



Solution Brochure

Smart Bootstrap and IoT Connectivity with G+D's AirOn360® Intelligent Online

Giesecke+Devrient's (G+D) connectivity enablement revolutionizes the way IoT and consumer devices leverage cellular network resources at large scale. In-built at manufacture, it ensures that a device always gets optimal network connectivity, even straight out-of-the-box. Combined with G+D's advanced eSIM and iSIM management, the dynamically allocated connectivity allows for user-friendly instant profile provisioning or bootstrapping activities. This technology is pivotal in the rapidly growing IoT landscape, enabling seamless, scalable, and secure connections wherever the device is deployed.

G+D's AirOn360® Intelligent Online (IO) enables advanced Remote SIM Provisioning (RSP) technology to provide both IoT and consumer devices as well as vehicles with an immediate cellular connection from the moment they are powered on. This technology eliminates the need preconfigured eSIMs or iSIMs as well as WiFi or Bluetooth connections used to download profiles. It allows for the remote provisioning of mobile network operator (MNO) subscriptions, tailored to the device's current location, ensuring the best network coverage as well as fast and easy user experience. Moreover, the solution enables cost-optimized periodic connectivity via a unique dynamic assignment process that leverages G+D's global connectivity option.

AirOn360® IO enables both consumer or IoT connectivity without the need for an active subscription via our unique dynamic subscription assignment process!

Challenges of IoT device deployment



Seamless Connectivity: Ensuring connectivity for devices right out of the box.



Periodic Connectivity: Enabling time-limited IoT connectivity via dynamic subscription assignment.



Scalability: Easily scaling to accommodate large volumes of devices, ensuring consistent and reliable provisioning.



Simplification: Reducing logistics complexity by minimizing the number of SKUs and simplifying inventory management.



Acceleration: Reducing time-to-market while simplifying device hardware without compromising on quality and performance.



Digitization: Digitizing the delivery of connectivity credentials during the initial start-up of the device.

Benefits of G+D's AirOn360® Intelligent Online



New Use Cases

- Devices can connect to cellular networks immediately.
- New markets, regions and customers can be addressed.
- Devices can connect for a limited time via a dynamic subscription.



Digitization

- Digital download of MNO profiles/subscriptions.
- Drives digitization and ensures future-readiness.
- Reduced production costs and subscription fees.



Efficient Logistics

- Single Stock-Keeping Unit (SKU) across various regions.
- Less variation of components.
- Manufacturing and logistics processes can be simplified, rationalized and accelerated.

Advantages of AirOn360® IO

- **Global Reach:** Compatible with numerous MNOs and MVNOs worldwide, ensuring consistent connectivity.
- **Global Connectivity-as-a-Service:** G+D's global IoT connectivity can be used with coverage in 185 countries across more than 600 mobile networks, including satellite-based connectivity for remote areas.
- **Network Switching:** Easily switch between MNOs or MVNOs to ensure the best coverage and service quality.
- **Local Adaptation:** Devices adapt to local MNOs or MVNOs, optimizing connectivity and performance.
- **Integrated SIM (iSIM):** The solution also features G+D's iUICC.
- **Versatility:** Suitable for a diverse range of IoT applications, from consumer electronics to IoT devices and vehicles.
- **Efficient Management:** Simplify the RSP process of IoT deployments with G+D's centralized connectivity management platform (CMP) AirOn360® IoT Suite.
- **Device Simplification:** No need for Wi-Fi, Bluetooth or any other additional wireless interface.
- **Cost Savings:** Reduce operating costs and subscription fees by minimizing the need for manual configuration and by using temporary or dynamically assigned subscriptions.
- **Cost Optimization:** The costs for applications that only make periodic connections can be significantly optimized.

How AirOn360® IO Works

1. **Connectivity Request:** The G+D eSIM requests connectivity from the AirOn360® IO backend when the device is powered on.
2. **Subscription Allocation:** Based on location, use case or device type, a suitable subscription is assigned temporarily or permanently.
3. **Connection Establishment:** With the dynamically or permanently assigned subscription, the eSIM enables the device to connect to the optimal cellular network.
4. **Optional Reassignment:** The dynamic subscription assignment is adjusted if conditions change.

Use Cases and Applications for Periodic or Bootstrap Connectivity



Smart Homes: Streamline connectivity for smart meters, sensors, fire alarms or other devices that require sporadic but secure connection.



Consumer Electronics: Ensure the best user experience for smartphones, tablets, PCs, and wearables with the preferred connectivity.



Logistics and Fleet Management: Get real-time updates on the location and status of vehicles and shipments using best-fit connectivity.



Smart Cities: Improve urban life with optimal connectivity for smart streetlights, sensors, transportation systems, and utilities.



V16 Beacons: Enable connectivity for devices that are rarely or never activated but require reliable connectivity when in use.



Automotive Industry: Enable location dependent communication and telematics services for connected vehicles.



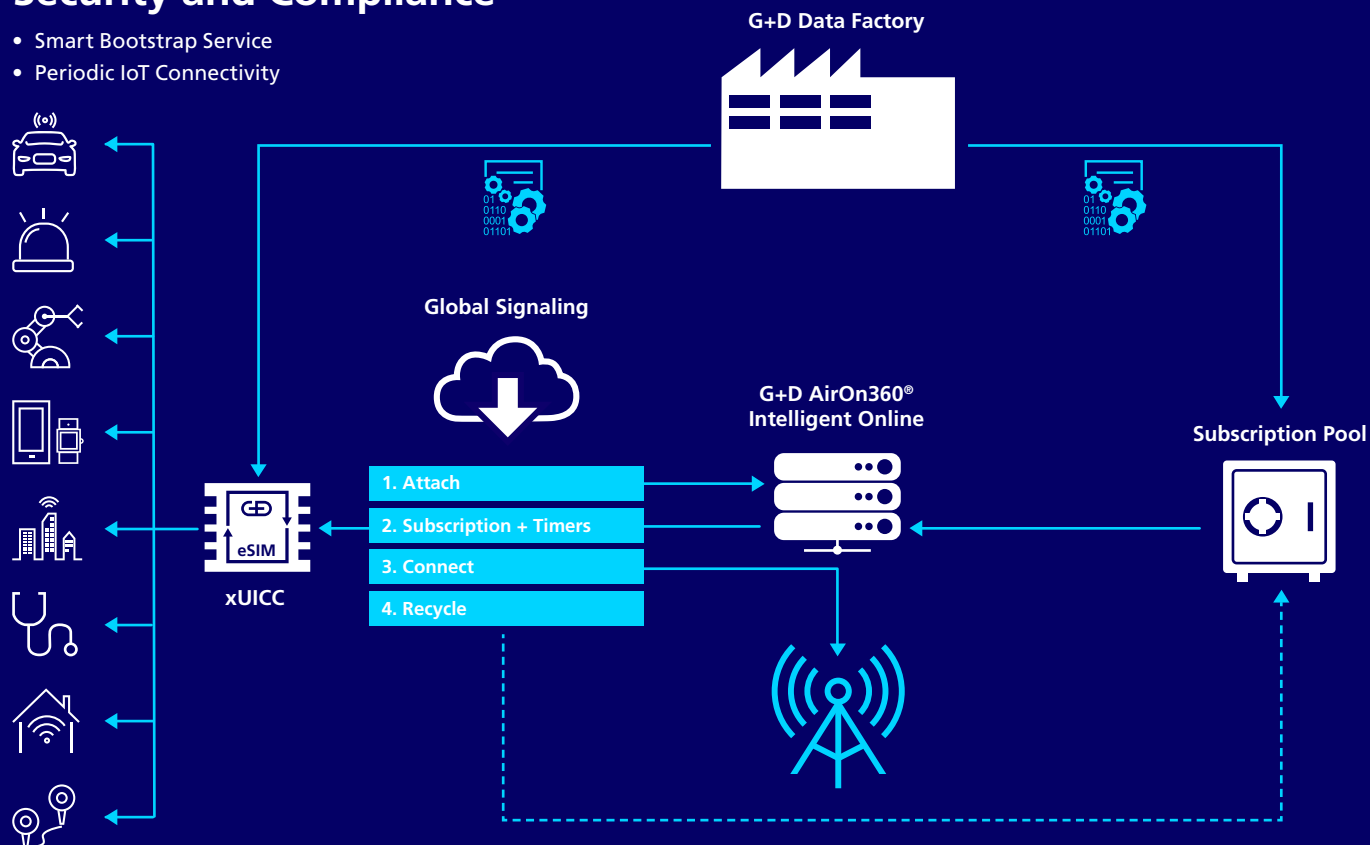
Healthcare and Telemedicine: Facilitate continuous monitoring of patients and health data through optimal connectivity.



Industrial IoT: Empower real-time monitoring and control for sensors and machinery with location-based connectivity.

Security and Compliance

- Smart Bootstrap Service
- Periodic IoT Connectivity



Security and Compliance

- **Standards:** All RSP processes are compliant with GSMA eSIM specifications, ensuring interoperability.
- **Profiles:** Supports multiple operator profiles, enabling dynamic switching.
- **Authentication:** Robust authentication mechanisms to protect against unauthorized access.
- **Regulatory Compliance:** Adherence to industry standards and regulations, ensuring compliance with data protection laws.
- **Global Coverage:** Partnerships with leading MNOs provide extensive coverage.
- **LTE and 5G Ready:** Supports latest network technologies for high-speed connectivity.

Additional Solutions

- **eUICC/eSIM:** The SmartSIM® product family from G+D is available for all RSP standards and comes in different form factors and variants.
 - Consumer grade
 - Industrial grade
 - Automotive grade
- **Remote SIM Provisioning (RSP) Option:** With G+D's eSIM solution, MNO profiles can optionally be managed via RSP.
- **Single Platform Option:** G+D's AirOn360® IoT Suite enables the remote SIM management of all GSMA standards via one platform.
 - SGP.02 / M2M – Legacy devices, cars
 - SGP.22 / Consumer – Phones, tablets
 - SGP.32 / IoT – Headless IoT devices, cars
 - SGP.42 / IFPP – Born Connected® devices

Why Choose Our Solution?

G+D's AirOn360® Intelligent Online stands out because of:

- **Our Expertise:** More than 30 years of experience in SIM, eSIM and iSIM technologies, ensuring reliable and secure profile provisioning.
- **Customization:** Solutions can be tailored to meet the unique needs of different industries and applications.
- **Support:** Comprehensive support throughout the provisioning process, from profile creation to deployment.
- **Availability:** Highest service availability.
- **Innovation:** Continuous innovation to stay ahead of emerging trends and technologies in IoT connectivity.
- **Sustainability:** Data centers that are operated with sustainable energy, depending on the region and availability.
- **Unique Solution:** The dynamic subscription allocation process to enable smart bootstrap and time-limited IoT connectivity is unique.



**Secure connections.
Unlimited potential.**

About Giesecke+Devrient

Giesecke+Devrient (G+D) is a global SecurityTech company headquartered in Munich, Germany. G+D makes the lives of billions of people more secure. The company shapes trust in the digital age, with built-in security technology in three segments: Digital Security, Financial Platforms and Currency Technology.

G+D was founded in 1852 and today has a workforce of more than 14,000 employees. In the fiscal year 2023, the company generated a turnover of 3 billion euros. G+D is represented by 123 subsidiaries and joint ventures in 40 countries.

Further information: www.gi-de.com



Giesecke+Devrient

Giesecke+Devrient Mobile Security Germany GmbH
Prinzregentenstrasse 161
81677 Munich
Germany

www.gi-de.com
connectivity@gi-de.com

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