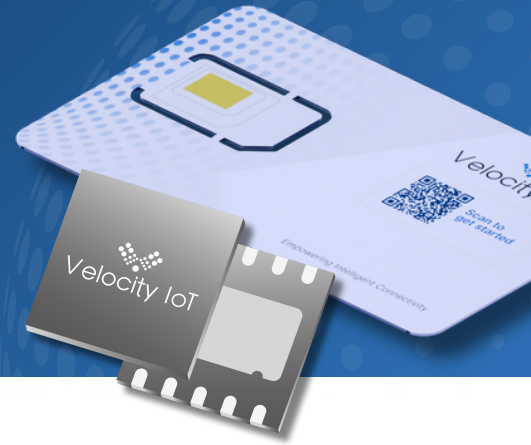




VloT-Flex

eUICC SIM (SGP.32)

MFF2 & 2FF/3FF/4FF Form Factors



Product Overview

The Velocity IoT VloT-Flex SGP.32 eUICC SIM is a GSMA-compliant solution for next-generation IoT Remote SIM Provisioning (RSP). Supporting both the GSMA SGP.22 v2.6.0 and SGP.32 v1.2 architectures, it enables flexible deployment across consumer-style (device-centric) and eIM-managed IoT models — without changing hardware. Available in embedded MFF2 and plastic 2FF/3FF/4FF form factors.

A Velocity IoT multi-IMSI profile is provisioned as the initial (bootstrap) profile, giving devices automatic access to the strongest available network across 750+ carrier networks in 190+ countries. Combined with eUICC flexibility and a globally distributed core network with local breakout, it delivers reliable connectivity at scale — without the complexity of managing multiple carrier relationships.

Advanced SGP.32 Capabilities

The eUICC OS provides the core intelligence of the SIM, delivering SGP.32-native features that are not available on Multi-IMSI UICC or legacy SGP.02 / SGP.22 SIMs:

Dual SGP.22 / SGP.32 architecture. Single eUICC supporting both the GSMA Consumer RSP model (SGP.22) and the IoT eIM-managed model (SGP.32), allowing the same hardware to serve consumer-style and constrained IoT deployments.

High profile capacity. Up to 20 operator profiles stored simultaneously, with up to 4 associated eSIM IoT Managers (eIMs).

IP Ae/ IP Ad flexibility: Available with the IoT Profile Assistant in the eUICC (IP Ae) for headless or constrained IoT devices, or without IP Ae for designs that prefer device-hosted IP A (IP Ad).

Lightweight IoT transport. Supports HTTPS, CoAP and DTLS, with eIM TLS session resume (Session ID / Tickets), enabling efficient profile management on NB-IoT and other resource-constrained networks.

Remote OS patching via eIM. OS patches can be applied via OTA or through the eIM channel — supporting cybersecurity-resilience requirements such as the EU Cyber Resilience Act.

In-Factory Profile Provisioning (IFPP). Supports profile loading at manufacturing time for just-in-time SKU customisation, reducing OEM SKU proliferation.

Technical Specifications

Form Factor & Mechanical

Feature	Plastic Triple-Cut	MFF2
Form Factor	2FF / 3FF / 4FF Triple-Cut card	MFF2 surface-mount (SON-8 / DFN8 5×6)
Contact/ pad layout	6-pin, ISO/IEC 7816-2 contacts (C1, C2, C3, C5, C6, C7)	8-pad SON-8 package, ISO 7816 compatible
Card / package material	Kigen ABS plastic body	Epoxy-encapsulated, lead-free

Hardware & Architecture

Feature	Specification
Secure element chipset	Infineon SLM17ECB800B — 32-bit security controller optimised for industrial IoT eUICC and eSIM
Chipset NVM	800 kByte SOLID FLASH™ (Infineon)
Chipset RAM	20 kB
Write Endurance	>1.5M cycles
Data Retention	10 years
Maximum operator profiles	Up to 20, managed via SGP.22 LPA or SGP.32 eIM
Maximum associated eIMs	4
Logical channels	8
Suspend / Resume SIM state	Supported
ISD-A / ISD-R	Supported
OS patching	Supported - OTA and via eIM

Electrical & Environmental

Electrical & Environmental	Detail
Operating Temperature	-40°C to +105°C (Industrial Grade)
Storage Temperature	-40°C to +105°C (chip level)
Operating Voltage	1.62 V to 5.5 V (ISO/IEC 7816 Classes A, B, C — 5 V / 3 V / 1.8 V)
Communication	ISO/IEC 7816-3 (T=0 protocol), GPIO
ESD — HBM (Human Body Model)	±4 kV, Class-3A (per ESDA/JEDEC JS-001-2023, chip level)
ESD — CDM (Charged Device Model)	±500 V, Class-C2a (per ESDA/JEDEC JS-002-2022, chip level)

SIM / USIM / eUICC Capabilities

Feature	Specification
Authentication algorithms	Milenage, TUAK, XOR (3G), 2G algorithms
Applications	USIM, ISIM, HPSIM, CSIM
GBA (Generic Bootstrapping Architecture)	Supported
TCA Profile Package	v3.3.1

Remote SIM Provisioning & Management

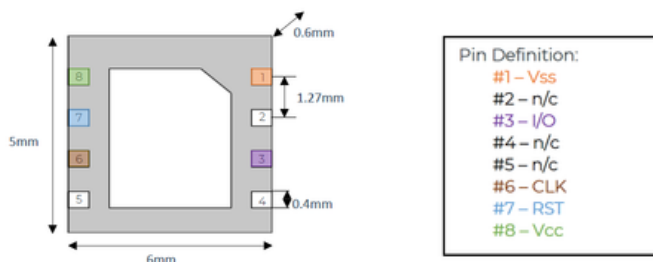
Feature	Specification
RSP architectures	GSMA SGP.22 v2.6.0 (Consumer / IoT) AND SGP.32 v1.2 (IoT eIM)
IoT Profile Assistant (IPA)	IPAE (in eUICC) and IPAD (in device)
Transport / management protocols	HTTPS, CoAP, BIP / OTA, eIM channel
TLS / DTLS	TLS 1.2, TLS 1.3, DTLS — supported
eIM TLS session resume	Session ID and Session Tickets — supported
Remote File Management (RFM)	Supported
Remote Applet Management (RAM)	Supported
In-Factory Profile Provisioning (IFPP)	Supported

Standards & Compliance

Organisation	Reference standard
GSMA	SGP.22 v2.6.0 (Consumer / IoT RSP), SGP.32 v1.2 (eSIM IoT). eUICC: SGP.25 Protection Profile (eSA-certified)
TCA (Trusted Connectivity Alliance)	Interoperable Profile Package Specification v3.3.1
ISO/IEC 7816	Series — Parts 1, 2, 3 and 4 (physical, contact layout, electrical interface, command structure)
ETSI	TS 102 221 — UICC physical and logical characteristics
3GPP	TS 31.101 (UICC characteristics), TS 31.102 (USIM application), TS 31.103 (ISIM application), Release 16 (5G-ready)
GlobalPlatform	v2.3.1 (Amendments A, B, D, E)
Java Card	Oracle Java Card 3 Platform Classic Edition v3.0.5
Environmental	RoHS, REACH compliant

Mechanical & Package Information - MFF2

Chip Pinout



Ordering Information

SKU	Description
VIOT-1SIM-MFF2-eUICC 32	eSIM MFF2
VIOT-1SIM-eUICC 32	Plastic Triple Cut SIM

Contact: sales@velocityiot.com