

CORTEX • SUPPORT INTELLIGENCE ENGINE

# Support that pays for *itself*.

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*The self-hosted support intelligence engine for engineering-led manufacturers — trained on your products, running on your infrastructure, with every answer traceable to source.*

SELF-HOSTED

OWNED, NOT RENTED

PRODUCTION-GRADE

PRODUCT BROCHURE  
ASCENTIS-AI.COM

## FROM COST CENTRE TO PROFIT CENTRE

# Support is leaking **£40k–£100k** a year. Cortex turns it into revenue.

Engineering-led manufacturers give away tens of thousands a year in unbilled support, and it never shows on a single P&L line. The knowledge sits in a handful of senior engineers and walks out the day they leave; resolutions take weeks; nothing compounds. Cortex captures every case, resolves the routine work automatically, enforces your commercial policy, and turns recurring failures into engineering intelligence — on infrastructure you control.

## THE CATEGORY

*Not a helpdesk. Not a chatbot. Not a copilot bolted onto a ticketing tool. An engine that orchestrates the entire support lifecycle and keeps your data, your knowledge and the AI itself inside your own walls.*

## PROVEN, NOT PROMISED

95.8%

CITATION RATE

5.0%

FABRICATION  
RATE

83.3%

RECALL @ 5

0

EXTERNAL AI  
CALLS

*Measured on self-hosted infrastructure — no customer data ever leaves the building.*

ONE PLATFORM, END TO END

# From first contact to resolution — *and it learns.*

## 01 • CAPTURE

### Every channel, one record

Email, portals, mobile, agent entry, field voice & video, API — unified automatically.

## 02 • TRIAGE

### Right case, right owner

Prioritised on contract, severity, warranty and repeat-failure signals, then assigned.

## 03 • RESOLVE

### The 80% already solved

Validated resolutions proposed, policy enforced, reply drafted, quote raised when chargeable.

## 04 • DETECT

### Patterns, not one-offs

Recurring failures surfaced for R&D, clustered across unit, part and component.

## 05 • COMPOUND

### Better every ticket

Every closed case feeds accuracy back in, so the platform compounds instead of plateauing.

CAPABILITIES — BUILT, IN PRODUCTION

## 01

### Support that bills itself

The commercial policy engine tracks support time against your free-hours allowance, detects the moment a case becomes billable, and generates a three-option conversion offer — automatically, on-brand.

## 02

### Pattern detection → R&D intelligence

Recurring failures clustered across unit, part and component, then raised as structured Product Improvement Recommendations for engineering — with the at-risk installed-base list attached.

## 03

### Equipment-aware knowledge

Knowledge indexed by your bill of materials, not flat document storage. A case about one product pulls the right answer at product, sub-assembly and component level — specific to the equipment in front of you.

## 04

### A glass box, not a black box

Every recommendation cites its source; if it can't, it flags inference rather than asserting fact. Every knob is yours — and the AI model is swappable, so there's no lock-in at the AI layer.

MADE FOR THE WAY YOU ALREADY WORK

# It slots into your world — *not the other way round.*

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## THE ASSISTANT

### Just ask Cortex

A conversational assistant sits over the whole platform. Ask how to do something and it walks you through it — onboarding becomes a conversation, not a manual, and a new hire is productive on day one. Ask who owns a customer's open cases, or this month's satisfaction score, and it answers from your live data — showing each person only what they're cleared to see. Sharp, permission-aware, with a dry sense of humour: your best engineer and your analyst, on call around the clock. It retrieves and guides — every customer-facing action still passes through a human.

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## IN THE FIELD

### Works in the field — even off-grid

A native mobile app puts the whole operation in an engineer's pocket. Update a case from the plant floor, capture a voice field report that transcribes itself — and, with no signal at all, still read every case you're working. It runs on your own infrastructure over a secure tunnel, so the work carries on in a basement, a shielded lab or offshore — exactly where cloud-only rivals go dark. Offline is read-access to your cases; new work syncs the moment you're back on the network.

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## INTEGRATIONS

### Integrates with the stack you already run

No rip-and-replace. Cortex plugs into the systems you already run and turns their output into structured cases.

#### CRM & BUSINESS SYSTEMS

**Salesforce · HubSpot · Zoho · Microsoft Dynamics · SAP**

Your customers and installed base, pulled in as real context on every case.

#### DOCUMENTS & KNOWLEDGE

**SharePoint · network file share**

Point Cortex at your manuals; it mirrors the folders, ingests, validates and indexes them — read-only at the source.

#### TICKETING & INBOUND

**Jira · Zendesk · Slack · Teams · webhook · email**

Tickets and messages become structured cases automatically.

#### IDENTITY

**SAML 2.0 · OpenID Connect (Entra ID, Okta)**

Sign in with the identity provider you already run.

Cortex reads **from** your systems — and never needs write-access into them.

## VALUE THAT COMPOUNDS

# Most platforms peak on day one. Cortex peaks on day one *thousand*.

Cortex learns from two streams — your company knowledge (every manual, datasheet, field report, resolved ticket and BOM update) and your team's corrections (every thumbs-up, edit, root-cause override and effectiveness rating). Every closed ticket becomes training data; every expert's instinct becomes structured, reusable capability before it walks out the door. Where every other platform plateaus on day one, Cortex gets measurably sharper with every case — and every change is versioned, auditable and reversible.

*Deal with it once. Learnt for life.*

## WHAT ONLY CORTEX DOES

- ▶ **AI inference on your own infrastructure.** Air-gappable on every tier — the only AI support platform able to serve the defence supply chain under DEFCON 658.
- ▶ **The three-entity channel model.** Channel partner → end customer → equipment, modelled natively — so traceability holds even when the ticket arrives through a distributor. A compliance requirement for ITAR and export-controlled work.
- ▶ **Commercial policy that bills itself.** Automatic billable-case detection and conversion offers — not a feature any generic helpdesk carries.
- ▶ **Swap the AI model yourself.** Model-agnostic, benchmarked against your own corpus, switched from the admin UI. No upgrade fee, no lock-in.
- ▶ **Own it outright.** Perpetual licensing and a knowledge base that belongs to you — not rented from a cloud you can't leave.
- ▶ **Published, reproducible proof.** A locked benchmark methodology with the full table — including the experiments that didn't work.

## DEFENSIBLE PERFORMANCE

# Published numbers. *Measured*, not asserted.

Cortex publishes its accuracy against a locked, open benchmark — a 120-case hand-authored corpus across ten real manufacturing failure clusters, a held-out evaluation split, and bootstrap confidence intervals, measured on the same hardware we ship. The full, reproducible methodology is available on request.

| METRIC           | RESULT       | WHAT IT MEANS                                                                            |
|------------------|--------------|------------------------------------------------------------------------------------------|
| Citation rate    | <b>95.8%</b> | How often a recommendation is grounded in a real, clickable source document.             |
| Fabrication rate | <b>5.0%</b>  | How rarely the AI asserts something it cannot ground — far below typical LLM baselines.  |
| Recall @ 5       | <b>83.3%</b> | When the right answer exists in your knowledge base, how often it lands in the top five. |

Supporting figures: **Hit@3 of 60.4%**, and **110 of 120 cases** resolved with a cited, grounded answer. For context, NVIDIA's published 2026 production-RAG baseline tops out at **64.8%** page-level retrieval — Cortex's 83.3% clears it comfortably, on self-hosted, open-source infrastructure with zero external AI calls. Pipeline validated at **1,000 cases** with sustained throughput and no degradation.

## AN ENGINEERING CLAIM, NOT A MARKETING ONE

*No number without a confidence interval. No figure measured on hardware higher-spec than what ships. We publish the table — including the changes that didn't work. Proven in production at a UK scientific-equipment manufacturer running three subsidiaries on a single platform.*

## SOVEREIGN BY DESIGN

# Your data, your AI, *your walls.*

Enterprise software with a formal security architecture and verifiable controls — 4,000+ automated tests on every code change and a production-approved security risk score.

- ▶ **Dedicated single-tenant deployment.** Your data, your AI model and your knowledge on your own instance — not a shared cloud. Application-layer scoping and network-bound infrastructure keep everything inside your perimeter.
- ▶ **Encryption & access.** AES-256-GCM at rest, TLS 1.3 in transit, keys never in code; SSO via SAML 2.0 and OpenID Connect (Entra ID, Okta, Google, Ping), multi-factor authentication and role-based access — 8 roles, 32 permissions.
- ▶ **Data sovereignty.** 100% self-hosted inference — no OpenAI, Anthropic, Google, Azure or Cohere. Outbound AI calls are blocked at the network layer and any attempt is logged. Air-gappable on every tier.
- ▶ **Audit & oversight.** Every action logged immutably for seven years by default, and a human approves every customer-facing output. No autonomous decisions.

| FRAMEWORK                    | HOW CORTEX ALIGNS                                                                                                          |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------|
| GDPR                         | Data on your infrastructure or chosen EU environment; one-click right-to-erasure with full cascade and vector-store purge. |
| ISO 27001                    | Architecture aligned to ISO 27001 controls — access, cryptography, logging, recovery, incident management.                 |
| DEFCON 658 · CSMv4           | Appliance deployment fully air-gapped — no telemetry, no outbound connections, all processing local.                       |
| Cyber Essentials · EU AI Act | Self-hosted deployment simplifies certification; transparent AI with human override and source citation throughout.        |

THREE WAYS TO DEPLOY · ONE PLATFORM

# Deploy it your way — *and own it.*

## Appliance

ON-PREMISES ·  
PERPETUAL

**Air-gappable**, customer-owned hardware

Defence, NDA-heavy & regulated work

No internet required

## Managed VPS

DEDICATED · PERPETUAL

**Dedicated** UK/EU instance

SMEs wanting full data control

Ascentis-managed

## SaaS

HOSTED · SUBSCRIPTION

**Fastest** time-to-value

Smaller teams & evaluation

Ascentis UK/EU cloud

The same software and the same guarantees on all three tiers, with full data portability between them. Perpetual licensing means you can **own** Cortex outright rather than rent it — and a typical deployment pays for itself inside the first year on recovered support revenue alone. Indicative pricing and a tailored ROI model are available on request.

## BUILT FOR YOUR WORLD

Purpose-built for engineering-led manufacturers, £2m–£200m revenue, making physical hardware with BOMs, serial numbers and warranty lifecycles: scientific instruments · test & measurement · semiconductor equipment · industrial machinery · medical devices · precision engineering · defence subcontractors · process equipment. Sharpest fit where support is email-and-spreadsheet, the team is 2–25 cross-functional engineers, and the installed base is international and distributor-served.



SEE IT FOR YOURSELF

# Every other AI platform sends your data *out*. Cortex keeps everything *in*.

*Twenty minutes on real manufacturing data is all it takes to  
know whether Cortex solves a problem you have.*

Book a 20-min walkthrough

Security overview · NDA

Benchmark methodology

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*Accelerate. Optimise. Outperform.*