IDREAD-01 User manual
RFID Reader V1.00

Document Title	IDREAD-01 User manual
Revision	1.00
Date	
Status	Draft/Release

Copyright

Contents

History

version	Date	Author	Description of Change
1.00	Dec 27, 2023	Nikhil	Initial.

1. Introduction

THE IDREAD-01 is a compact MIFARE READER MODULE for MOTIVE Vehicle Gateways. It has an RS-232 serial port to communicate with the VG, a RED LED indicator for POWER SUPPLY, and a GREEN LED indicator for target reading correct, as well as a BUZZER for indicating. The reader has a RFID Reader interface to READER MIFARE targets. The reader supports all MIFARE transponders which work with MIFARE protocol.

1.2 References

S.NO	Document Name	Remark
1	RFID Reader UART Protocol for Motive_V1.00	The UART protocol interface between IDREAD-01 and Vehicle gateway.

1.4 Terms and Abbreviations

Table x: Terms and Abbreviations

Abbreviations	Remark
RXD	Receive Data
TXD	Transmit Data
GND	Ground
VIN	External DC Power Input
VG	Vehicle Gateway

2. Product Overview

2.1 Appearance

2.2 Parts List

Name	Picture	Dimensions	weight
IDREAD-01		118*75*17 mm	82 grams (Max)
RF card		85.6*54*0.9 mm	

2.3 Electronic Condition

S.NO	Type	Specification	Unit	Condition
1	Power Voltage (VIN)	8-32	V(DC)	
2	Standby Current (Ista)	3.5 (Avg)	mA	Vin = 12VDC
3	Sleep Current (Isleep)	Min: 1.2; Max: 4.2; Avg: 2.1	mA	Vin = 12VDC
4	Active Current (Iactive)	Min: 1.6; Max: 68.6; Avg: 7.8	mA	Vin = 12VDC

2.4 Environment Condition

S.NO	Type	Specification	Unit
1	Operating Temperature	-20~+80	°C
2	Storage Temperature	-20~+85	°C

2.5 RFID Specification

S.NO	Type	Specification
1	Frequency	13.56MHz
2	RF Output Power	200mW (VCC = 5VDC) 700mW (VCC = 3.0/3.3VDC)
3	Supported RF Standards and Transponders	MIFARE Mini, MIFARE Ultra-light, MIFARE-DESFire EV1, MIFARE Plus, MIFARE ONE(S50), MIFARE

		ONE(S70), MIFARE Pro(X)

2.6 UART Specifications

S.NO	Type	Specification
1	Signal voltage level	Output voltage swing: Min:+-5V; Typ: +-5.4V Input voltage range: -15~15V
2	Baud Rate	115200bps
3	Flow control	None (Didn't has RTS CTS signal)
4	Data bits	8bit
5	Stop bits	1bit

2.7 Interface Definition

The DR102P features a 5-wire input interface: three wires for data communication and two wires for power supply.

2.7.1 5 Pin Input Interface

DR102P	PIN	Colour	Description	Remarks
INPUT INTERFACE	PWR	Red	8-32V input，Can be connected to the vehicle battery directly	Power cable. 22AWG 1 meters with sheath and open wire
	GND	Black	Ground	
	TXD_232	Blue	RS232 level, receiver data, connect to TXD of gateway devices	Data Cable. 22AWG 2 meters with sheath and Bendix female connector
	RXD_232	Green	RS232 level, transmit data, connect to RXD of gateway devices	
	GND	Black	Ground	

2.7.2 Device Status LED

LED	Trigger Event	State
Power LED (RED)	Power on device	Indicate the power status
RFID Status LED (Green)	Power on device	Green LED flashes once, then turns off. (Default)
RFID Status LED (Green)	RFID card read success	Green LED turns on for 0.5s then turns off.

2.7.3 Device Status Buzzer

Buzzer	Trigger Event	State
Buzzer	Power on device	Beeps for 0.5s
	RFID card read success	Beeps for 0.5s

3. Safety Information

- Don't disassemble the device by yourself.
- Don't place the device in an environment with high temperature and high humidity. Avoid exposure to direct sunlight. The high temperature will damage the device.
- Don't use the device on an airplane or near medical equipment.

4.FCC, IC Caution Statement

Federal Communication Commission Interference Statement:

§ 15.19 Labeling requirements.

This device complies with part 15 of the 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.

§ 15.21 Changes or modification warning.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

§ 15.105 Information to the user.

Note: 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.

Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.

Industry Canada statement:

CAN ICES-3(B)/NMB-3(B)

This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

(1) This device may not cause interference, and

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

(1) l'appareil ne doit pas produire de brouillage, et

(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement

Radiation Exposure Statement:

This equipment complies with ISED radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with greater than 20cm between

the radiator & your body.

Déclaration d'exposition aux radiations:
Cet équipement est conforme aux limites d'exposition aux rayonnements ISED établies pour unenvironnement non contrôlé. Cet équipement doit être installé et utilisé à plus de 20 cm entre le radiateur et votre corps.

Motive contact info

+52 80 0283 3437
support@gomotive.com
helpcenter.gomotive.com