



OPTIGA™ Connect IoT Customer Presentation

Infineon Technologies
September 2023



Limitations of the Subscriber Identify Module (SIM)

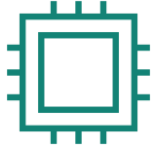


- It stores an operator defined profile
- It identifies and authenticates with the selected mobile network
- Soldered (MFF2) or removable



- Contract with multiple MNO*s for multi-national coverage needed
- Maintenance, supply chain management, risk of theft
- Robustness and interoperability
- Cost of SIM vary when changing the operator contract

Why an eSIM (eUICC) with Remote SIM Provisioning (RSP)?



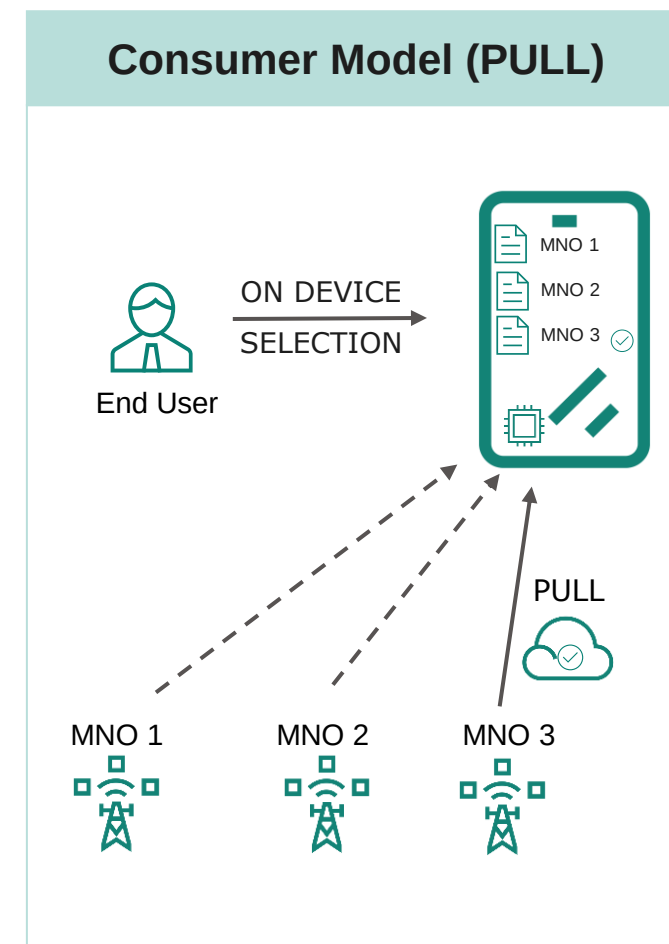
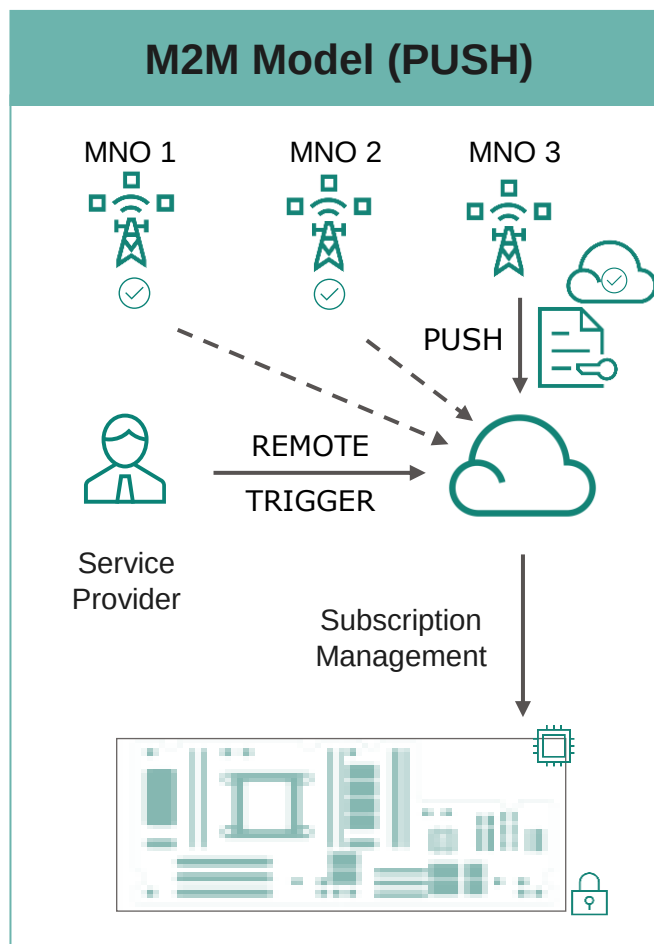
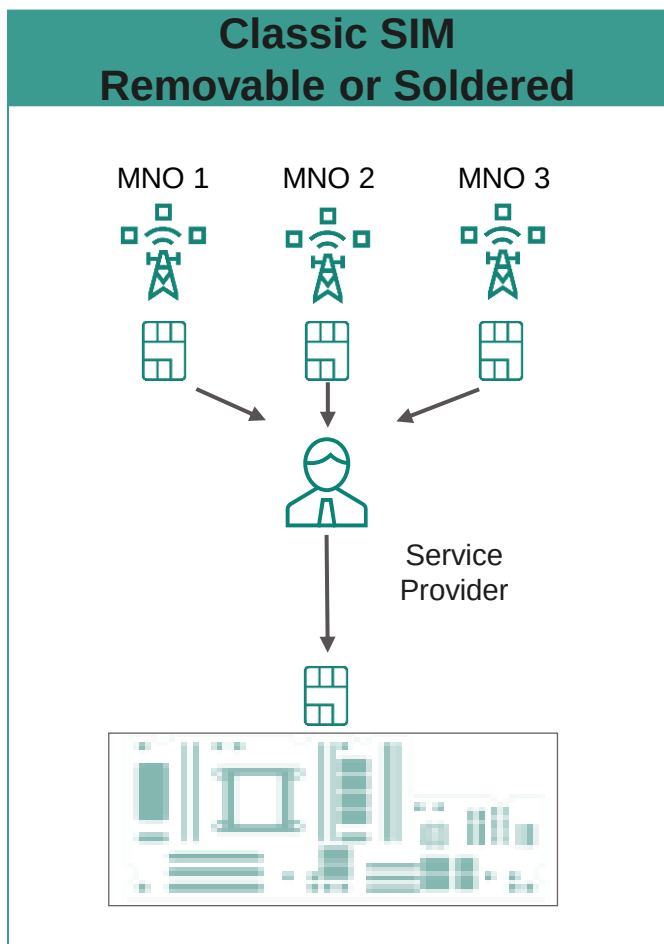
- True SIM with Remote Provisioning Over The Air (OTA) through a subscription management portal
- Specifications according to GSMA standards
- 2G/3G/4G/LPWA/5G compliant
- Removable or solderable



Benefits of eSIM

- Single SKU can be used all over the world
- Can hold multiple MNO Profiles (ICCIDs)
- Interoperable and secured
- Ideal for tiny modules and rough conditions
- Anti-theft
- It offers an increased life span, future-proof

SIM vs Remote SIM Provisioning (M2M vs Consumer models)





OPTIGA™ Connect IoT

Cellular connectivity drop-in for IoT devices



Extensive set of use cases

- Out-of-the-box connectivity
- Worldwide single Stock Keeping Unit (SKU)
- Indian SKU to support local regulation
- Advanced device authentication
- Lifecycle management

Easy to integrate

- Full turnkey solution
- Connectivity with global cellular coverage
- Connectivity management via online portal
- Adjustable data plan

Future proof

- GSMA compliant
- Interoperability allows new MNO onboarding & change of subscription management platform
- Certified CC EAL 6+ exceeding today's required security level
- Open for integration of additional applets

Product Details

GSMA eSIM compliance	SGP.02 version 3.2	Temperature Range	-40 to +105°C
Java Card	3.0.5 classic	Interface	ISO7816
GlobalPlatform	2.2.1	Operating Supply Voltage	1.62 to 5.5 V
Bootstrap connectivity	Tata Communications	Package	MFF2



OPTIGA™ Connect IoT OC2321 & OC2322

For large-scale IoT deployments



An easy way to benefit from cellular IoT

Simplification and security of all process steps give customers the satisfaction that its main challenges have been considered before, during and after deployment of its IoT devices.



Easy to buy

Our turnkey solutions allow a simplification of the supply chain (e.g., reduced interfaces, contracts, costs).



Easy to design

Delivered in MFF2 package industry standard to enable easy design-in and possible multi-sourcing.



Easy to deploy

OC2321 has a single SKU for all regions. However, the OC2322 is specifically designed to comply with Indian Telecom Department regulations.



Easy to connect

Infineon partners with Tata Communications which offers dedicated connectivity data plan acc. to customer, application and use case requirements.



Easy to manage

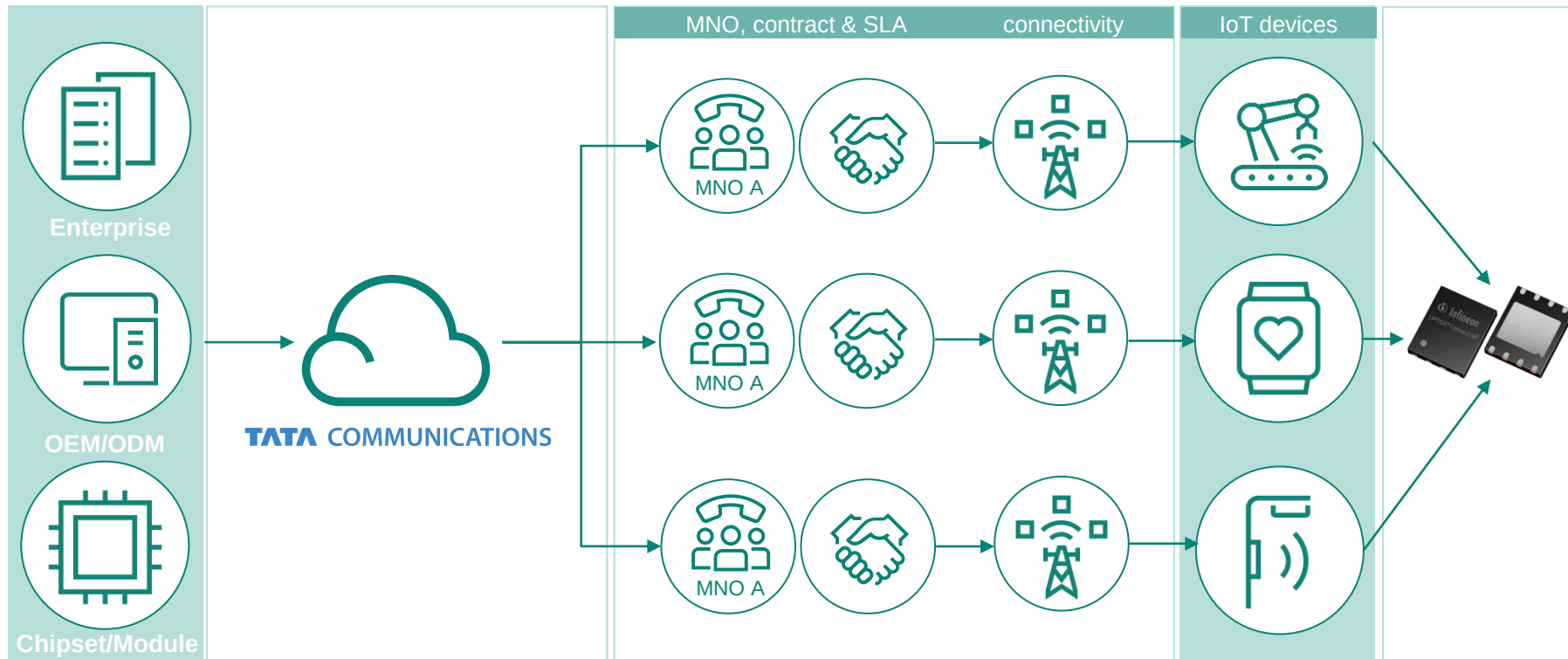
Tata MOVE™ platform allows a centralized management of connectivity and other IoT services (e.g., cloud).

OPTIGA™ Connect IoT

A different approach to deploy IoT at scale

Bringing eSIMs and management platforms together

Combine eSIM technology with a single contract, and a single interface to manage connected services globally during the various stages of the hardware lifecycle.



OPTIGA™ Connect IoT

Ready to support various IoT use cases

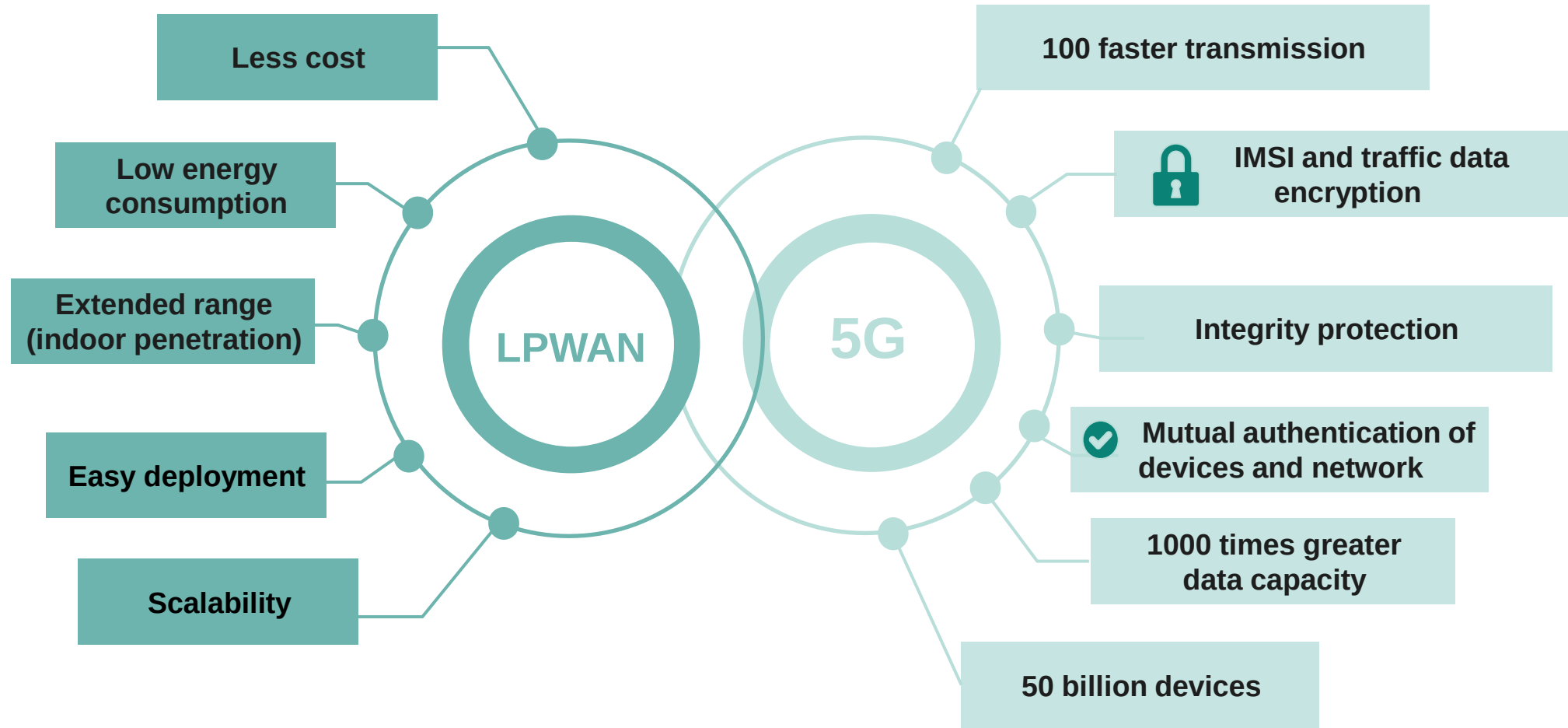


Massive IoT		Broadband IoT		Critical IoT		Industrial Automation IoT			
One network – multiple use cases and industries									
									
smart metering	asset tracking	fleet management	drones	VR / AR	automotive	traffic safety & control	smart grid automation	robotics	advanced automation & control
low-cost devices small data volumes massive numbers		high throughput low latency large data volumes		ultra reliability ultra low latency very high availability		industrial protocols time sensitive networks precise indoor positioning			

Cellular technologies overview

	NB-IoT	LTE-M	2G/3G	LTE (4G)	5G
Latency					
Mobility					
Indoor coverage					
Voice					
Data rates					
Battery life					
SMS/HTTPS					
Roaming					

New technologies promise to boost cellular connectivity adoption for IoT devices



Deployment Challenges & Value Proposition

Deployment challenges

Security

- Threat to critical infrastructure
- Energy theft / tampering
- Firmware / Software authenticity and integrity
- Privacy breaches
- Unauthorized network access

Logistic

- Connectivity
- Miniaturization
- Post-issuance personalization and remote management

OC2321 & OC2322 value proposition

Enhancing security

- Security microcontroller
- Remote security update / upgrade
- Secured process landscape
- Solder form factor MFF2

Less complexity & more flexibility

- Secured global cellular connectivity
- Remote connectivity management

Key take-aways

- Compliant with GSMA remote SIM provisioning spec SGP.02
- Support 2G, 3G, 4G, 5G, LTE-M, NB-IoT*
- Bootstrap connectivity with global cellular coverage (640+ networks, 230 countries/territories)
- Worldwide single Stock Keeping Unit (SKU) and an additional solution that is tailored to Indian regulations

*NB-IOT has some limitations that may limit remote management



