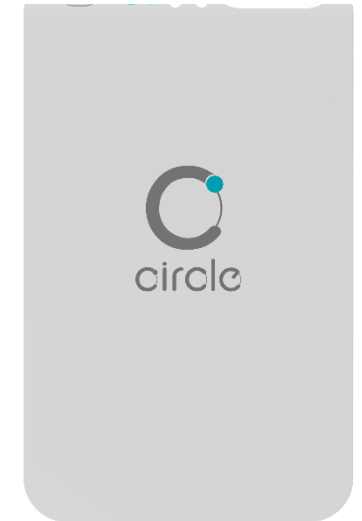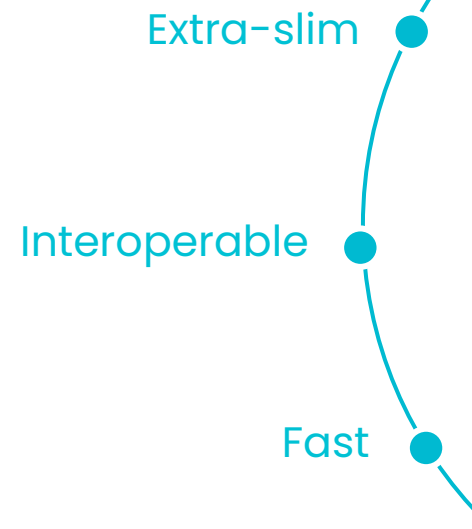# CIR415A

Bluetooth® Contactless Smart Card Reader

CIR415A Bluetooth® Contactless Smart Card Reader combines the latest Bluetooth® and contactless technologies to offer you an ideal solution for wireless contactless applications.

- Supports Bluetooth® 5.0
- Supports ISO/IEC 14443, ISO/IEC 18092 and ISO/IEC 15693 standards
- Supports ISO/IEC 14443-4 Type A & B cards, ISO/IEC 15693-3 cards, MIFARE® series, FeliCa, J-LIS cards, Calypso and NFC Forum Type 1/2/3/4/5 Tags
- Supports ISO/IEC 7816 Part 3/4 SAM slot (Optional)
- Supports extended APDU
- Complies with CCID standard
- Conforms to PC/SC specifications
- Firmware upgradable
- Works on different operating systems
- A transparent card holder is included

Extra-slim

Interoperable

Fast

Accessories

- Removeable card holder
- 1m detachable USB cable

CIR415A
Bluetooth® Contactless Smart Card Reader

Contactless Smart Card Interface

Standard	ISO/IEC 14443, ISO/IEC 18092, ISO/IEC 15693
Protocol	T=CL (translated to T=1 for PC/SC compliance)
Operating Frequency	13.56 Mhz
Supported Card Types	ISO/IEC 14443-4 Type A & B Cards, ISO/IEC 15693-3 Cards, MIFARE® series: Classic/ Plus/ Ultralight/ Ultralight C/DESFire/ DESFire EV1/ DESFire EV2, etc, FeliCa (Standard/ Lite/ Plug), Calypso, J-LIS Cards, NFC Forum Type 1/2/3/4/5 Tags
Speed	106/ 212/ 424/ 848 kbps (Default: 424 kbps)
Reading Distance	Up to 50 mm (depending on tag type)
Extended APDU	Support

SAM Card Interface

Standard	ISO/IEC 7816 Part 3/4
Protocol	T=0, T=1
Supported Card Types	ISO/IEC 7816 Class A (5V) cards
Supported Card Size	ID-000 (SIM size)
Speed	9.6 – 125 kbps
Clock Frequency	4.0 MHz

Physical Characteristics

Dimensions	With Card Holder: 96.1 mm (L) x 64.1 mm (W) x 8.9 mm (H); Without Card Holder: 94.7 mm (L) x 60.0 mm (W) x 6.0 mm (H)
Weight	34.0 g (± 5 g)
Casing	Reader: White PC; Card Holder: Transparent ABS

Host Interface

Bluetooth® Standard	BLE 5.0 (2 Mbps)
USB Standard	USB 2.0 Full Speed (12 Mbps)
USB Connector Type	Type C (Female)
USB Cable	1m, Detachable USB Cable

Power

Supply Voltage	USB Bus-powered (DC 5V)
USB Rated Current	<500 mA (Operating)
Battery	3.7V 400mAh Rechargeable Lithium-ion Battery (charged via USB)
Current Consumption	<500 mA (Operating)

Human Interface

LED	3 x LEDs: Blue (Operation Status), Blue & Green (Mode), Red & Green (Power)
Buzzer	Monotone
Tactile Switch	2 x Switches: Power Button, Mode Button

Software and Driver

Firmware Upgradeable	Support, via USB
Communication Channel Encryption	Bluetooth® Mode: AES-128 Encryption Algorithm (CBC Ciphering Mode)
Driver	USB Mode: CCID; Bluetooth® Mode: Proprietary
Application Programming Interface (API)	USB Mode: PC/SC; Bluetooth® Mode: Proprietary

Operating Conditions

Operating Temperature	0 – 60 °C (not charging); 0 – 45 °C (charging)
Operating Humidity	Max. 85% (non-condensing)
Storage Temperature	-20 °C – 65 °C
Meantime Between Failure (MTBF)	500,000 hours

Compliance/ Certifications

Standards/ Systems	ISO/IEC 14443, ISO/IEC 18092, ISO/IEC 15693, ISO/IEC 7816 (SAM slot), USB 2.0 Full Speed, CCID, Microsoft® WHQL, Bluetooth® 5.0
Regulatory/ Environmental	EN 62368, CE, FCC, VCCI, MIC, BQB, TELEC, RoHS3, REACH

Operational Environment

Supported Operating Systems	USB Mode: Windows® 7 SP1 and above, Linux®, macOS® 10.12 and above, Android™ 6.0 and above; Bluetooth® Mode: Windows® 10 and above, Android™ 6.0 and above, iOS 11.0 and above, iPadOS 13.1 and above

Ordering Information

Product Code	CIR415A-01: USB Type A (Male) to Type C (Male) Cable, with SAM slot (Standard)
	CIR415A-02: USB Type A (Male) to Type C (Male) Cable, without SAM slot
	CIR415A-03: USB Type C (Male) to Type C (Male) Cable, with SAM slot
	CIR415A-04: USB Type C (Male) to Type C (Male) Cable, without SAM slot