



## Application brief

# Transport Ticketing

Driving contactless mass transit and multi-application schemes based on open and non-proprietary standards

### Shaping new mobility experiences with contactless technology

The future of transport ticketing will be driven by convenience, security and speed. Multi-modal services, typically accessed through one single form factor – whether that be a paper ticket with an embedded chip, smart card, mobile phone or wearable, must be capable of supporting future market needs. These multi-purpose devices have to combine the security associated with payment applications with the speed and performance of typical contactless ticketing schemes. This calls for new, more robust and faster security solutions capable of protecting passenger credentials and saving operator costs.

### Pioneering smart mobility solutions based on open standards

In order to improve efficiency, performance and interoperability, transport authorities are increasingly replacing proprietary legacy fare-collection deployments with future-oriented platforms based on open standards. Independent bodies certify open standard products and all industry players are free to join the standardization body and contribute to the standardization process. Open standards consequently adhere to equal, transparent terms and conditions.

At Infineon, we understand the market need for open, non-proprietary, interoperable and competitive solutions capable of spanning ticketing, identification, micropayment and mobile payment. Covering all form factors, our scalable and secure ticketing product and solution portfolio based on open standards is designed specifically to meet those market needs.

### Key features

#### Infineon smart card solutions

- › Offering a secure, scalable and flexible product portfolio for worldwide deployment
- › Entire portfolio supports open, non-proprietary security standards
- › Market leader for secure ICs

#### Benefits of open standards

- › Vendor neutrality, enabling fair competition across value chain
- › Protection of investments as operators migrate from proprietary to open schemes, securing passenger credentials and preventing fraud
- › Cross-vendor system interoperability from card to reader
- › Non-discriminatory and compliant with public procurement rules

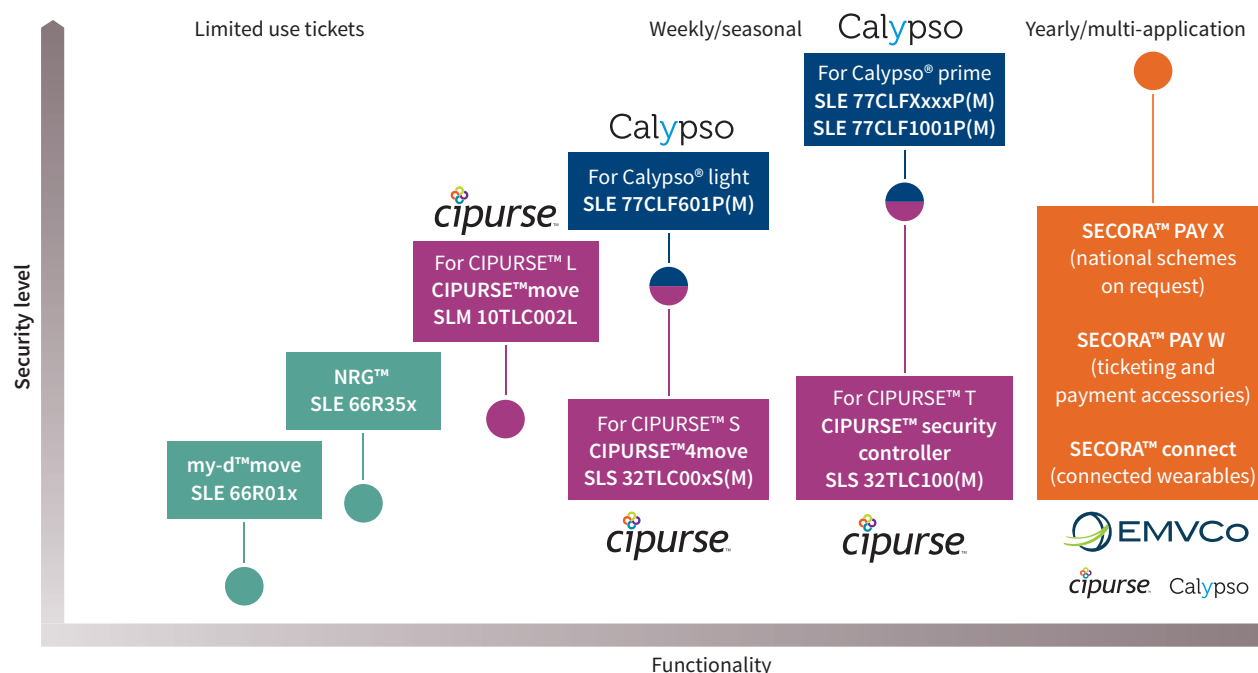
Limited use Tickets used once or several times	Mid-range Multiple use cards (seasonal, monthly, etc.)	High end Multi-service, multi-application
<p>For CIPURSE™ L CIPURSE™move SLM 10TLC002L</p> <p>For Calypso® basic</p>	<p>For CIPURSE™ S CIPURSE™4move SLS 32TLC00xS(M)</p> <p>For Calypso® light SLE 77CLF601P(M)</p>	<p>For CIPURSE™ T CIPURSE™ security controller SLS 32TLC100(M)</p> <p>For Calypso® prime SLE 77CLFXxxxP(M) SLE 77CLF1001P(M)</p>
		<p>SECORA™ PAY X (national schemes on request)</p> <p>SECORA™ PAY W (ticketing and payment accessories)</p> <p>SECORA™ connect (connected wearables)</p> <p>EMVCO VISA Mastercard DISCOVER</p>

### Further information

- › Ticketing solutions
- › Infineon smart card solutions
- › Infineon wearables
- › Calypso network association
- › OSPT alliance



## Transport ticketing portfolio by functionality and security



## Transport ticketing product portfolio overview

Product name	Product description	Interfaces
SLE 66R01P	my-d™ move	ISO/IEC 14443-3 Type A, NFC Forum Type 2 Tag operation
SLE 66R01L	my-d™ move lean	ISO/IEC 14443-3 Type A, NFC Forum Type 2 Tag operation
NRG™ SLE 66R35	(E7) = Supporting 7-byte UID, (I) = Supporting 4-byte fixed number, non-unique ID, (R) = Supporting 4-byte reused ID, Intelligent 1 kByte EEPROM	ISO/IEC 14443-3 Type A
SLM 10TLC002L	CIPURSE™ move (CIPURSE™ L profile)	ISO 14443 A, NFC Forum Type 4 Tag configurable
SLS 32TLCxxxS(M)	CIPURSE™ 4move (CIPURSE™ S profile)	ISO 14443 A, NRG™ (ISO/IEC 14443-3 type A with CRYPTO1) optional, NFC Forum Type 4 Tag configurable
SLS 32TLC100(M)	CIPURSE™ Security controller (CIPURSE™ T profile)	ISO 14443 A, NRG™ (ISO/IEC 14443-3 type A with CRYPTO1) optional, NFC Forum Type 4 Tag configurable
SLE 77CLFxxxP(M)	Contactless security controller	ISO 14443 A/B, ISO 18092 passive mode, NRG™ (ISO/IEC 14443-3 type A with CRYPTO1)
SLE 77CLFXxxxP(M)	Dual-interface security cryptocontroller for multi-application use cases with best-in-class contactless performance for transport use cases	ISO 7816, ISO 14443 A/B, ISO 18092 passive mode, optimized for small antenna sizes, optional NRG™ (ISO/IEC 14443-3 type A with CRYPTO1)
SLC 32TDzxxx	Dual-interface security cryptocontroller for multi-application use cases with best-in-class contactless performance for transport use cases	ISO 7816, ISO 14443 A/B, ISO 18092 passive mode, optimized for small antenna sizes, optional NRG™ (ISO/IEC 14443-3 type A with CRYPTO1)
SLC 36TDzxxx	Dual-interface security cryptocontroller for multi-application use cases with best-in-class contactless performance for transport use cases	ISO 7816/I <sup>2</sup> C, ISO 14443 A/B, ISO 18092 passive mode, optimized for small antenna sizes, optional NRG™ (ISO/IEC 14443-3 type A with CRYPTO1)
CIPURSE™SAM SLE 9630	CIPURSE™ SAM with NRG™ interface. Secured authentication between the reader and CIPURSE™ chip cards or cards with AES128-based authentication schemes. Dedicated key management system including key derivation and key upload.	CIPURSE™ secure access module with NRG™ (ISO/IEC 14443-3 type A with CRYPTO1) interface
SECORA™ Pay X	Flexible platform to address multi-application payment cards and domestic schemes. EMV-based payment schemes and local content in combination with Infineon's applets for Visa, Mastercard, American Express, Discover, Calypso® and CIPURSE™.	ISO 7816, ISO 14443
SECORA™ Pay W	Turnkey solution for payment accessories, designed for non-connected, passive wearable devices such as rings, wristbands or key fobs that are not powered by a battery.	ISO 14443
SECORA™ Connect boosted	All-in-one turnkey NFC solution for connected smart wearables enabling ultra-small physical footprint, with certified application for Visa, Mastercard, CIPURSE™, and Calypso®.	ISO 7816, ISO 14443, I <sup>2</sup> C
SECORA™ Connect passive NFC	Security solution for smart wearables enabling battery-less NFC transaction, with certified application for Visa, Mastercard, CIPURSE™, and Calypso®.	ISO 7816, ISO 14443, I <sup>2</sup> C

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