



VALID eSIM  
SOLUTIONS  
FOR CONSUMER  
DEVICES

**Valid**



## The eSIM's Rise and Our Growing Global Mobile Economy

The eUICC technology, also known as eSIM technology, is revolutionizing our mobile economy, simplifying our modern mobile lifestyles, and accelerating the "Internet of Everything". As mobile connections continue to grow at a staggering pace worldwide, the eSIM – or embedded SIM – has become crucial in keeping our mobile economy moving forward.

Compared to traditional, removable SIMs, the eUICC offers improved simplicity, cloud security, unprecedented flexibility, global connectivity and it operates with an endless range of mobile devices and networks. Over-the-air (OTA) provisioning throughout the life of an expanding range of innovative consumer connected products is a game changer for "turning on" devices with multiple mobile operators and OEMs, updating service plans, and downloading security and device software updates.

Consumers enjoy greater service plan flexibility, improved functionality and lower costs, but MNOs may see the biggest advantages through reduced logistics in SIM handling, more flexibility, parity and partnership opportunities between carriers and OEMs. What's more, with 5G on the horizon, eSIMs allow seamless management of network evolution, keeping consumer devices continuously connected, and updated and helping to reduce network congestion to make way for new innovative devices.

Valid brings its expertise in sensitive data generation and secure personalization services to its advanced mioSIM eSIM product family by delivering high performance, GSMA compliance and worldwide coverage of 2G, 3G, 4G, 5G, LTE-M, and NB-IoT as well as market leading customer service with local market support around the world.

**The number of mobile operators supporting eSIM is skyrocketing, growing from 15 in 2018 to 108 at the start of 2020.**

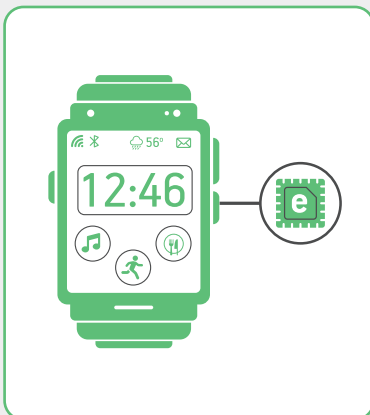
**The GSMA estimates the world will have 5.8 billion unique mobile subscribers by 2025 with 80% being smartphones. By 2025, 60% of smartphones will have eSIM technology.**

**According to Verified Market Research, the global eSIM Market is projected to reach USD 2,045.5 million by 2026, up from USD 237 million in 2018 and growing at a CAGR of 30.72% between 2019 and 2026.**

## Valid mioSIM eSIM for Consumer Devices

An eUICC, also known as embedded SIM, is a secure element designed to remotely manage your customers' mobile subscriptions across the lifespan of devices. Comprised of end-to-end encryption and strong authentication technology, Valid's mioSIM eSIM helps identify and authenticate a device to mobile networks and

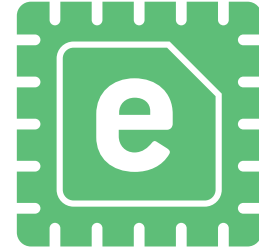
make connections resistant to security breaches. Valid's eSIM greatly simplifies the mobile ecosystem allowing OEMs to develop their devices that can be used with a variety of global mobile networks, significantly streamlining development timelines and logistics. With Valid's mioSIM eSIM, the connected device can be provisioned after purchase for the end user's preferred mobile network.



Valid's mioSIM eSIM products are secure, and scalable and come with on-demand capabilities that optimize reliability across the entire mobile ecosystem. What's more, Valid's eSIM solution enables remote updates as networks evolve to help extend the lifespan of devices. It is compliant with the new GSMA standard and comes in different form factors to support a variety of eSIM strategies. It can be plugged in or soldered into a device, bringing ruggedness and flexibility to OEMs to create their devices in a small and compact size if needed – offering necessary connectivity and security.

## mioSIM eSIM Benefits:

- ✓ Improve logistics by eliminating SIM switching costs
- ✓ No more commercial restrictions with a single MNO contract
- ✓ Compliant with new regulations
- ✓ Future-proof consumer devices as it simplifies remote updates
- ✓ Improve flexibility and agility in selecting MNO services
- ✓ Streamline logistics for OEMs and MNOs
- ✓ Promote cost efficiency for consumers



## Technical Specifications:

- mioSIM® OS is compliant with ETSI Release 15 Specifications
- GSMA specifications (SGP.21/SGP.22) for Remote SIM Provisioning for Consumer Devices
- Oracle Java Card™ Specification
- Global Platform Card Specification
- Global Platform Car Specification, Amendment B
- Global Platform Device Technology
- Secure Elements Access Control
- SIM/USIM/ISIM
- CAT/SAT/USAT
- 5G Ready
- OTA

## Valid eSIM for Consumer Devices Supported Form Factors and Grades

mioSIM eUICC CONSUMER DEVICES ARCHITECTURE					
GRADES	FORM FACTORS		MAIN SUPPORTED CHARACTERISTICS		
	Repluggable	Soldered	Temperature (C)	Write/Erase Cycles	Data Retention Lifespan
Consumer	2FF/3FF/4FF	MFF2 WLP (wafer level package)	85°	100k	10 years
Industrial	2FF/3FF/4FF (ruggedized plastic)	MFF2 (a.k.a. VFQFN8, DFN8, SON8)	105°	500k	15 years
Automotive	Not available	MFF2	105°	500k	17 years

## Subscription Management Services to Boost Consumer eSIM Usage

With big technology companies implementing eSIMs in their devices and smartphones, Google, Apple, Motorola and Samsung are boosting this trend with **eSIM enabled smartphones reaching 500 million in 2024**, according to ABI Research.

With **2 billion eSIM devices delivered worldwide in 2025**, the need for a subscription management solution is more than necessary. The industry needs to manage all connected devices remotely in order to upgrade security features, data information, and subscription details, hence requiring a comprehensive eSIM and subscription management strategy.

## Valid eReach Subscription Management Services for Consumer Devices

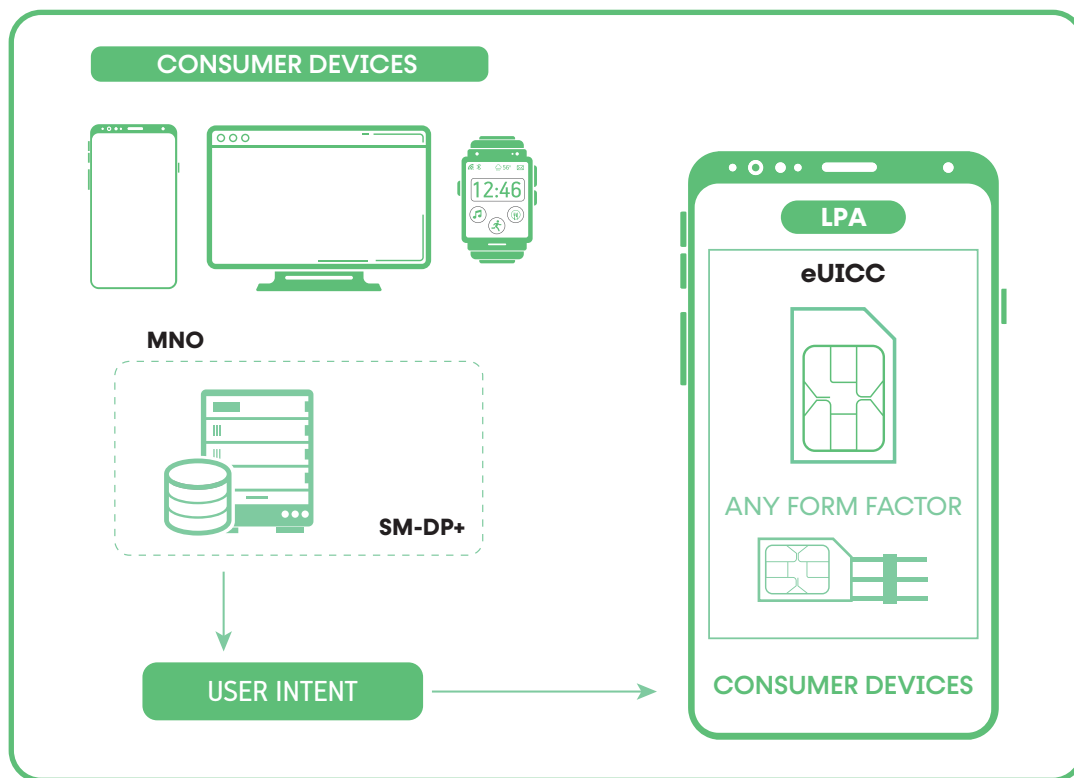
The mioSIM eSIM and all GSMA-compliant eSIM platforms are seamlessly supported by Valid's eReach Subscription Management platform, which enables MNOs, Service Providers, MVNEs and Device Makers to remotely provision, connect and manage your customer's mobile subscriptions into connected devices. Compatible with any form factor, eReach supports MNOs, OEMs, consumers

and service providers to remotely activate the embedded SIM in any mobile device.

Allow your end users to enable connectivity plans directly from their smartphones and connected devices, powering them to remotely manage connections for their devices during the entire lifecycle of such devices.

### eReach Benefits:

- ✓ Compliant with GSMA standard for remote provisioning to ensure interoperability with Valid's mioSIM eSIM and all GSMA-compliant eSIM solutions
- ✓ Provides profile generation and management both in batch or "on the fly" as needed
- ✓ Simplifies and secures integration with MNOs backend
- ✓ Allows flexible rules management to simplify specific use cases and meet a variety of special requirements for consumer devices



### Valid eReach Subscription Management for Consumer Devices main technical aspects:

- SM-DP+ platform fully compliant with GSMA SGP.22 V2.2 standard for Consumer Devices.
- Fully compliant with the high-security SAS (Security Accreditation Scheme) certification for Subscription Management (SAS-SM).
- Run your business 24/7 with Geo-redundant systems supported by our two certified data centers in Europe and USA.

## Revitalizing the Customer Journey and Expanding Revenue

**mioSIM eSIM** and **eReach technologies** unlock exciting opportunities to evolve the customer journey by providing value added services that strengthen customer loyalty, reduce churn and enhance revenue.

**mioSIM eSIM** and the **eReach Subscription Management Solution** are transforming the mobile device ecosystem and expanding business opportunities:

- ✓ Provides customers with flexible choice of service providers after purchase of a device. Improved experience with real-time, simple OTA provisioning, security and reduced costs
- ✓ Allows seamless, automated onboarding of new devices to existing service plans, which greatly simplifies billing for consumers and adds revenue streams for service providers
- ✓ Enables opportunities for “over the top services” such as economical “travel specials” when customers visit other countries and regions that are compliant with eSIM roaming services. Users avoid expensive roaming charges by simply downloading an additional eSIM and paying a local tariff and/or service fee.
- ✓ Reduces churn
- ✓ Delivers simpler device setup without the need to insert or replace a SIM card
- ✓ Enables devices that can operate independently of a tethered smartphone, with their own subscriptions;
- ✓ Enables new interactive marketing and event campaigns that improve the customer experience



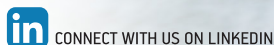
# VALID eSIM SOLUTIONS FOR CONSUMER DEVICES

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**Valid** Trust  
is Power

Valid provides tailored solutions that integrate emerging technologies to enable secure, trusted experiences. From Data, Payments, Identity, and Mobile to IoT, Track and Trace, Digital Certification, and Agritech, Valid offers a wide portfolio of services and solutions that accelerate the digital transformation of our clients' business. With over 60 years of experience and more than 6,000 employees in 16 countries, Valid is the largest issuer of identification documents in Brazil, among the top 5 producers of SIM cards and among the world's largest manufacturers of banking cards.

To learn more, visit [valid.com](https://valid.com)



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