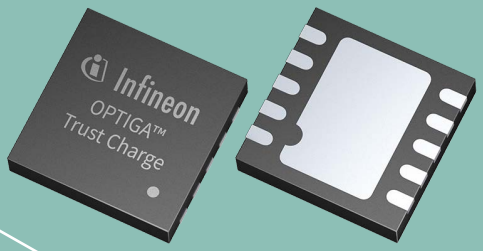

Product brief

OPTIGA™ Trust Charge

The trusted authentication solution for wireless charging

An increasing number of products and applications support wireless charging – driven by its obvious ease and convenience. However, an inaccurate power supply can be harmful to the device and, worst case scenario, even to the user.

Wireless charging authentication solution
Infineon's OPTIGA™ Trust Charge is a turnkey solution providing secured device authentication for inductive wireless charging according to the Qi 1.3 wireless charging standard. Secured authentication with OPTIGA™ Trust Charge contributes to device and user safety by protecting against fake chargers.

The Qi 1.3 wireless charging standard
Developed by the Wireless Power Consortium (WPC), the Qi standard defines wireless power transfer to small electronic devices with the aim of providing compatibility and safety for the device, and thus contributing to consumer safety. The Qi 1.3 standard mandates the use of security-certified hardware to protect the authentication process. It also mandates that keys and certificates be provisioned in a security-certified manufacturing environment. Chargers have to communicate with the device in question to prove their authenticity and compliance with the standard. Authentication of certified wireless chargers can prevent product damage as a result of unauthorized chargers and thereby can protect the consumer against safety hazards.

Enhanced security
The OPTIGA™ Trust Charge authentication chip is certified to Common Criteria EAL6+ (high), thus exceeding the security requirements of the Qi 1.3 standard. Infineon is able to provide personalization and injection of the certificates and keys specified by the WPC in a secured and certified environment according to WPC requirements, making it easy for customers to build in security capabilities.

Fast and easy integration
The turnkey setup – with full system integration support and all key and certificate material preprogrammed – minimizes customer effort for design, integration and deployment. OPTIGA™ Trust Charge comes with preprogrammed locked OS, locked application code, and host-side modules to integrate with host microcontroller software. Integration support includes a reference board and documentation for rapid design-in.

Key features

- WPC Qi 1.3 authentication
- Common Criteria EAL6+ (high) certified hardware
- ECDSA P-256 authentication
- NIST P-256, SHA-2 cryptography
- Up to 10 kB user memory
- Qi certificate format
- PKI
- I^2C serial communication
- USON10-2 package (3 x 3 mm)
- Extended temperature range version available
- Full turnkey solution incl. drivers, SW library, preimplemented certificate(s) and key pair(s)

Applications

- Mobile phones
- Tablets
- Cameras
- Accessories and other small personal electronic devices with charging according to the Qi standard
- Health tech devices

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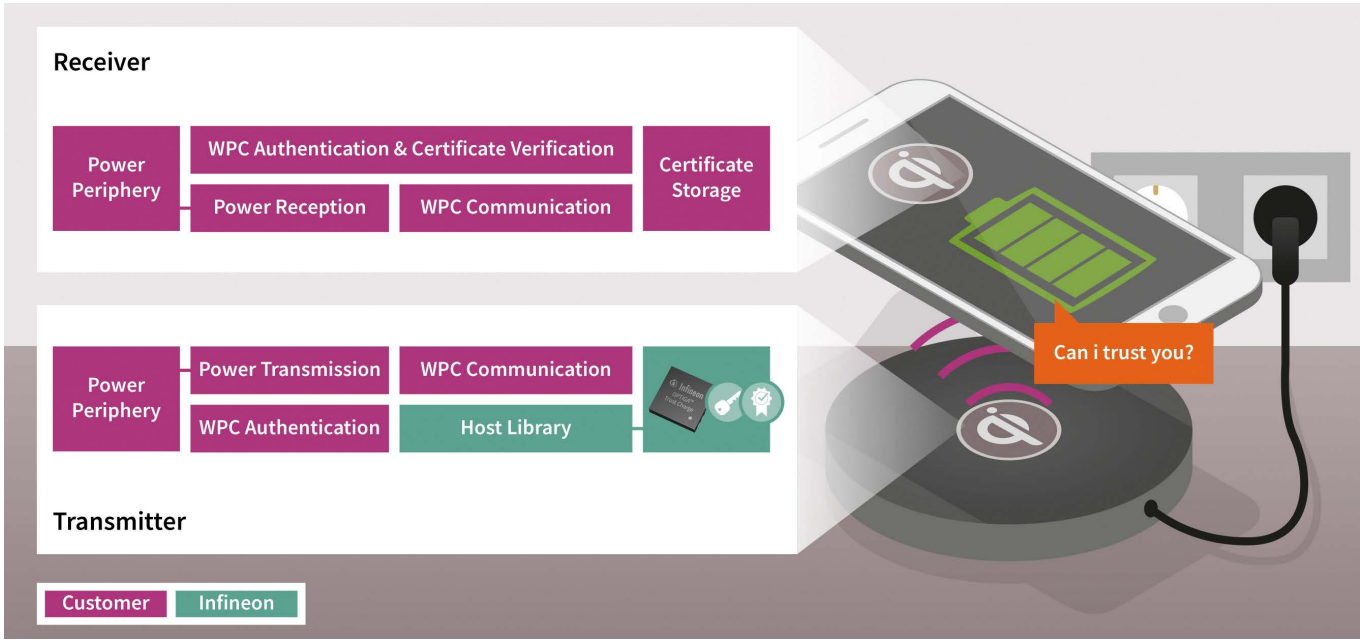

Benefits

- Protection of consumers against fake charging devices
- Turnkey solution with full system integration support including embedded software, host software, a development board, a reference board and documentation
- WPC-specific personalized keys and certificates preloaded at secured Infineon fabs
- Tiny package (3 x 3 mm) optimized for small devices
- Versions for standard and extended temperature ranges

The OPTIGA™ Trust family of products

OPTIGA™ Trust Charge is part of Infineon's OPTIGA™ Trust family, which offers a full range of embedded security solutions for the connected devices market.

Infineon's OPTIGA™ family is geared towards the protection of embedded systems. All OPTIGA™ products are based on secured hardware and software.

Product summary

Sales code	Temperature range [°C]	Package	Application area
SLS 32AIA020U2	-20 to +85	USON-10-2	Consumer electronics
SLS 32AIA020U3	-40 to +105	USON-10-2	Industrial applications

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Additional information
For further information on technologies, our products, the application of our products, delivery terms and conditions and/or prices, please contact your nearest Infineon Technologies office (www.infineon.com).

Warnings
Due to technical requirements, our products may contain dangerous substances. For information on the types in question, please contact your nearest Infineon Technologies office.

Except as otherwise explicitly approved by us in a written document signed by authorized representatives of Infineon Technologies, our products may not be used in any life-endangering applications, including but not limited to medical, nuclear, military, life-critical or any other applications where a failure of the product or any consequences of the use thereof can result in personal injury.

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