General Description

This Half-insert and RFID Mifare Card Reader is designed to read high or low coercivity magnetic card, Mifare cards and Bluetooth Low Energy (BLE) Advertising for gaming applications. The illuminated bezel provides full color display, variable intensity and flashing rates. This product communicates with a host computer or other terminal via a USB interface.

Features

The MFC243 provides the following features:

1	Light Weight
2	High Performance
3	USB interface in HID 1.12 specification
4	Compatible with GDS Card Reader Communication Protocol Standard v1.4
5	Programmable illuminated bezel
6	In System Program (ISP) allows reprogramming of device

Hardware Specification

Magnetic Card Specifications

Card Type

ISO standard card (ISO 7810 and 7811)

Thickness

0.76mm ± 0.08mm

Card Format

Track 1 & 3: 210 bpi

Track 2: 75 bpi

Magnetic Head Life

Min. 500K passes

Error Rate

Read < 0.5%

MTBF

165,000 hours

Magnetic Stripe reading

300 ~ 4000 Oe

Card Data Information

Channel	Track 1	Track 2	Track 3
Recording method	F2F (FM)	F2F (FM)	F2F (FM)
Recording density	210 bpi	75 bpi	210 bpi
Max. Character	38	19	53

Card Operation Speed

Test Card	Speed (IPS)
ISO standard card	4 ~ 40
*Jitter	5 ~ 35
**Low Amplitude	5 ~ 35

Notes:
* Jitter card: Reliable reading of magnetic stripes encoded with bit cell length variations within ±15% of normal as defined by ISO 7811.
** Low amplitude: Reliable reading of magnetic stripes encoded at 60% or more of the encoding amplitude as defined by ISO 7811.

Mifare Card Specifications

Compliant with the ISO/IEC 14443 standard (Type A 13.56MHz).
Compatible with and configured to handle multiple types of Mifare cards

Card Types Support
Guest cards: 1K Mifare Ultralight C

Reference document:
RFID SeaPass & Crew Card – Technical Specifications.doc

MTBF
165,000 hours

Mechanical Specifications

Body Material

SABIC PC 945A

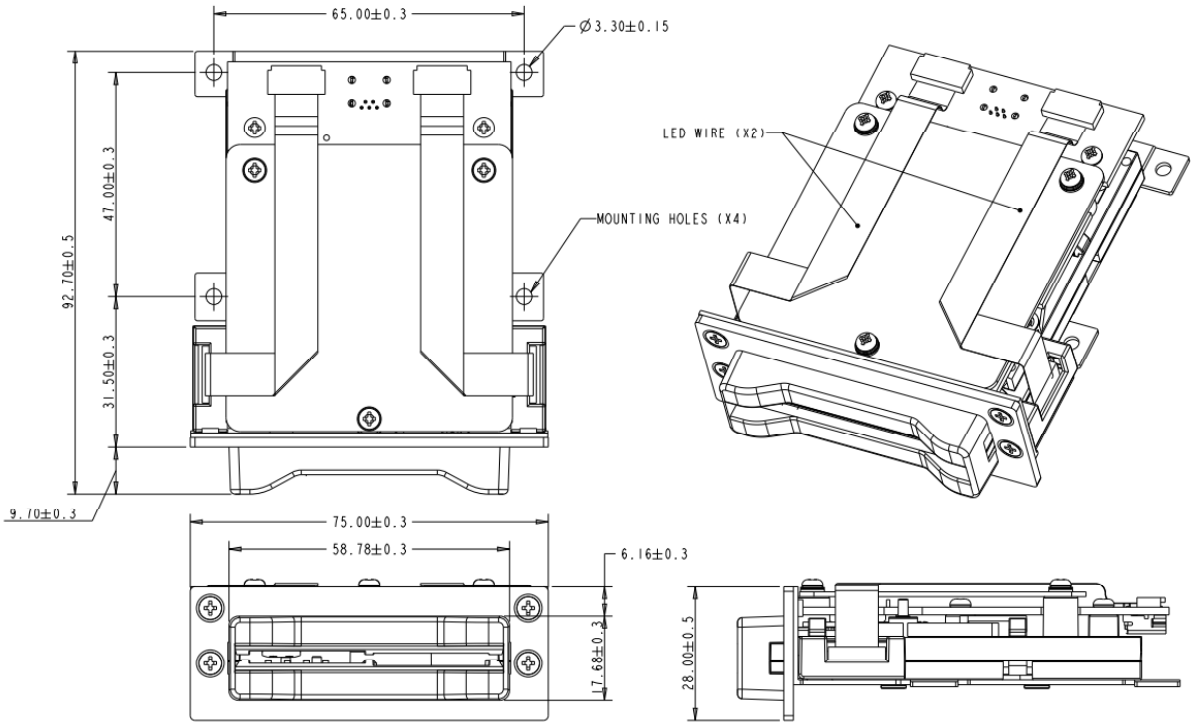
Weight

Approx. 110g

Dimension

Length: 92.7mm
Width: 75 mm
Height: 28 mm

Dimensions of MFC243



Electrical Specifications

Power Required
5VDC, +/-5%

Power Consumption
Standby: 35mA Max.
Operating with three LED turned on: 315mA Max.

Ripple Voltage
50 mVp-p or less

Dielectric
500VDC for 1 minute

Communication
USB Interface: Compatible with USB specification Revision 2.0

Temperature
Operating: -10 ~ 50°C
Storage: -30 ~ 70°C

Humidity
Operating: 10% to 90% non condensing
Storage: 10% to 90% non condensing

ESD
- Install with FCC/CE certificated Lab PC: +/- 15KV air, +/- 8KV contact - The reader can be at least recovered back automatically after ESD discharge is applied.
- Install with customer machine with good proper ground system: +/- 27KV air, +/- 10KV contact and the reader can be at least recovered back automatically after ESD discharge is applied.

EMC
FCC/CE Class B Certificate

Memory/Firmware
Number of writing light sequences to SRAM: unlimited, per microprocessor design.