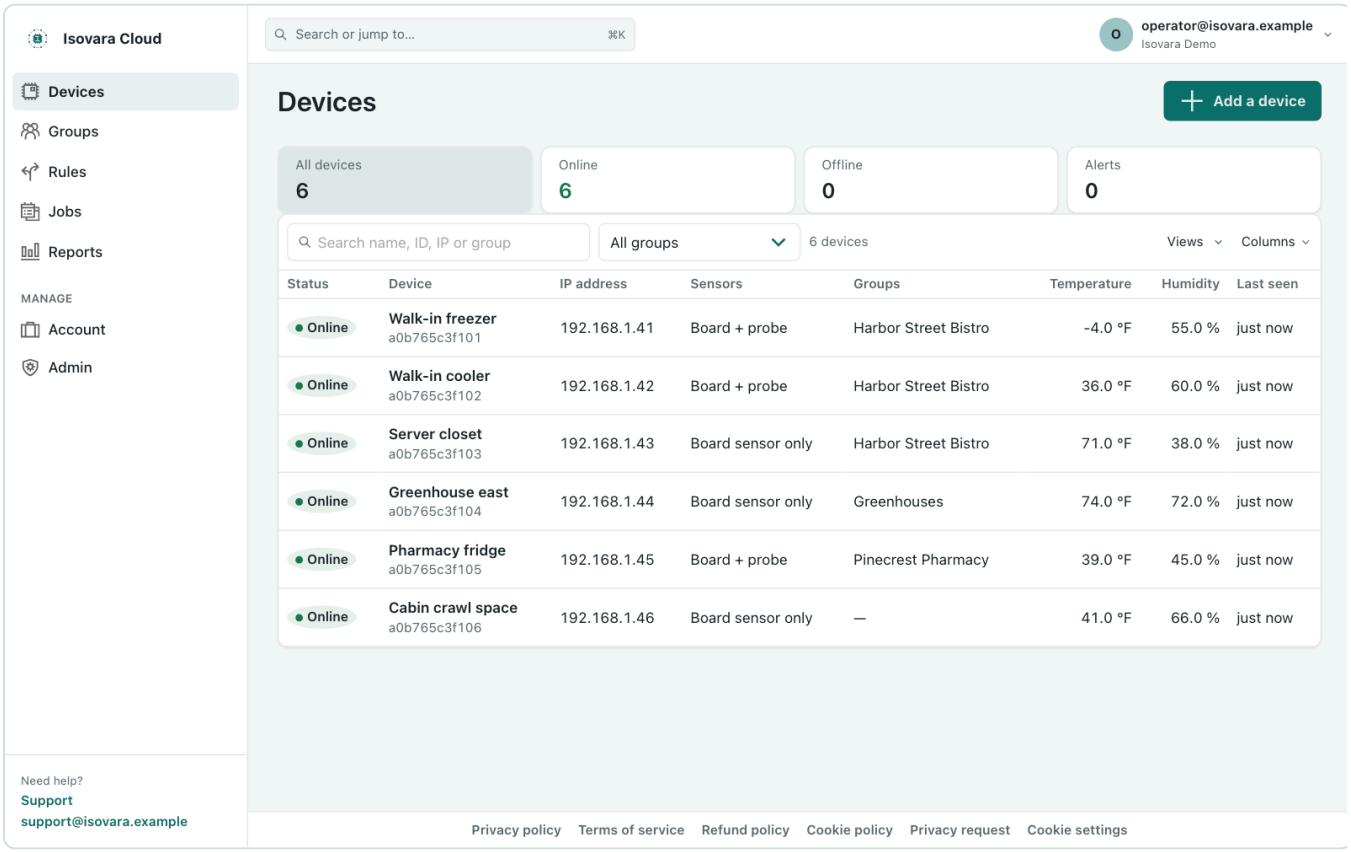
	SaaS — we host it	Licensed install — you host it
Best for	Operators who want to sell, not run servers	Operators who need control of data, location or uptime
Where it runs	Our multi-tenant cloud; your tenant at yourbrand.… or your own domain	Your server, data center or cloud account (Docker; OpenTofu for Azure, AWS and Google Cloud)
Who runs it	We handle servers, upgrades, backups and monitoring	Your team, with our install, upgrade, backup and monitoring guides
Your data	Fenced per tenant in the database	Never leaves your infrastructure

	SaaS — we host it	Licensed install — you host it
Licensing	Subscription per device	Offline license key per install, priced per device; single-tenant or multi-tenant edition (host your own sub-operators)
Internet check-in	Not applicable	None needed: keys and usage reports are signed files
Try it	Hosted trial tenant	30-day evaluation, 1 tenant and 10 units

Both run the same software, release for release, so choosing one today never locks a feature away.

Your brand, front to back

- **White-label portal:** your name, logo, colors, tagline and support details, shown before sign-in, at your own address (yourbrand.example.com or your own domain).
- **Branded firmware packages:** the built-in package builder turns each signed release into your factory image, with your splash screen, logo and settings. No compiler, no signing key on your side.
- **Customer self-service:** customers sign up on your page, add a unit with a claim code (or a power cycle for older units), name it, and invite up to three read-only viewers (your limit to set).

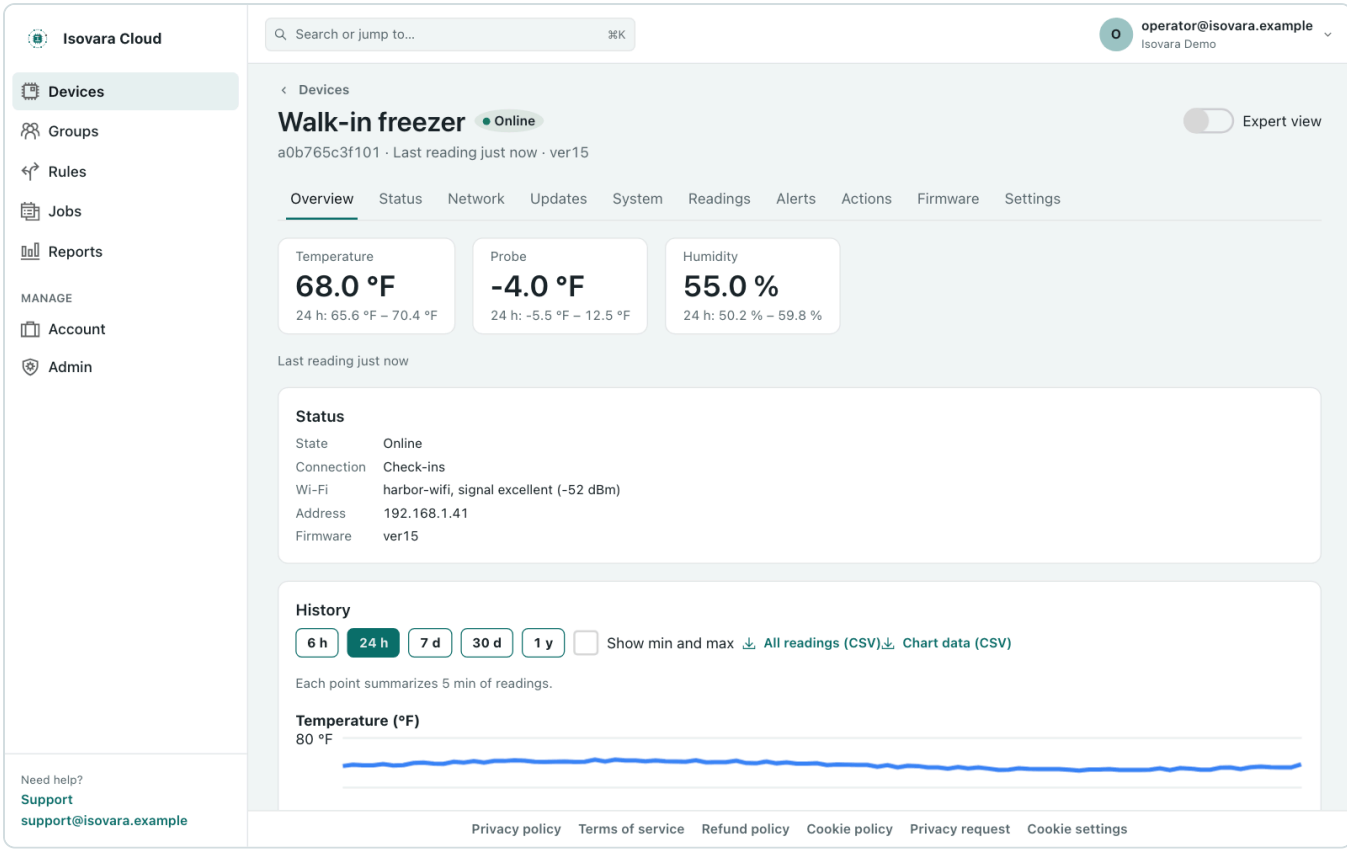


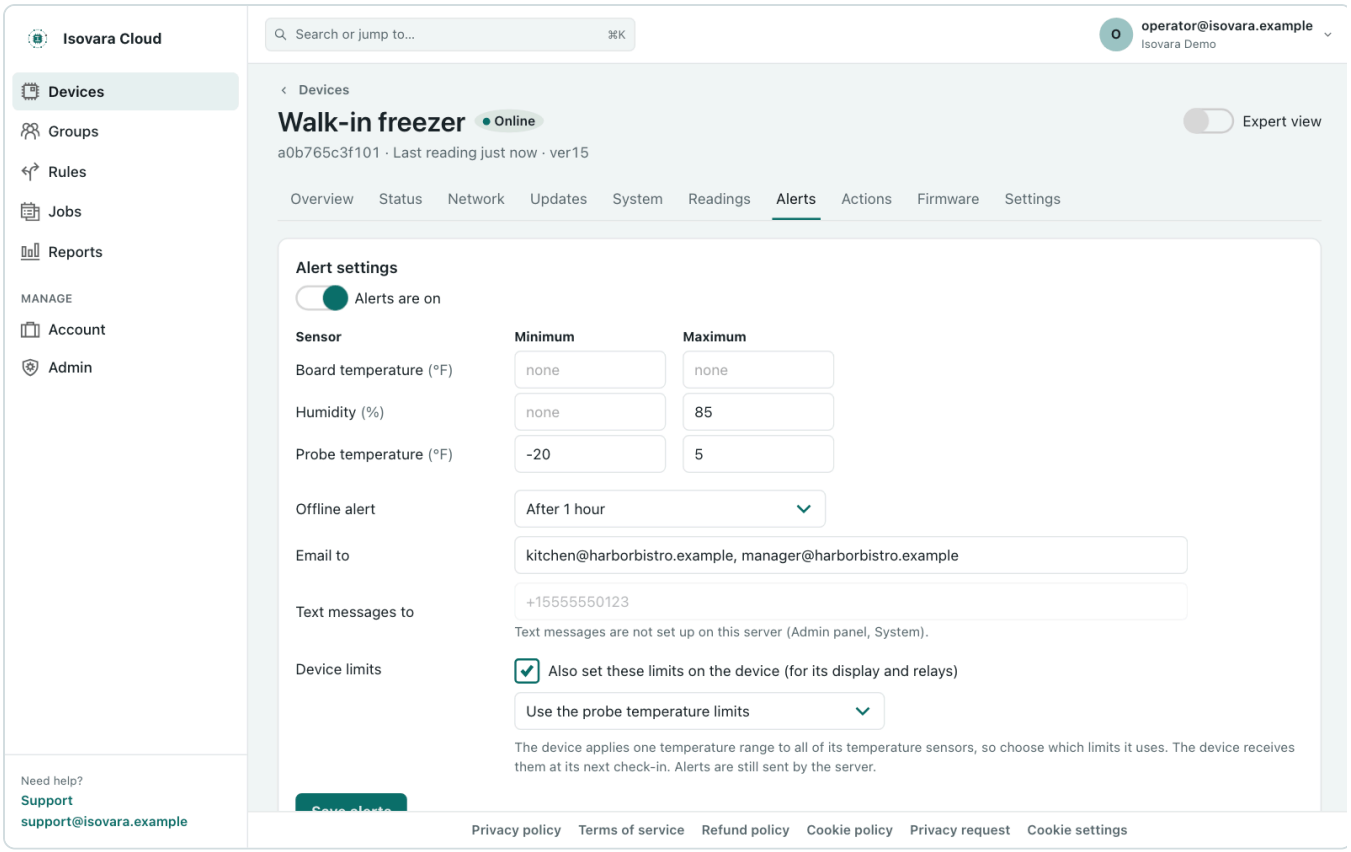
The device list in a branded portal, as the operator sees it. Customers see only their own units.

Monitoring that earns its subscription

- **Per-sensor alerts** by email and SMS (Twilio or Azure Communication Services), offline detection, and STOP handling for texts.

- **Rules engine:** 13 ready-made rules taken from the firmware (freezer defrost overrun, thaw risk, garage left open or opened at night, relay runaway, sudden pressure change, weak Wi-Fi, no reports), plus your own rules and webhooks.
- **Groups and bulk actions:** apply an alert template to a whole site, restart many units or change their displays at once.
- **History and charts:** readings stored on PostgreSQL with TimescaleDB; 14 days for every unit, long-term history as a plan feature.





Each sensor gets its own limits; alerts go by email and text, and offline units are flagged.

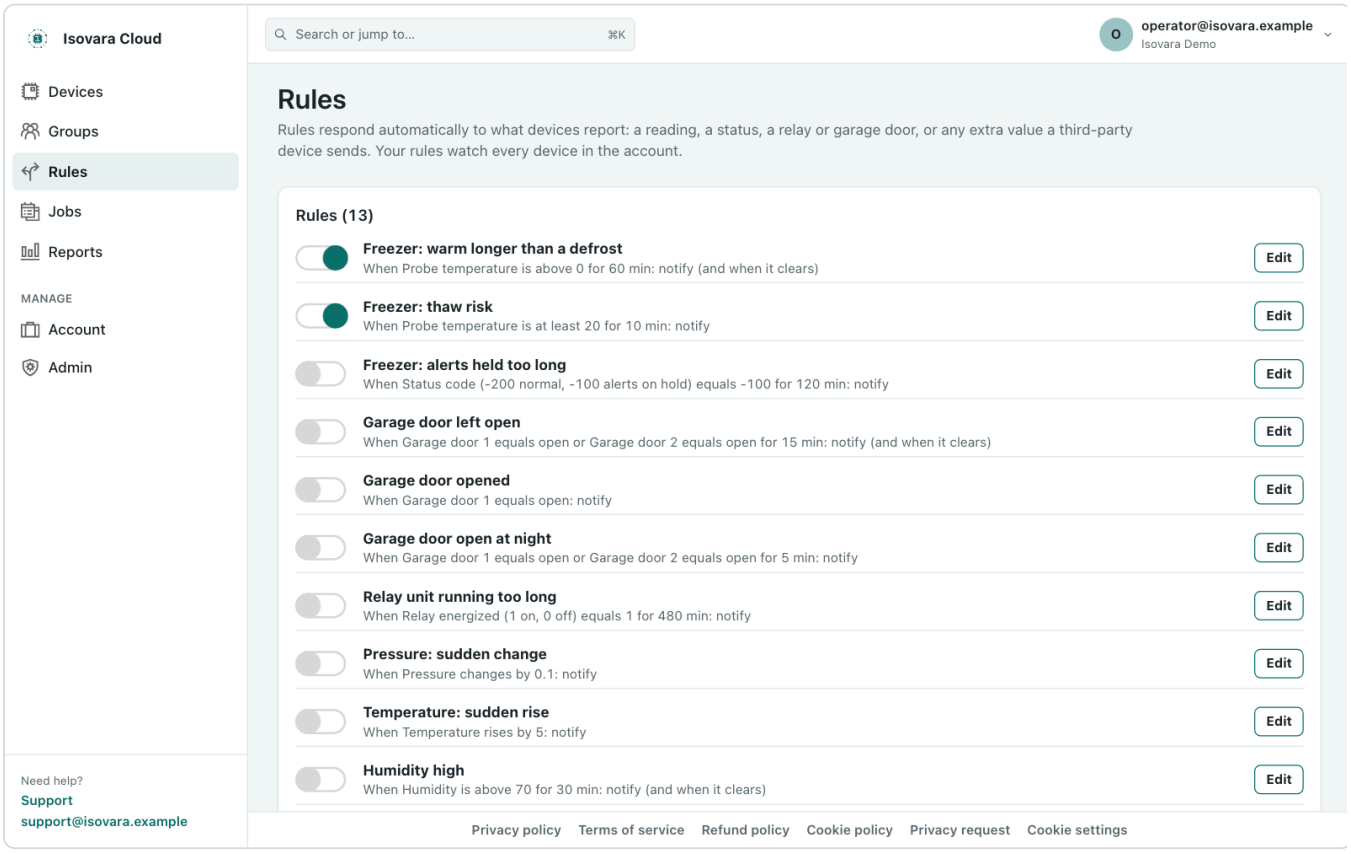
Get paid your way

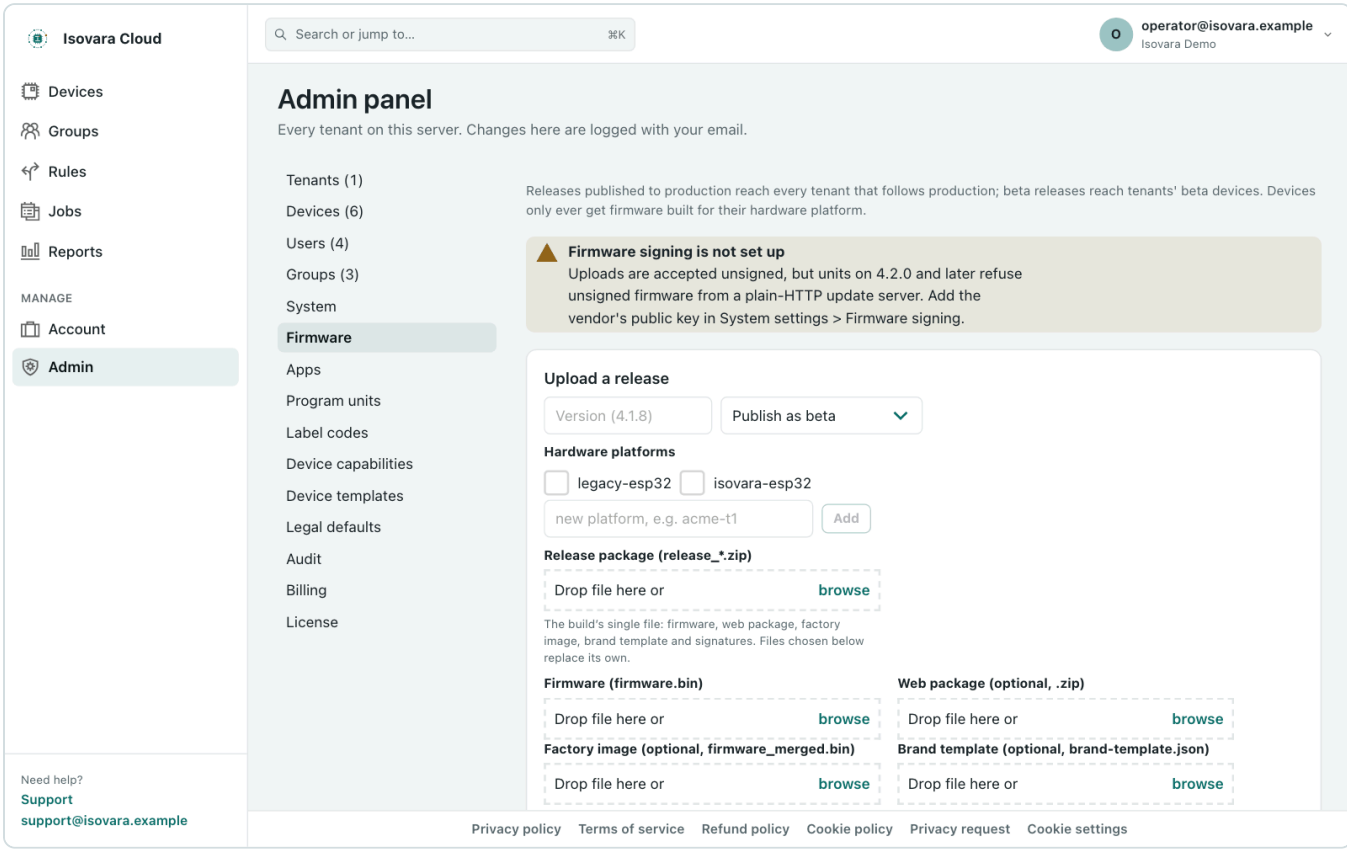
- **Plans you design:** features and price per device, monthly or yearly; offer a free tier only if you want one.
- **Your own Stripe account:** payments go straight to you through Stripe Connect. Prefer your own invoicing? Mark customers paid by hand.
- **API access as an upsell:** customers on an API plan get their own keys.

Fleet operations

- **Firmware releases with staged rollouts:** send a release to a share of devices or named groups first, then widen it. Signatures are checked on the server and on the unit.
- **Service without a site visit:** a technician role for field staff; a remote console that runs the unit's command line over the cloud channel, with every line audited; and scheduled jobs for one unit, a group or a device type.
- **A password per unit:** every registration gives the unit a new admin password, shown only to you and logged when viewed.
- **Bring your existing fleet:** deployed Isovara units work unchanged on the legacy door. A repointing tool, canary cut-over plan and migration runbook move accounts, registrations, alerts and history.
- **Roles that match your business:** operator, technician, customer and viewer, with a platform admin above all tenants. Every tenant is fenced at the database level.
- **Open by design:** everything in the portal is a documented REST call (OpenAPI), with OAuth 2.0 clients, API keys and sign-in through Entra ID, Google or any OIDC provider.

- **More hardware:** devices from other makers that pass Isovara Ecosystem certification join the same portal, with the same alerts, rules, charts and rollouts.





At a glance

Item	Isovara Cloud
Deployment	SaaS (hosted multi-tenant) or licensed install with Docker on your own server; OpenTofu templates for Azure, AWS and Google Cloud
Scale (measured)	10,000-device target at 1 % of one CPU core, 5.7 ms p95; about 135,000 devices per server before the database saturates
Device connections	Legacy HTTP check-in, HTTPS device API, MQTT over TLS with per-device accounts
Third-party hardware	Isovara Ecosystem program: certified Native (Class A) and Reporting (Class B) devices
Data	PostgreSQL 16, TimescaleDB when available; per-tenant row-level security
Operations	Prometheus metrics and Grafana dashboards, audit log, backup and restore runbook
Licensing	SaaS subscription per device, or an offline license per install (single- or multi-tenant edition, per device); readings are never refused at a limit

> **Coming next:** machine-learning analytics as a subscription feature.

Manager app and Support tools — setup and service in your customers' hands

The Manager app sets up and services units on site, over Bluetooth and the local network, on Android, Windows and macOS. Support tools let your help desk recover a locked unit without a site visit.

Manager app

- **Finds units nearby:** Bluetooth LE scanning and local-network discovery, no IP addresses to type.
- **Sets them up:** Wi-Fi, sensor type, alert limits, relay setpoints and cloud address, in a few taps.
- **Tiered settings:** customers see the everyday settings; technicians get the full set, protected by the unit's own enable password.
- **Command console:** quick commands and a full command line for technicians, with a readable response log.
- **One app, every brand:** the app ships in Isovara editions today; with branded builds it carries your name, colors and support details.

Support tools

- **Recover a locked unit:** answer the unit's password-recovery challenge.
- **Issue time-limited access:** grant a technician 1 to 30 days of elevated access with a signed token, and check tokens already issued.
- **Your fleet only:** codes are issued only for units in your own fleet, and each one is logged with who issued it, for which unit, and until when.

Roadmap

Capability	Status
Manager app on Android, Windows and macOS	Available
Support tools moving from a separate app into your portal	Planned (phase 1)
Manager reads your brand from a file, matches your setup network and mDNS names	Planned (phase 2)
Cloud sign-in for the app, working offline for 30 days by default (1–90, your choice)	Planned (phase 3)
Branded app downloads from your portal, signed with your own keys and your own Android app ID	Planned (phases 4–7)
Technician role in the portal	Available
The app reading the platform role to set its settings tier	Planned (phase 3)

Once branded downloads ship, your staff and your customers both get the app from your portal. Brands install side by side, so a technician who serves two operators can carry both.
