



## Solution Brochure

# Advanced Remote SIM Provisioning with G+D's AirOn360® IoT

G+D's AirOn360® IoT is an advanced eSIM management solution designed to meet the evolving demands of global IoT connectivity. Built to comply with the GSMA SGP.32 standard, AirOn360® IoT ensures seamless integration across mobile network operators (MNOs) worldwide, offering businesses a secure, scalable, and flexible solution for managing IoT devices and their connectivity.

SGP.32 is the successor to the legacy SGP.02 standard, which was widely used for Machine-to-Machine (M2M) communication. While SGP.02 relied primarily on SMS communication, SGP.32 aligns with modern IP-based communication protocols, similar to the SGP.22 standard used for consumer devices such as smartphones. This evolution enables faster, more efficient, and secure connectivity management for large-scale IoT deployments.

As industries such as utilities, automotive, healthcare, transportation, and industrial automation continue to grow, AirOn360® IoT offers centralized control over eSIM profiles, allowing businesses to remotely provision, update, and manage their devices over-the-air (OTA). With support for global interoperability and end-to-end lifecycle management, the platform makes it easy to deploy and administrate millions, of IoT devices worldwide.

By leveraging the GSMA SGP.32 standard, AirOn360® IoT helps businesses extend their global reach while reducing costs associated with roaming and manual SIM handling.

**AirOn360® IoT provides a standardized and future-proof solution to optimize your digital IoT strategy.**

## Challenges of automotive and IoT device OEMs



**Connectivity** - Ensuring seamless connectivity for cars and IoT devices.



**Digitalization** - Digitalizing processes to enable connectivity at the point of use.



**Sustainability** - Reducing plastic consumption and minimizing CO2 emissions.



**Future-proof** - Supporting IP-based protocols as well as 5G and NB-IoT.



**Time-to-Market** - Speeding up the development time.



**Interoperability** - Ensuring global interoperability and regulatory compliance.

# Advantages of G+D's AirOn360® IoT for eSIM Management



## Increased Efficiency

- Simplified global connectivity management, reducing operational complexity.
- Higher efficiency and better scalability for large-scale IoT deployments.
- Protects investments by providing a solution that remains relevant as IoT technologies advance.



## Fast Time-To-Market

- Accelerates the rollout of IoT devices, allowing businesses to respond quickly to market opportunities.
- Enables businesses to scale their IoT ecosystems without worrying about connectivity bottlenecks or operational overhead.



## Streamlined Logistics

- Reduces the logistical and operational costs of managing large fleets of IoT devices, particularly those in hard-to-reach locations.
- Streamlines device management and provides businesses with greater flexibility in managing the lifecycle of their IoT devices.

## Benefits of G+D's AirOn360® IoT

- **Global Interoperability:** SGP.32 ensures seamless integration and compatibility with MNOs worldwide. This allows businesses to deploy IoT devices across borders without needing multiple agreements with different MNOs.
- **IP-Based Communication:** Unlike the legacy SGP.02 standard, which relied on SMS, SGP.32 uses modern IP-based protocols for communication. This enables faster, more reliable data exchange and provisioning.
- **Future-Proof Connectivity:** AirOn360® IoT is designed to support evolving IoT requirements and future technologies, ensuring long-term compatibility with future network upgrades and innovations.
- **Integrated SIM (iSIM):** The solution also features profile administration for G+D's iUICC.
- **Lifecycle Management (LCM):** AirOn360® IoT supports the full lifecycle of an eSIM, from initial provisioning to updates, switching, transfers, and eventual deactivation.
- **Time-to-Market:** With RSP, IoT devices can be deployed faster, as there is no need to pre-install physical SIM cards or configure devices manually.
- **Flexibility:** Businesses can dynamically switch between MNOs to optimize network performance or reduce costs, without the need to physically replace SIMs.
- **Scalability:** AirOn360® IoT is designed to manage large-scale IoT deployments, from hundreds to millions of devices, efficiently and securely.
- **Cost Savings:** Reduces operational costs by minimizing the need for manual configuration and post-deployment adjustments.

## Security and Compliance

Security is paramount in Remote SIM Provisioning (RSP) via AirOn360® IoT. By loading and managing profiles in the field, we ensure:

- **Data Encryption:** Profiles and data are encrypted to prevent unauthorized access and tampering.
- **Secure Authentication:** Devices use secure authentication protocols, safeguarding against network breaches.
- **Regulatory Compliance:** Adherence to industry standards and regulations, ensuring compliance with data protection laws.
- **Standard Compliance:** G+D's AirOn360® IoT is fully in line with the GSMA standard SGP.32.

## Use Cases and Applications



**Smart Cities/Buildings:** Devices that are to be used globally and/or for which connectivity is to be managed centrally.



**Automotive Industry:** Enable connected vehicles with MNO profiles for seamless global communication and telematics.



**Transport and Logistics:** Trackers and other battery-powered IoT devices that need to be connectivity enabled.



**Healthcare Devices:** Empower medical devices with secure connectivity for reliable data transmission and remote monitoring.



**Smart Metering/Massive IoT:** Smart electricity, gas and water meters or sensors that need to be configured at the point of use.



**Industrial IoT:** Provide sensors and machinery with optimal connectivity for real-time monitoring and control.

# Key Components of SGP.32 RSP with G+D's AirOn360® IoT



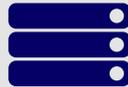
**eUICC:** The hardware chip embedded in IoT devices that stores multiple eSIM profiles and manages switching between them.



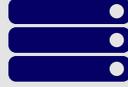
**IPA:** The IoT Profile Assistant is a software component in the device (IPAd) or in the eUICC (IP Ae). It handles the communication between the eUICC and external servers.



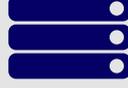
**MNO:** The MNO provides the eSIM profiles that are remotely provisioned to IoT devices. MNOs handle connectivity and network service for the deployed devices.



**SM-DP+:** The Subscription Manager Data Preparation Plus is responsible for securely downloading eSIM profiles to the eUICC. It is fully compliant with the consumer SM-DP+ (SGP.22).



**SM-DS:** The Subscription Manager Discovery Service assists in locating the appropriate SM-DP+ and facilitating the eSIM profile download to the eUICC.



**eIM:** The eSIM IoT Remote Manager administrates the eUICC lifecycle.

## Additional Offerings and Services

- **G+D's Connectivity Option:** G+D's global IoT connectivity can be used as bootstrap, backup or permanent connectivity. It covers 185 countries via more than 600 mobile networks, including satellite-based connectivity for remote areas.
- **One-Stop-Shop:** G+D can offer all relevant components out of one hand.
  - Services
  - Connectivity
  - xUICC
- **Combined RSP Option:** For some use cases a combination of RSP via SGP.32 and In-Factory Profile Provisioning (IFPP) can be beneficial.
- **eUICC/eSIM:** The Sm@rt SIM® 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
- **Single Platform Option:** G+D's AirOn360® IoT Suite enables the remote SIM administration of all GSMA standards via one platform.
  - SGP.02 / M2M – Legacy devices, cars
  - SGP.22 / Consumer – Phones, tablets
  - SGP.32 / IoT – IoT devices, cars
  - SGP.42 / IFPP – Born Connected® devices

## Why Choose Our Solution?

G+D's AirOn360® IoT 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.
- **Innovation:** Continuous innovation to stay ahead of emerging trends and technologies in IoT connectivity.
- **Multi-Carrier Offering:** Customers can choose from and easily integrate with 300+ SM-DP+ systems, securely hosted at G+D.
- **Support:** Comprehensive support throughout the provisioning process, from profile creation to deployment.
- **Sustainability:** Data centers that are operated with sustainable energy, depending on the region and availability.





**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](http://www.gi-de.com)



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