Telecommunications Standards Advisory Committee (TSAC)

Technical Specification

eUICC Subscription Management Technology - M2M Device

IMDA TS eUICC SMT - M2M Device
Issue 1, Aug 2026

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IMDA TS eUICC SMT - M2M Device **Issue 1, Aug 2026**	Technical Specification for eUICC Subscription Management Technology (SMT) – M2M Device
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eUICC Subscription Management Technology (SMT) – M2M Device

1 Scope

1.1 This Technical Specification (TS) sets out the configuration requirements which include hardware and software for implementing remote subscription management of the M2M (or IoT) Devices that deploy cellular eUICC technology, according to the Embedded SIM Remote Provisioning Architecture (GSMA SGP.01 [1]).

1.2 The scope of this TS focuses on the GSMA compliant eUICC of the M2M Devices used in Remote Provisioning System as shown in Figure 1. Figure 1 is extracted from the Remote Provisioning Architecture for Embedded UICC Technical Specification (GSMA SGP.02 [2]). Separate configuration requirements for the M2M Server are set out in section 4 of the IMDA Provisioning of eUICC Subscription Management (IMDA Provisioning of eUICC SM).

1.3 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.

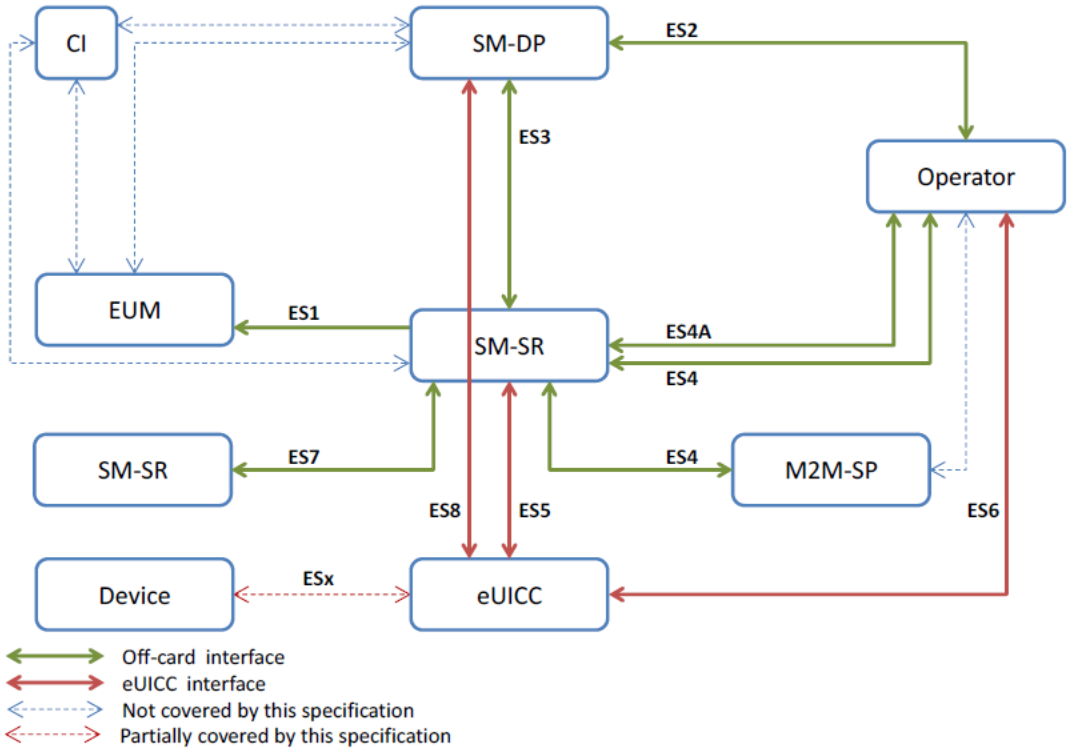

Figure 1: eUICC Remote Provisioning System (Figure 1 of GSMA SGP.02 [2])

2 References

2.1 For the requirements captured in this TS, reference has been made to the following documents. Where versions are not indicated, implementation of this specification 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.05: Embedded UICC Protection Profile

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

[5] GSMA SGP.16: M2M Compliance Process

[6] GSMA FS.04 SAS-UP: Security Accreditation Scheme for UICC Production – Standard

[7] GSMA FS.05 SAS-UP: Security Accreditation Scheme for UICC Production – Methodology

[8] IMDA TS CMT: IMDA Technical Specification for Cellular Mobile Terminal

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

[10] 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 TS infers the following (RFC 2119 [10]):

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

3 Definitions and Abbreviations

For the purpose of this TS, the following terms and definitions apply (taken mainly from GSM SGP.02 [2]).

3.1 Definitions

Embedded UICC: A UICC is not easily accessible or replaceable, not intended to be removed or replaced in the Device, and enables the secure changing of Subscriptions.

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.

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.

Subscription Manager Data Preparation (SM-DP): Role that prepares the Profiles to be securely provisioned on the eUICC and manages the secure download and installation of these Profiles on the eUICC.

Subscription Manager Secure Routing (SM-SR): Role that securely performs functions of Platform Management commands and the transport of Profile Management commands.

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
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)
M2M	Machine to Machine
M2M-SP	Machine to Machine Service Provider
PLMN	Public Land Mobile Network
SAS	Security Accreditation Scheme
SAS-UP	Security Accreditation Scheme for UICC Production
SIM/USIM	Subscriber Identification Module or Universal SIM
SM-DP	Subscription Manager Data Preparation
SM-SR	Subscription Manager Secure Routing
UICC	Universal Integrated Circuit Card
UMTS/3G	Universal Mobile Telecommunications System - 3rd Generation mobile cellular system

4 General Requirements

4.1 For access to Public Land Mobile Network (PLMN) services, the M2M Device SHALL comply with the IMDA Technical Specification for Cellular Mobile Terminal (IMDA TS CMT [7]), and SHALL support network access technology E-UTRAN (Annex G of SGP.02 [2]).

4.2 In addition, the accompanying eUICC subscription management technology defined in this TS SHALL require the eUICC used in the M2M Device to be certified according to the Protection Profile specified by GSMA (section 2.2.2 of the GSMA SGP.01 [1]).

5 M2M Device Requirements

5.1 To ensure interoperability between potentially different MNO deployment scenarios, different makes of network equipment (for example SM-DP, SM-SR) and different makes of eUICC platforms, the M2M Device SHALL comply with the mandatory requirements defined in Annex G of GSMA SGP.02 [2].

5.2 Vendors of M2M Devices SHALL ensure that compliance declarations have been submitted to and verified by GSMA for the eUICCs used in the M2M Devices, according to the M2M Compliance Process (GSMA SGP.16 [5]), which include:

a. eUICC functional testing performed according to the M2M Test Specification (SGP.11 [4]);

b. eUICC security evaluations performed according to the eUICC Protection Profile (GSMA SGP.05 [3]);

c. eUICC hardware platform certified to Security IC Platform Protection Profile with Augmentation Package Certification (PP-0084) or Security IC Platform Protection Profile (PP-0035); and

d. Production sites for eUICCs used in the M2M Devices accredited according to the SAS-UP (GSMA FS.04 SAS-UP [6] and GSMA FS.05 SAS-UP [7]).