MOBILE-ID
Anytime, Anywhere

CheckID-BioR502-MRZ

Document Reader with Facial Recognition

- Compliant with PC/SC, CCID Standards
- Supports ISO-7816-1/2/3 T=0 and T=1, Class A, B and C Cards
- Supports ISO-14443 standard card, including Type A, Type B, and Mifare© Family
- Supports secure firmware upgrades through USB
- Supports Android / Windows / Linux
- Dual 5MP binocular camera for accurate living face detection & verification
- Anti-reverse engineering & self-protection, firmware can't be read
- Indicators for 4 status (reader/card/ battery/fingerprint sensor)
- Logo, case color, and shell surface treatment process customizable
- Photoelectric hybrid fingerprint sensor
- Integrated MRZ (Machine-Readable Zone) Scanner

The CheckID BioR502-MRZ is designed to meet tough security needs without sacrificing convenience. The device has a USB Type A female port allowing for it to be connected to a PC. Various biometric sensors such as SecuGen, SupreMa, ZKTeco and Morpho are supported by the card reader. The biometric sensor should be selected based on customer requirements.

Additional drivers may be required so it is recommended to check with the biometric sensor vendor. The SupreMa module offers a plug and play experience with no need to install a driver. The SecuGen and Morpho modules require their own driver for the respective biometric sensors.

The BioR502-MRZ supports one ID-1 size chip card interface slot, one contactless card slot, and two (secure authentication module (SAM)) slots located on the back of the reader. The four LED lights inform the user of the reader/card/biometric sensor status. The strong biometric sensor integration provides a total security solution.

The fingerprint reader is supported on the Android platform and can be connected by the appropriate cable allowing for wide scale adoption of smart card applications.

Our machine-readable zone (MRZ) recognition module enables you the possibility of quickly integrate passport, ID document scanning, and data extraction features into your App.

The bio-assay binocular camera supports facial recognition, accurate detection and living object detection. In addition, the reader acts as a standard smart card reader and is compliant with PC/SC and CCID standards.

The CheckID fingerprint reader suits customers where the security concerns are of the utmost importance while satisfying the demand for a flexible solution for ID authentication, e-commerce, e-payment, information and access control.

This fingerprint reader series and the rest of CheckID’s smart card reader product line offers a complete solution for each individual use case.




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Specifications

Basic Parameter

Host Interface	USB 2.0 CCID (also compiant with USB 1.1)
USB Port	USB Type C female on reader port
Transmission Speed	12Mbps(USB 2.0 Full Speed)
Material	ABS+PC
Weight	ABS+PC
Status Indicator	Blue, Red, Yellow
Connector Cable	1m USB Type C to Type A cable
Contact principle	Landing contact technology (contact part)
Durability	300,000 insertions
Color	White + Black
Dimension	341 × 309 × 4 00mm
Custom Items	OEM logo, packaging, color and firmware
Support OS	Win2000+/Linux/macOS /UNIX/Android(OTG)
Certificate	CE/FCC/RoHS/EMV Level 1/LTIC/BSMI/NFC Forum/TELEC

Security

Physical Security	Short circuit and thermal protection, over-voltage protection High security level chipset Electrostatic prevention
Firmware Security	Firmware encryption mechanism Firmware upgradability in encryption Firmware cannot be read out. Anti-reverse analysis

Standard

Card Reader Standard	ISO-7816 Class A, B, C (5V, 3V,1.8V) Standard ISO 14443 Standard, Felica Standard, Mifare© Standard EMV Level 1 Standard PC/SC Standard USB 2.0 Standard CCID Standard
API Standard	PC/SC Lite/WINSCARD API

Warranty

Meantime Between Failure (MTBF)	500,000 hours
Warranty	One year warranty

Card Reader Module

Extended APDU length	Supported
Power to Smart Card	75 mA (typical); < 150 mA (max)
ID1 Contact	Supported Card Types: 1.8V, 3V and 5V Smart Card Interface Speed: 10753~625kbps (when supported by card) Smart Card Clock Frequency: 4M ISO 7816-3 ID-1 (full-size) ISO/IEC7816, T=0 and T=1 protocol, Class A, B, C cards
SIM Card	2 SAM Slot
Contactless	Build-in antenna 106kbps-424kbps Smart Card Clock Frequency: 13.56MHz ISO 14443 Type A and Type B, Mifare© Protocol, Felica® protocol

Working Environment

Power supply	USB port 5V DC
Working current	<100mA without card plugged
Working Temperaure	0°C ~ 60 °C
Storage Temperature	-20°C ~ 85°C
Humidity	≤90%(non-condensed)

bio-assay binocular camera

Camera	Camera #1	Camera #1
Pixel	5M WDR	5M WDR
Image sensor	1/2.5"	1/2.5"
Physical resolution	2592×1944	2592×1944
	2592×1944@30fps, 2048×1536@30fps, 2048×1536@25fps, 1920×1080@25fps	2592×1944@30fps, 2048×1536@30fps, 2048×1536@25fps, 1920×1080@25fps
Pixel Dot size	2.2um×2.2um	2.2um×2.2um
Data output type	RAW data 10bits	RAW data 10bits
Signal to noise ratio	≥44dB	≥44dB
dynamic range	≥80dB	≥80dB
Minimum illuminaion	≥0.01lux	≥0.01lux
Output format	MJPG/YUY2	MJPG/YUY2
Focusing mode	Fixed focus	Fixed focus
Perspective range	85°	85°

Fingerprint Module

Fingerprint Module Model Name	SupreMa BM-Slim2S
Sensor Type	Optical
DPI/Resolution	500 DPI
Image size	300 × 4 00 pixels
Platen Size	16.5 × 21.0 mm
Sensor Area	15.24 × 20.32 mm
Image Gray Scale	256 Levels
Light Source	Red LED
Smart Capture Speed	N/A
Image format	RAW, BMP, WSQ, ISO 19794-4
Biometric template Standards	Suprema, ISO19794-2, ANSI 378
Image Certificate	FBI PIV and FBI Mobile ID FAP 20
Compliance	CE, FCC, KC, RoHS, CB, WEEE, REACH, WHQL
Live Fingerprint Detection	YES
Other Features	N/A
Humanized Customization	Provide semi-finished product without fingeprint module, allowing customer to buy module locally and do assembling by themselves.
Compatible with other module with same vendor	SecuGen U10, U20, ZKTec SLK20M, Morpho CBM-V3, CBM-E3, SupreMa BM-SLIM2

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