From Architecture to Operations for On-Premises AI

Designing, Deploying, and Operating AI Infrastructure with Accountability

High-Density AI Platform Services for Modern Data Centers

AMAX Professional Services support organizations deploying and operating on-premises, high-density AI infrastructure. We deliver end-to-end services spanning architecture and design, deployment and automation, and ongoing operations. Our approach focuses on system-level accountability, ensuring AI platforms are production-ready, performant, and sustainable over their full lifecycle.

AMAX works alongside customer IT teams, facilities organizations, and OEM partners to bridge gaps between hardware delivery and real-world operational success.

AMAX ENGINEERING

AMAX combines deep expertise in AI platforms and high-density, liquid-cooled infrastructure with an operations-focused delivery model. We bridge IT and facilities disciplines through a vendor-agnostic, OEM-aligned approach and assume responsibility for how AI systems perform in production environments.

Challenges AMAX Solves in On-Premises AI Deployments

On-premises AI workloads introduce significant complexity across compute, networking, storage, power, and cooling. Organizations must scale rapidly while meeting strict performance, security, and compliance requirements. Many deployments involve non-standard configurations, multiple vendors, or regulated environments that exceed OEM reference designs and basic installation services.

As a result, customers often face delayed time to production, fragmented ownership, and increased operational risk once systems move beyond initial deployment.

How AMAX Delivers Production-Ready AI Infrastructure

AMAX Professional Services provide system-level ownership across the AI infrastructure lifecycle. Rather than focusing solely on hardware delivery, AMAX ensures platforms are designed, deployed, validated, and operated as integrated, production-ready environments aligned to business and performance objectives.

AMAX | 1565 Reliance Way, Fremont, CA 94539 | 1 (800) 800-6328 | www.amax.com | info@amax.com

Core Services

Engineering and Design

AMAX translates workload and business requirements into scalable, secure, and future-ready on-premises AI architectures. Services extend beyond OEM reference designs to address custom interconnects, BIOS and firmware tuning, mixed accelerator environments, and workload-specific optimization. Architecture design, capacity planning, high-density rack and liquid cooling design, network and storage architecture, and security frameworks are delivered with cost efficiency and long-term operational impact in mind.

Deployment and Implementation

AMAX manages the full factory-to-production deployment lifecycle. Services include factory rack integration and acceptance testing, logistics and site coordination, liquid cooling installation and commissioning, cluster and storage deployment, and network fabric validation. Burn-in, stress testing, and performance benchmarking confirm systems meet acceptance criteria. Security hardening, automation workflows, documentation, training, and operational handover ensure production readiness at delivery.

Software Services

AMAX provides software configuration and integration consulting to bridge the gap between hardware delivery and operational AI platforms. Services include customized OS and container runtime environments and consultative guidance on NVIDIA AI Enterprise platform integration. For organizations without existing on-premises operational expertise, AMAX advises on infrastructure services and tooling typically abstracted by cloud platforms but required for on-premises deployments. Software services enable customer teams to operate AI platforms using familiar tooling, reducing integration friction and accelerating time-to-value.

Post-Sales and Operations

AMAX supports mission-critical AI environments with ongoing operational services focused on stability, performance, and long-term reliability. Capabilities include continuous monitoring, incident response, health assessments, and performance optimization.

AMAX also oversees liquid cooling and environmental maintenance, firmware and lifecycle coordination, capacity planning, and security monitoring with compliance alignment. Regular architecture and operational reviews help ensure infrastructure evolves in step with changing business requirements and workload demands.

Key Benefits

- Clear ownership across design, deployment, and operations
- Reduced risk in complex and multi-vendor environments
- Faster time to production for large-scale AI deployments
- Accountability for system-level performance
- Improved operational stability and long-term efficiency

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