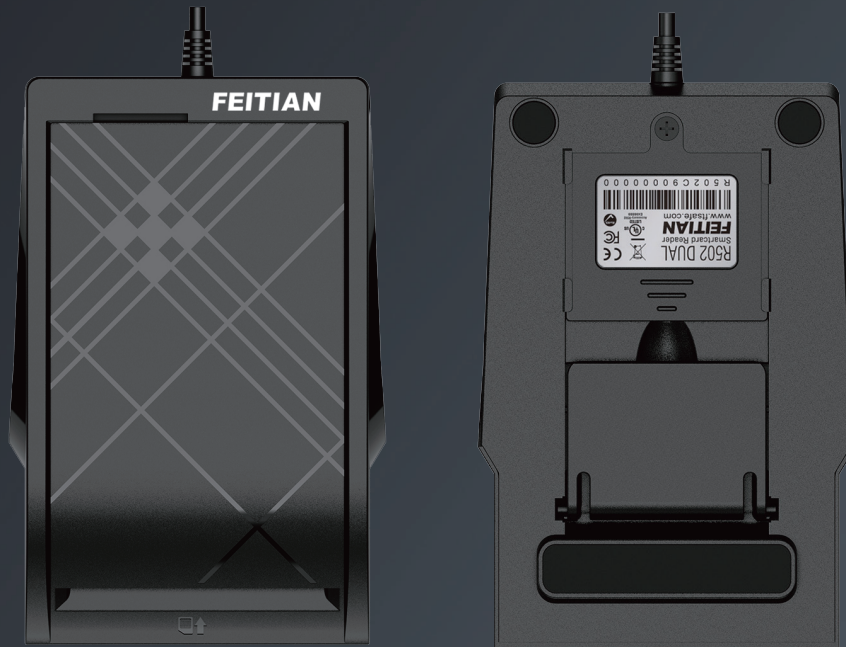# R502-Dual

## CCID Dual Interface Smartcard Reader

## Overview

R502 is a dual-interface smart card reader developed by Feitian Technologies. It is based on CCID driver, supports contact cards that compliant with ISO 7816 and contactless cards that compliant with ISO 14443, and contactless cards following the Mifare standard.

R502 is a terminal interface device for smart card applications and system integration. Its firmware supports upgrade. With support for smart cards using different interfaces, R502 can be widely used in industries or applications requiring electronic payment and authentication, especially suitable for high security fields. It is an optimal solution in authentication, e-commerce, financial organizations, access control etc.

## Features

- USB 2.0 full speed device
- Short Circuit Protection
- Support extended APDU (Application Protocol Data Unit)
- Supports ISO 7816 class A, B and C smart cards, compliant with ISO 7816-1/2/3 T=0 and T=1
- Built-in antenna
- Built-in anti-collision feature
- Supports contactless cards compliant with ISO 14443 type A and B
- Supports Mifare S50 / S70 / Ultralight C cards and DESFire card, FeliCa© card
- Led status indicator: Different indication for Power ON, Contact card in use, Contactless card in use
- Firmware supports upgrading in encryption
- Open UID (user ID) function
- Firmware encryption mechanism, anti-reverse analysis
- Supports PPS (Protocol and Parameters Selection)

## Key Applications

- e-Government
- e-Banking
- e-Payment
- e-Healthcare
- e-Passport
- Network Access Control

## PKI Applications

- Digital Signature
- Identification

**FEITIAN**
WE BUILD SECURITY

# Specifications

| | | | | |
|---|---|---|---|---|
| Casing Number | **C9** | Dimension | **120 x 80 x 25.6 mm** | |
| Interface | **USB2.0 Full Speed** | Cable | **Fixed, 1.5m** | |
| Power Supply | **USB port 5V DC** | Connector | **USB Type-A (optional: USB Type-C)** | |
| Supply Current | **<100mA (Without Card Plug-in) max.300 mA** | Weight | **128g** | |
| | | Material | **ABS+PC** | |
| Supported Card Types | **1.8V, 3V and 5V** | Status Indicators | **Red, Green and Blue LED** | |
| Supported Card Size | **ISO 7816-3 ID-1 (full-size)** | Meantime Between Failure (MTBF) | **500,000 hours** | |
| Supported Contact Cards | **ISO7816 T=0/T=1, Class A,B and C** | Working Temperature | **0°C ~ 60°C** | |
| Card Clock Frequency | **4MHz** | Storage temperature | **-20°C ~ 85°C** | |
| Card Read / Write Speed | **10753~688172bps (depending on the card)** | Humidity | **≤90% No Condensation** | |
| Durability | **500,000 insertions** | Custom Items | **OEM logo, packaging, color and firmware** | |
| Supported Contactless Cards | **ISO 14443 Type A and B cards, Mifare Classic and Mifare Ultralight C cards and DESFire card, FeliCa© card** | Warranty | **One year** | |
| Card Clock Frequency | **13.56MHz** | Certification/Compliance | **CE / FCC / RoHS / EMV Level 1 / NFC Forum / LITIC / BSMI / UL / TELEC / FIPS 201 / Microsoft WHQL** | |
| Card Read / Write Speed | **106kbps, 212kbps, 424kbps, 848kbps (Depends on card)** | | | |
| Operating Distance | **0-50mm (+/-10 mm)** | Supported OS | **Win2000+ / Win 10 / Win 11 / Linux / macOS / UNIX / Android(OTG) / iOS 16.1+ / iPadOS 16.1+** | |

| | | | |
|---|---|---|---|
| Hardware Security | **Short circuit protection**<br>**Thermal protection**<br>**Over-voltage protection**<br>**High security level chipset**<br>**Electrostatic prevention** | Standards | **ISO 7816 Standard**<br>**ISO 14443 Standard**<br>**Mifare© Standard**<br>**EMV2000 Level 1 Standard**<br>**USB2.0 Standard**<br>**PC / SC Standard**<br>**CCID Standard**<br>**WINSCard API**<br>**ISO / IEC 18092 (NFC)**<br>**FeliCa© Standard** |
| Firmware Security | **Firmware cannot be read out**<br>**Anti-reverse analysis**<br>**Firmware encryption mechanism**<br>**Firmware upgradability in encryption** | | |