Government of India
Ministry of Communications
Department of Telecommunications
Networks and Technologies Division
2nd Floor, Door Sanchar Bhawan, JLN Marg, New Delhi -110002

No.: 4-35/M2M eSIM/2024-NT **Dated: 26.06.25**

Subject: Instructions on the Usage of Embedded SIM for Machine-to-Machine (M2M) Communications –reg.

1. Embedded SIMs (e-SIMs) are soldered directly onto the devices and come equipped with a remote provisioning feature. With e-SIM, the provisioning process can be done remotely over-the-air (OTA), eliminating the need for physical access to the device. This is particularly beneficial for M2M communications, where devices are often located in remote or difficult-to-reach areas.

2. DoT vide instructions dated 16.05.18 (enclosed herewith) permitted the use of e-SIM with both single and multiple profile configurations with Over the Air (OTA) subscription update facility. The Licensees were permitted for Profile updation via Over the Air (OTA) feature, as per the prevailing global specifications and standards.

3. GSMA-compliant subscription solutions are designed in compliance with GSMA's Embedded SIM Remote Provisioning Architecture. Remote SIM Provisioning for M2M utilizes a server-driven model (push) to provision and remotely manage operator profiles. The GSMA remote provisioning architecture for M2M communications consists of various interrelated entities, viz. eUICC (Embedded Universal Integrated Circuit Card), eUICC Manufacturer (EUM), M2M Device, Mobile Network Operator (MNO), M2M Service Provider (M2M SP), Certificate Issuer (CI), Subscription Manager-Data Preparation (SM-DP) and Subscription Manager Secure Routing (SM-SR). SM-SR loads, enables, disables, and deletes profiles on the eUICC in accordance with the operator's policy rules.

4. TRAI provided its recommendation dated 21.03.24 on the Usage of Embedded SIM for Machine-to-Machine (M2M) Communications. The Government has considered the TRAI recommendations and accordingly, the approval of competent authority is hereby conveyed for the following –

4.1 The following entities are permitted to own and manage SM-SRs in the country:

i. Unified Access Service License holder;

ii. Unified License (Access Service Authorization) holder;

iii. Unified License (Machine-to-Machine Authorization) holder;

iv. Unified License for VNO (Access Service Authorization) holder;

v. Unified License for VNO (Machine-to-Machine Authorization) holder; and

vi. The companies holding M2MSP Registration with a specific permission to own and manage SM-SR in India.

4.2 The additional terms and conditions that the companies holding M2M SP registration have to comply to own and manage SM-SR in India are enclosed as Annexure-I. These additional terms and conditions are over and above the terms

and conditions enumerated in the guidelines dated 08.02.2022 for registration for M2M Service Providers and WPAN/WLAN Connectivity Providers for M2M Services'.

4.3 Each SM-SR site should be GSMA "Security Accreditation Scheme for Subscription Management" (SAS-SM) certified. The holders of SM-SR should submit a copy of the GSMA SAS-SM certificate to DoT (through Saral Sanchar Portal) before operationalizing any SM-SR in India.

4.4 The M2MSP registrant/ telecommunication service licensee, whose SM-SR controls M2M eSIMs in India, shall not refuse integration of its SM-SR with the SM-DP of the licensed telecom service provider, whose profiles are to be added in such M2M eSIMs, upon the request of the concerned M2MSP.

- The integration of SM-SR with SM-DP should be carried out in accordance with the GSMA's specifications and should be completed within a period of three months from the date of receipt of the formal request from the concerned M2MSP.

4.5 The M2MSP registrant/ telecommunication service licensee, whose SM-SR controls M2M eSIMs in India, shall mandatorily facilitate switching of its SM-SR with the SM-SR of another entity, eligible to hold SM-SR in India, upon the request of the concerned M2MSP.

- Such SM-SR switching should be carried out as per the GSMA's specifications and should be completed within a period of six months from the date of receipt of the formal request from the concerned M2MSP.

4.6 The request for switch-over of the communication profile on M2M eSIMs from one licensed telecom service provider (TSP) to another TSP shall be placed by M2M Service Providers.

4.7 The M2M SP Registrant/ telecommunication service licensee shall be allowed to communicate with SM-DPs and other SMSRs only for profile management of the M2M eSIMs as per GSMA specifications.

4.8 The M2MSP registrant/ telecommunication service licensee shall adhere to the instructions regarding usage and management of M2M eSIMs, including instructions related to SM-DP, SM-SR, as notified by the Government from time to time.

4.9 The M2MSP registrant/ telecommunication service licensee shall adhere to instructions regarding roaming of foreign M2M SIMs (including M2M eSIMs) as notified by the Government from time to time.

4.10 The use of 901.XX IMSI series allocated by ITU-TSB to Indian entities is not permitted for providing M2M services in India.

Encl:

i. Annexure-1 - Additional terms and conditions that the companies holding M2M SP registration have to comply to own and manage SM-SR in India.
ii. Annexure-2 - AS Wing, DoT instructions dated 16.05.2018 regarding instructions for e-SIMs
iii. Annexure-3 - Guidelines dated 08.02.2022 for registration for M2M Service Providers and WPAN/WLAN Connectivity Providers for M2M Services

Digitally signed by
Ajay Nain
Date: 26-06-2025
12:22:15

Ajay Nain
ADG NT-III, DoT HQ
ajay.nain@gov.in

Copy To:

i. PSO to Secretary(T)
ii. PSO to Member-T, Member-F, Member-S
iii. O/o DG-T
iv. Sr. DDG, TEC
v. DDG-LP, DDG-AS, DDG-SA
vi. Unified Access Service License holders;
vii. Unified License (Access Service Authorization) holders;
viii. Unified License (Machine-to-Machine Authorization) holders;
ix. Unified License for VNO (Access Service Authorization) holders;
x. Unified License for VNO (Machine-to-Machine Authorization) holders; and
xi. M2M Service Providers

Annexure-1

Additional terms and conditions for companies holding M2M SP registration with permission to own and manage SM-SRs

Note: These additional terms and conditions are in addition to the guidelines dated 08.02.2022 for registration for M2M Service Providers and WPAN/WLAN Connectivity Providers for M2M Services'.

A. Additional definitions

1. **"Embedded SIM (eSIM)"** means machine-to-machine form factor (MFF2). It is soldered directly to the M2M device's motherboard, fully encased in the device. The eSIM is the hardware component of the SIM and a physical form that can be soldered into a solution. On the other hand, eUICC refers to the software component of eSIM that provides the capability to store multiple network profiles that can be provisioned and managed Over-the-Air (OTA).

2. **"Embedded SIM Remote Provisioning Architecture"** means the common global GSMA architecture framework which provides a single, de-facto standard mechanism for the remote provisioning and management of M2M connections, allowing the OTA remote provisioning of an initial operator subscription, and the subsequent change of subscription from one operator to another. The GSMA's remote provisioning architecture consists of various inter-related entities, viz. eUICC, eUICC Manufacturer (EUM), M2M Device, Mobile Network Operator (MNO), M2M Service Provider (M2M SP), Certificate Issuer (CI), Subscription ManagerData Preparation (SM-DP) and Subscription Manager- Secure Routing (SM-SR).

3. **"Subscription Manager-Data Preparation (SM-DP)"** builds personalized profiles for the targeted eUICC and installs them on the eUICC through the SMSR. Further, the SM-DP prepares, stores, and protects operator profiles and tracks all imported and known subscriptions. It must be GSMA SAS-SM (Security Accreditation Scheme for Subscription Management) certified.

4. **"Subscription Manager-Secure Routing (SM-SR)"** obtains the platform management credentials of the eUICC from the EUM (in case of initial registration) or establishes them through the previous SM-SR (in case of SM-SR swap). It loads, enables, disables, and deletes profiles on the eUICC in accordance with the operator's policy rules. It maintains a secure connection between SM-DP and eUICC for the delivery of profiles. It holds a database of all the eUICCs under its control and the key sets used to manage them. eUICCs should always be registered to only one SM-SR at a particular instant. It can be changed during the lifetime of the eUICC via SM-SR swap. The SM-SR shall be GSMA SAS-SM certified.

5. **"Original Equipment Manufacturer (OEM)"** is an organization that makes devices containing M2M eSIM.

6. **"Communication Profile"** comprises of the mobile network operator data related to subscription, including the operator's credentials.

B. Additional eligibility conditions

7. An applicant, if it is an Indian company registered under the Indian Companies Act, may seek permission for owning and managing SM-SRs in India at the stage of submitting application for 'Registration of M2M Service Provider (M2MSP) & WPAN/ WLAN Connectivity Provider for M2M Services'.
8. Any existing M2MSP registrant, if it is an Indian company registered under the Indian Companies Act may separately seek permission for owning and managing SM-SRs in India.
9. A non-refundable processing fee of Rs. fifty thousand (Rs. 50,000/-) shall be payable separately at the time of seeking permission for owning and managing SM-SRs in India.

C. Additional technical conditions

10. Each SM-SR site shall be GSMA Security Accreditation Scheme for Subscription Management (SAS-SM) certified. The Registrant shall submit a copy of the GSMA SAS-SM certificate to DoT before operationalizing any SM-SR in India.
11. The Registrant, whose SM-SR controls M2M eSIMs in India, shall not refuse integration of its SM-SR with the SM-DP of the licensed telecom service provider, whose communication profiles are to be added in such M2M eSIMs upon the request of the concerned M2MSP. The integration of SM-SR with SM-DP shall be carried out in accordance with the GSMA's specifications and shall be completed within a period of three months from the date of receipt of the formal request from the concerned M2MSP.
12. The Registrant, whose SM-SR controls M2M eSIMs in India, shall mandatorily facilitate switching of its SM-SR with the SM-SR of another entity, eligible to hold SM-SR in India, upon the request of the concerned M2MSP. Such SM-SR switching shall be carried out as per the GSMA's specifications and shall be completed within a period of six months from the date of receipt of a formal request from the concerned M2MSP.
13. The Registrant shall be allowed to communicate with SM-DPs and other SM-SRs only for profile management of the M2M eSIMs as per GSMA specifications.

D. Additional security conditions

14. The Registrant shall adhere to the instructions/ guidelines issued by the Government in respect of connecting Trusted Products in the network.
15. The Registrant shall adhere to the instructions/ directions of the Licensor (i.e., DoT) issued from time to time in the interest of national security.

****