# **R502–CL** CCID Smartcard Reader



Build-in antenna

ISO/IEC 14443 (A and B) standard

Mifare S50/S70/Ultralight C cards

Card clock Frequency: 13.56MHz

106kbps, 212kbps, 424kbps, 848kbps communication speed (Depends on card)

0.3 second for read/write Mifare $\odot$  card CSN

Open UID(User ID) function

Support Extended APDU

Encrypted firmware upgrade

Windows 2000 / XP / 2003 / Vista / 2008 / 7 / 8, Linux Kernel 2.6+, macOS X, Android(OTG)



FEITIAN Reader R502-CL is a contactless smart card reader developed by FEITIAN Technologies. It is based on CCID Driver. It supports contactless cards compliant with ISO 14443 and contactless cards following Mifare standard. Developers use it as a platform to generate and deploy related products and services. Moreover, FEITIAN Reader R502-CL is a terminal unit which is seamlessly integrated to all major systems of operation. Additional features such as the built-in inclusive support for different smart card interfaces has facilitated the wide scale and cross industry adoption of Reader 502-CL.

R502-CL is a terminal interface device for smart card applications and system integrations. It can be widely used in industries or applications requiring electronic payment and authentication, especially suitable for the high security fields. It is an optimal solution for authentication, e-commerce, financial organizations, access control.

# Applications

R502-CL is high speed smartcard reader product, it can using financial systems, e-commerce, e-government, e-banking, digital signatures, authentication, network access control, online games, recharge payment, ticketing system, parking and access control, public transportation system.

# **Extension and maintenance**

Product can be extended and disassembled. Firmware can be extended, customized and updated.

### Security feature

Firmware cannot be read out. Anti-reverse analysis Short circuit protection and overcurrent protection Do not contain any users' sensitive data in product, such as password.

PCB board has a 5mm distance with reader shell.

### Reliability

The period of hardware usable is at least 5 years. Frequently read/write 200 times will not lead the system down or error.

Continuously using 48 hours will not lead error occurrence rate exceed 3‰.

#### Specifications

Interface type	USB 2.0 CCID (12Mbps)	Humidity	≤90% (non-condensed)	Supported OS	Win2000+/Linux/macOSX/
Supported	Speed: 106kbps, 212kbps, 424kbps,	Dust-Proof	IP54		UNIX / Android(OTG)
Contactless Card	848kbps (Depends on card) Clock Frequency: 13.56MHz ISO 14443 Type A and Type B.	Power supply	USB port 5V DC	Standard	ISO 14443 Standard Felica® Standard Mifare® Standard
	Mifare <sup>®</sup> Protocol, Felica <sup>®</sup> protocol	Working current	170mA without any card 230mA with contactless card		EMV Level 1 Standard PC / SC Standard
	120 × 80 × 25.6 mm	Power to Smart Card	60mA		USB 2.0 Standard CCID Standard
Weight	80g				
Material	ABS+PC	Hardware Security	Short circuit protection Thermal protection Over-voltage protection	Certification	CE / FCC / RoHS / EMV Level 1 / LTIC / BSMI / UL
Status Indicator	Blue and Red LED		High security level chipset Electrostatic prevention	API Standard	PC / SC Lite / WINSCARD API / CT-API
Working temperature	0°C ~ 60 °C				
Storage temperature	-20°C ~ 85°C	Firmware Security	Firmware encryption mechanism Firmware upgradability in encryption Firmware cannot be read out	Meantime Between Failure (MTBF)	500,000 hours
			Anti-reverse analysis	Warranty	Two-year warranty