

OPTIGA™ Connect Consumer (OC1230)

World’s smallest and first GSMA compliant 28 nm eSIM turnkey solution

CSS DSI TMT – Trusted Mobile Connectivity & Transactions

May 2026

Public

Infineon eSIM product portfolio overview

eSIM M2M/Industrial IoT



Applications

Smart metering | eScooter | Smart home

Portfolio

eSIM Industrial

#1 eSIM Industrial IoT

eSIM Consumer



Applications

Smartphone | Wearables | Tablet | Laptops

Portfolio

SIM/eSIM Consumer

- **OPTIGA™ Connect Consumer OC1230**
  28 nm eSIM full turnkey solution (HW+SW)
- SLC21 (28nm eSIM)

eSIM Automotive



Applications

eCall | Automative aftermarket | Telematics

Portfolio

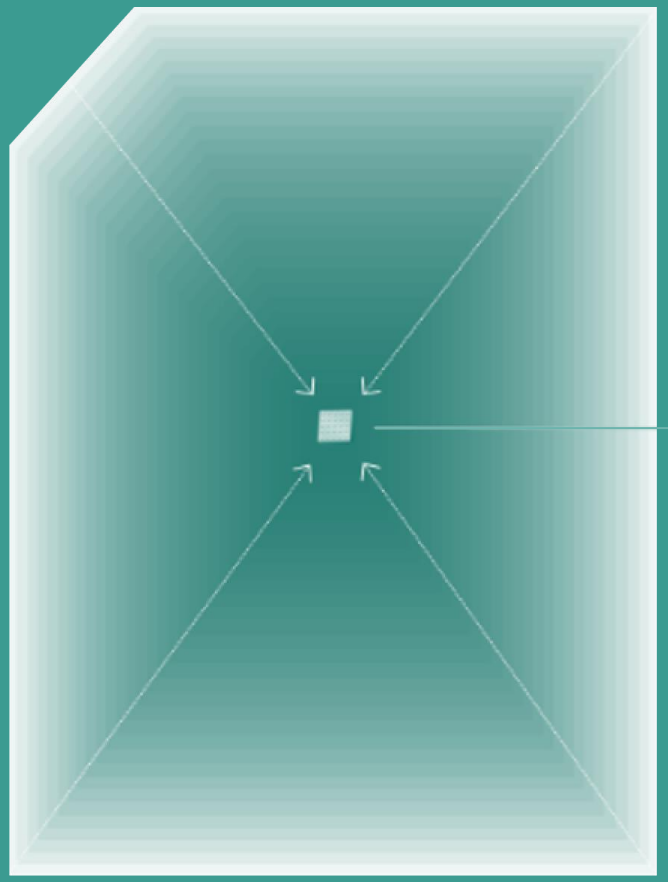
eSIM Automotive

#1 eSIM Automotive

Copyright © Infineon Technologies AG 2026. All rights reserved.

OPTIGA™ Connect Consumer OC1230 – World's tiniest 5G eSIM solution

37x
smaller than traditional SIM cards



Infineon eSIM

OPTIGA™ Connect Consumer

OC1230



1.8 x 1.6 x 0.4 mm | 2,9 mm² footprint

Worldwide Interoperability

Multiple profiles on a single device

Benchmark Quality and Robustness

Copyright © Infineon Technologies AG 2026. All rights reserved.

OPTIGA™ Connect Consumer OC1230 has the smallest footprint - perfect match for consumer devices





WLCSP-16

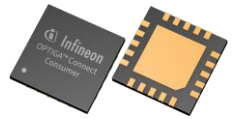
Availability:
- Mass Production
- Sample

Size:
- 1.8 x 1.6 x 0.4 mm
- 2,9 mm² footprint
- 27% reduction vs. competition (4,6 mm²)



Infineon
Competition

*indicative scaling



X2QFN20

Availability:
- Mass Production
- Sample

Size:
- 3.0 x 3.0 x 0.3 mm
- 9 mm² footprint
- 70% reduction vs. competition (30 mm²)



Infineon
Competition

*indicative scaling

Our packages save you valuable space

Copyright © Infineon Technologies AG 2026. All rights reserved.

OPTIGA™ Connect Consumer eSIM solution
The ultimate solution to conquer eSIM consumer market



Benchmark hardware TEGRION™ security controller and **PQC**[1] ready, 1,8 MB NVM[2]

Thales **GSMA**[3] SGP.22 v3.0 functional compliant OS and strong design-in experience

GSMA[3] **& TAF**[4] compliant solutions to address global consumer market

Easy-to-integrate plug-and-play solution incl. OS for fast **time to market**

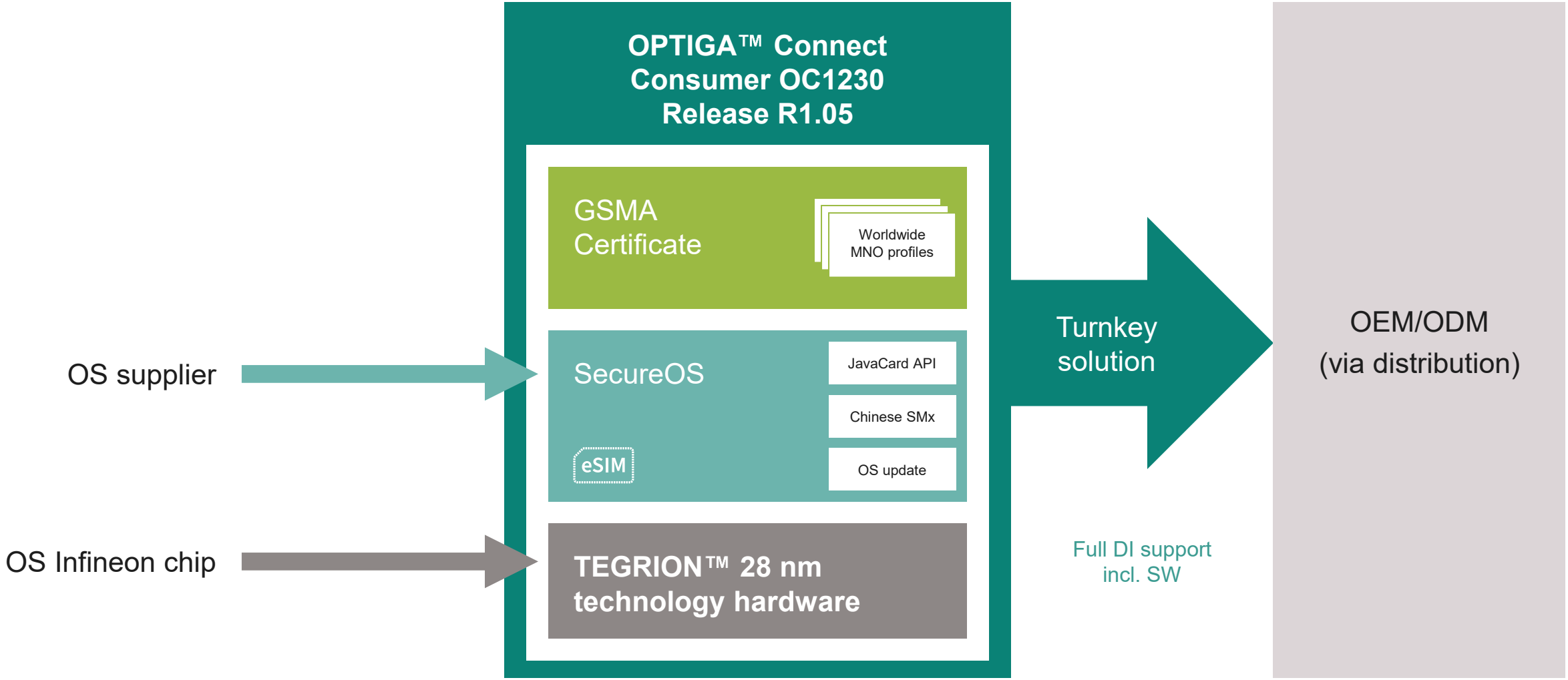
Smallest footprint in the market to save up to **70% space vs. next best alternative**

- Smartphone
- Wearables
- Tablets & PC
- Routers & others

[1] Post Quantum Cryptography | [2] Non-volatile Memory | [3] Global Standard for Mobile Communication Association | [4] China Telecommunication Industry Forum Associations

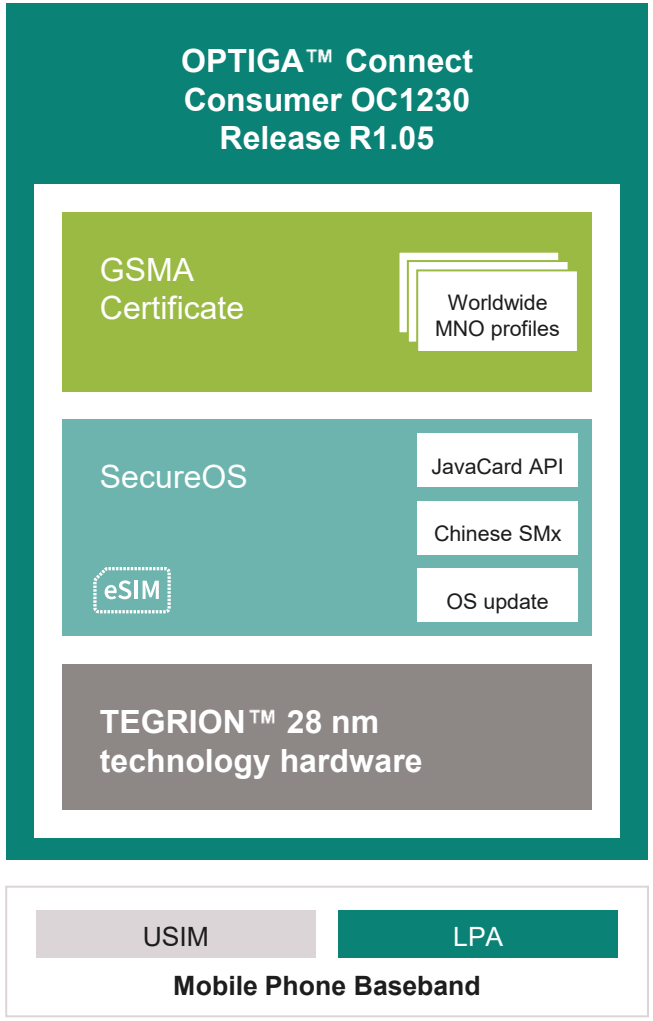
Copyright © Infineon Technologies AG 2026. All rights reserved.

Infineon to provide OPTIGA™ Connect Consumer OC1230 as turnkey solution offering to end customer including SW support



Copyright © Infineon Technologies AG 2026. All rights reserved.

OPTIGA™ Connect Consumer OC1230
World's first and smallest 28nm eSIM turnkey solution



Space for 20+ MNO profiles

1.1 MB free user space for MNO profiles and for OEM specific JAVA applets (1.8 MB total NVM)

GSMA (v3.0) SGP.22 functional compliant eSIM OS

Latest features for improved user experience incl. MEP and future proof thanks to OS update

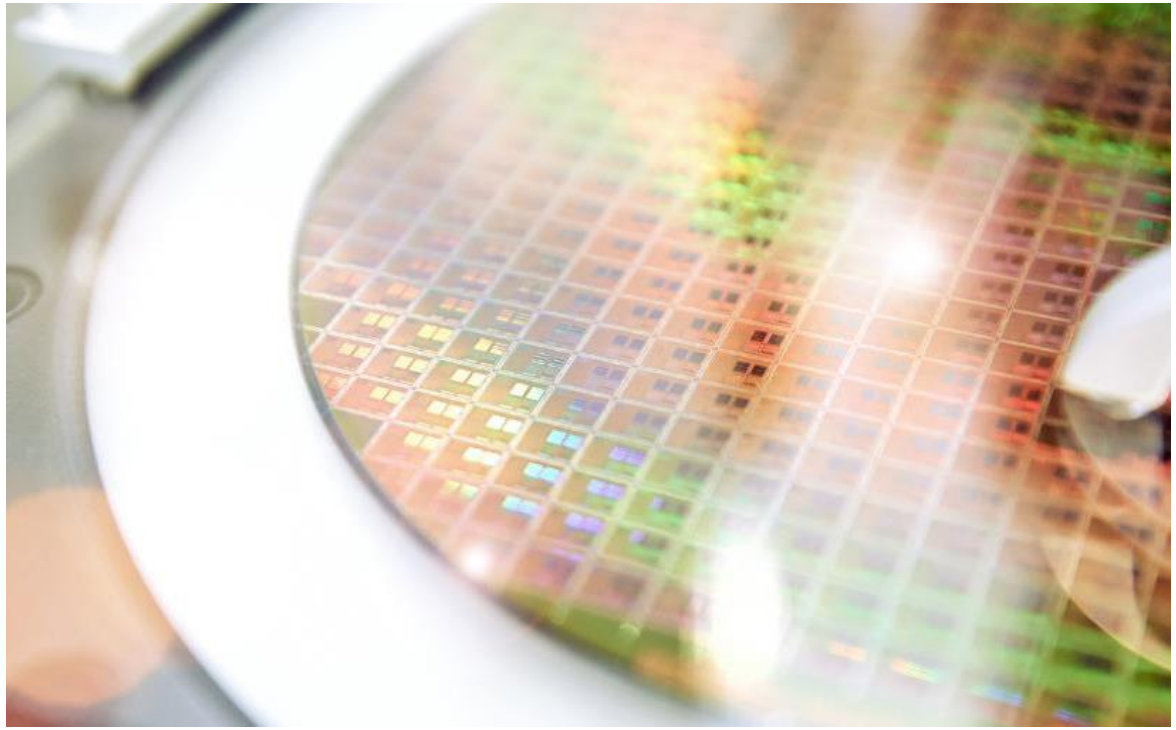
World's first 1.2 Volt eSIM

TEGRION™ 28 nm technology saving up to 50% power

Copyright © Infineon Technologies AG 2026. All rights reserved.

OPTIGA™ Connect Consumer OC1230 28nm hardware strongly outperforms next best solution

Innovative technology



OPTIGA™ Connect Consumer OC1230 is **world's first 28 nm eSIM solution**

Hardware competitive analysis

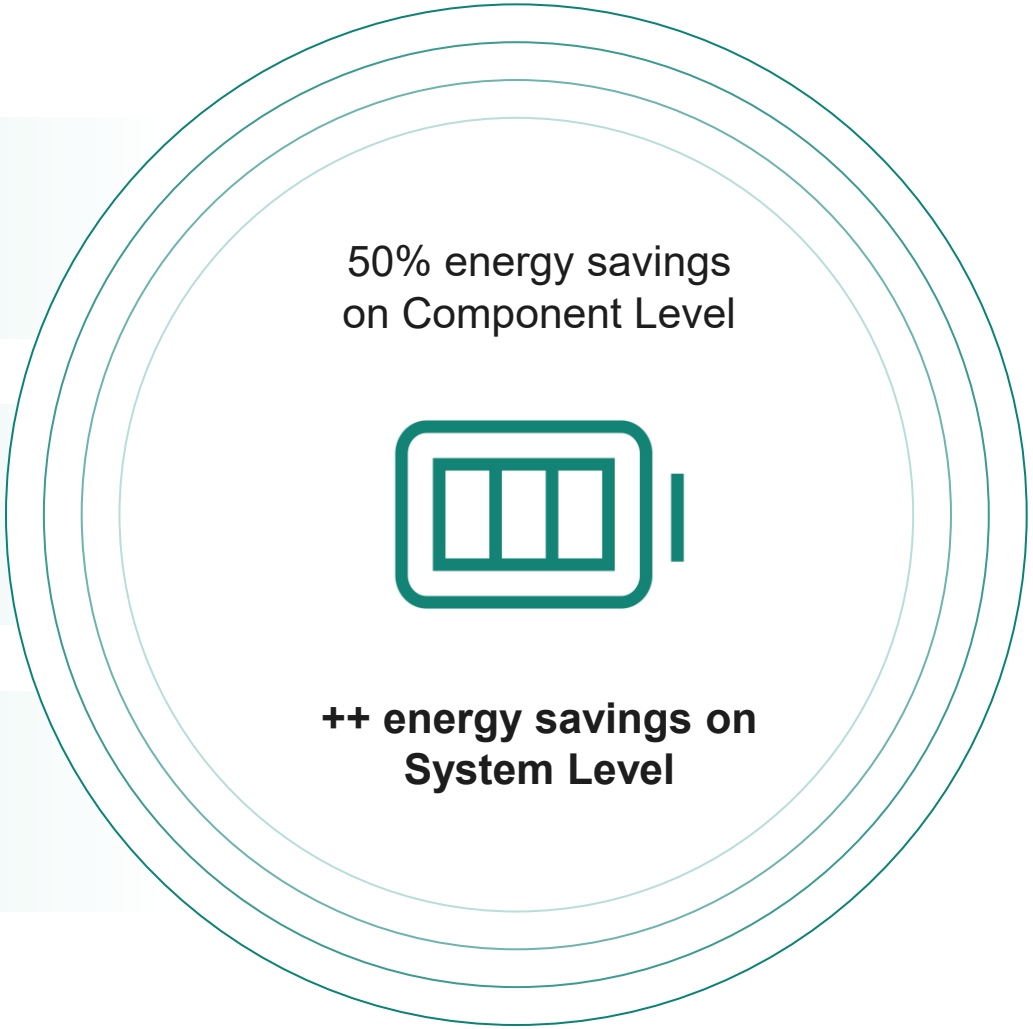
	OC1230	Competition
Processor	ARM V8-M (100 MHz)	ARM-M35P (70 MHz)
Technology Node	28 nm	40 nm
Die Size	<3 mm²	4,6 mm²
NVM Size	1.8 MB	1.5 MB
RAM Size	64 KB	64 KB
Voltage Class	D (1,2 V), C (1,8 V)	C (1,8 V), B (3/3,3 V)
Interface	SPI, ISO7816, I³C^[1], Master/Slave I²C[1], SWP*	SPI, ISO7816, Master/Slave I²C
Crypto perf	Better than competition	N/A
Energy	Savings up to 50%	N/A
Packages	CSP, X2QFN20	CSP, VQFN8

[1] Interfaces available on request

Copyright © Infineon Technologies AG 2026. All rights reserved.

OPTIGA™ Connect Consumer – Extended Battery Life enabled by efficient eSIM Hardware

1.2 V Supply	Enable 1.2 V system-wide No add. external circuitry
Tegrion™ Architecture	Best in Class Performance 50% less energy than BA
Flexible Supply	Switch off interfaces or baseband while keeping context

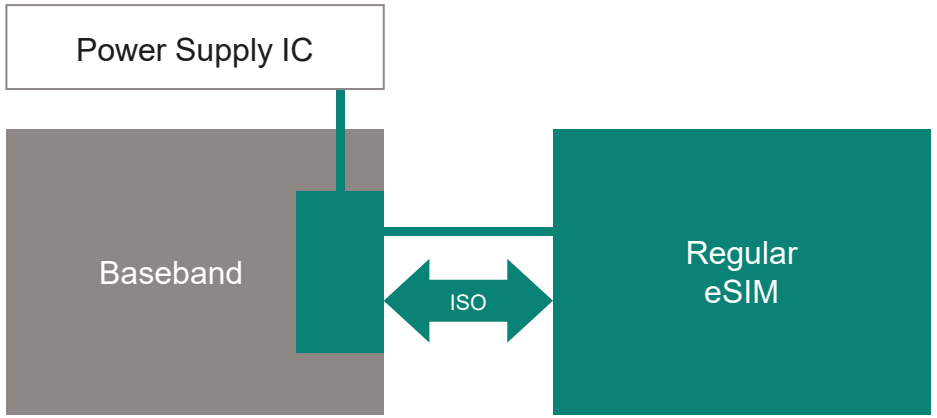


Copyright © Infineon Technologies AG 2026. All rights reserved.

OPTIGA™ Connect – versatile power concept

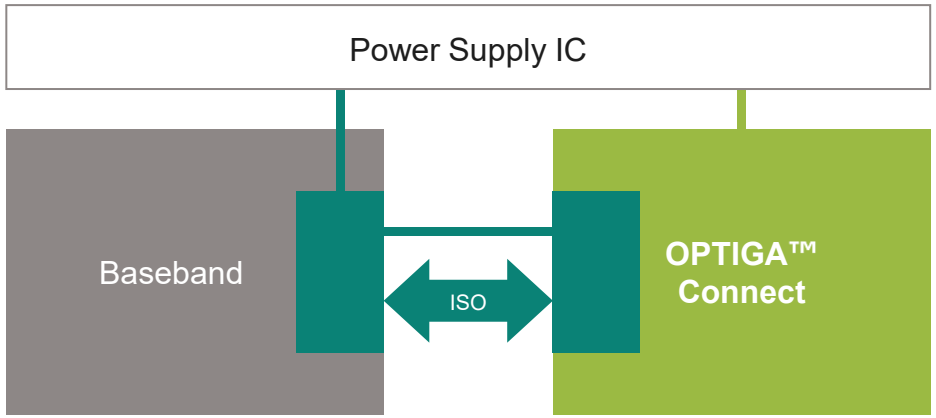
Competitor eSIM

The complete eSIM chipset is always supplied thru the ISO interface.



OPTIGA™ Connect

The OPTIGA™ Connect Consumer OC1230 is supplied independently from communication interfaces. This allows easier system integration and highest possible power saving.

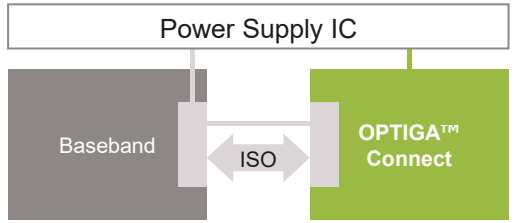


Copyright © Infineon Technologies AG 2026. All rights reserved.

New use cases – only possible with OPTIGA™ Connect

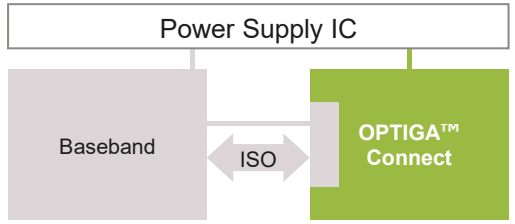
Power saving: Interface switching

The communication interface can be switched off completely (power saving in the baseband and the Power supply IC). While the eSIM keeps its context.



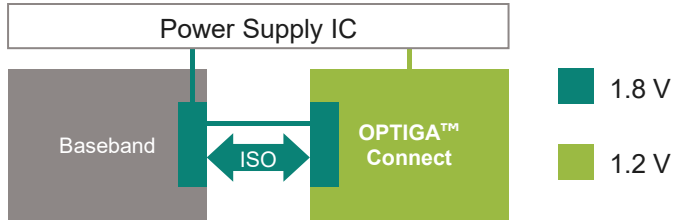
Power saving: Baseband sleep:

Baseband can go into sleep for utmost power saving – while keeping eSIM security context alive.



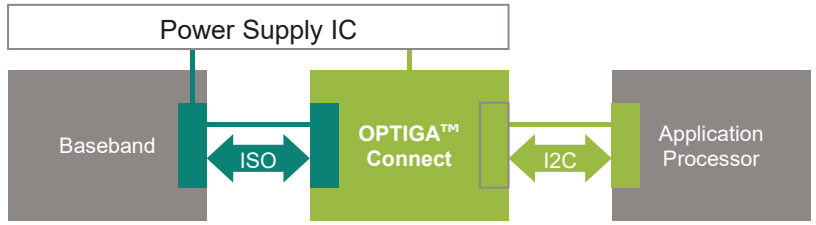
Easy integration:

The communication interface and the eSIM chipset can operate with different, best suitable voltages.



Multi host connection:

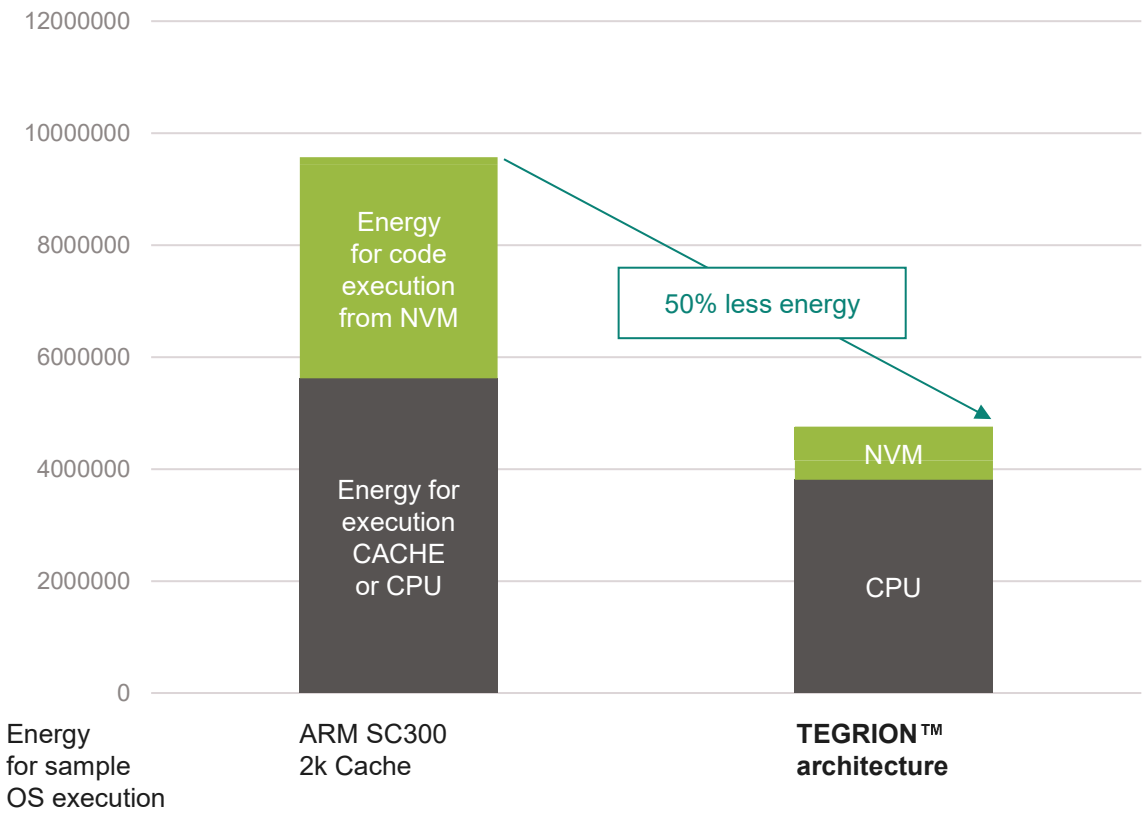
Different hosts (e.g., APP or NFC controller) can communicate with different communication levels.



Copyright © Infineon Technologies AG 2026. All rights reserved.

Power: Save energy while increasing performance

Energy simulation
instructions/wait states @W



OPTIGA™ Connect Consumer OC1230 on 28 nm technology

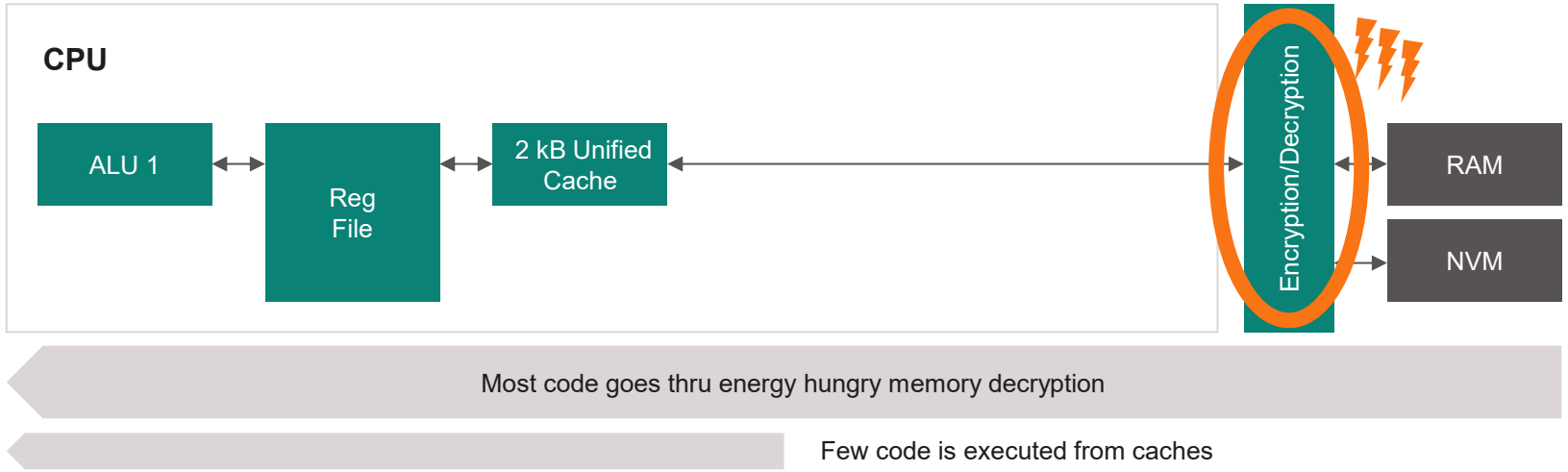
- Introducing 1.2 V supply reduces power consumption by 30%
- Optimized cache and optimized TEGRION™ architecture leads to further 20% power savings
- Overall **energy reduction by 50%** when running a reference OS
- TEGRION™ security architecture reducing overall code size in secured OS – less lines of code **lead to further reduction**

Copyright © Infineon Technologies AG 2026. All rights reserved.

Power efficient TEGRION™ architecture

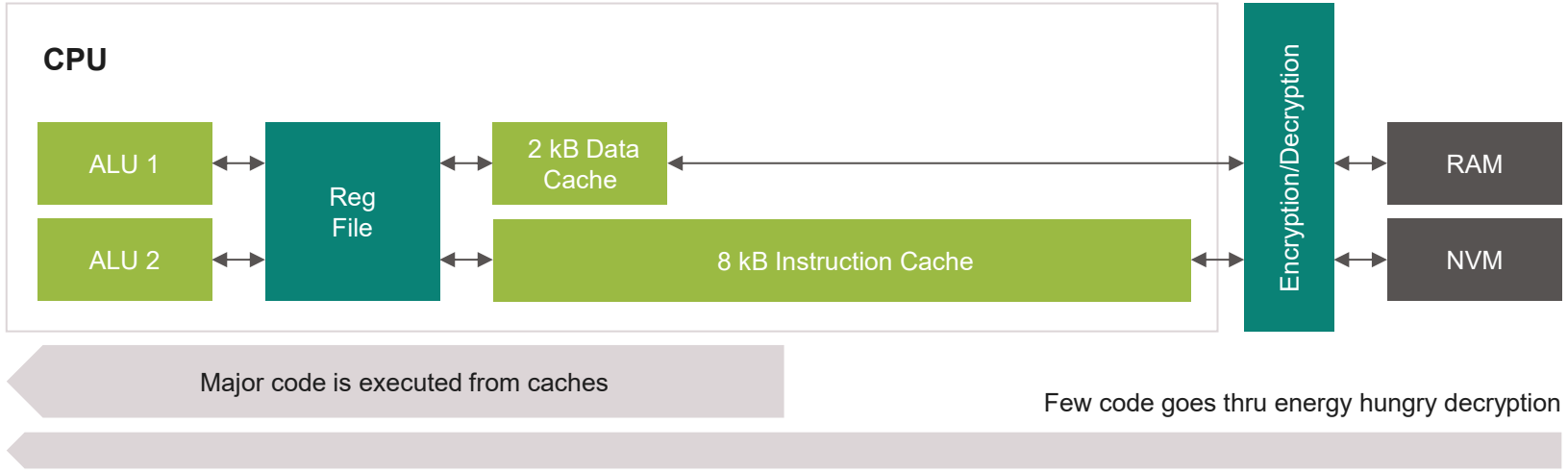
ARM SC300 with 2 kB cache

- Regular architecture
- Most code is executed from NVM
- Memory decryption is energy hungry



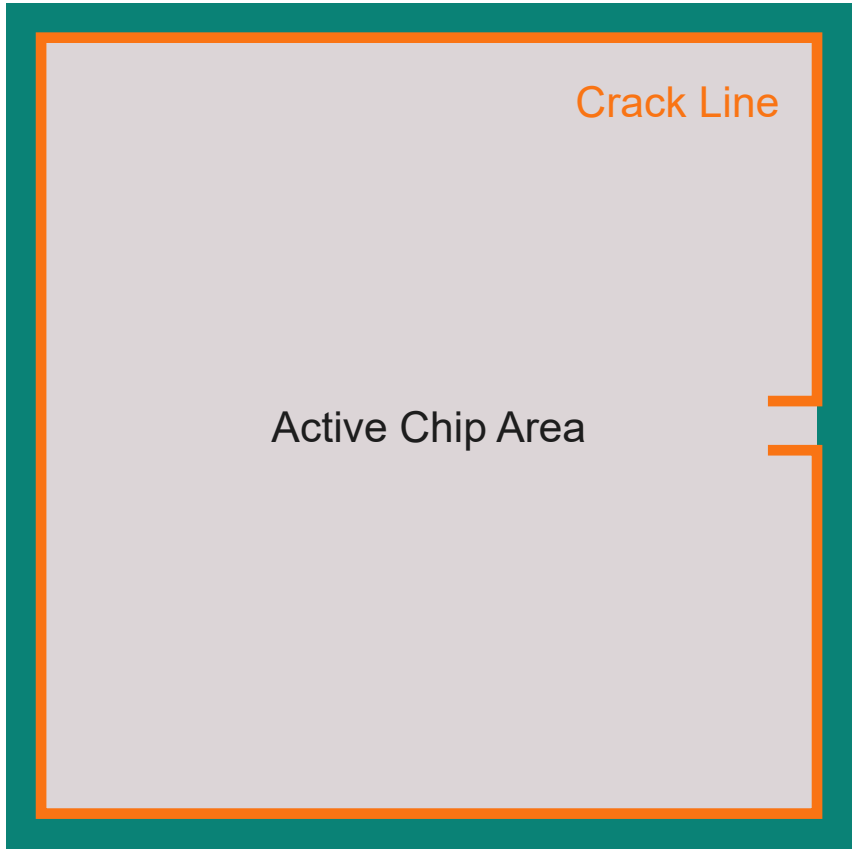
Infineon TEGRION™ architecture

- With 8 kB instruction cache
- Most code is executed from caches
- Much less power hungry as less code is going thru decryption



Copyright © Infineon Technologies AG 2026. All rights reserved.

OPTIGA™ Connect Consumer OC1230
Crack Detect Feature greatly enhances reliability in production



Mechanical stress such as during soldering of WLCSP in consumer devices can **damage the IC**. Damaged IC might impair functionality of device.

IFX OC1230 HW **crack line detects mechanical damage** of the chip. Feature callable through command during production.

Crack Detect Feature greatly **enhances quality and reliability** of devices in the field.

Copyright © Infineon Technologies AG 2026. All rights reserved.

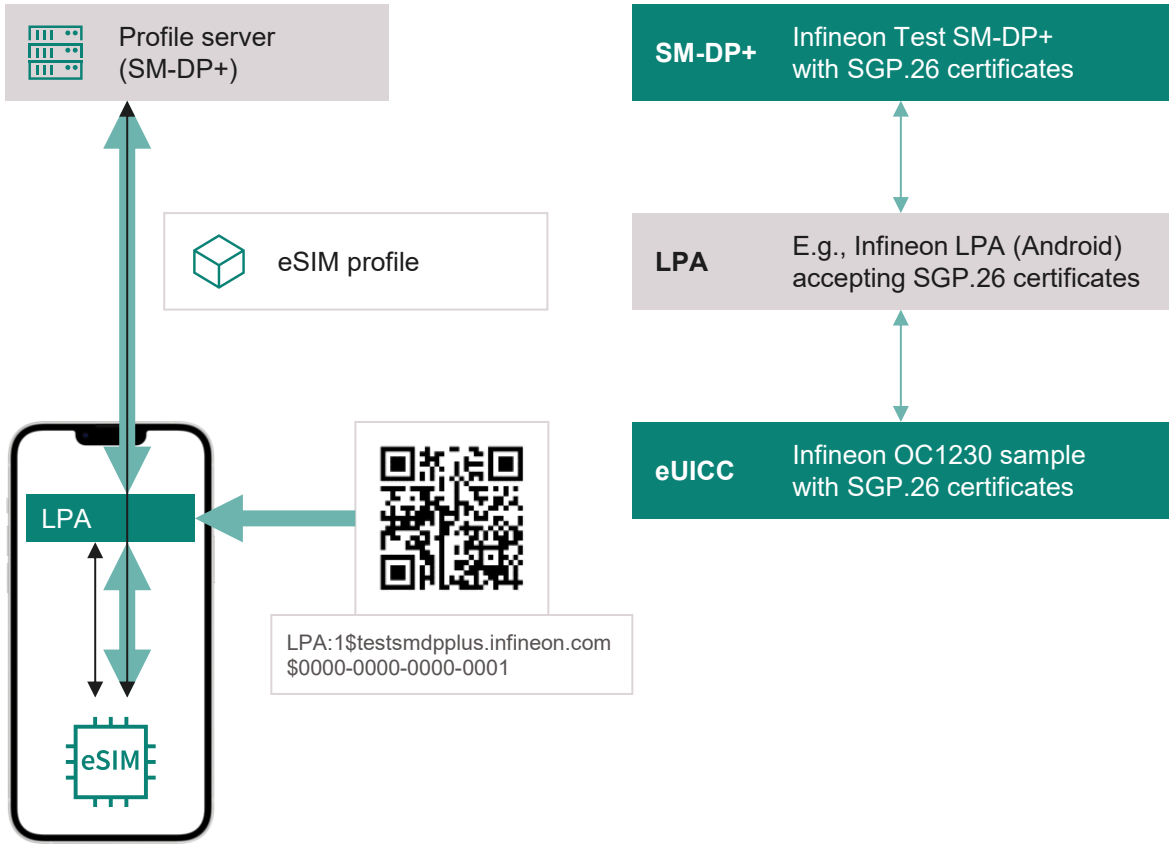
We offer excellent design-in services dedicated to our customers

Extensive **host software support**,
e.g., GSMA LPA System App, OS Patch agent for Android

SM-DP+ test setup with GSMA SGP.26 samples

Customer dedicated Field Application Engineers

Full offering to make your design-in easy



Copyright © Infineon Technologies AG 2026. All rights reserved.

Our latest Operating System offers new benefits for end users and makes your device's connectivity future prove



Features	Status	Benefits
GSMA v3.x	✓	**Future prove** solution for **worldwide** devices
OS update	✓	**Future prove** solution for device maker
1.1 MB free user space	✓	**Future prove** & improved **user experience** with **additional applications & SIM profiles**
Multiple **E**nabled **P**rofiles	✓	Enabling **traveler & multi SIM use cases**
Android Ready SE	✓	Enabling **new use cases** (e.g., digital keys, ID)
Platform approach	✓	OS always up to date, hardware ready to support future use cases (e.g. **PQC**)

Our webpage **www.infineon.com/OPTIGA-Connect-Consumer** &
Field Application Engineers provide you more information on additional features

Improved user experience & future prove devices with our latest OS features

Copyright © Infineon Technologies AG 2026. All rights reserved.

OPTIGA™ Connect turnkey solution offers substantial benefits to you

Benchmark performance

TEGRION™ based
28 nm technology

High-end security, performance
& ease of integration

Space optimized

Ultra-small
CSP & X2QFN20 packages

27% – 70% PCB footprint reduction

Scalable offering

Latest SW features & technology,
globally certified at >200 MNOs

Perfect fit for global markets

Energy saving

Up to 50% lower consumption with
1.2 V supply and ARMv8 cache

Extended battery lifetime

Strong design-in support

Host software, SM-DP+ test setup
and local engineering support

Seamless design-in across devices

High-end quality & logistic excellence

>3bn security ICs shipped every year,
dual site support, only 7 weeks delivery time

Proven reliability & trusted partner

Copyright © Infineon Technologies AG 2026. All rights reserved.


Infineon