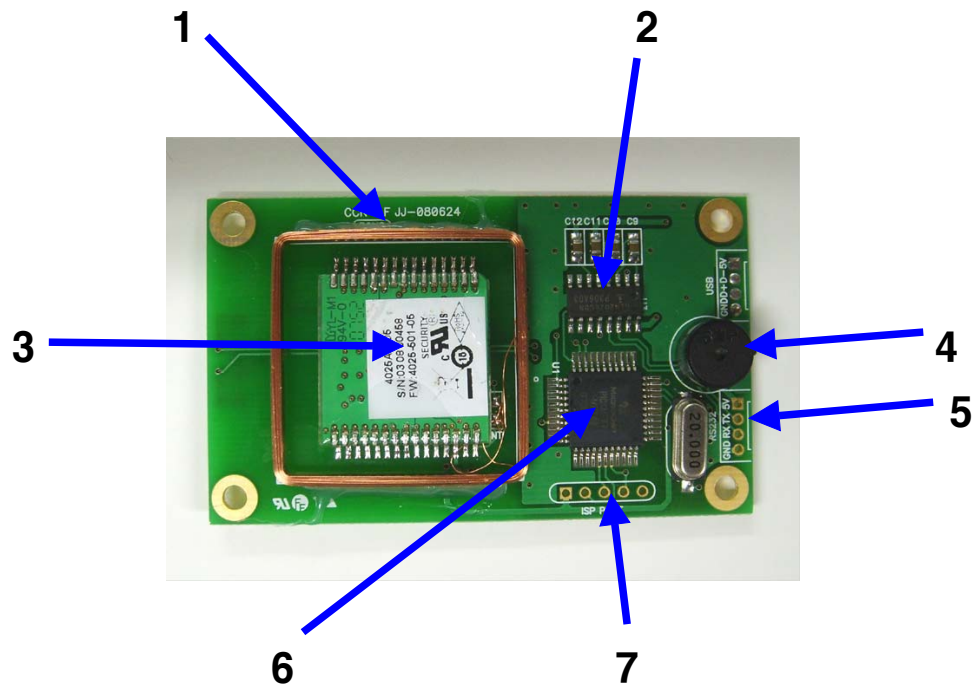


NL-LF100 HID CARD READER

USER MANUAL

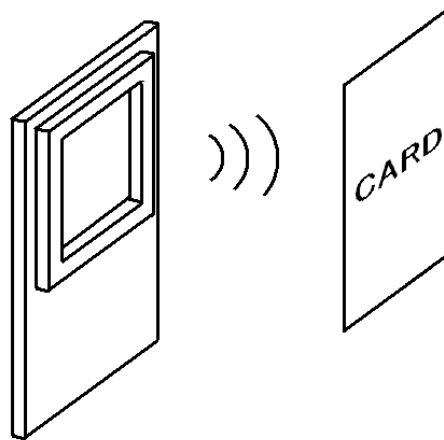
1. DESCRIPTION



DETAIL DESCRIPTION

1. Loop Antenna
2. RS232 Driver IC
3. eProx MCM
4. Buzzer
5. External Interface Port
6. Microprocessor
7. MCU Program Port

2. OPERATION



- If the reader is supplied with DC 5 V, The reader sounds beep tone and is set to standby mode.
- If a HID CARD is approached to the reader like a figure and is in effective area, the reader sounds beep tone a time and brinks the LED.
- If the reader received a HID CARD ID, the reader sands the card ID to the RS232 driver IC.
- If the card stays long time in effective area, the reader will not respond.
- If you wants the reader to read the same card , you should keep the card in uneffective area for 2 seconds, and if the HID CARD is approached to the reader again and is in effective area, the reader sounds beep tone and brinks the LED.
The reader can receive the card ID again.
- The reader can receive the card ID easily when the card is kept parallel to the reader.

- **If there is a material of metal between the reader and the card, the reader can not receive the card ID.**

3. RS232 Interface Port

1. DC5V
2. TX
3. RX (N/A)
4. GND

DC5V

Board Power, DC5V External Power Supply Connection.

TX

RS232 LEVEL TX Data, Receive port connection of a equipment.
If the equipment is a computer, it is connected to the serial port
9PIN D-SUB PIN2.

RX

RS232 LEVEL RX Data, Not application.

GND

Board Power Ground, RS232 Signal Ground

4. Specification

Environmental Characteristics

Operating Temperature Range -30°C to 65°C

Operating humidity Range 5% to 95% non-condensing

Power Requirements

Operating Voltage	4.8VDC ~ 5.0VDC
Absolute Maximum	5.5VDC
Operating Current	30mA
Peak Current	<150mA

Operating Parameters

Frequency of Operation	125Khz +/- 1Khz
Communication	RS232 Tx Only
Baudrate	9600bps

5. Protocol

BAUDRATE : 9600bps

PARITY : NONE

DATABIT : 8BIT

STOPBIT : 1BIT

The reader only send the next packet data on standby mode with one way communication.

PACKET TYPE (9byte)

Card data (8byte) + End code(1byte)

D1 D2 D3 D4 D5 D6 D7 D8 CR

D1~D3 : HID Facility Code

The local code or a company management code is from 000 to 255

D4~D8 : HID Card ID code

The ID of the card is from 00000 to 65535.

CR : Carriage Return (0x0D)

데이터의 마지막임을 알리는 END CODE

The code is the end code of data.

Caution

Modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

FCC Compliance Information

This device complies with Part 15 of FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received. Including interference that may cause undesired operation.

Information to User

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ tv technician for help.