

<b>Theory of operation</b>	
<b><u>Product Name</u></b>	<b><u>ALVH Desktop Card Reader</u></b>
<b><u>Model</u></b>	<b><u>DWMS-VDCR01</u></b>

Version 6.0

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## 0. Abstract of ALVH Desktop Card Reader

ALVH Desktop Card Reader, incorporates contactless radio frequency identification (RFID).

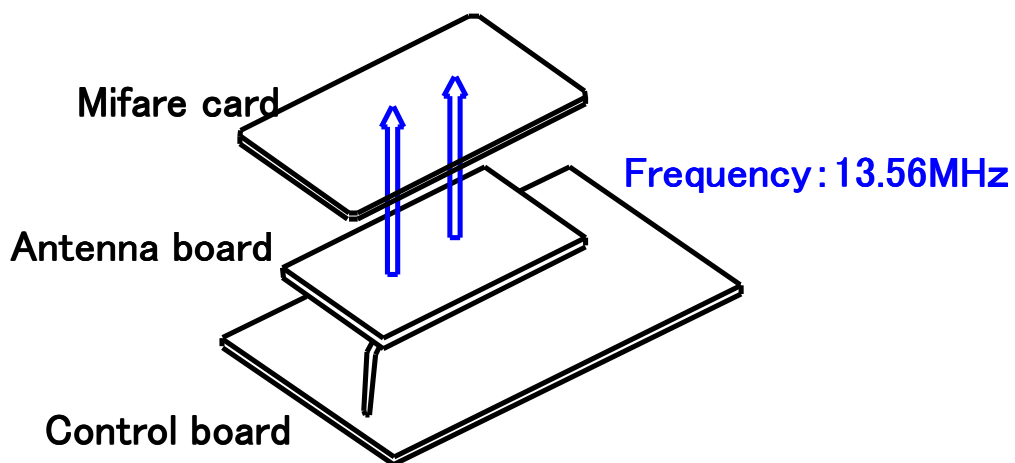
This unit communicates with Mifare card.

Mifare card is a contactless IC card, classified into Type A, and is used the most widespread in the world.

### Principle of Mifare card

Contactless communication between the ALVH Desktop Card Reader and the Mifare card is activated by electromagnetic waves radiated from the ALVH Desktop Card Reader.

The normal communication frequency is 13.56MHz and the communication speed is 106kbps.



### Outline of the ALVH DesktopCard Reader

This unit communicates on frequency of 13.56MHz. This unit can read and write a Mifare card which is mainly used for key of hotel's door.

## 1. Introduction

This document describe the supply specifications for the ALVH Desktop Card Reader (VDCR).

The VDCR is a desktop Mifare card reader/writer installed in the hotel and connects to a PC server via RS-232C port.

PC server can write necessary data to the Mifare card which is placed on the VDCR.

The KB/SSDW-05 is a keyboard which also can write the data in the card when installed between the VDCR and the computer.

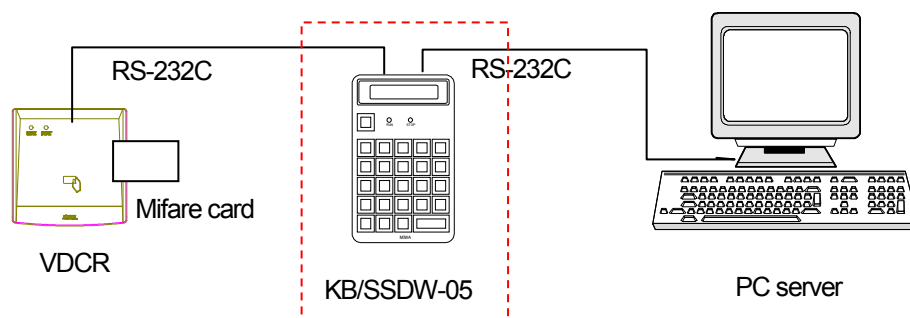


Fig.1.1: Host connection

## 2. Hardware specifications

Table 2.1: Interface specifications

Items	Description	
Communication with card	Mifare	Modulation type : ASK Codification : Modified Miller Antenna power : 2W(MAX) (Output power to antenna at no-modulation carrier transmission) Basic frequency : 13.56MHz Frequency deviation: Less than 50ppm Communication distance: 0 to 12 mm
External interface	RS-232C	Communication rate: 19200 bps Data length : 8 bit Parity bit : EVEN Stop bit : 1 bit Flow control : Nil