

# SMAOT500B 5G UICC SIM Card

on eXtra one on IO209 CC EAL5+



Micro SIM



Nano SIM



## Ready for 5G deployments

Driven by the exponential data traffic growth and customers increasing expectations for speed, 5G will make connectivity ultra- fast seamless and secure. New 5G SIM card “SMAOT500B” brings another level of enhanced Security & Privacy to mobile users

### Be ready from Day one

Offering 5G QoS and QoE from day one. Maximize monetization of bunch of new services. Being compliant with Privacy regulation policy to ensure subscribers un-traceability. Protecting Brand reputation Those are some of main challenges that Smartjac's SMAOT500B 5G SIM card is here to help

### Our offer:

#### Seamless 5G Access & Being in control of 5G Security

The SIM card is the only way to authenticate to the 5G network. SMAOT500B offers 5G configuration to allow smooth and seamless access to 5G services.

### Protecting subscriber's Privacy & Brand Reputation

SUCI, the encrypted IMSI is used to access the 5G network. SMAOT500B embeds the two required privacy crypto algorithms and offers dynamic control for the network operator to activate or deactivate subscriber Privacy at any time. It allows also the configuration of the the network operator's preferred encryption scheme and selection of where SUCI processing shall take place: either in a phone ( i.e. untrusted environment) or in the SIM ( i.e. The network operator's trusted environment)

### Prioritization of Services & Control of user QoS & QoE

A new Unified Access Control (UAC), Steering of Roaming (SoR) and Access agnostic management over WiFi or 3GPPP access are enabled by the SMAOT500B. It allows The network operator to monitor user QOS & QoE and to prioritize services based on: partnership agreement, deployment scenarios and subscriber profiles. (e.g. multimedia, IoT, public safety or private network services)

### Benefits



#### Protecting mobile subscriber Privacy:

SMAOT500B allows IMSI encryption (i.e. SUCI) to better protect end-users against location tracking and interception of mobile communications



#### Providing secure and fast access to 5G:

SMAOT500B allows faster and smooth,5G connection and reconnection, including WiFi while protecting end user privacy and The network operator credentials and reputation



#### CC EAL5+ for Powering high security service and application

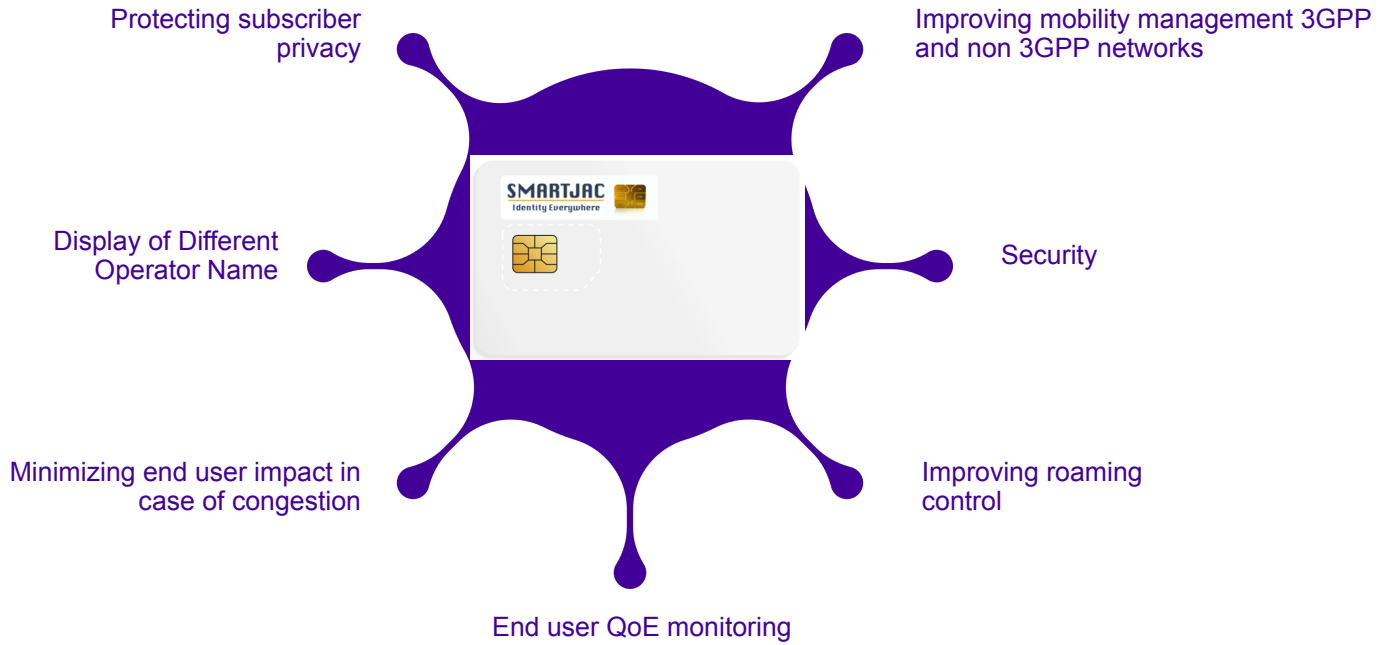
SMAOT500B allows The network operator to set up services and applications requiring certification of common criteria with high level security and fast HW processing

### Why SMARTJAC?

Trusted by the largest network companies worldwide, with high presence in standards, and strong understanding of the ecosystem SMARTJAC provides Security expertise fitting needs for 5G Deployment and challenges in labs, test networks, PLTE's and CBRS networks.



# How it works?

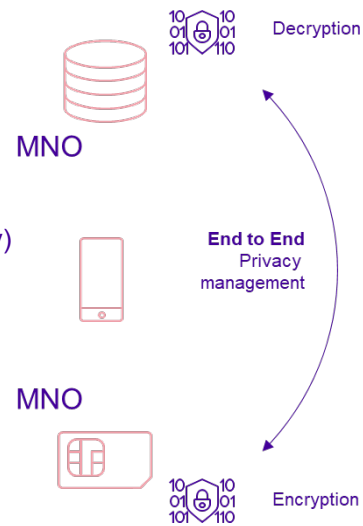


## 5G Profile: 9 new Services & 10 new Files

|               |  |
|---------------|--|
| Service n°122 | 5GS Mobility Management Information                  |
| Service n°123 | 5G Security Parameters                               |
| Service n°124 | Subscription identifier privacy support              |
| Service n°125 | SUCI calculation by the USIM                         |
| Service n°126 | UAC Access Identities support                        |
| Service n°127 | Control plane-based steering of UE in VPLMN          |
| Service n°128 | Call control on PDU Session by USIM                  |
| Service n°129 | 5GS Operator PLMN List                               |
| Service n°130 | Support for SUPI of type Network Specific Identifier |

## New Asymmetric Crypto ECIES for SUCI

- › Profile A: Curve25519
- › Profile B: Secp256r1
- › Null scheme (No Privacy)



## Cutting-edge technology

|                                   |   |
|-----------------------------------|---|
| <b>Chip</b>                       | <ul style="list-style-type: none"> <li>• IO209</li> <li>• CC EAL5+</li> <li>• HW crypto accelerator</li> <li>• 128 kB Flash Memory for customer profile</li> <li>• 6 kB RAM Memory</li> </ul>     |
| <b>Authentication algorithm</b>   | <ul style="list-style-type: none"> <li>• Milenage</li> <li>• TUAK</li> <li>• Dual activation of TUAK and Milenage</li> </ul>  |
| <b>Authentication application</b> | <ul style="list-style-type: none"> <li>• USIM</li> <li>• ISIM</li> <li>• SIM</li> </ul>   |
| <b>Crypto Algo for Privacy</b>    | Elliptic Curve Integrated Encryption Scheme( ECIES) <ul style="list-style-type: none"> <li>• Profile A: Curve25519</li> <li>• Profile B: Secp256r1</li> <li>• Null scheme (No Privacy)</li> </ul> |
| <b>Over-The-Air (OTA)</b>         | <ul style="list-style-type: none"> <li>• GP Amendment B (OTA over HTTPs)</li> <li>• SMS</li> <li>• Activation /deactivation of 5G Services and SUCI configuration</li> </ul>                      |
| <b>Compliant Standards</b>        | <ul style="list-style-type: none"> <li>• 3GPP Rel.15</li> <li>• ETSI Rel.15R15</li> <li>• Java Card 3.0.4</li> <li>• Global Platform 2.3</li> </ul>   |

## And much more

- › Backward compatibility with 2G/3G/4G
- › Future proof and forward compatibility with 5G networks
- › Over-The-Air (OTA) 5G Service activation, 5G files configuration updates and SUCI Algorithm selection
- › Dynamic behavior switch between SUCI (IMSI encryption) in SIM or in phone
- › SUCI calculation in SIM HW on fly or background depending of operator settings

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