

What is the right eSIM activation method for consumer device connectivity?

Four eSIM activation methods to enable consumers securely and easily activate their mobile subscription on their eSIM devices.

CONNECTIVITY

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Choosing the right eSIM activation methods depending on a consumer's connectivity needs

eSIM technology is a breakthrough for connectivity services, allowing out-of-the box device connectivity on a mobile network as well as a complete digitization of customer interactions. The eSIM profile contains the operator data related to a user's subscription and authenticates the user on a mobile network. It can be remotely downloaded over-the-air into the eUICC, the secure element that is soldered onto the device.

In the consumer model, which is defined by GSMA Remote SIM Provisioning (RSP) specification, the operator's eSIM subscription management server (SM-DP+ or Subscription Manager Data Preparation) is responsible for storing, preparing and downloading operator eSIM profiles to the eUICC of consumer devices (smartphones, tablets, laptops, wearables...). In this model, the user triggers the mobile subscription activation—this can be done via one of several ways.

Let's take a look at the different eSIM activation methods that enable consumers to securely and remotely provision and activate an eSIM mobile subscription (eSIM profile) onto an eSIM device. Mobile Network Operators (MNOs) can choose the most suitable methods for their use cases, business needs, and requirements—IDEMIA supports each of these eSIM activation methods.

Method 1: GSMA eSIM Discovery eSIM activation

When a user buys a subscription from an MNO, the MNO sends the eUICC identity (EID) to their subscription management server (SM-DP+). The MNO's SM-DP+ then informs the GSMA eSIM Discovery (the GSMA Subscription Management Discovery Server, or SM-DS) that it has a profile for a particular device, and sends the EID and SM-DP+ address to the GSMA's SM-DS.

Once switched on for the first time, the device connects to the **GSMA eSIM Discovery** and seamlessly acquires the eSIM profile from the correct operator. This is the most transparent and user friendly eSIM activation method for users, but it requires connection between the operator's SM-DP+ platform and the GSMA's SM-DS platform.

IDEMIA has already integrated the GSMA eSIM Discovery service into its SM-DP+ platform, to relieve MNOs from integration efforts.

Method 2: eSIM activation via the default SM-DP+

To benefit from the default SM-DP+ method, an MNO needs to partner with the device manufacturer in order to provision the device's eUICC with the operator's remote SIM provisioning platform (SM-DP+) address. This is done during the device manufacturing process. At first activation, the device connects to the SM-DP+, which downloads the eSIM profile on the device.

This method offers customers an easy and seamless experience, as the operator's remote SIM provisioning platform (SM-DP+) is contacted automatically, with no specific action required from the user.

Method 3: eSIM activation via a unique QR Code

With the eSIM activation code method, the customer is given a physical or digital QR code, containing the URL of the SM-DP+, where the eSIM profile is stored. The customer scans the QR code with the eSIM device, and the eSIM profile is downloaded automatically into the device.

Of the three methods, this method requires the least back-end integration. There is no need for partnership and/or integration between the systems of an MNO and a third-party (i.e. device manufacturer or GSMA).

Method 4: eSIM activation via a group QR Code

With IDEMIA's proprietary Group QR Code feature, mobile operators can leverage a single QR code to onboard groups of subscribers. Not only does this simplify subscription management, but it also enables various marketing campaigns: a single QR code can be used to promote targeted offers to numerous potential customers, through print media, outdoor posters and digital signage, for example.

The Group QR code activation method enables multiple use cases, such as offering device connectivity for travelers, connectivity for multiple devices under a single contract, and streamlined management of enterprise device fleets. Consumers benefit from special offerings and pricing and on-the-go connectivity, while MNOs can sell more services and simplify their processes.

The Group QR Code activation method goes beyond GSMA specifications and has been specifically developed by IDEMIA.



Mobile Network Operators (MNOs) who partner with IDEMIA are able to choose the eSIM activation methods that are best suited to their individual use cases and the specific needs of their customers. Our teams work closely with operators to advise them on how to identify the best fit among the different eSIM activation methods available.

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