Product Brief

intel® tiber™ Edge Platform

Accelerate Edge Innovation with an End-to-End Software Solution

Streamline your path to high ROI at the edge with the Intel® Tiber™ Edge Platform

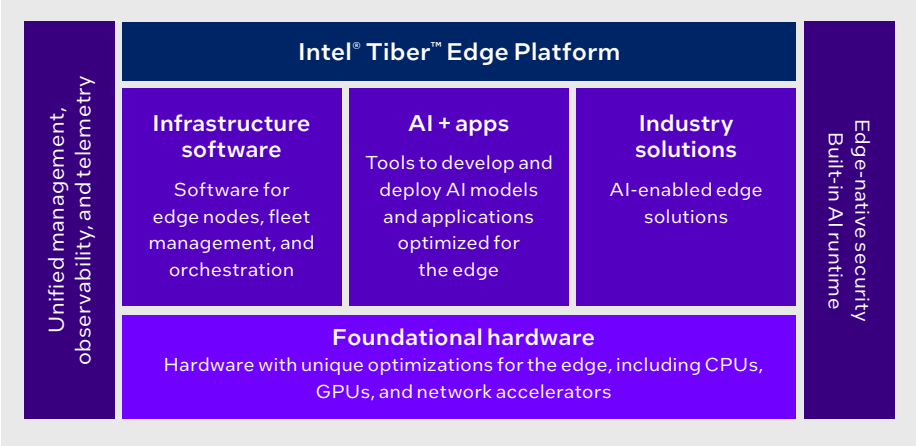
How you can use the platform

In combination with our robust partner ecosystem, the Intel® Tiber™ Edge Platform supports today's most critical edge and edge AI use cases, including:

- **Defect detection:** Leverage integrated support for the OpenVINO™ toolkit to easily enable accurate, high-performance computer vision and inferencing on your plant floor.
- **Retail automation:** Streamline operations and enhance the customer experience by using built-in capabilities to enhance key areas such as checkout, inventory processes, and logistics through AI.
- **Smart cities:** Support distributed infrastructure, including AI-enabled cameras, spread out across a vast physical area for applications such as intersection monitoring.
- **Inventory management:** Deliver real-time, AI-enhanced inventory management capabilities for warehousing and retail use cases.
- **Asset tracking:** Enable intelligent solutions that can monitor asset status in real time in industrial environments.

Build, deploy, run, manage, and scale edge and AI solutions on standard hardware with cloud-like simplicity.

The Intel® Tiber™ Edge Platform supports heterogeneous components and zero-touch, policy-based management of infrastructure, apps, and AI across a fleet of edge nodes from a single pane of glass.



Get everything you need to securely build, deploy, run, and manage at scale

Edge solutions are essential in reducing costs, improving productivity, increasing resilience, and a host of other high-priority business objectives. However, many enterprises find that their efforts stall out as they're faced with complex development and deployment challenges, such as:

- Building high return on investment (ROI) and high-performance edge AI solutions across a range of use cases
- Integrating new and existing heterogeneous infrastructure and applications for edge and AI solutions
- Securely and cost-effectively moving and using high data volumes required by AI at the edge while maintaining low latency
- Managing complex day 0/1/2 operations of distributed edge nodes and applications at scale

AI both increases the potential of these new edge use cases and amplifies the degree of difficulty—introducing challenges such as securing sensitive data in the public cloud, upgrading infrastructure to support costly specialty hardware, ensuring quality-of-service requirements, and optimizing application performance in dynamic operating conditions.

Our software platform enables your organization to overcome these challenges and dramatically shorten the path to ROI from your intelligent edge solutions. This modular software solution enables enterprises to build and manage edge deployments end to end for their vertical use cases. Support for heterogeneous components helps extend the value of current technology investments, while zero-touch, policy-based management across your fleet of edge nodes from a single pane of glass simplifies orchestration and helps reduce overhead. Plus, it features built-in AI model development, management, and AI inference runtime optimizations for hybrid implementations.

Using this platform, your organization can expedite your journey from prototype to production with:

- **Integrated development environments with robust AI support**, including prebuilt components, optimized AI models that are ready for deployment or custom AI development services, and application development options
- **Edge-native infrastructure management**, with the ability to securely onboard and manage a fleet of edge nodes, leveraging the most suitable and cost-effective brownfield or greenfield components
- **Edge-optimized AI inferencing** with compelling application performance tuned for a wide spectrum of edge hardware in edge-to-cloud hybrid implementations
- **Simplified solution management** that eases day 0/1/2 operations across your edge fleet with zero-touch, policy-based provisioning, orchestration, and life-cycle management, including dynamic application deployment based on your requirements
- **Closed-loop automation** that leverages deep hardware-aware telemetry to track and automate application deployment based on policies and observability
- **Deep-root security capabilities** that enable zero trust onboarding and offer enhanced security—all the way down to the hardware level

Take advantage of powerful components for intelligent edge

We're bringing the full power of Intel's edge experience and expertise to your enterprise. This platform comes equipped with proven Intel® technology investments that move from proof of concept to production, including the following software:

Infrastructure management

Enable IT and DevOps personnel to provision, onboard, and manage a fleet of edge nodes—including AI boxes, industrial controls, HMI devices, smart cameras, POS systems, and more—securely and remotely.

A modular and edge-native software stack for edge nodes supports computing, networking, security, and more. This stack can be customized to extract maximum value from your hardware components and can be optimized for edge and hybrid implementations.

AI and application development

The platform provides enterprise developers with powerful applications and platforms such as:

- **Development microservices** that can help accelerate application development
- **Intel® Geti™ software**, which helps facilitate model training for AI computer vision with a streamlined interface that's easy for non-data scientists to use
- **Built-in OpenVINO™ AI Runtime**, optimizations to achieve the desired speed, accuracy, and power efficiency on right-sized components

Industry solutions

The platform includes AI-enabled edge solutions optimized for verticals and use cases, such as:

- **Intel® Edge Insights System** to manage, operate, and deploy AI at the edge
- **Integrated data management and ingest for time series and video data**, enabling industrial use cases such as defect detection and predictive analytics for manufacturing, energy, and beyond

Solve edge challenges across the device and application life cycle

With the Intel® Tiber™ Edge Platform, you can build working solutions that connect and optimize for maximum performance. It's designed to accelerate every phase of the solution development and AI life cycle—from building your application, to deploying it across all your edge nodes, to optimizing and updating as part of your continuous operations. The platform supports a range of hardware architectures, model repositories, and edge AI model training platforms to help streamline your edge journey.

Accelerate application and solution development

Make the journey from prototype to production a shorter one. Speed up ROI with a set of software building blocks, toolkits, pretrained AI models, and reference solutions that unlock quick progress on your AI and application development journey.

With application development environments, our platform allows your developers to work in whatever way suits them best. Teams will have the option to upload their existing containerized apps, AI models, datasets, and solutions or start building from scratch. You can also optimize existing apps for the edge—even if they're cloud-native.

The Intel® Tiber™ Edge Platform also includes the Intel® Geti™ platform—innovative software that allows non-data scientists to easily help train AI models for computer vision. Using the Intel® Geti™ software eases laborious data labeling, model training, and optimization tasks across the AI model development process, empowering teams to produce custom AI models at scale.

Streamline deployment and leverage existing investments

Scale your application across every node seamlessly. Remove barriers to optimized application deployment—including AI-enabled use cases—across your edge nodes with hardware-aware telemetry and tools that allow you to tackle challenging requirements such as performance and latency, all while you easily support MLOps for ongoing model updates.

Our platform allows you to securely onboard and manage fleets of edge nodes more efficiently and with lower TCO. It supports diverse architectures and applications and enables new solutions on greenfield or brownfield components. Dynamic workload placement based on policies helps you achieve optimized performance and meet overall deployment performance expectations. The platform can automate cluster orchestration to centralize control and meet application requirements.

Using this offering, you can easily take advantage of built-in OpenVINO™ AI Runtime optimizations that enable efficient inferencing on right-sized components. With a write-once, deploy-anywhere approach, OpenVINO™ toolkit helps you meet stringent deployment demands on a wider range of heterogeneous hardware.

Manage everything from a single pane of glass

Keep things optimized with less effort. From day 0 through days 1 and 2, the Intel® Tiber™ Edge Platform offers streamlined solution management and enables custom edge and hybrid implementations. Deep telemetry enables policy-based life-cycle management for distributed edge infrastructure and gives you a cloud-like, single-pane-of-glass view of your deployments.

The Intel® Tiber™ Edge Platform also offers dynamic application deployment and eases operations with zero-touch, policy-based provisioning, orchestration, and life-cycle management for both infrastructure and applications. Using the platform, you can reduce the time required to protect and manage edge applications with streamlined security configuration and application life-cycle support.

Enable deep-root security from end to end

Security is a top-of-mind concern for distributed, edge-to-cloud applications. To help safeguard your solution, our platform provides full access to a rich toolset that helps you protect data with consistent, hardened edge security measures, including:

- Zero trust, secure onboarding
- Protection for data at rest, in use, and in transit
- Identity and access controls
- Local attestation

Now's the time to innovate at the edge

Edge use cases are evolving and improving every day. Business leaders know the pressure is on to transform their operations and revolutionize their businesses through distributed intelligence, real-time insights, and AI-enhanced capabilities. The Intel® Tiber™ Edge Platform is designed to streamline your edge efforts across the entire solution development life cycle and shorten your path to ROI.

Built by Intel. Supercharged by our partners.

With a focus on openness and interoperability, the Intel® Tiber™ Edge Platform seamlessly integrates with solutions from our diverse partner ecosystem. You can take advantage of these integrations—and many more—to easily enable new capabilities for your edge solutions.

To learn more about our platform partners, visit **intel.com/edgeplatform** or reach out to your Intel representative.

Next steps

Find out more about the Intel® Tiber™ Edge Platform:
intel.com/edgeplatform

Learn more about resources for developers:
intel.com/content/www/us/en/developer/topic-technology/edge-5g/edge-platform/overview.html

Or contact your Intel representative to request a platform demo and get started.

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