

PRODUCT SHEET

AITHAOS

AITHAOS is the embedded firmware that runs inside AITHA Core

Type:	Product sheet
Product:	AITHAOS
System:	AITHANEX
Audience:	Customer, pre-sales, management and operations
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AITHAOS is the embedded firmware that runs inside **AITHA Core**. It manages telemetry, connectivity and remote updates of the device in the field.

When the deployment requires it, AITHAOS reports to **AITHANEX** for centralized monitoring and operation.

What it solves

It allows distributed devices in the field to be operated without on-site intervention for updates, configuration changes or diagnostics. Local logic runs rules and validations on the device itself when low latency is needed or the connection is not guaranteed.

Where it is used

AITHAOS is present in all devices based on AITHA Core:

- **AITHA Core** — reusable technology base.
- Derivatives: AITHA Protection, Router LoRa, OSHTIA EV Charger, AURA X36.
- OEM and white-label products that start from AITHA Core.

Main capabilities

- **Field telemetry.** Collects and publishes data from sensors, peripherals and device status.
- **Managed connectivity.** Manages LTE, Wi-Fi, BLE and LoRa according to the deployment configuration.
- **A/B OTA update.** Dual partition with automatic rollback if boot does not pass validation.
- **Local (edge) intelligence.** Runs rules and validations locally when low latency or intermittent connection is required.
- **Low-power operation.** Optimized for energy-constrained deployments.
- **Security.** Device identity management and encrypted communication.

Main advantages

- **No visits to update.** Firmware improvements are applied remotely, with automatic rollback if anything fails.
- **Works without a continuous connection.** Processes and stores events locally; synchronizes them when the network is available.
- **A known, maintained base.** The same firmware runs across the whole AITHA line, which reduces support cost and integration risk.
- **Reusable in your own products.** An OEM or white-label product built on AITHA Core inherits AITHAOS with no additional base firmware development.

References

- AITHA Core: <https://aitha.es/en/aitha-core/>
- AITHANEX: <https://aitha.es/en/platform/>