Telecommunications Standards Advisory Committee (TSAC)

Technical Specification

Provisioning of eUICC Subscription Management

IMDA TS Provisioning of eUICC SM
Issue 1, Aug 2026

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IMDA TS Provisioning of eUICC SM **Issue 1, Aug 2026**	Technical Specification for Provisioning eUICC Subscription Management
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Content

eUICC Subscription Management Technology (SMT) – Servers

1 Scope

1.1 This Requirement document sets out the configuration requirements for implementing remote provisioning and subscription management of eUICC deployed in M2M and Consumer Devices. Section 4 of this document outlines the compliance requirements based on the GSMA M2M Architecture and Technical Specification (GSMA SGP.01 [1] and SGP.02 [2]); whilst Section 5 outlines the compliance requirements based on the GSMA Consumer RSP Architecture and Technical Specification (GSMA SGP.21 [5] and SGP.22 [6]).

2 References

2.1 For the requirements captured in this document, reference has been made to the following documents. Where versions are not indicated, implementation of this guide shall be based on current and approved versions of these standards published by the respective Standards Development Organisations.

[1] GSMA SGP.01: Embedded SIM Remote Provisioning Architecture

[2] GSMA SGP.02: Remote Provisioning Architecture for Embedded UICC Technical Specification

[3] GSMA SGP.11: Remote Provisioning Architecture for Embedded UICC Test Specification

[4] GSMA SGP.16: M2M Compliance Process

[5] GSMA SGP.21: RSP Architecture

[6] GSMA SGP.22: RSP Technical Specification

[7] GSMA SGP.23: RSP Test Specification

[8] GSMA SGP.24: RSP Compliance Process

[9] GSMA FS.08: GSMA SAS Standard for Subscription Manager Roles

[10] GSMA FS.09: GSMA SAS Methodology for Subscription Manager Roles

[11] ISO 27001: ISO 27001: Information technology – Security techniques – Information security management systems – Requirements

[12] RFC 2119: Key words for use in RFCs to Indicate Requirement Levels, S. Bradner https://www.ietf.org/rfc/rfc2119.txt

2.2 Conventions

The use of "SHALL", "SHALL NOT", and "MAY" in this document infers the following (RFC 2119 [12]):

a. SHALL means “REQUIRED”, a Mandatory requirement;
b. SHALL NOT means “MUST NOT”; and
c. MAY means an Optional requirement.

3 Definitions and Abbreviations

For the purpose of this document, the following terms and definitions apply (taken mainly from GSMA SGP.02 [2] and SGP.22 [6]).

3.1 Definitions

Consumer Device: Device that supports Remote SIM Provisioning as defined by GSMA SGP.21 and SGP.22.

Device: User equipment used in conjunction with an eUICC to connect to a mobile network. E.g. a tablet, wearable, smartphone or handset.

eUICC: A removable or non-removable UICC which enables the local management of Profiles in a secure way.
Note: This term originates from “embedded UICC”.

It is a UICC that supports “over the air” provisioning of an initial operator subscription and the subsequent change of subscription from one operator to another in accordance with GSMA specifications.

Local Profile Assistant (LPA): A functional element in the Device or in the eUICC that provides the Local Profile Download (LPD), Local Discovery Services (LDS) and Local User Interface (LUI) features. When the LPA is located in the Device, they are called LPAd, LPDd, LUId, LDSd. When the LPA is located in the eUICC, they are called LPAe, LPDe, LUIe, LDSe. Where LPA, LPD, LDS or LUI are used, they apply to the element independent of its location in the Device or in the eUICC.

M2M Device: Equipment into which an Embedded UICC and a communication module are inserted during assembly that supports Remote SIM Provisioning as defined by GSMA SGP.01 and SGP.02. Examples include Utility meter, car and camera.

Operator: A Mobile Network Operator or Mobile Virtual Network Operator; a company providing wireless cellular network services.

Profile: A combination of data and applications to be provisioned on a eUICC for the purpose of providing services.

Profile Policy Rule: Defines a qualification for or enforcement of an action to be performed on a Profile when a certain condition occurs.

Service Provider: The organization through which the End User obtains PLMN telecommunication services. This is usually the Network Operator or possibly a separate body.

Subscription: Describes the commercial relationship between the End User and the Service Provider.

SMDP+: This role prepares Profile Packages, secures each with a Profile protection key, stores Profile Protection keys in a secure manner as well as the Protected Profile Packages in a Profile Package repository, and links the Protected Profile Packages to specified EIDs.
The SM-DP+ binds Protected Profile Packages to the respective EID and securely downloads these Bound Profile Packages to the LPA of the respective eUICC.

SM-DP: Role that prepares Operational and Provisioning Profiles to be securely provisioned on the eUICC and manages the installation of the Profile on the eUICC.

SM-SR: Role that which allows secure transport of both Platform and Profile management commands in order to load, enable, disable and delete Profiles on the eUICC.

UICC: It is the hardware used in mobile devices that contains SIM and/or USIM applications enabling access to GSM, UMTS/3G and LTE networks.

3.2 Abbreviations

CI	Certificate Issuer
DLOA	Digital Letter Of Approval
EID	Embedded UICC Identifier
eUICC	Embedded UICC
EUM	eUICC Manufacturer
E-UTRAN	Evolved UMTS Terrestrial Radio Access Network
GSM	Global System for Mobile communications
GSMA	GSM Association
IoT	Internet of Things
LTE	Long Term Evolution (also known as E-UTRA)
LPA	Local Profile Assistant
LPD	Local Profile Download
LDS	Local Discovery Services
LUI	Local User Interface
M2M	Machine to Machine
PLMN	Public Land Mobile Network
SAS	Security Accreditation Scheme
SAS-SM	Security Accreditation Scheme for Subscription Manager
SAS-UP	Security Accreditation Scheme for UICC Production
SIM/USIM	Subscriber Identification Module or Universal SIM
SM-DP	Subscription Manager Data Preparation
SM-DP+	Subscription Manager Data Preparation (Enhanced)
SM-DS	Subscription Manager Discovery Server
SM-SR	Subscription Manager Secure Routing
UICC	Universal Integrated Circuit Card
UMTS/3G	Universal Mobile Telecommunications System - 3rd Generation mobile cellular system

4 eUICC SMT – M2M Servers

4.1 General Requirements

4.1.1 Section 4 of this document focuses on security and functional requirements of the M2M Server (comprising SM-DP and SM-SR) as shown in Figure 1, extracted from the GSMA SGP.02 [2] specification. Separate configuration requirements for the M2M Device are set out in the IMDA Technical Specification for eUICC Subscription Management Technology (SMT) – M2M Device (IMDA TS eUICC SMT-M2M Device).

4.1.2 As shown in Figure 1, subscription management for the M2M Device is pushed from the M2M Server, where eUICC profile loading and management are pushed by an off-device component (i.e. SM-SR) into eUICC.

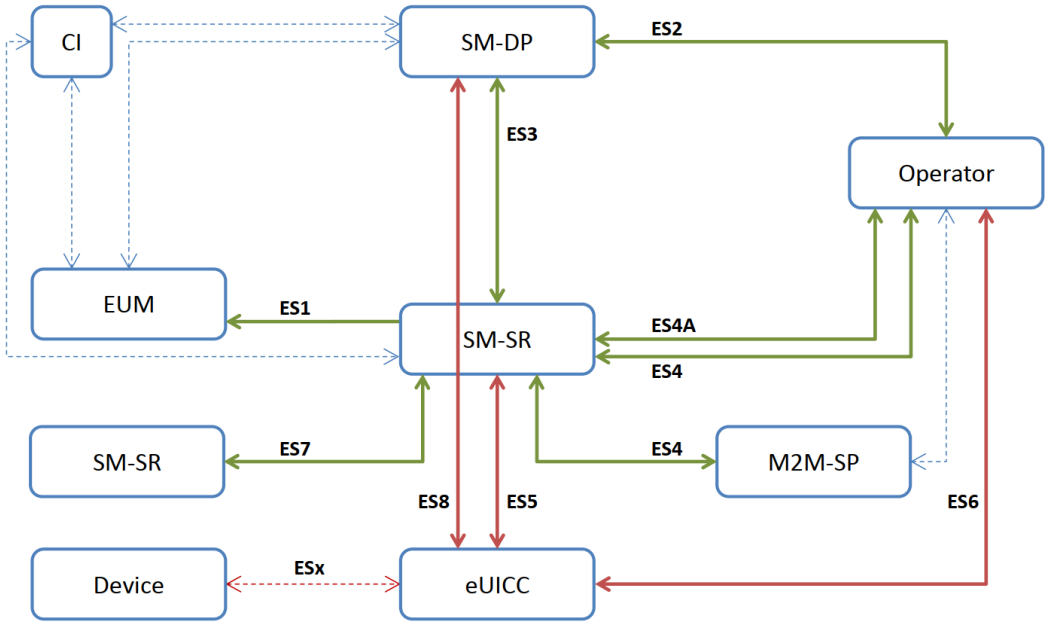

Figure 1: eUICC Remote Provisioning System (Figure 1 of GSMA SGP.02 [2])

4.2 Technical Requirements

4.2.1 Vendors of SM-DP products SHALL ensure that compliance declarations have been submitted to and verified by GSMA according to the M2M Compliance Process (GSMA SGP.16 [4]), which include:

a. Compliance with the applicable requirements defined in the GSMA M2M Architecture and Technical Specification (GSMA SGP.01 [1] and SGP.02 [2]);

b. SM-DP functional testing performed according to the Remote Provisioning Architecture for Embedded UICC Test Specification (GSMA SGP.11 [3]); and

c. Production sites for SM-DP accredited according to the SAS-SM (GSMA FS.08 [9] and GSMA FS.09 [10]).

4.2.2 Vendors of SM-SR products SHALL ensure that compliance declarations have been submitted to and verified by GSMA according to the M2M Compliance Process (GSMA SGP.16 [4]), which include:

a. Compliance with the applicable requirements defined in the GSMA M2M Architecture and Technical Specification (GSMA SGP.01 [1] and SGP.02 [2]);

b. SM-SR functional testing performed according to the Remote Provisioning Architecture for Embedded UICC Test Specification (GSMA SGP.11 [3]); and

c. Production sites for SM-SR accredited according to the SAS-SM (GSMA FS.08 [9] and GSMA FS.09 [10]).

4.2.3 Data centres hosting SM-DP and SM-SR SHALL be GSMA SAS-SM accredited (GSMA FS.08 [9] and GSMA FS.09 [10]), and ISO 27001 [11] certified.

5 eUICC SMT – Consumer Servers

5.1 General Requirements

5.1.1 Section 5 of this document focuses on security and functional requirements of the Consumer Server (comprising SM-DP+ and SM-DS) as shown in Figure 2, extracted from the GSMA SGP.22 [6] specification. Separate configuration requirements for the Consumer Device are set out in the IMDA Technical Specification for eUICC Subscription Management Technology (SMT) – Consumer Device (IMDA TS eUICC SMT-CE Device).

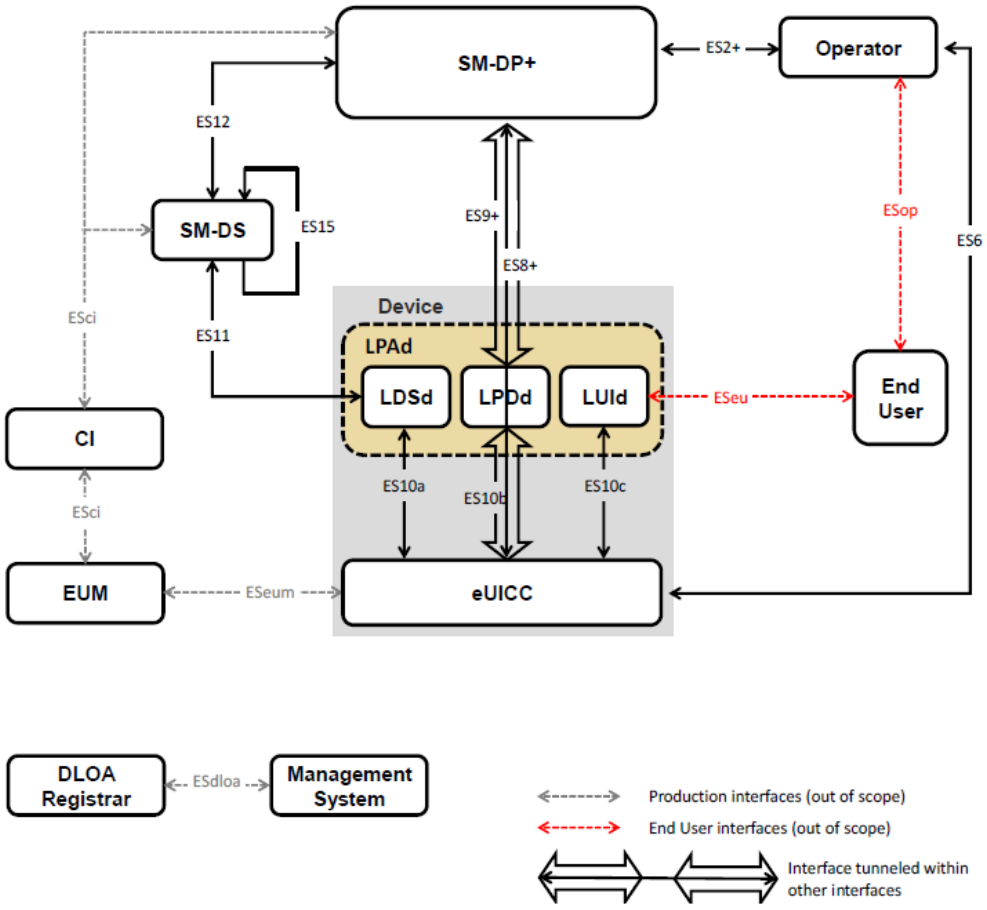

Figure 2: Remote SIM Provisioning System, LPA in the Device (Figure 1 of GSMA SGP.22 [6])

5.1.2 As shown in Figure 2, subscription management for the Consumer Device is pulled from the Consumer Server by the End User via a Local Profile Assistant (LPA) after obtaining commercial agreement from the Service Provider. The LPA MAY be located in the eUICC depending on the use-case.

5.1.3 Apart from the Device shown in Figure 2, a primary device (mobile) and a companion device (wearable) MAY also constitute the Consumer Device. In which case, the LPA is located in the primary device and the eUICC is in the companion device.

5.1.4 Referring to section 4.13.2 of the GSMA SGP.21 [5] which defines the Profile Policy Management requirements, amendment is made to Policy number 2 (POL2), whereby each Profile SHALL NOT have Profile Policy Rules associated with itself, thus removing the option for each Profile to have its associated Profile Policy Rules.

5.1.5 Similarly, referring to section 2.9.1 of GSMA SGP.22 [6] that defines the Profile Policy Rules, amendment is made whereby Profile Owners are not allowed to define the Profile Policy Rules, set by the SM-DP+ in the Profile Metadata.

5.1.6 No SIM Lock

As each Profile SHALL NOT have Profile Policy Rules associated with itself, the Consumer Device SHALL NOT be permanently locked with a particular Profile.

5.2 Technical Requirements

5.2.1 Vendors of SM-DP+ products SHALL ensure that compliance declarations have been submitted to and verified by GSMA according to the RSP Compliance Process (GSMA SGP.24 [8]), which include:

a. Compliance with the applicable requirements defined in the GSMA Consumer RSP Architecture and Technical Specification (GSMA SGP.21 [1] and GSMA SGP.22 [2]);

b. SM-DP+ functional testing performed according to the RSP Test Specification (GSMA SGP.23 [7]); and

c. Production sites for SM-DP+ accredited according to the SAS-SM (GSMA FS.08 [9] and GSMA FS.09 [10]).

5.2.2 Vendors of SM-DS products SHALL ensure that compliance declarations have been submitted to and verified by GSMA according to the RSP Compliance Process (GSMA SGP.24 [8]), which include:

a. Compliance with the applicable requirements defined in the GSMA Consumer RSP Architecture and Technical Specification (GSMA SGP.21 [5] and GSMA SGP.22 [6]);

b. SM-DS functional testing performed according to the RSP Test Specification (GSMA SGP.23 [7]); and

c. Production sites for SM-DS accredited according to the SAS-SM (GSMA FS.08 [9] and GSMA FS.09 [10]).

5.2.3 Data centres hosting the SM-DP+ and the SM-DS SHALL be GSMA SAS-SM accredited (GSMA FS.08 [9] and GSMA FS.09 [10]), and ISO 27001 [11] certified.