

# MARKLAND

## MCR7003

### QR Code + Dual Interface Smart Card Reader



Get QR Code Scanner, Contact ISO/IEC 7816, Contactless/NFC 13.56 MHz technologies and Secure Access Module (SAM) in one device.

MCR7003 is the ideal combination of QR code, contact, SAM, contactless, and near field communication (NFC) technologies in just one single device. Supporting 1D code, 2D code, ISO/IEC 7816 contact cards, Secure Access Module (SAM), 13.56 MHz contactless technology, and NFC, this multi-function card reader works in end user environments where virtually all kinds of credentials are being used, even in mixed populations.

With its all-in-one concept, MCR7003 enables a smooth transition from well-established traditional technologies into emerging NFC and QR code applications, pushing new business.

This multifunctional device adopts international standard protocols. It is designed for government, medical, banking, finance, public transportation, education and security fields. It is very suitable for applications such as e-government, e-health, access control protection, identity authentication, digital signature, network security, etc.

#### The Mighty All-in-One

- Features contact, SAM, contactless, and NFC tech, Supports 1D and 2D codes

#### User Convenience

- Modern design optimized for easy and ergonomic operation, even in limited space environments

#### Superior QR Scanning Capabilities

- Leverages professional optical technology to accurately read both printed codes and electronic screen codes (e.g., smartphones), featuring breakthrough performance in wide scanning range, high-speed recognition, and decoding damaged/reflective surfaces

#### Fast

- Transaction time optimized with support of 1D and 2D code high-speed decoding, millisecond response, 848 kbps in ISO/IEC 14443 and 600 kbps in ISO/IEC 7816 for maximum end user acceptance

Parameter	Details
Host Interface	USB 2.0 CCID (USB 1.1/3.0 compliant)
Communication Speed	12 Mbps (USB 2.0 full speed)
QR Scanner	
QR code resolution	640 * 480 CMOS
QR code Field Angle	Horizontal: 60° , Vertical: 48°
QR code Scanning Angle	Rotating 360°, Horizontal ±55°, Vertical ±55°
Recognition Accuracy:	≥5mil
1D code types	Interleaved 2 of 5, ISBN, Code 93, Code 11, UCC/EAN-128 GS1 Databar, Matrix 2 of 5, Industrial 2 of 5, Code 128, EAN-13, EAN-8, Code 39, UPC-A, UPC-E, Codabar, Standard 2 of 5, MS-Plessey, GS1 composite code ...
2D code types	PDF417, Data Matrix, QR Code ...
Contact Smart Card Interface	
Supported Contact Card ICs	All major ISO/IEC 7816 compliant Smart Card IC support
Contact Smart Card Protocols	T=0, T=1;
Smart Card Interface Speed	Up to 600 kbps (depending on card) , TA1=97
Smart Card Clock Frequency	ISO/IEC 7816 compliant up to 5 MHz; Operates up to 12 MHz
Supported Smart Card Types	ISO/IEC 7816 voltage classes A/B/C (5V, 3.3V, 1.8V)
Smart Card Detection	Card present switch; Automatic power on/off; Short circuit protection
Card Size	ID-1
Contact Card Slot	2 * ID-1 Sliding Contact Socket (8 pin) (One of them can be used as SAM)
Contactless Smart Card Interface	
Supported Contactless Standards	ISO/IEC 14443 A&B, ISO/IEC 18092
Protocols	T=CL
Supported Contactless Card ICs	MIFARE® Classic Family, MIFARE Ultralight Family, MIFARE Plus Family, MIFARE DESFire Family, FeliCa™, NFC Forum Tag types 1/2/3/4
Data Transfer Rate	106/212/424/848 kbits/s, depending on card IC
Antenna	Integrated
Driver and Software	
PC/SC Driver	PC/SC Specification Ver. 2.01.14 for: <ul style="list-style-type: none"><li>Windows® 7/8/10/11 (32 and 64 bit), Windows® Server 2008/2012/2016/2019, WindowsXP,</li><li>Linux 2.6.x, and 3.x, 4.x, 5.x (32 and 64 bit),</li><li>Android 4.0 and higher</li></ul>
Software	PC/SC API; CT-API (through wrapper on top of PC/SC); M-Card API (through wrapper on top of PC/SC)
Operating Conditions	
Power Supply	USB Bus-powered
Power Consumption	<220 mA, excluding smart card; < 400 mA, with smart card; < 600 µA in Standby Mode
Dimensions(L x W x H)	108.3 x 73.1 x 49.3 mm
Weight	218 g ± 5%
Operating Temperature Range	0° to 50° C (32° to 122° F)
Storage Temperature Range	-25° to 85° C (-13° to 185° F)
Operating Humidity Range	Up to 95% RH non-condensing
Connector	1.5m USB cable with USB type A connector
Status Indicator	Dual color LED
Certifications / Compliance	
Systems/Standards	ISO/IEC 7816, ISO/IEC 14443, USB 2.0 Full Speed, CCID, Microsoft® WHQL,FBI PIV-071006, Mobile ID FAP 20
Regulatory/Environmental	CE, RoHS