ZLG600A

Integrated Circuit Card Reading/Writing Module

Data
Sheet

Datasheet

Revision History

Version	Date	Modifications
V0.90	2016/07/15	Created the document.
V1.00	2019/03/08	Modified document template

Contents

Chapter 1: Introduction

The ZLG600A series card reading/writing module is an integrated circuit card reading/writing module developed by ZLG Technology Corp., Ltd... It is versatile, low cost, easy-to-use, reliable, diverse and small, and can be used in various fields such as finance & accounting, software encryption, medical and health care, transportation ticketing, and entertainment management. The ZLG600A series module uses a new MCU controller chip, can completely replace the old ZLG600S series product.
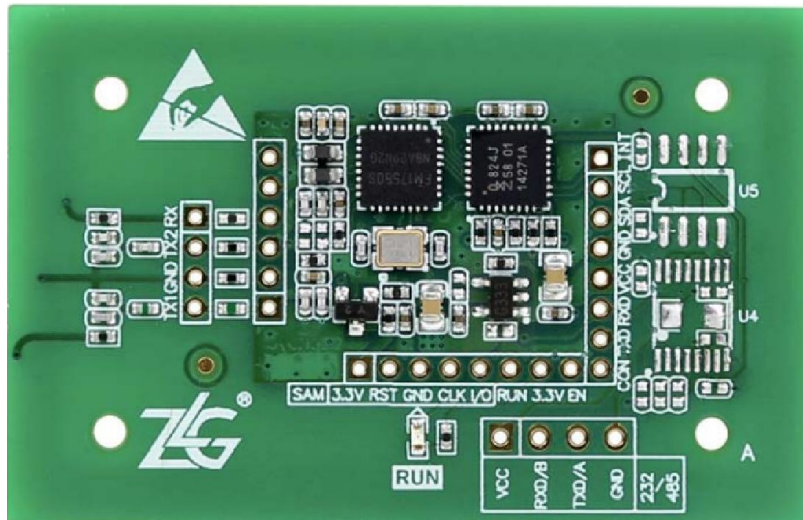
Figure 1-1: ZLG600A

Note: The figure is for reference only and subject to actual sales.

1.1 Features

- Complies with ISO14443A, ISO14443B and ISO7816-3 standard.
- Integrates operation commands of TypeB, MifareUltraLight, Mifare1 S50/S70, PLUS CPU, SAM card.
- Provides half-duplex block transmission protocol interface specified in ISO14443-4, which can easily support CPU card in accordance with ISO14443-4A and TypeB card in accordance with ISO14443-4B.
- Supports serial interface and I^2C communication interfaces.
- It can actively detect card access, and can generate an interrupt when detecting the card and output data through the serial port and I^2C.
- The hardware interface and communication protocol are fully compatible with the earlier ZLG522S/ZLG600S series modules.

1.2 Technical Specifications

Table 1-1: ZLG600A technical specifications

Model Number	ZLG600A
Power consumption	Average current: 5V DC supply/73mA Peak current: less than 150mA
Operating frequency	13.56MHz
Card reading distance	TypeA card: ≥5cm
External interface	I^{2}C, UART
Data transmission speed	I^{2}C: 300K UART: 9600～230400bit/s
Supported card type	Contact: SAM card Contactless: Mifare 1 S50, Mifare 1 S70, MifareUltraLight, MifareDesfire, PLUS CPU card, ISO14443A-compliant logic encryption card and CPU card, ISO14443B-compliant card
Physical dimensions	Dimensions: 54mm*34.5mm*1.6mm, integrated antenna
Environmental conditions	Operating temperature: -20~80℃ Humidity: 5%~95% relative humidity

1.3 Limit Parameters

Table 1-2: Limit parameters

Symbol	Parameters	Min.	Max.	Unit
Top	Operating temperature	-20	+80	℃
Tstg	Storage temperature	-40	+85	℃
Vn1	Any J1 pin voltage relative to GND	-0.3	+5.5	V
Iol1	J1 I/O low-level input current	—	20	mA

1.4 DC Parameters

Table 1-3: DC parameters

Symbol	Parameters	Conditions	Min.	Typ.	Max.	Unit
Icc51	Supply current, normal operating mode	Vcc=5V after power on or run config( )	—	73	150	mA
Icc52	Supply current, sleep mode	Vcc=5V after run close( )	—	15	20	mA
Icc31	Supply current, normal operating mode	Vcc=3.3V after power on or run config( )	—	79	150	mA
Icc32	Supply current, sleep mode	Vcc=3.3V after run close( )	—	15	20	mA
Vil1	Input low voltage	Only SCL, SDA	—	—	1.5	V
Vil2	Input low voltage	Except for SCL, SDA	—	—	0.99	V

Symbol	Parameters	Conditions	Min.	Typ.	Max.	Unit
Vih	Input high voltage	—	2.31	—	5.5	V
Vol	Low-level output voltage	Iol=20mA	—	0.6	1.0	V
		Iol=3.2mA	—	0.2	0.3	
Voh	Hgih-level output voltage	Ioh=20μA	3	3.3	—	V
Iil	Logic 0 input current	Vin=0.4V	—	—	-80	μA

1.5 Host Information

Product Name:	Host Device
Model Name:	SC3832V
Manufacturer:	Qingdao Haier Biomedical Co Ltd

Federal Communications Commission (FCC) Interference Statement

The limited modular transmitter is only FCC authorized for the specific rule part (FCC Part15.225) listed on the grant, and that the host product manufacturer is responsible for compliance to any other FCC rules that apply to the host not covered by the modular transmitter grant of certification.

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.

FCC Caution: Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

For additional hosts other than the specific host originally granted with a limited module, a Class II permissive change is required on the module grant to register the additional host as a specific host also approved with the module.
OEM/Host integrator is responsible for complying with the instructions and requirements for each transmitter they choose to integrate into a host product.

RF exposure warning
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.
This product may not be collocated or operated in conjunction with any other antenna or transmitter. This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance from all persons and must not be collocated or operating in conjunction with any other antenna or transmitter. Additional text needed for the host product manufacturer to provide to end users in their end-product manuals.

OEM Integration Instructions：

This device is intended only for OEM integrators under the following conditions：

The module can be used to installation in other host. And the transmitter module may not be co-located with any other transmit or antenna. The module shall be only used with the integral antenna(s) that has been originally tested and certified with this module. As long as 3 conditions above are met, further transmitter test will not be required. However, the OEM integrator is still responsible for testing their end-product for any additional compliance requirement with this module installed (for example, digital device emission, PC peripheral requirements, etc.)

IMPORTANT NOTE：

In the event that these conditions cannot be met (for example certain laptop configuration or co-location with another transmitter), then the FCC authorization for this module in combination with the host equipment is no longer considered valid and the FCC ID of the module cannot be used on the final product. In these and circumstance, the OEM integrator will be responsible for re-evaluating. The end product (including the transmitter) and obtaining a separate FCC authorization. The final end product must be labeled in a visible area with the following:

"**Contains Transmitter Module FCC ID: 2ASR8ZLG600A** or

Contains FCC ID: 2ASR8ZLG600A".