

MIFARE & ISO14443A & ISO14443B & ISO7816 DESKTOP IC CARD READER

MR790 Series Desktop IC Card Reader

User's Manual

(Revision 4.03)

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June 1, 2016



Please read this manual carefully before using. If any problem, please mail to: jinmuyu@vip.sina.com



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1 Overview

MR790 series desktop contactless IC card reader is based on NXP series RF chip with high performance MCU. The communication is according to USB PC/SC standard. The reader fully supports the IC card according to ISO14443 and ISO15693 standard, especially completely supports ISO14443-4 contactless CPU card.

The reader builds in 3 SAM slots, and fully supports SAM according to ISO7816.



2 Main Characteristics

- **Compatible USB PC/SC interface**
- **High speed MCU and advantage firmware provide very high card process speed**
- **RF interface and protocol process with EMV2010 LEVEL 1 certification ability**
- **Support many kind of card/tag**

3 Technical parameters

- PCD: MF RC500; MF RC531; CL RC632; SL RC400
- Working frequency: 13.56MHz
- RF protocol: ISO14443A, ISO14443B, ISO15693
- Operating distance: 100mm (MIFARE One, typical)
- SAM slots: 3 slots, support ISO7816 (T=0 & T=1, support PPS, Max. 115200bps)
- Display: 1 tricolor LED
- Buzzer: Build in
- Interface: USB PC/SC compatible
- Power supply: DC5V \pm 10%
- Power consumption: 0.9W
- Dimension: 123mm * 88mm * 25mm
- Weight: About 100g
- Operating temperature: -25 ~ +85°C
- Storage temperature: -40 ~ +125°C
- PC software: PTransWin, download from <http://www.jinmuyu.com>
- SDK: Base on Windows, free
- Sample code: VC, VB, C++ Builder, DELPHI, Power Builder
- ISP: Support



- RoHS: Compliant

4 Cards supported

	MR790UA	MR790UC	MR790UG	MR790UH
PCD	MF RC500	MF RC531	SL RC400	CL RC632
MIFARE 1K	●	●		●
MIFARE 4K	●	●		●
MIFARE Mini	●	●		●
MIFARE Ultra Light	●	●		●
MIFARE Ultra Light EV1	●	●		●
MIFARE Ultra Light C	●	●		●
MIFARE DES fire	●	●		●
MIFARE DES fire EV1	●	●		●
MIFARE Plus	●	●		●
T=CL TYPE A	●	●		●
SR176		●		●
SRI512		●		●
SRI1K		●		●
SRI2K		●		●
SRI4K		●		●
SRIX4K		●		●
T=CL TYPE B		●		●
I.CODE 1			●	●
I.CODE SLI			●	●
I.CODE SLI-S			●	●
TI Tag-it series			●	●
ST LRI series			●	●
ISO7816 PPS	●	●	●	●
ISO7816 T=0	●	●	●	●
ISO7816 T=1	●	●	●	●



5 Model of the reader

5.1 Model format

This is the model format of Master Reader series contactless card reader/writer:

1	2	3	4	5	6
MR	XXX	X	X	X	-XXX

1: Product code; 2: Device class; 3: Communication port; 4: Supported card type;
5: Color of enclosure; 6: ODM code;

5.2 Model description

5.2.1 Product code

The code of Master Reader series contactless card reader is: MR

5.2.2 Device class

600: Desktop readers with 8 digits LED displayer, support 1 SAM slot.
701: Desktop readers, support 2 SAM slots.
730: Desktop readers, Ethernet interface, support 1 SAM slot.
731: Desktop readers, Ethernet interface, support 2 SAM slots. MR730 Enhanced with more advance.
762x: Desktop read only programmable reader. Keyboard simulator. Support ISO14443A/B, ISO15693.
763x: Desktop read only programmable reader. Keyboard simulator. Support ISO14443A, ISO14443B.
780: Desktop reader, MR701 enhanced model. Support 3 SAM slots.
7801: Desktop reader, MR780 in new style case. Support 4 SAM slots.
790: Desktop reader with compatible PC/SC interface. Support 3 SAM slots.
7901: Desktop reader with compatible PC/SC interface. MR790 in new style case. Support 4 SAM slots.
791: Desktop reader with standard PC/SC interface. Support 3 SAM slots.
7911: Desktop reader with standard PC/SC interface. MR791 in new style case. Support 4 SAM slots.
800: Desktop reader with 128*64 dots LCD displayer. Compatible PC/SC interface, support 2 SAM slots.
801: Desktop reader with 128*64 dots LCD displayer. Standard PC/SC interface, support 2 SAM slots.
810: Desktop reader with compatible PC/SC interface. Support 2 SAM slots. Based on ARM7 processor.
811: Desktop reader with standard PC/SC interface. Support 2 SAM slots. Based on ARM7 processor.



5.2.3 Communication port

S: RS232C interface, power supply from USB

R: RS485 interface, power supply by wire connection

U: USB interface

E: Ethernet interface, power supply by AC adaptor

5.2.4 Supported card type

A: ISO14443A, MIFARE classic and ISO7816

C: ISO14443A, ISO14443B, MIFARE classic and ISO7816

G: ISO15693 and ISO7816

H: ISO14443A, ISO14443B, ISO15693, MIFARE classic and ISO7816

5.2.5 Color of enclosure

W: white (if blank, default white)

B: black

5.2.6 ODM code

This part is for ODM customer only. It is 3 digital codes like 001, 002...

5.3 Model available

The models below are available for supply:

- MR790UA
- MR790UC
- MR790UG
- MR790UH

6 USB Driver installation

The driver installation of MR790 is simple. There are 2 ways:

1. Plug the USB header to PC and let Windows find the driver online.
2. The CCID driver is locate on:

CD-ROM: \English\RFID Desktop Readers\PCSC Interface\CCID Driver

Plug the USB header to PC and point the driver path to Windows.



7 About PC Software and API

The PC software for MR790 is PTransWin. This is software based on API of the reader. The software supports most function of IC cards. Please download the operation manual and API manual from our website: <http://www.jinmuyu.com>, or contact us with jinmuyu@vip.sina.com.