CALYPSO™ move

Optimized security for contactless paper tickets.
The perfect fit for passengers who use public transport occasionally

CALYPSO™ move from Infineon is a secure memory product for cost-effective limited-use tickets (LUT). Compliant with the Calypso® basic specification, it is mainly targeted at public transit applications but is also suited to mass events.

As a certified Calypso® product, CALYPSO™ move is compatible with the existing Calypso® ecosystem. It serves the cost-effective paper ticketing segment while meeting the high security needs of transport and access systems. CALYPSO™ move can be used in the existing Calypso® infrastructure and works with other Calypso® products. This compatibility reduces integration effort relative to other infrastructure upgrades.

The main advantages of **CALYPSO™ move**:

- **Easy integration** into existing infrastructures. Terminal and system upgrade implementation costs are minimal, as this solution is compatible with the communication, cryptography, command set, and file structure protocol already used in existing Calypso® automated fare collection (AFC) systems.

- **Lower cost of operation**. It is a ready-to-use and easy-to-integrate product based on the Calypso® Basic specification. CALYPSO™ move is the perfect fit for Calypso® tickets aimed at passengers who only use public transport occasionally.

- As part of the Calypso® infrastructure, it is based on **open standards** so avoids vendor lock-in. CALYPSO™ move thus contributes to fair competition and sourcing flexibility. Additionally, it can be adapted to meet evolving requirements of ecosystem players over time. Ultimately, it supports the potential phase-out of protocols for other proprietary technologies.

- It is a **future-proof product**, offering the **best contactless performance and security level**. The product is certified to the CC EAL2+ (enhanced basic) security standard. Unlike competing technologies, which offer little or no security, it thus brings a robust level of security to tickets of limited use and lifetime. CALYPSO™ move offers extremely competitive transaction times compared with other products in the field.

Key features

- Future-proof, cost-effective solution for limited-use tickets (LUT)
- Calypso® basic compliance
- Functional certified by PayCert
- CC EAL 2+ "enhanced basic" secure certified
- Contactless ISO/IEC 14443 Type B with data rates up to 424 Kbits/s
- Command set based on ISO/IEC 7816-4
- Security based on TDES
- Available as sawn bumped or unbumped wafer and contactless module MCC8
- 17 pF chip input capacitance

Applications

- Limited-use tickets for public transport ticketing
- Cards for access management
- Secure tickets for mass events

CALYPSO™ move

Contactless I/O management
- ISO/IEC 14443-3 Type B initialization and anticollision
- ISO/IEC 14443-4 transmission protocol

Memory organization
- ISO/IEC 7816-4 file system organized in hierarchical tree structure
- Single dedicated file (DF)
- Following elementary file (EF) types: linear record, cyclic record, and counters elementary

Security
- 2-key TDES cryptography and
- 3-key 128-bit length for CALYPSO™ move application
- Security attributes defining the access rights for the DF and EF
- Data exchange protocol inherently DPA- and DFA-resistant
- Atomic operations for manipulating record files and counter files

Tools
- CALYPSO™ move evaluation kit, incl. CALYPSO™ move tool and installation guide (scripts for ticket use cases)
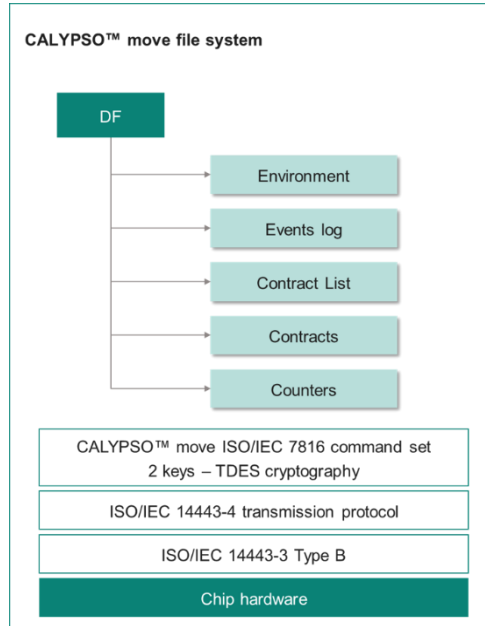
Ordering information

Type	Description	SP number
SLM10TLD002Y-NB	Sawn wafer (75/120 µm, NiAu bump 20 µm)	SP005854097 (75 µm) / SP005542196 (120 µm)
SLM10TLD002Y-MCC8	MCC8 (contactless module)	SP005542194
Paper tickets	Sample paper tickets	SP005865606

Get started now with CALYPSO™ move!

Availability	Supply	Technical support	Infineon as a strategic partner
Full qualified product. Samples available. Plug & play for LUTs according to Calypso® basic specification	Production capacity to support **volume ramp-up since 2023**	Support material available. Customer trainings on request	Trusted partner **with comprehensive, long-term roadmap.** Committed to open standards for all security applications

Available both functional and security certifications!

Date: 06/2024

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.

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