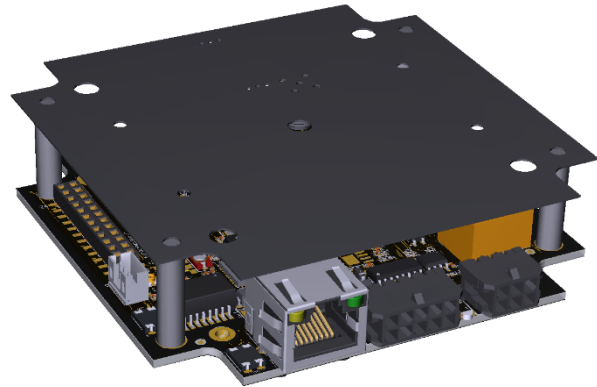


# MCR09P Multi-ISO RFID/NFC PoE-Reader

MCR09P R 1.0  
March 20, 2019

## Key Features

<b>Frequency</b>	13.56 MHz
<b>Interface</b>	Ethernet (PoE), RS232/485, USB 2.0
<b>Standards</b>	ISO14443A/B, ISO15693
<b>Supported Cards &amp; Transponders</b>	Girocard (Electronic Cash) EMV Credit Cards MIFARE® Family NTAG I-Code
<b>Antennas</b>	Internal
<b>Relay</b>	1.5A/24V
<b>Power supply</b>	+8V to +60V DC



## 1 DESCRIPTION

The MCR09P is a state-of-the-art Power-Over-Ethernet (POE) reader supporting multiple standards and interfaces.

## 2 ELECTRICAL

SYMBOL	PARAMETER	MIN	TYP	MAX	UNIT
VIN	Input Voltage PoE/Vin	+8	+12	+60	V
IIN	Input Current (VIN=+12V)	-	150	200	mA
VR	Maximum Reverse Voltage	-	58	-	V
TA	Ambient Temperature Range	-30	-	+85	°C
VTVS	TVS Clamping Voltage	+64.4	-	+93.6	V
IPEAK	TVS Peak Pulse Current	-	-	4.3	A
PDISS	TVS Power Dissipation	-	-	400	W
INPUTVMAX	Max. voltage of input pins	-6	-	+40	V
RS485-VOD	Differential Output (RL=54Ω)	+1.5	+2	+3.3	V
RS485-A/B	Input Voltages	-8V	-	+13	V
RS485-A/B	Output Voltages	-	+3.3	-	V
RS232 Receiver	Input Voltages	-30	-	+30	V
RS232 Transmitter	Output Voltages	±5	±5.2	-	V
RELAY	Max. 1.5A / 24VDC				
<b>ESD Performance</b>					
RS485-A/B		IEC 61000-4-2 (ESD) ±15kV (air), ±8kV (contact)			
RS232		IEC 61000-4-2 (ESD) ±15kV (air), ±8kV (contact)			
MTBF		500.000h			

## 3 PROTECTIVE FEATURES

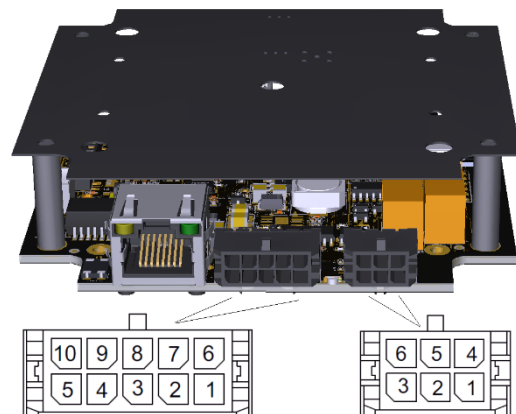
- Reverse polarity protection
- Overvoltage transient protection
- Thermal shutdown
- Current limiting
- ESD protection
- Short circuit protection

## 4 CONNECTOR PINOUT

Main Connector	
1	External Input 2
2	External Input 3
3	RS485_B
4	RS485_A
5	GND – Ground
6	External Input 0
7	External Input 1
8	RS232_RX
9	RS232_TX
10	+VIN – Power Input (optional PoE-Powered)

Relay Connector	
1	Description
1	NC1 – Relay 1 normally closed output
2	COM1 – Relay 1 common output
3	NO1 – Relay 1 normally open output
4	NC2 – Relay 2 normally closed output
5	COM2 – Relay 2 common output
6	NO2 – Relay 2 normally open output

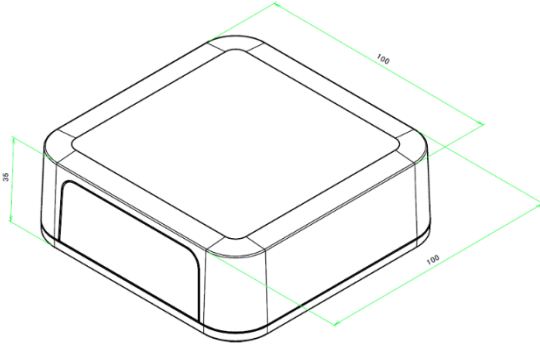


5 USB INTERFACE SPECIFICATION

Interface Class	HID (Human Interface Device)
Speed	Full (12 Mbit/s)
Product ID	81B1h
Vendor ID	1FC9h
Device Descriptor	MT-MCRN
Endpoint0 00h	00h Control endpoint
Endpoint1 IN	81h interrupt endpoint to retrieve data
Endpoint1 OUT	01h interrupt endpoint to send data
Packet size	Fixed to 64 bytes (non-used bytes set to 00h) Multiple packets in case of bigger frames

6 DIMENSIONS

100x100x35mm



6 ANTENNAS & READING RANGE

The reading range of the internal antenna is as below.

Antenna	Internal Antenna
Size	91x91mm
ISO14443 ISO Card	100mm
ISO14443 KeyFob	50mm
ISO15693 ISO Card	200mm
ISO15693 KeyFob	100mm

7 FEATURES

- 100Mb Ethernet with PoE (Power-Over-Ethernet) interface
- RS232 or RS485 up to 230K Baud
- USB 2.0 Full-Speed interface (optional)
- Bluetooth® Smart (BLE) or Wi-Fi Interface (optional)
- Bi-color LED indicator
- Full NFC support
- 2 relay outputs 1.5A/24VDC
- 4 opto-isolated inputs
- Buzzer and Real Time Clock (optional)
- 8MBit external flash memory
- 4GB SD-Memory (optional)
- Bootloader for firmware update
- +8V to +60V DC power supply (optional +5V version)
- 200mA<sub>max</sub> @ +12V current consumption
- -30 to +85 °C ambient Temperature
- Crypto Functions
  - 256-Bit ECDSA Elliptic Curve Digital Signature Algorithm (SECP256R1)
  - 128-Bit AES Advanced Encryption Standard (ECB Mode)
  - SHA256 Secure Hash Algorithm

8 ORDERING CODES

ARTICLE NR:	PoE	RS232	RS485	BLE	RELAY	USB	INPUTS
MCR09P-1000	X						
MCR09P-2000	X	X			X		X
MCR09P-1100	X		X	X	X		X
MCR09P-U000						X	

