



# SIMETRY

WIRELESS IoT MADE SIMPLE

## Multi-IMSI SIM

A secure, scalable and resilient global cellular connectivity solution for IoT and M2M devices.



### Multi-IMSI SIM DEFINITION

“Multi-IMSI” is an abbreviation for Multiple International Mobile Subscriber Identities. An IMSI is a unique number that lets Mobile Network Operators authenticate their subscribers so they can access the MNO's network—and any networks the MNO has established roaming agreements with.

Based on our unique SIM technology, with configured multi-IMSI capability, we aim to deliver near 100% connectivity out-of-the box. Our solution enables you to manufacture and deploy a single product SKU worldwide, massively reducing potential complexity in IoT developments and associated deployment costs.

SIMETRY delivers maximised 2G, 3G or 4G cellular coverage across GSM, LTE including CAT M networks, reinforced by our global MNO partnerships.

Furthermore, our SIM technology is pre-configured to operate with emerging technologies, such as 5G, to ensure your IoT implementation is future-proofed. You have the power to manage your devices from one single centralised management console located anywhere in the world. And with zero-touch management and security features, throughout your product's lifecycle, it also reduces both the risk and TCO of your global IoT deployment.

## BENEFITS



### Ubiquitous Global Connectivity

Achieve over 99.8% device connectivity uptime across more than 190 countries globally



### Out of the Box, Zero Touch Provisioning

Automatic Over-The-Air (OTA connection and setup of the device with no on-site configuration)



### Central Management

One global point of contact for service, support and billing for all IoT device connectivity; no need for multiple MNO contracts and associated support agreements



### Improved Connectivity Resilience

The multi-IMSI SIM can be configured with multiple IMSI bootstraps to allow complete autonomy to switch networks and provide uninterrupted cellular connectivity



### Future Proofed SIM Technology

Support for 5G, as well as LTE networks which will benefit applications using all 4G networks including Cat-M1 Devices



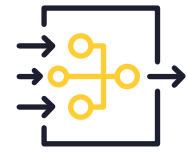
### Flexible Integration

Multiple out-of-box integration options with Cloud providers and device manufacturers

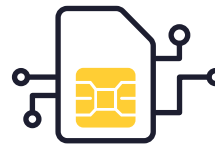
## FEATURES



Full suite of security features, including IMEI locking and bespoke firewall



Multiple bootstrap IMSIs to enable autonomous network switching



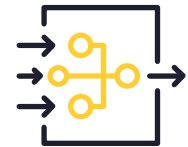
Flexible integration - embedded or standard card form-factors



Real-time billing alerts and cost management



Provides real-time SIM location-based services



Multiple 'over the air' reprogrammable IMSIs



VPNs, Fixed IPs and NAT offered



Access to the cloud-based SIM Management Portal (SIAM)

# SIM SPECIFICATION

## SIM Type

- Standard M2M grade 2FF, 3FF card or MFF2 embedded
- M2M grade 4FF Nano cards and specifications are available on request

## MFF2 Operation

### MFF2 EMBEDDED SIM

Operating Temperature Range -40° to +85°C

Temperature Humidity Bias (THB) To JESD22-A101

Storage Temperature -40° to +125°C

Vibration Variable Frequency (VVF) To JESD22-B103

## MFF2 Power

- Supply voltage range; 1.62 V to 3.3 V

## MFF2 Package Dimensions

- Weight; 0.17g

## Provisioning & Management

- SIAM portal (account required)
- API available

## Features

- SMS/MMS/USSD/CSD
- SIMID barcode

\*USSD not available 4G and above

## Security

- Private APN
- APN Firewall
- Side channel attack detection: (SPA, DPA)
- Encrypted storage: code, keys and data
- Blocking available on IMEI, location, country and services
- Flexible feature enablement/ disablement

## Memory & Data Storage

- Non Volatile Memory (NVM): 64 kB
- Write/erase time (max.): 2.3 ms
- Data retention time (min.): over 10 years at -40 to +85°C
- High stress memory (HSM) supports >2M E/W cycles per file

## SIM PIN Definitions

For full details on the layout of Embedded SIMs see here

PIN	SIM CARD (2FF/3FF)	EMBEDDED SIM (MFF2)
1	VCC	GND
2	RST	NC
3	CLK	I/O
4	GND	NC
5	VPP	NC
6	I/O	CLK
7	-	RST
8	-	VDD

Conforming to the JEDEC specification, ideal for automated soldering as part of manufacturing package thickness shall not exceed 1.0mm. An index marker will be visible on the exposed metal heat feature located at the terminal 1 corner. The topside terminal 1 shall be indicated by a marked feature. The exposed metal heat feature (exposed die pad) of the package is either electrically connected internally to ground or it is not electrically connected within the package. The electrical handling of the JEDEC terminals shall be as defined in ETSI TS 102 221

## Ordering Information

Available to order via email to sales@simetry.com

Minimum order quantity: 1 SIM for 2FF / 3FF / 4FF and 200 SIMs MFF2.

Lead time: we aim to process all 2FF / 3FF / 4FF SIM card orders on the day of order (if ordered before 3PM GMT).

Please note, these specifications may be subject to change without prior notice.

Name	Order Code
2FF/3FF	ES5611
2FF/3FF/4FF	ES5631
MFF2	ES5620