



# Multi-Functional Card

User Manual

## **User Manual**

COPYRIGHT ©2019 Hangzhou Hikvision Digital Technology Co., Ltd.

### **ALL RIGHTS RESERVED.**

Any and all information, including, among others, wordings, pictures, graphs are the properties of Hangzhou Hikvision Digital Technology Co., Ltd. or its subsidiaries (hereinafter referred to be “Hikvision”). This user manual (hereinafter referred to be “the Manual”) cannot be reproduced, changed, translated, or distributed, partially or wholly, by any means, without the prior written permission of Hikvision. Unless otherwise stipulated, Hikvision does not make any warranties, guarantees or representations, express or implied, regarding to the Manual.

### **About this Manual**

The Manual includes instructions for using and managing the product. Pictures, charts, images and all other information hereinafter are for description and explanation only. The information contained in the Manual is subject to change, without notice, due to firmware updates or other reasons. Please find the latest version in the company website

(<http://overseas.hikvision.com/en/>).

Please use this user manual under the guidance of professionals.

### **Trademarks Acknowledgement**

**HIKVISION** and other Hikvision’s trademarks and logos are the properties of Hikvision in various jurisdictions. Other trademarks and logos mentioned below are the properties of their respective owners.

### **Legal Disclaimer**

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, THE PRODUCT DESCRIBED, WITH ITS HARDWARE, SOFTWARE AND FIRMWARE, IS PROVIDED “AS IS”, WITH ALL FAULTS AND ERRORS, AND HIKVISION MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY, SATISFACTORY QUALITY, FITNESS FOR A PARTICULAR PURPOSE, AND NON-INFRINGEMENT OF THIRD PARTY. IN NO EVENT WILL HIKVISION, ITS DIRECTORS, OFFICERS, EMPLOYEES, OR AGENTS BE LIABLE TO YOU FOR ANY SPECIAL, CONSEQUENTIAL, INCIDENTAL, OR INDIRECT DAMAGES, INCLUDING, AMONG OTHERS, DAMAGES FOR LOSS OF BUSINESS PROFITS, BUSINESS INTERRUPTION, OR LOSS OF DATA OR DOCUMENTATION, IN CONNECTION WITH THE USE OF THIS PRODUCT, EVEN IF HIKVISION HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

REGARDING TO THE PRODUCT WITH INTERNET ACCESS, THE USE OF PRODUCT SHALL BE WHOLLY AT YOUR OWN RISKS. HIKVISION SHALL NOT TAKE ANY RESPONSIBILITES FOR ABNORMAL OPERATION, PRIVACY LEAKAGE OR OTHER DAMAGES RESULTING FROM CYBER ATTACK, HACKER ATTACK, VIRUS INSPECTION, OR OTHER INTERNET SECURITY RISKS; HOWEVER, HIKVISION WILL PROVIDE TIMELY TECHNICAL SUPPORT IF REQUIRED.

SURVEILLANCE LAWS VARY BY JURISDICTION. PLEASE CHECK ALL RELEVANT LAWS IN YOUR JURISDICTION BEFORE USING THIS PRODUCT IN ORDER TO ENSURE THAT YOUR USE CONFORMS THE APPLICABLE LAW. HIKVISION SHALL NOT BE LIABLE IN THE EVENT THAT THIS PRODUCT IS USED WITH ILLEGITIMATE PURPOSES.

IN THE EVENT OF ANY CONFLICTS BETWEEN THIS MANUAL AND THE APPLICABLE LAW, THE LATER PREVAILS.

## Regulatory Information

### FCC Information

Please take attention that changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.


**FCC compliance:** This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.


### FCC Conditions


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.
2. This device must accept any interference received, including interference that may cause undesired operation.

### EU Conformity Statement

 This product and - if applicable - the supplied accessories too are marked with "CE" and comply therefore with the applicable harmonized European standards listed under the EMC Directive 2014/30/EU, the LVD Directive 2014/35/EU, the RoHS Directive 2011/65/EU.

 2012/19/EU (WEEE directive): Products marked with this symbol cannot be disposed of as unsorted municipal waste in the European Union. For proper recycling, return this product to your local supplier upon the purchase of equivalent new equipment, or dispose of it at designated collection points. For more information see: [www.recyclethis.info](http://www.recyclethis.info)

 2006/66/EC (battery directive): This product contains a battery that cannot be disposed of as unsorted municipal waste in the European Union. See the product documentation for specific battery information. The battery is marked with this symbol, which may include lettering to indicate cadmium (Cd), lead (Pb), or mercury (Hg). For proper recycling, return the battery to your supplier or to a designated collection point. For more information see: [www.recyclethis.info](http://www.recyclethis.info)

### Industry Canada ICES-003 Compliance




This device meets the CAN ICES-3 (A)/NMB-3(A) standards requirements.

## Applicable Models

This manual is applicable to the multi-functional card 2.0.

## Symbol Conventions

The symbols that may be found in this document are defined as follows.

Symbol	Description
 <b>NOTE</b>	Provides additional information to emphasize or supplement important points of the main text.
 <b>WARNING</b>	Indicates a potentially hazardous situation, which if not avoided, could result in equipment damage, data loss, performance degradation, or unexpected results.
 <b>DANGER</b>	Indicates a hazard with a high level of risk, which if not avoided, will result in death or serious injury.

# Chapter 1 Introduction

## 1.1 Overview

As an accessory of the LED sending card, the second generation multi-functional card is designed to implement functions such as remote screen adjustment, 3D display, voltage detection, temperature detection, and light sensing.

 **NOTE**

You need to upgrade both the receiving card and the sending card first, to enable 3D function of the multifunctional card. Refer to the user manual of LED display for details.

## 1.2 Physical Interface

### 1.2.1 Front Panel

The appearance and description of the front panel are shown as below.

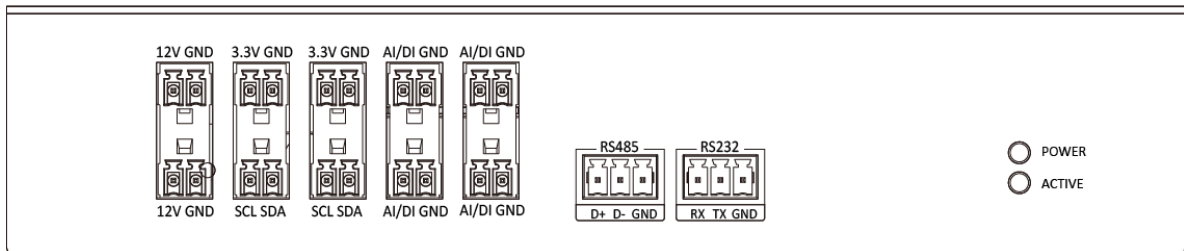


Figure 1-1 Front Panel

Table 1-1 Front Panel Description

Name	Description	Name	Description
12V GND	Sensor interface	RS232	Serial interface for remote telecommunication
3.3V GND (SCL SDA)	Sensor interface	POWER	Power indicator
AI/DI GND	Sensor interface	ACTIVE	Indicator for normal working status
RS485	Serial interface for telecommunication	—	—

## 1.2.2 Rear Panel

The appearance and description of the rear panel are shown as below.

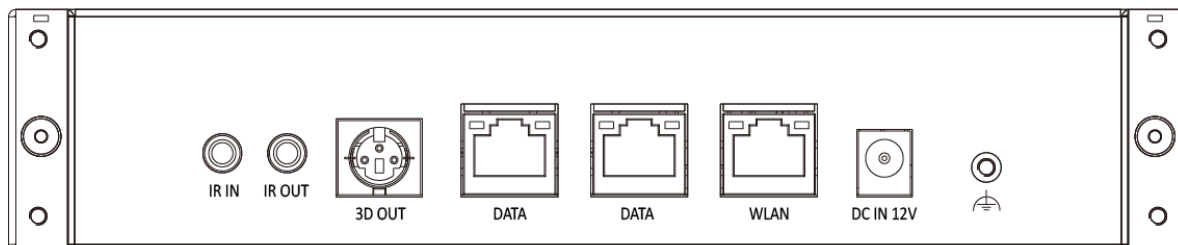


Figure 1-2 Rear Panel

Table 1-2 Rear Panel Description

Name	Description	Name	Description
IR IN	Infrared input interface, requiring to connect with an IR extension cable	DATA	Interface for connecting with the receiving card
IR OUT	Infrared out interface	WLAN	Ethernet interface
3D OUT	3D interface	DC IN 12V	Power interface

## Chapter 2 Hardware Connection

The multi-functional card can work properly after being serially connected with the sending card and the receiving cards.

 **NOTE**

- In order to power the multi-functional card, you are recommended to connect it to the last receiving card, as shown in the following figure.

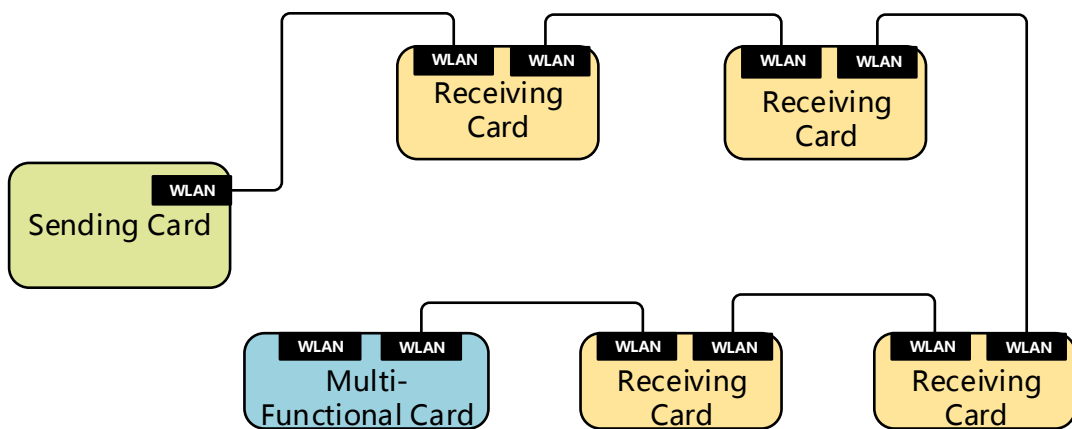


Figure 2-1 Hardware Connection

- If the multi-functional card is connected directly to the sending card, extra configuration on the client is needed. Refer to the user manual of LED display for details.

## Chapter 3 Common Operations

### 3.1 3D Display (Optional)

The multi-functional card supports 3D function, which is used to implement the display of 3D videos.



When the 3D function enabled, the loading capacity will decline by half. You need to connect to half of the original devices to prevent screen flickering.

#### Prerequisites

The multi-functional card is connected correctly. See Chapter 2 Hardware Connection for details.

#### Steps

Step 1 Connect the 3D accessory, such as glasses, to **3D OUT** on the multi-functional card.

Step 2 Input signal source.

Step 3 Log in to the client.

Step 4 Select **Screen Management > Advanced Operation > Input Capability**.

Step 5 Enable **3D Video Processing**.

Step 6 Click **OK**.

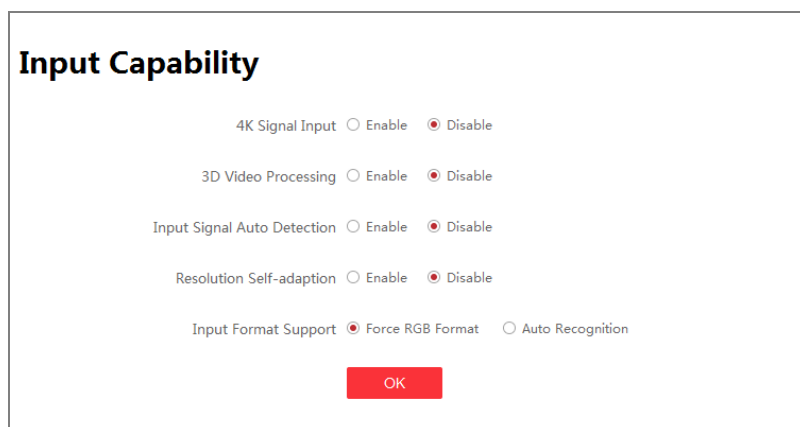


Figure 3-1 Enable 3D Display



## 3.2 Infrared Remote Control

The multi-functional card can work with a remote control to remotely control LED screens.

You can use the remote control by importing a configuration file.

The remote control implements functions such as signal source switching, brightness adjustment, display on/off detection, scene switching, etc.



**NOTE**

The remote control is available within 10 m and 45° angle away from the multi-functional card.

## 3.3 Extended Functions

The multi-functional card has 5 extended interfaces to implement functions such as voltage detection, temperature detection, and smoke or light sensing.

# Appendix A Description of the Remote Control

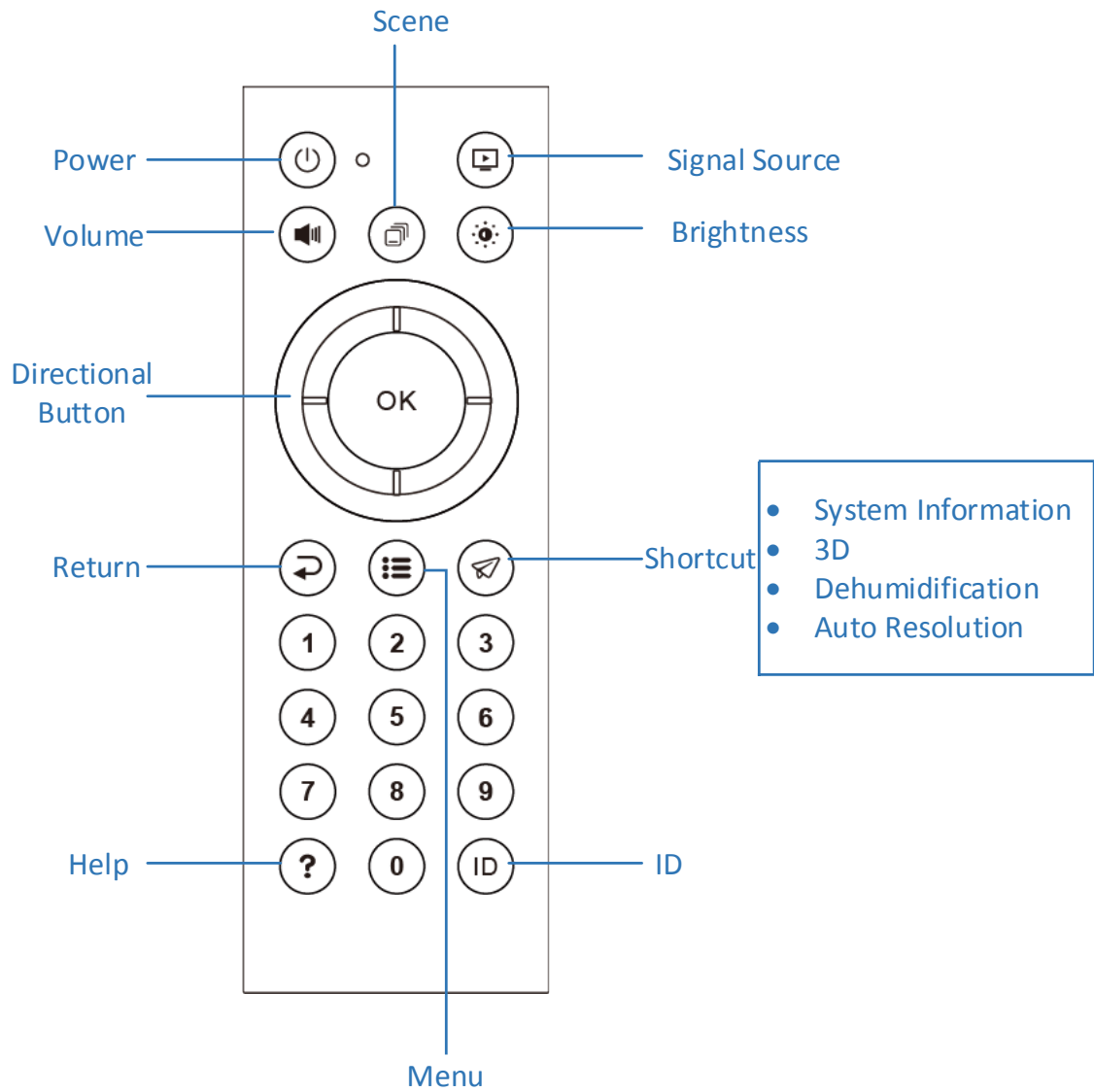


Table A-1 Description of the Remote Control

Button	Description
Power	Turn on/off the display
Signal Source	Switch signal sources
Volume	Press Volume, and press Directional Button to increase/decrease volume
Brightness	Press Brightness, and press Directional Button to increase/decrease brightness
Scene	Switch scenes
Directional Button	Press Up/Down/Left/Right to select menu items
OK	Confirm selection
Return	Back to the previous menu
Menu	Enter the main menu
Shortcut	Quickly access to System Information, 3D, Dehumidification, and Auto Resolution
Help	Show the button descriptions of the remote control
ID	Select multi displays
Number Button	Press ID, and press the number button to select the display



See Far, Go Further