Chapter 7. Magnetic Card Reader

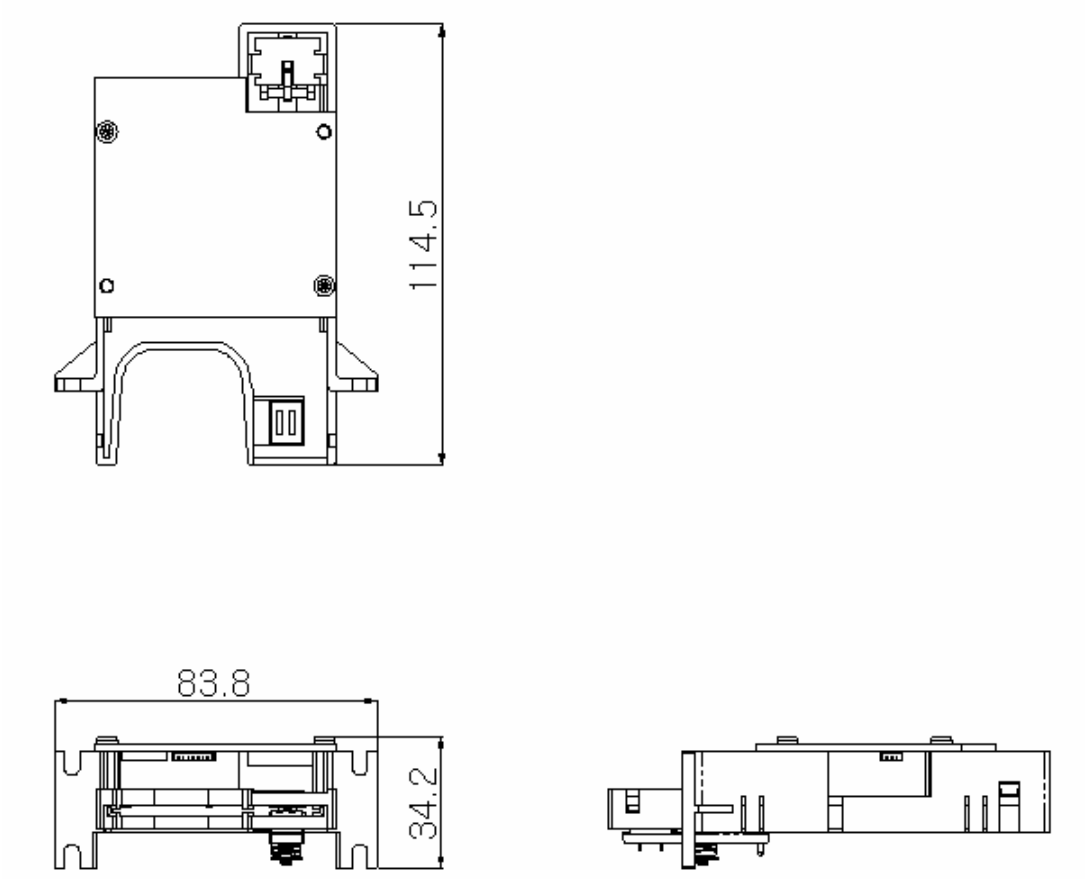
7. Magnetic Card Reader

7.1 Appearance/Arrangement Plan

7.1.1 Apperance Plan

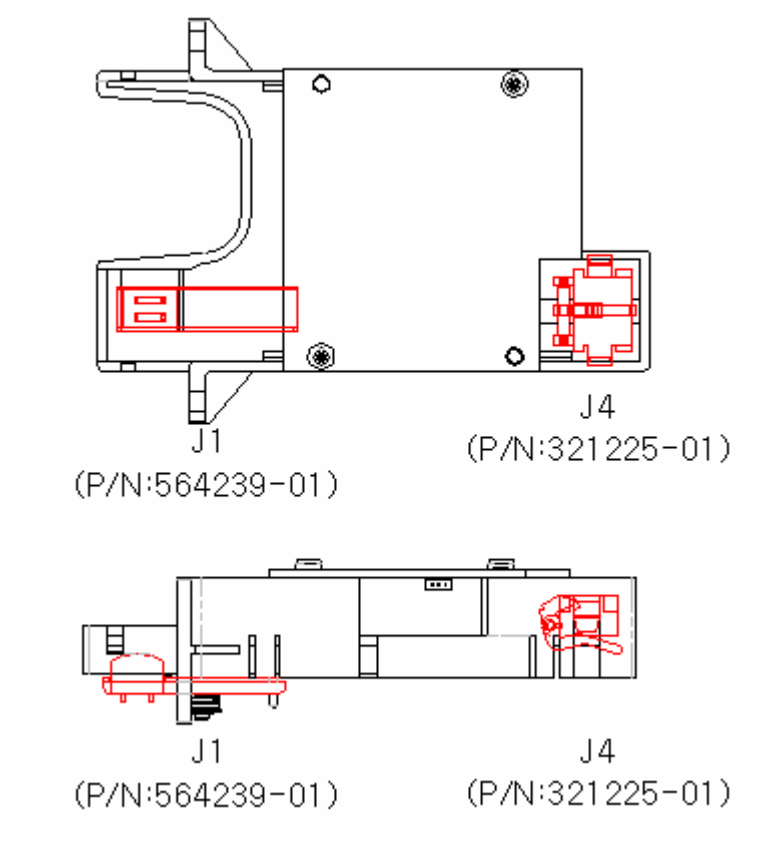
The following figure shows the external appearance of Magnetic Card Reader.

Its dimensions are 83.8mm(W) X 34.2mm(H) X 114.5mm(L).



<Figure> Appearance Plan of the Magnetic Card Reader (P/N:728811-02)

7.1.2 Arrangement Plan



<Figure> Arrangement of Each Part

SYM	Description	Function	Status	Remark
J1	Magnetic Card Reader Head	Magnetic Card Reader	-	-
J4	Card Insertion Sensor	Detects card insertion status	Inserted:1/ Not inserted:0	-

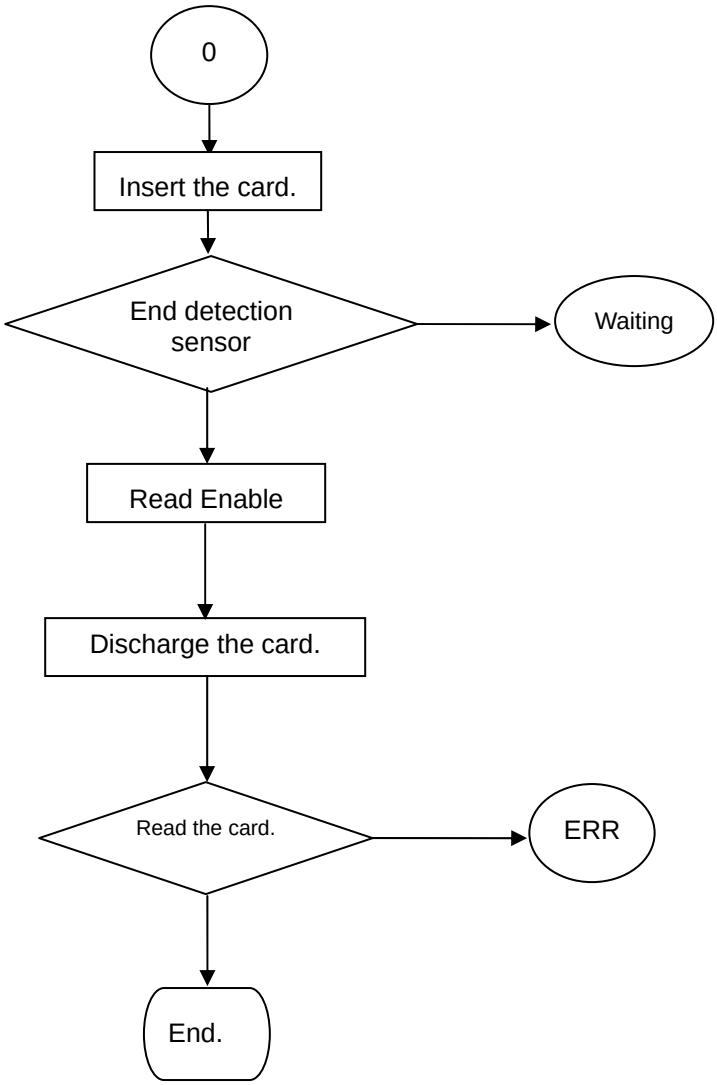
<Table> Name and Description of Each Sensor/Electromagnetic Parts

7.1.3 General Specification

Type	DIP Type
Using Card	ISO 1, 2
Power Requirements	12V (Head), 5V (End Sensor)
Card Read Timing	Ejection
Recording Method	F2F
Speed	Card Speed : 15~100cm/sec
MTBF	Head : 1,000,000 Passes (500,000 Insertion Cycles)

<Table> General Specification of the DIP MCR

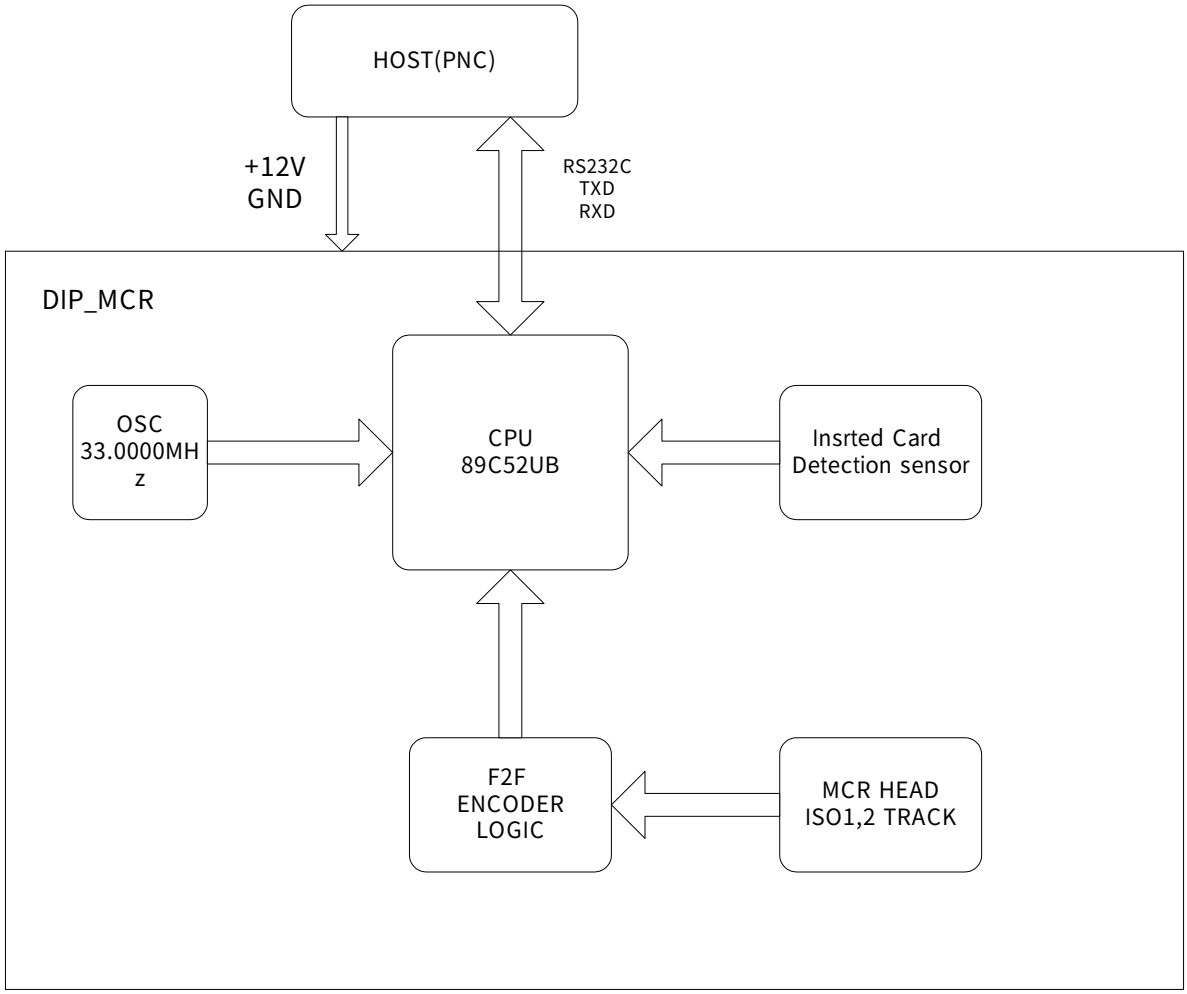
7.1.4 Execution Sequence



<Figure> Execution Sequence of the MBS5000 DIP MCR

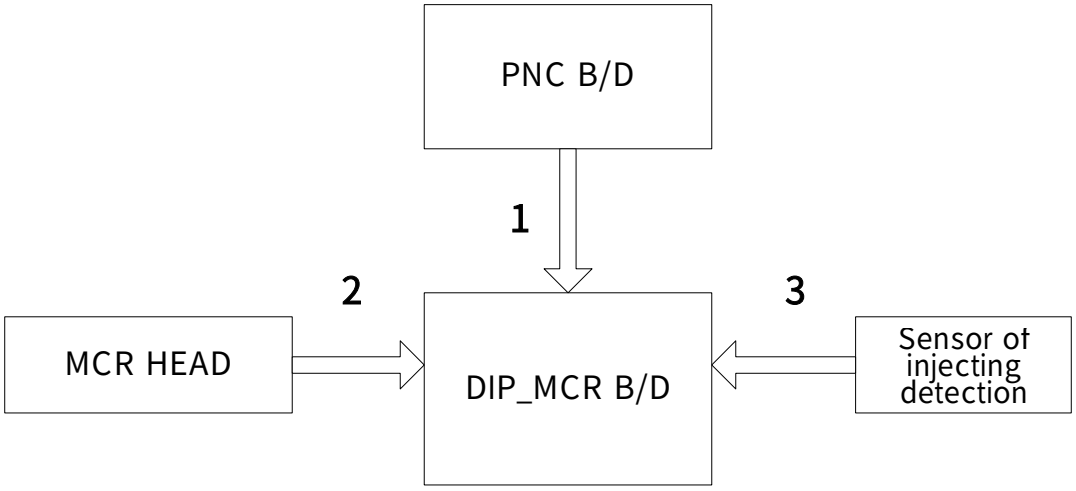
7.2 Unit Block Diagram

The following block diagram gives an overview of the Magnetic Card Reader



<Figure> MB1530 DIP_MCR Block Diagram

7.3 Cable Connection Diagram



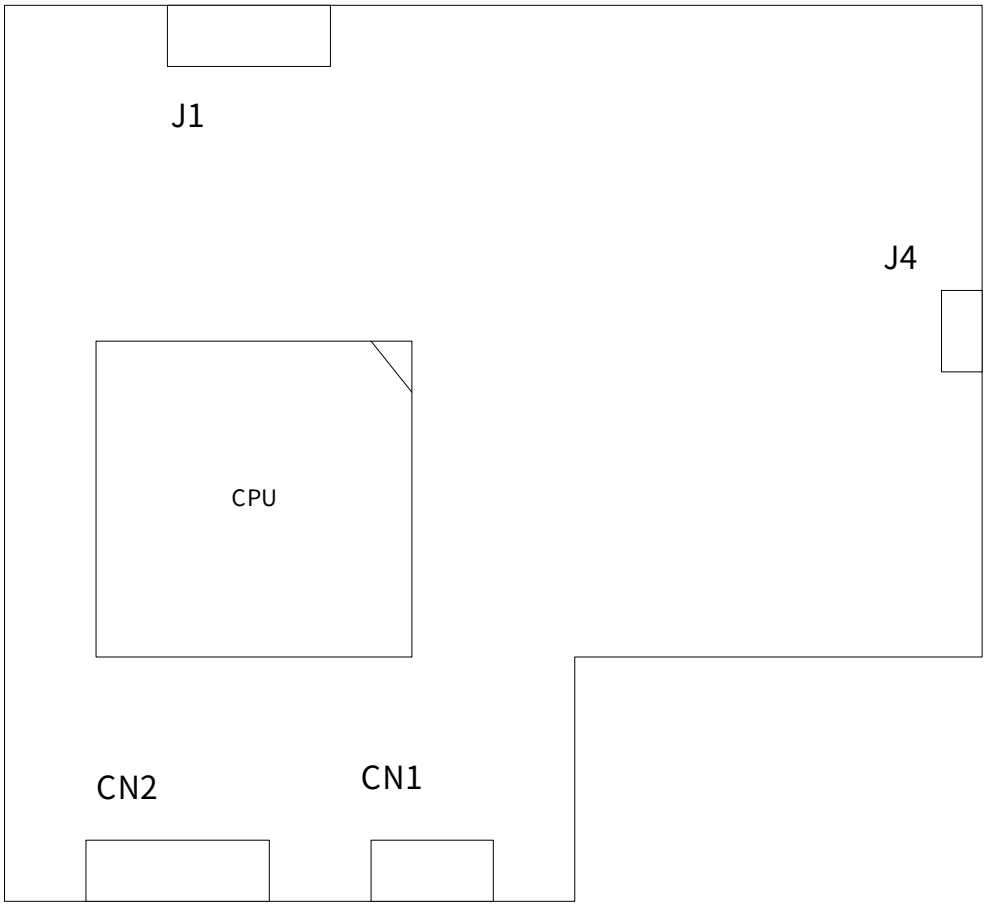
<Figure> MBS5000 DIP_MCR Block Diagram

NO	Part Number	Usage	Remark
1	321207-01	DIP_MCR Interface	-
2	564239-01	ISO1, 2 MCR Head	Including Interface cable
3	321225-01	Insertion Detection Sensor	-

<Table> Usage and Description of DIP_MCR Cables

7.4 Interface Specifications

7.4.1 Interface Connector Diagram



<Figure> DIP_MCR Interface Connector Arrangement Plan

7.4.2 Details of the Interface Connector

NO	Connector Name	Usage	Remark
1	CN1	PNC Interface	Including Power
2	J4	MCR Head Interface	ISO1,2
3	J1	Insertion Detection Sensor	-

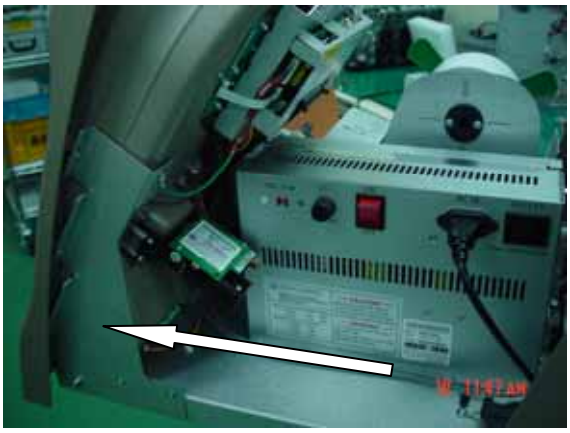
<Table> Specification of the DIP_MCR Interface Connector

7.5 Repair and Maintenance

7.5.1 Replacing Magnetic Card Reader Assembly

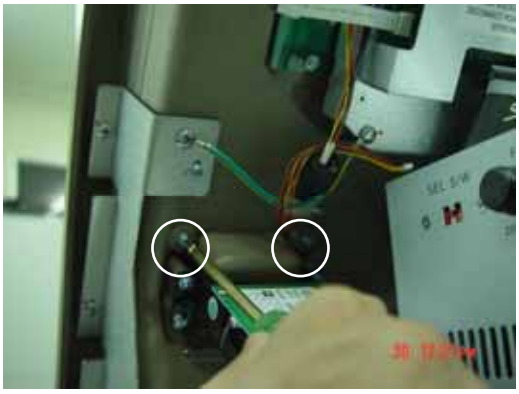
1) Unlock the front panel with a key.

2) Pull the front part to open it.



3) Disconnect Magnetic Card Reader Interface cable from the Magnetic Card Reader.

4) Unscrew two screws (PH(+):S/W:F/W(L):M3X10) that fix the Magnetic Card Reader on the front part using a driver.



5) Remove the Magnetic Card Reader from the front part.

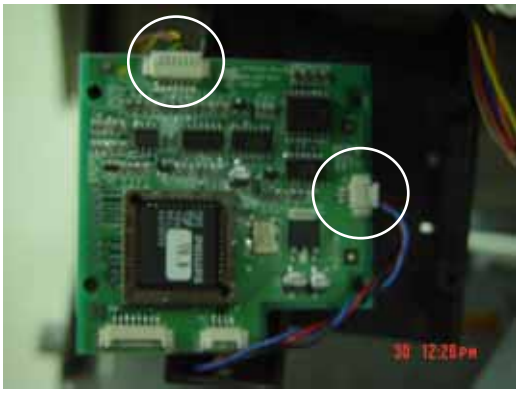
6) Assemble in the reverse order of Steps 1) ~ 5) above.
7) Note: After finishing Step 5), insert a card and check if the card is smoothly inserted. If it is not, assemble again.

7.5.2 Replacing the Magnetic Card Reader Board (723361-01)

Same as Steps 1) and 2) of 7.5.1 above.

3) Disocnnect the Interface cable from the Magnetic Card Reader, and unscrewn the board fixing screws (PH(+):TAP:M3X8).

4) Disconnect the head and the end sensor connectors, and remove the board and the mecha.



5) Replace the board and assemble again.

6) Assemble in the reverse order of Steps 1) ~ 5).

7) Note: Be careful not do damage the head cable when performing Step 3).

Option A. Card Reader_IntelliStripe 65

A.1 Features

The IntelliStripe 65, RS-232 Insertion Reader performs the following major functions

- Reads magnetic stripe cards
- Communicates with ISO smart cards and many popular memory cards
- Supports one on-board SAM (Security Access Module)
- Supports up to six optional external SAMs in a “SAM Ranch” configuration.

The Reader communicates to a host an RS-232 interface with a defined protocol and command set.

The Reader has an industry standard mechanical footprint. The IntelliStripe 65 is designed for self-service applications such as pay telepahones, vending machines, kiosks, and fuel pumps

Standard Features

Standard features of the the IntelliStripe 65 are as follows:

- Three different Chassis styles and two different bezel styles allow for optimized mounting and intergration
- Rugged-High impact plastic with read heads attached to beam mounts
- Vandal Resistant – Open chassis design provides superior debris clearing; half-card drop-out allows half size credit cards and coins to be cleared from insert channel
- RS-232 interface
- On board intellignece for transporting large blocks of data using a defined protocol and command set
- Test LED
- External LED port
- Flash upgradable

A.2 General Specification

Item		Specifications	Notes
Data Fornat	Mothod	Dip type	
	Regulations	ISO/AAMVA/CDL formats Compliant ISO 7810, 7811 Conpliant	
	Card type used	ISO 1,2,3	
	IC Card	Available	
	Security	EMVCo Level 1 Approval	
Operational	Card Speed	7.62 cm/s (3 IPS) to 127cm/s (50 IPS)	
	Recording Method	Two-frequency coherent phase (F2F)	
	MTBF	Electronics: 125,000 hrs Head: 1,000,000 passes IC contacts: 1,000,000 passes	
Electrical	Input Voltage	12.0VDC±5%	
	Current	500 mA max, 100 mA typical	
Mechanical	Dimensions	Overall Length: 119.4mm (4.70”) Monunting Depth: 96.5mm (3.80”) Height: 35.6mm (1.40”) Width: 66.0mm (2.60”)	
	Weight	142.2 gr (5.02 oz)	
Environmental	Temperature	Operating: 0 ℃ to 50 ℃ (32°F to 122°F) Storage: -40 ℃ to 70 ℃ (-40°F to 158°F)	
	Humidity	Operating: 5% to 95% noncondensing Storage: 5% to 95% noncondensing	
	Altitude	Operating: 0 – 3,048 m (0-10,000 ft) Storage: 0 – 15,240 m (0-50,000 ft)	

A.3 More Detailed Information

For more detailed features and specification about the IntelliStripe 65, Nautilus Hyosung recommend you to download the manual from the following website.

1) Website : ***httl://www.magtek.com/support/documentation/card_reading.asp***

2) Manual Subject : ***IntelliStripe 65, RS-232 Insertion Reader, Technical Reference Manual***