ASTREON

SERVERGUARD

PROTECT THE ROOM. PRESERVE THE MISSION.



Industrial environmental intelligence for server rooms, data halls and critical IT spaces.

Edge-first monitoring
Continuous visibility. Local alarms. Optional cloud.

ASTREON automation platform
Industrial sensing by TEJ Sensors & Instrumentation

A ROOM THAT EXPLAINS ITSELF

KNOW THE RISK BEFORE IT BECOMES AN INCIDENT.

ServerGuard turns fragmented sensor signals into one clear operating picture—on site, in real time.

DETECT EARLIER

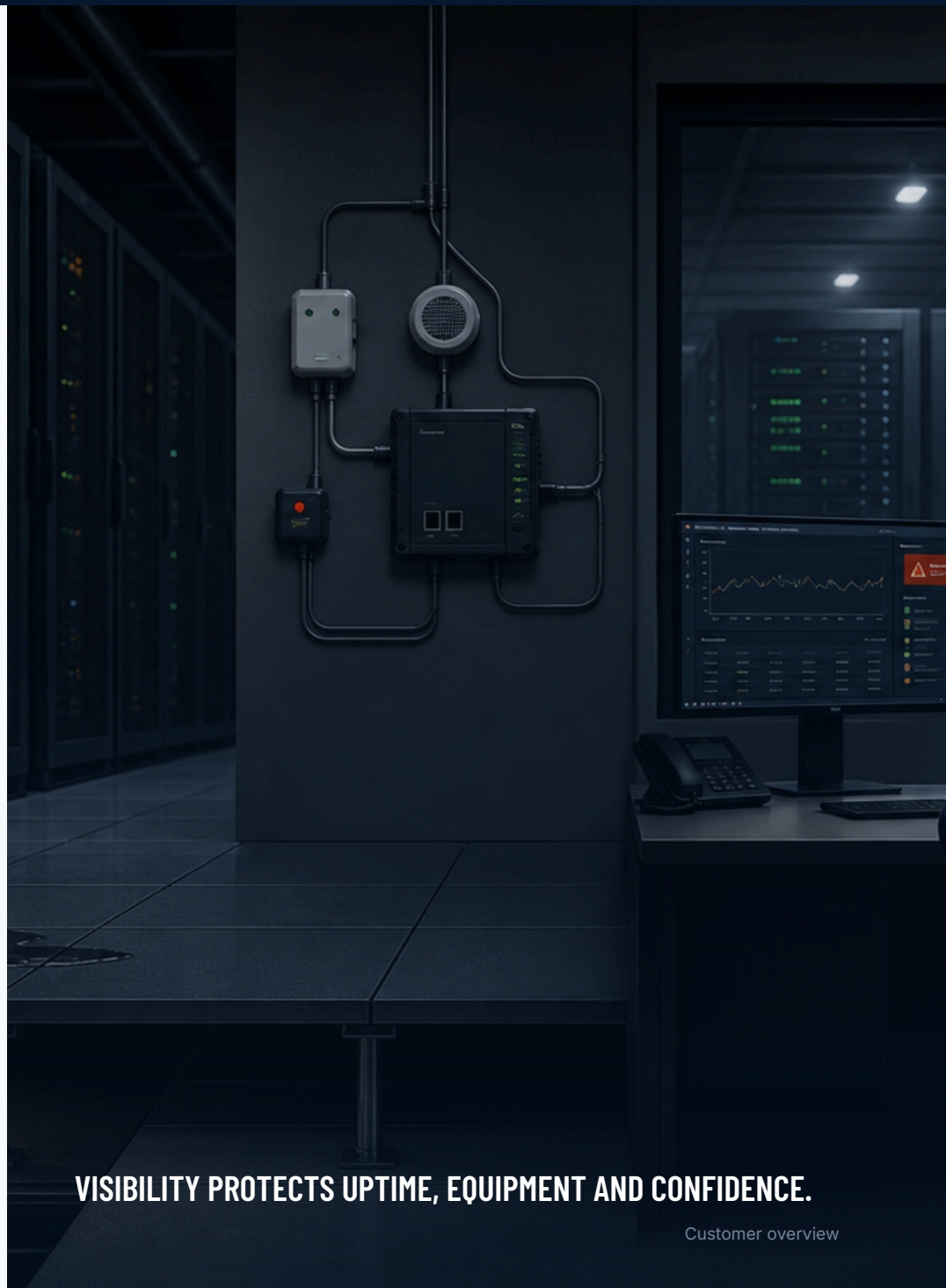
See thermal, airflow, moisture and cooling deviations at source.

RESPOND FASTER

Route the right alarm, context and recommended action.

PROVE CLOSURE

Keep acknowledgement, action and recovery evidence.



VISIBILITY PROTECTS UPTIME, EQUIPMENT AND CONFIDENCE.

Customer overview

ONE PROTECTION LAYER

EVERYTHING THE ROOM IS TRYING TO TELL YOU.

01

RACK THERMAL

Inlet, outlet, top, middle and bottom sensing reveals local hot spots—not just room averages.

02

HUMIDITY & DEW POINT

Track moisture conditions and condensation margin before equipment is exposed.

03

AIRFLOW & PRESSURE

Verify aisle containment, obstructions and low differential-pressure conditions.

04

LEAK & MOISTURE

Protect raised floors, pipe routes and cooling equipment with zoned detection.

05

COOLING PERFORMANCE

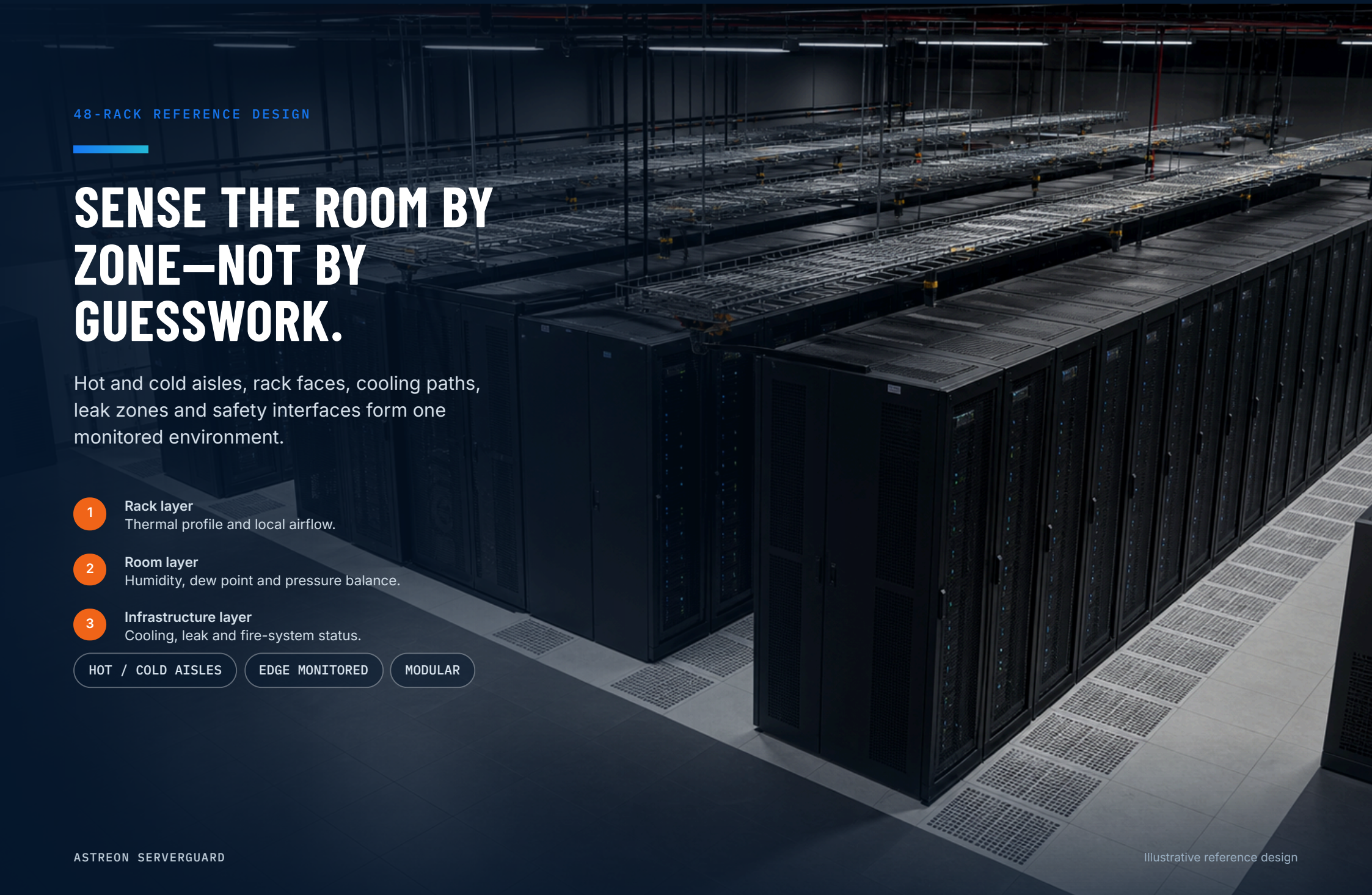
Compare supply, return and room response to expose degradation and failed capacity.

06

FIRE-SYSTEM STATUS

Monitor certified fire-panel and VESDA interfaces while safety systems remain independent.

Sensor quantities and thresholds are site-specific



48-RACK REFERENCE DESIGN

SENSE THE ROOM BY ZONE—NOT BY GUESSWORK.

Hot and cold aisles, rack faces, cooling paths, leak zones and safety interfaces form one monitored environment.

1. **Rack layer**
   Thermal profile and local airflow.
2. **Room layer**
   Humidity, dew point and pressure balance.
3. **Infrastructure layer**
   Cooling, leak and fire-system status.

HOT / COLD AISLES | EDGE MONITORED | MODULAR

Illustrative reference design

INDUSTRIAL BY DESIGN

LOCAL INTELLIGENCE. OPEN INTEGRATION. NO CLOUD DEPENDENCY.

WORKS OFFLINE

Monitoring, alarms, display and history continue during internet failure.

CONNECTS BROADLY

4–20 mA, RTD, Modbus, BACnet/IP, SNMPv3, supervised contacts and MQTT/TLS.

BUILT FOR THE EDGE

Fanless industrial controller, watchdog, industrial SSD, TPM and UPS-backed 24 VDC.

FITS THE ECOSYSTEM

Local HMI, beacon, NOC, BMS/DCIM and optional outbound-only cloud access.



ALARM WITH PURPOSE

FROM SIGNAL TO ACCOUNTABLE ACTION.

NORMAL	ADVISORY	WARNING	CRITICAL	EMERGENCY
Within the commissioned operating envelope.	Early deviation or trend worth observing.	Persistent condition requiring intervention.	High risk with timed escalation.	Immediate site response; safety systems remain independent.

01

VALIDATE

Check quality, freshness, persistence, hysteresis and rate of change.

02

NOTIFY

Beacon, NOC, email/SMS/WhatsApp gateway, SNMP trap or BMS/DCIM.

03

GUIDE

Show affected zone, observed value, evidence and recommended response.

04

CLOSE

Record acknowledgement, authorized action, recovery and audit-ready history.

Equipment-control actions are supervised and operator-approved. Fire, suppression, power isolation and emergency shutdown remain outside ServerGuard control.

ONE OPERATING VIEW

SEE THE ROOM. SEE THE REASON.

A dashboard designed for decisions, not decoration.

ROOM & RACK HEATMAP

Locate excursions in context.

ALARM & EVIDENCE

Severity, ownership, elapsed time and closure history.

COOLING & AIRFLOW

Supply-return response, pressure and sensor health.

ASTREON SERVERGUARD



Illustrative interface

USEFUL AI. CLEAR BOUNDARIES.

PREDICTION CAN ASSIST. SAFETY MUST REMAIN DETERMINISTIC.

AI ASSISTS THE OPERATOR

- Identify emerging rack hot-spot patterns.
- Flag cooling degradation before threshold failure.
- Detect sensor drift and unusual correlations.
- Prioritize investigation with explainable evidence.

SAFETY REMAINS INDEPENDENT

- Critical alarms cannot be suppressed by AI.
- Fire and VESDA systems remain certified, separate systems.
- No direct AI control of suppression, shutdown or isolation.
- HVAC actions require authorization and commissioned interlocks.

The result: smarter diagnostics without weakening deterministic protection.

A RIGHT-SIZED STARTING POINT

ONE PLATFORM. FOUR DEPLOYMENT SCALES.

ESSENTIAL VISIBILITY

CORE

1–10

RACKS

Focused environmental monitoring and local alarm for compact critical rooms.

Single-room essentials

EXPANDED COVERAGE

PRO

11–30

RACKS

Broader sensing, escalation and integration for growing operational teams.

Growing facilities

REFERENCE DESIGN

ENTERPRISE

31–100

RACKS

Multi-zone protection, redundancy options and deep BMS/DCIM integration.

Mid-to-large server rooms

MULTI-SITE OPERATIONS

CAMPUS

100+

RACKS / ROOMS

Coordinated visibility across rooms, buildings and operational boundaries.

Campus and multi-room estates

ASTREON

THE PRACTICAL NEXT STEP

START WITH THE ROOM.



A protection assessment turns your site conditions, systems and response expectations into a commissioned design.

01

SURVEY

Map risks, racks, cooling, utilities and interfaces.

02

DESIGN

Define zones, sensor classes, thresholds and alarm routing.

03

COMMISSION

Install, calibrate, integrate and test failure scenarios.

04

PROVE

Track compliance time, excursion duration and response KPIs.

Design alignment—not certification: ISO/IEC 22237 · ASHRAE TC 9.9 · NFPA 75 · National Building Code of India 2016 · NIST SP 800-82 Rev. 3 · IEC 62443 · IEC 61326-1 · ISO/IEC 17025 traceability. Final requirements, thresholds and sensor quantities are site- and OEM-specific. ASTREON ServerGuard does not replace certified fire, suppression, emergency shutdown or power-isolation systems.