

SNR-MR100 Motorized Card Reader/Writer

Compact multi-card reader/writer with magnetic, contact IC, contactless IC, SAM and dual-gate protection support.

Overview

The SNR-MR100 is a compact motorized card reader/writer designed for self-service terminals that require magnetic card reading, contact IC card read/write, contactless IC card read/write and SAM card support. Its dual protective gate design, modular architecture and power-failure card handling make it suitable for secure kiosk applications with limited installation space.

Key Features

- Compact motorized card reader/writer with magnetic, contact IC contactless IC and SAM card support.
- Dual protective gate design: primary mechanical gate for dust protection and secondary motorized gate for foreign object protection.
- Supports command-triggered insertion and magnetic sensor-triggered insertion.
- Motorized card insertion and ejection with rear card retention capability.
- Magnetic card Track 1 / Track 2 / Track 3 reading support.
- Contact IC card read/write supports CPU cards, memory cards and logic encryption cards.
- Contactless IC read/write supports 13.56 MHz Mifare Classic and ISO/IEC 14443 Type A/B cards.
- Modular two-part architecture supports easier disassembly, debris removal and maintenance.
- Power failure protection can reposition the card to the exit position or rear retention area when backup capacitors are installed.



Quick Specifications

Model	SNR-MR100
Product Type	Motorized Card Reader/Writer
Card Functions	Mag read, IC read/write, RF read/write, SAM support
Gate Design	Dual protective gates
Interface	RS-232 full-duplex
Power Supply	12VDC +/-10%
Card Thickness	0.7-0.9 mm
Card Speed	300 mm/s +/-10%; max 400 mm/s
Power Failure Protection	Backup capacitor supported
Weight	Approx. 0.4 kg

Typical Applications

- Banking and payment self-service terminals.
- Access control and identity verification terminals.
- Membership, visitor and service card processing systems.
- Parking, transportation and ticketing card readers.
- Card personalization, initialization and transaction devices.
- Compact kiosk systems requiring Mag / IC / RF card processing and power-failure handling.

Technical Specifications

Main card reading, gate protection, electrical and reliability parameters for SNR-MR100 integration projects.

Model	SNR-MR100
Product Category	Motorized Card Reader/Writer
Main Material	PC+GF composite plastic with stainless steel embedded in both sides of the card passageway
Main Color	Black
Gate Design	Dual-gate system: primary mechanical gate and secondary controllable motorized gate
Card Transport	Motorized front insertion/ejection with rear card retention; rubber roller-based transport
Insertion Modes	Command-triggered insertion and magnetic sensor-triggered insertion
Magnetic Card Function	ISO/IEC Track 1, Track 2 and Track 3 read; Lo-Co and Hi-Co magnetic cards supported
Contact IC Support	ISO/IEC 7816-1/2/3 CPU cards T=0/T=1; synchronous IC cards; SL4442/SLE4428 and AT24C01-AT24C64 memory cards; AT88SC102 read support
Contactless IC Support	13.56 MHz; Mifare Classic, ISO/IEC 14443-1/2/3/4 Type A/B read/write
SAM Card Support	Optional 4-bit or 8-bit SAM card socket; 4-bit socket standard
Certifications	EMV 4.3d Level 1, PBOC 2018 Level 1, CE, FCC and RoHS according to source specification
Encryption	Hardware-based and algorithmic encryption optional
Card Size	Length 85.47-85.9 mm; width 53.92-54.18 mm; thickness 0.7-0.9 mm
Transmission Speed	Standard speed 300 mm/s +/-10% for magnetic card read/write; maximum speed 400 mm/s
Transmission Time	Approx. 1.5 s from card entry to reader position
Card Exit Length	23 mm +/-2 mm at card holding position
Operating Voltage	12VDC +/-10%, ripple <120 mV
Current	Peak current <2.0A; quiescent current <0.1A
Communication	RS-232 full-duplex; PH 3P 2.0 mm pitch connector
Power Interface	PH 4P 2.0 pitch connector
Operating Environment	-5 deg C to 50 deg C; 0%-90% RH, non-condensing
Storage Environment	-15 deg C to 55 deg C; 0%-90% RH
Lifetime	Device >800,000 cycles; magnetic heads >1,000,000 cycles; IC contacts >800,000 cycles; motor/belt/roller >800,000 cycles
Reliability	Magnetic and IC card error rate 1/1000 under standard test conditions
Power Failure Protection	Voltage threshold below 10V for over 15 ms; backup capacitor >0.33F, 1A for >=2 s at 10-12V
MTBF	>100,000 hours for electronic components only
Self-Test	Power-on self-test, operation self-test and command self-test
Net Weight	Approx. 0.4 kg

Integration Notes

- Confirm magnetic stripe, IC card, RF card and SAM card requirements before deployment.
- Use RS-232 full-duplex communication for host control and status handling.
- For backup power design, connect main power and backup power according to the power interface definition.
- When main power returns above 10.5V, communication resumes after power-failure handling.
- Avoid hot-plugging connectors; keep the module clean and free from oil contamination.

Why Choose SNR-MR100?

SNR-MR100 is suitable for projects that need compact multi-card processing with stronger mechanical protection. Compared with a basic card reader, it adds dual protective gates, magnetic card reading, contact IC, contactless IC, SAM support, modular maintenance and power-failure card handling, helping kiosk integrators build reliable payment, access control and identity verification terminals.

Note: Specifications may vary according to final reader configuration, SAM option, card type and project installation conditions. Please confirm card samples, power design and communication protocol before mass deployment.