

# WHY AERIS?

## IoT CONNECTIVITY SOLUTIONS FOR MANAGEMENT AND COST

Aeris has been leading the global IoT expansion for more than a decade, providing connectivity solutions and insights to global industries regarding their products, their customers, and their business. But as with any successful company, there is so much more.

IoT deployments can mean many things to differing business sectors. At Aeris, we try to make the entire IoT deployment and maintenance process as simple and cost-effective as possible. Staying ahead of the curve, we provide multi-carrier, multi-technology solutions. That means regardless of your chosen carrier, and regardless of the underlying technology, Aeris solutions can connect and provide numerous advantages.

The Aeris Connectivity Platform (ACP) is purpose-built to provide a better global IoT solution across multiple carriers and multiple technologies. ACP reduces operational complexities while improving coverage and cost optimization by moving deployments away from connectivity silos to multi-channel implementations. And it does so by using a single dashboard for all carriers, technologies, and deployments.

The Aeris Mobility Platform (AMP) is an end-to-end IoT technology stack from infrastructure to application that is modular down to the component level. Every micro-service in AMP includes a well-defined API, such that companies can leverage the entire stack, or pick and choose just the components they want, and then integrate them into existing or third-party systems.

# Connectivity: Seamless Global Cellular Solutions

The Aeris Connectivity Platform (ACP) provides complete control over an IoT program's entire device lifecycle. Provision, activate, troubleshoot and bill devices with speed and confidence.

ACP is a single platform to seamlessly manage deployments across multiple carrier networks and multiple technologies. This allows customers to reduce operational complexities and shorten time-to-market by up to 50% for launching next-gen products and global expansion.

Aeris global connectivity gives you better reliability, performance, visibility, and control. Choose the connectivity option that works best for your company's specific business needs.

Aeris offers 2G, 3G, 4G, and soon-to-be 5G cellular connectivity in more than 180 countries across more than 550 carriers. Our networks are built specifically for IoT, and include readiness for next-generation technologies, such as LTE-M and NB-IoT, for increased coverage.

## The Advantages of LTE-M

Aeris LTE-M benefits from all the security and privacy features of LTE networks, such as support for user identity confidentiality, entity authentication, data integrity, and mobile equipment identification. The Aeris Intelligent IoT Network has incorporated advanced

functionality to provide the highest value for data access and security in the industry. With low-cost modules, extended battery life, better signal penetration, and the ability to use existing infrastructure, LTE-M has the potential to improve all IoT business models.

# Data and Device Security

In order to restrict data to and from devices, Aeris enables data delivery only to designated IP addresses or endpoints.



## Aeris ConnectionLock™

In order to restrict data to and from devices, Aeris provides the ConnectionLock capability, which restricts data delivery only to designated IP addresses or endpoints.

- Connect, send, receive only to/from preselected IP addresses or endpoints.
- Acts as an additional firewall within the Aeris IoT network.
- SIM cards cannot connect to other devices, thereby reducing security risks.
- Solution implemented at the network level, so no added complexity or work for customer.

## Connectivity-Aware OTA APIs

The ability to make changes to many devices remotely is important especially for operators of large-scale IoT deployments where updating devices manually would be a nearly impossible task.

- Up to 50% reduction in time-to-completion for OTA campaigns.
- Up to 50% reduction in OTA failure rates and data costs.
- Scale for large deployments with ease.
- Significantly reduce manual operations.

## Additional Security

Aeris connectivity options provide a technology- and carrier-agnostic solution that minimizes outages and inconsistent performances while adding a heightening level of security.

- SIM as Security Element: To simplify and heighten security capabilities, Aeris puts both security and connectivity on a single chip. SIMs are pre-activated but restricted to connect only to Aeris, thereby avoiding theft or misuse and the charges associated with such actions.
- Device Lock: Aeris Device Lock enables locking devices to a specific IP address or a set of IP addresses at the network level. Devices and SIM cards are virtually bonded to each other. One will not work without the other.





# Connectivity: Visibility and Control

ACP provides complete visibility and control over the entire device lifecycle.

The platform includes a device management component to provision, activate, and bill devices, bound together with heightened customer support. Device traffic management provides customers with the ability to analyze performance and cost drivers and, when combined with alerts management, allows for a wide range of pre-defined or option-driven system alerts and reports, thereby ensuring optimum performance. Additional ACP functionality provides:

## AerPort / APIs

The Aeris AerPort™ dashboard provides a single portal for managing global deployments, end-to-end device lifecycle management, billing optimization, location-based services, connectivity analytics, and access to customer support. Aeris also offers a rich set of REST APIs, which enable customers to effectively manage connectivity, network services, and more.

## IoT Analytics

By identifying devices with connectivity issues, focusing on devices that are outliers or behaving abnormally, and by analyzing usage activity, it's possible to improve business operations and reduce equipment outages and downtime, all of which result in decreased business expenditures. IoT Analytics applies business rules, actions, and analysis to data stored in the cloud to find insights.

## IoT Billing

Supporting diverse rollover and pooling policies, IoT Billing is designed specifically to meet the multi-tiered account requirements of device lifecycle billing management during activation and suspension, while at the same time supporting diverse rollover and pooling policies.

## IoT Data Management

A cloud platform provides time-series data management designed to meet the challenges of scale, speed, and rich analytics. This Platform-as-a-Service (PaaS) allows a cost-effective, pay-as-you-grow model that minimizes up-front expenses without hampering future growth.

## IoT Asset Management

The IoT Asset Management solution provides analytics and IoT connectivity management for assets, people, and operations. Service providers can offer this enterprise-level solution to customers, including OEMs, fleet rental, leasing, and finance organizations.

## Roaming Control

Specifies a network to which a device is connected. Moves to a stronger network (by means of using a visited network) if the signal strength drops below a defined threshold when travelling outside the geographical coverage area of the home network.

# Aeris Mobility Platform: Modular and Scalable

The Aeris Mobility Platform (AMP) is a modular software platform offering technical and functional building blocks for IoT solutions related to motorized moving things, such as cars, trucks, and motorcycles.

AMP is modular down to the component level. Every micro-service in AMP includes a well-defined API so that OEMs can leverage the entire stack, or “pick and choose” just the components they want, and then integrate them into existing or third-party systems. AMP consists of the following:

## Service Platform

The Services Platform provides tools to create and centrally administer connected services and deliver those services to the right devices, to the right users, at the right time.

It includes a robust library of pre-built Business Services related to things that move and have a motor; a Services Factory to create or enable new services; a Product Catalog to package those services into a wide variety of products

(for regions, brands, models, etc.); Lifecycle Management to correctly deliver services across the entire user and device lifecycles (including vehicle/thing registration, customer enrollment, mobile device pairing, transfer of ownership, TCU swap, etc.); Billing, Payments, and Taxation services; User Relationship Management (URM); as well as campaign management capabilities to remotely update device software over-the-air.

## Device Platform

The Device Platform connects and controls information flow between each device and all other endpoints in your system.

Architecturally separated from the Services Platform, the Device Platform automates device configuration as services evolve, improving

operational efficiency and enabling advanced business models where users can carry seamlessly connected services from machine to machine. It includes a smart edge client that enables maximum service flexibility while reducing both connectivity and cloud computing costs.

## Infrastructure Services

Infrastructure Services provide the tools and analytics to help OEMs manage and monitor their entire system — from infrastructure to applications — at any scale. Infrastructure

Services integrate advanced tools, including a container deployment orchestrator, rules-based anomaly detection, trend analysis, and a full audit trail to detect security threats.

# The Aeris Way

Aeris understands that there must be an entire company backing up the promise of a better solution. To that end, we highlight three critical elements that differentiate Aeris solutions from the marketplace.



## Services

Providing exceptional solutions starts with the ability to provide superior creation velocity while delivering product flexibility. Micro-services architecture enables plug-and play agility with the fastest time to market. The modular design enables easy customization. Or, if ready to go, then our off-the shelf solutions provide a ready-to-launch service.



## Operations

The Aeris solution has a scalable and flexible global architecture providing regional autonomy (think regional rules, currency, compliance) to deployments. Aeris' container-based architecture enables seamless migration, expansion, and risk mitigation. It was designed to enable the rapid deployment, modification, or removal of applications while maintaining security and overall functionality.



## Customer Experience

A company can enamor itself to customers by providing a world-class business experience. This is initiated with best-in-class service responsiveness. Add to this a rules-based policy with smart data compression to optimize performance and cost. Then add native network-level data segregation for improved security and the end experience becomes an easy-to-deploy and easy-to-maintain IoT business solution.

## ONLY AERIS

Aeris simplifies the complexity of your IoT deployments and enables you to stay ahead of the competition. Our goal is to provide cost-effective, flexible, high-capacity, and low-complexity cellular solutions for IoT communications.

We will work closely with your IT team to identify the type of network that best fits your needs, as well as identifying the specific technologies needed for your project. We care about creating network solutions that customers can rely on.

For additional information:  
[www.aeris.com/iot-solutions](http://www.aeris.com/iot-solutions)

## ABOUT AERIS:

Aeris is a technology partner with a proven history of helping companies unlock value through IoT. We strive to fundamentally improve businesses by dramatically reducing costs, accelerating time-to-market, and enabling new revenue streams. Built from the ground up for IoT and road tested at scale, the Aeris Intelligent IoT Network is based on the broadest technology stack in the industry, including the Aeris Connectivity Platform (ACP) and the Aeris Mobility Platform (AMP), spanning connectivity up to vertical solutions for things that move. At Aeris, we believe that if you focus on the customer, you gain a competitive edge by delivering an experience that surpasses your competitors and fulfills all customer expectations. We know that implementing an IoT solution can be complex, and we pride ourselves on making it simpler.

Visit [www.aeris.com](http://www.aeris.com) or follow us on Twitter @AerisM2M to learn how we can inspire you to create new business models and to participate in the revolution of the Internet of Things.

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