



Panoramic Auxiliary System

User Manual

Legal Information

©Hangzhou Hikvision Digital Technology Co., Ltd. All rights reserved.

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 of this Manual at the Hikvision website (<https://www.hikvision.com/>).

Please use this Manual with the guidance and assistance of professionals trained in supporting the Product.

Trademarks

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

Disclaimer

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, THIS MANUAL AND THE PRODUCT DESCRIBED, WITH ITS HARDWARE, SOFTWARE AND FIRMWARE, ARE PROVIDED "AS IS" AND "WITH ALL FAULTS AND ERRORS". HIKVISION MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, MERCHANTABILITY, SATISFACTORY QUALITY, OR FITNESS FOR A PARTICULAR PURPOSE. THE USE OF THE PRODUCT BY YOU IS AT YOUR OWN RISK. IN NO EVENT WILL HIKVISION 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, CORRUPTION OF SYSTEMS, OR LOSS OF DOCUMENTATION, WHETHER BASED ON BREACH OF CONTRACT, TORT (INCLUDING NEGLIGENCE), PRODUCT LIABILITY, OR OTHERWISE, IN CONNECTION WITH THE USE OF THE PRODUCT, EVEN IF HIKVISION HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES OR LOSS.


YOU ACKNOWLEDGE THAT THE NATURE OF THE INTERNET PROVIDES FOR INHERENT SECURITY RISKS, AND HIKVISION SHALL NOT TAKE ANY RESPONSIBILITIES FOR ABNORMAL OPERATION, PRIVACY LEAKAGE OR OTHER DAMAGES RESULTING FROM CYBER-ATTACK, HACKER ATTACK, VIRUS INFECTION, OR OTHER INTERNET SECURITY RISKS; HOWEVER, HIKVISION WILL PROVIDE TIMELY TECHNICAL SUPPORT IF REQUIRED.


YOU AGREE TO USE THIS PRODUCT IN COMPLIANCE WITH ALL APPLICABLE LAWS, AND YOU ARE SOLELY RESPONSIBLE FOR ENSURING THAT YOUR USE CONFORMS TO THE APPLICABLE LAW. ESPECIALLY, YOU ARE RESPONSIBLE, FOR USING THIS PRODUCT IN A MANNER THAT DOES NOT INFRINGE ON THE RIGHTS OF THIRD PARTIES, INCLUDING WITHOUT LIMITATION, RIGHTS OF PUBLICITY, INTELLECTUAL PROPERTY RIGHTS, OR DATA PROTECTION AND OTHER PRIVACY RIGHTS. YOU SHALL NOT USE THIS PRODUCT FOR ANY PROHIBITED END-USES, INCLUDING THE DEVELOPMENT OR PRODUCTION OF WEAPONS OF MASS DESTRUCTION, THE DEVELOPMENT OR PRODUCTION OF CHEMICAL OR BIOLOGICAL WEAPONS, ANY ACTIVITIES IN THE CONTEXT RELATED TO ANY NUCLEAR EXPLOSIVE OR UNSAFE NUCLEAR FUEL-CYCLE, OR IN SUPPORT OF HUMAN RIGHTS ABUSES.


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

Regulatory Information

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, RE Directive 2014/53/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




 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

Industry Canada ICES-003 Compliance

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

Symbol Conventions

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

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

Safety Instructions

- Proper configuration of all passwords and other security settings is the responsibility of the installer and/or end-user.
- In the use of the product, you must be in strict compliance with the electrical safety regulations of the nation and region. Please refer to technical specifications for detailed information.
- Input voltage should meet limited power source or PS2 requirements according to the IEC60950-1 or IEC 62368-1 standard. Please refer to technical specifications for detailed information.
- Do not connect several devices to one power adapter as adapter overload may cause overheating or a fire hazard.
- Please make sure that the plug is firmly connected to the power socket.
- If smoke, odor or noise rise from the device, turn off the power at once and unplug the power cable, and then please contact the service center.

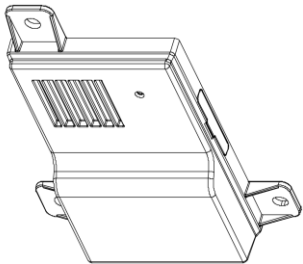
TABLE OF CONTENTS

Chapter 1 Package Check	1
Chapter 2 Overview	2
2.1 Introduction.....	2
2.2 Key Features	2
2.3 Appearance	3
Chapter 3 Installation	5
Chapter 4 Basic Operations	8
4.1 Calibration Preparation	8
4.2 Calibrate with Mobile APP	8
4.3 Calibrate with Remote Control.....	10

Chapter 1 Package Check

Please check the package for damages. After opening the package, please check the whether all the items are complete according to the table shown bellow. If all items are complete, then devices are ready for installation.

Table 1-1 Packing List

No.	Picture	Name	Number
1		Panoramic auxiliary system	1

Chapter 2 Overview

2.1 Introduction

The panoramic auxiliary system adopts the panoramic image stitching algorithm and image equalization algorithm to perfectly stitch 4-ch 720p/1080P ultra-wide-angle pictures, and conduct 360-degree panoramic surveillance video around the vehicle. By looking at the display inside the vehicle, the driver can easily tell the surrounding condition of the vehicle. The panoramic auxiliary system supports user-friendly functions such as high-definition video surveillance, 360° panorama, static auxiliary line display, and 3D frame. The products can be widely used in various models such as buses, engineering vehicles, special vehicles, etc., to meet the monitoring needs of the blind area around the vehicle.

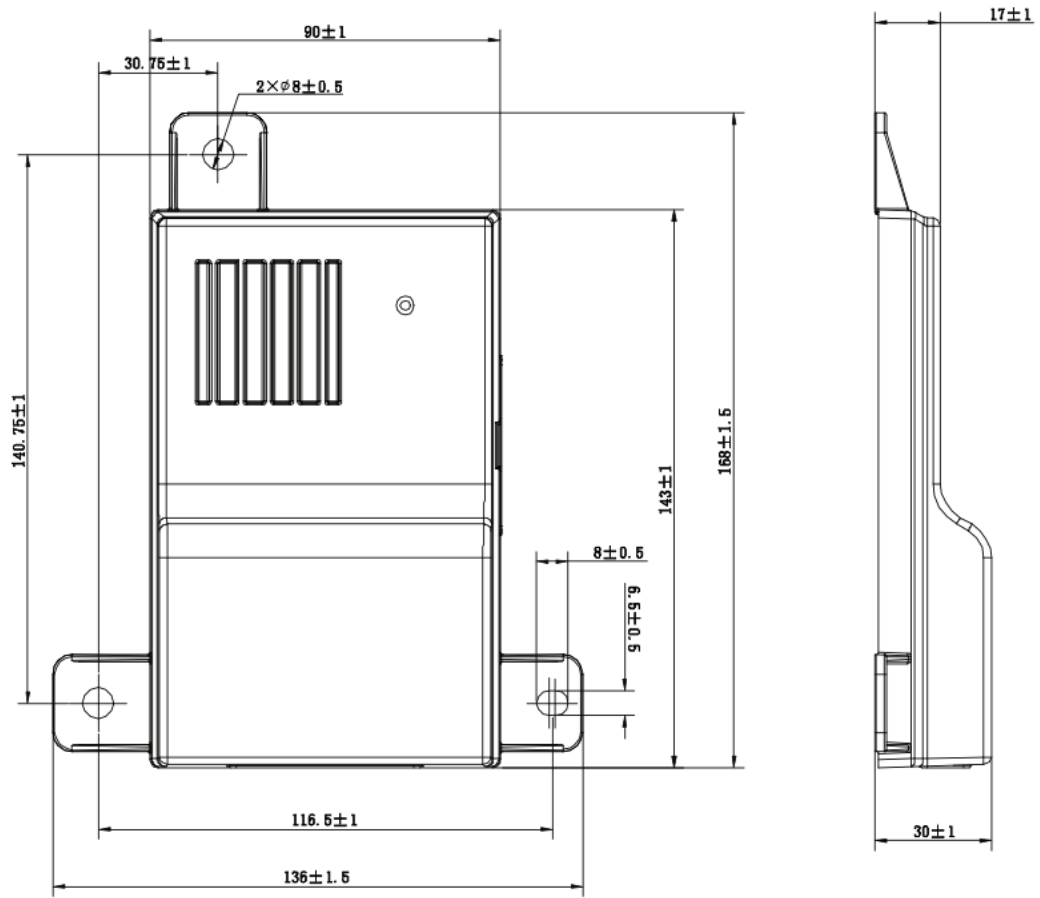
 **Note**

The product is subject to active development, and some functions may differ from what is presented in this manual. Please refer to the actual product.

2.2 Key Features

- Adopted panoramic image stitching algorithm and image equalization algorithm to realize panoramic surveillance video around the vehicle
- Supports 4 channels of 720p, 1080P high-definition camera input
- Support 2D/3D multi-view switching
- Supports HDTVI, AHD, CVBS output
- Supports storage of 4-ch original video and video playback
- Supports CAN connection
- Supports connection to left turn, right turn, reverse hard line signal.
- Supports APP access and calibration function.

2.3 Appearance



Unit: mm

Figure 2-1 Dimensions

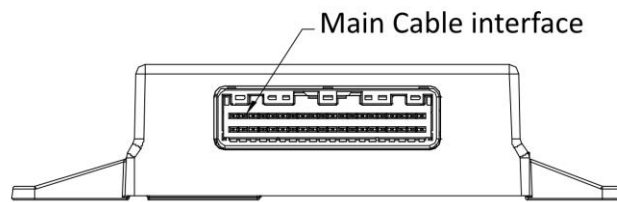


Figure 2-2 Main Cable interface

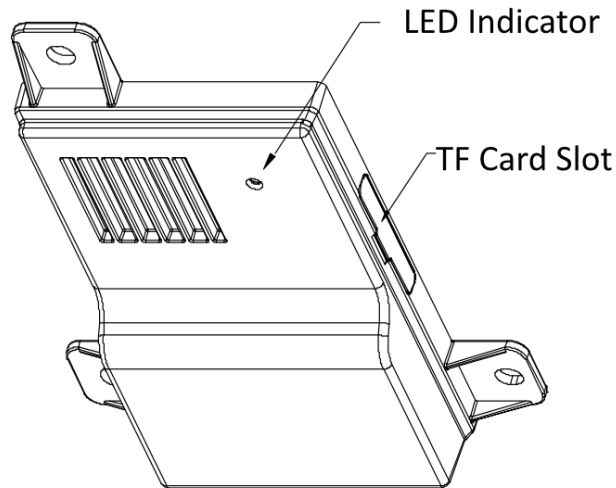


Figure 2-3 TF Card Slot and Indicator

Table 2-1 Indicator Status

Status	Definition
Red and green flashes alternately	The device is booting
The red light flashes	The camera is not connected normally, or the camera is abnormal
The green light is solid	The TF card is not inserted properly, or the TF card is abnormal
The red light is always on	During a device upgrade, the green light flashes when the upgrade is complete
The green light flashes	The device is working normally

Chapter 3 Installation

You need to securely fix all the screw holes, in particular the recorder itself. It is recommended to use the M6 Screw and please choose the appropriate length.

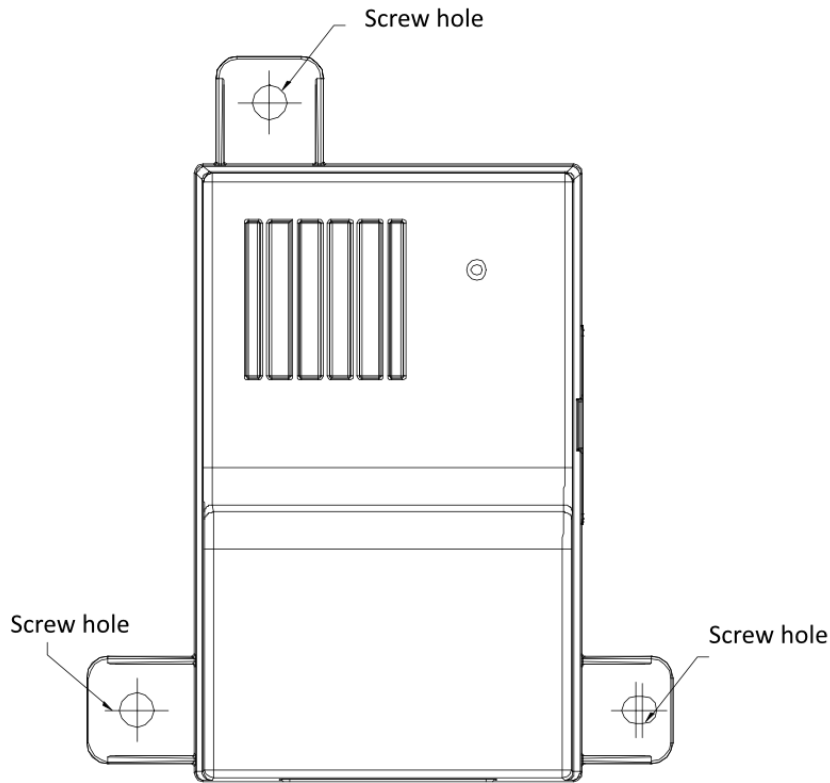


Figure 3-1 Screw Position

Step 1 Gently break the silicone plug on the TF card slot, connect the host to the TF card, and then press the silicone plug back.

 **Note**

Insert the TF card with the gold finger side facing down

Step 2 Attach the main cable to the recorder.

Step 3 Attach the cables to the corresponding peripheral or vehicle interface.

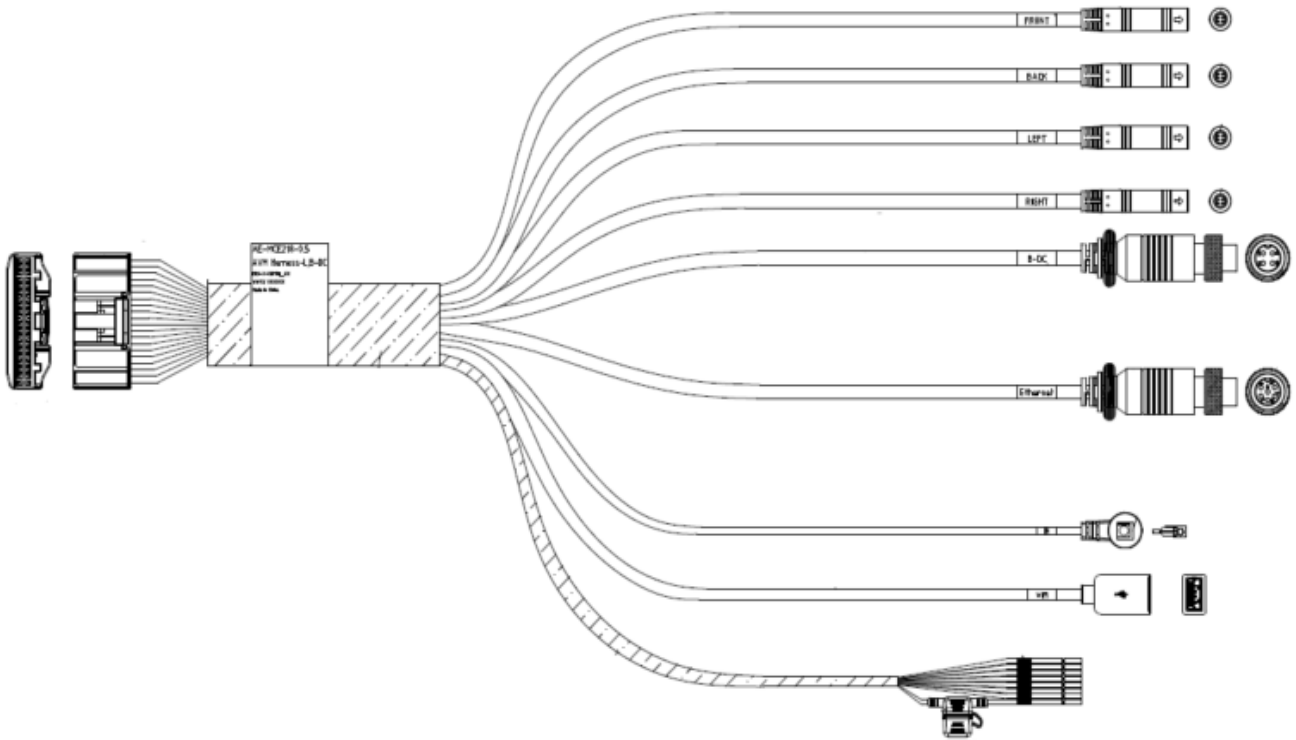


Figure 3-2 Cable Descriptions

Table 3-1 Interface Descriptions

Definition	Name	Function
Camera Connection Interface	Front Camera F	Connect to Front View Camera
	Back Camera B	Connect to Back View Camera
	Left Camera L	Connect to Left View Camera
	Right Camera R	Connect to Right View Camera
IR Receiving Interface	IR Indicator IR	Support receiving IR signal of the remote control
Video Output Interface Note: choose one between the two types of cable and refer to the actual cable definition.	B	Connect to B pin sequence display, without powering the display
	B-DC	Connect to B pin sequence display, and powers the display
Ethernet Interface	Ethernet	Support Ethernet communication
USB Interface	Wi-Fi	Wi-Fi calibration module
Other Interfaces	POWER+	Connect to vehicle power positive
	ACC	Connect to vehicle ACC
	POWER-	Connect to vehicle power negative

	Left Turn L	Connect to vehicle left turn wiring
	Right Turn R	Connect to vehicle right turn wiring
	Backing B	Connect to vehicle backing wiring
	CAN_H	Connect to vehicle CAN wiring
	CAN_L	

Chapter 4 Basic Operations

4.1 Calibration Preparation

Before calibrating the panoramic auxiliary system (recorder), make sure you have connected the main cable, 4 channels of camera, display and other needed cables to the recorder. Also, make sure that you have inserted the accompanying TF card.

There are two types of calibration methods, including calibration with mobile APP and calibration with remote control.



Note

Refer to the manual of *360 AVM Calibration Guide* for detailed calibration guide and other information. You can contact technical support to get it.

4.2 Calibrate with Mobile APP

Step 1 Scan the QR code below, and download the APP first.



Figure 4-1 QR Code for Android System



Figure 4-2 QR Code for iOS System

Step 2 Insert the accompanying Wi-Fi calibration module to the cable.



Figure 4-3 Insert Wi-Fi Calibration Module

Step 3 Turn on the Wi-Fi function of your cellphone, and connect to “HIKAUTO-360****”.

Step 4 Run the APP, and you can view the preview image and connect/disconnect the connection, and set parameters.

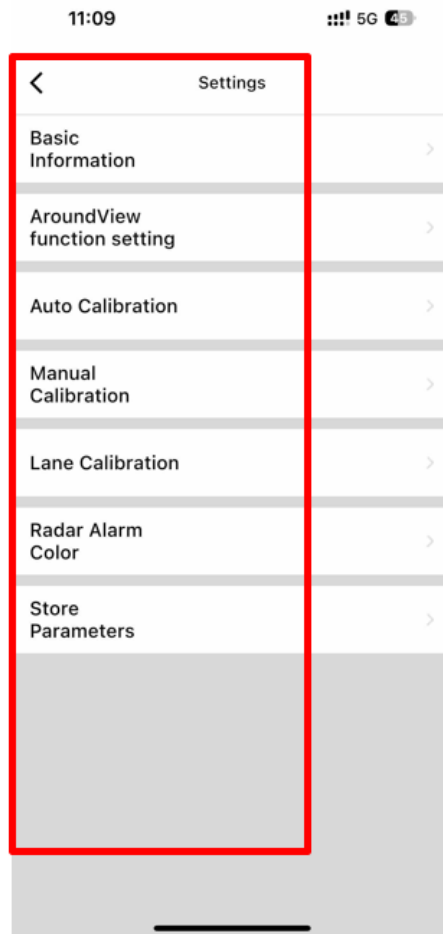


Figure 4-4 APP Interface

4.3 Calibrate with Remote Control

You can also use the accompanying remote control and aim at the signal receiver of the host on the cable to calibrate the system.

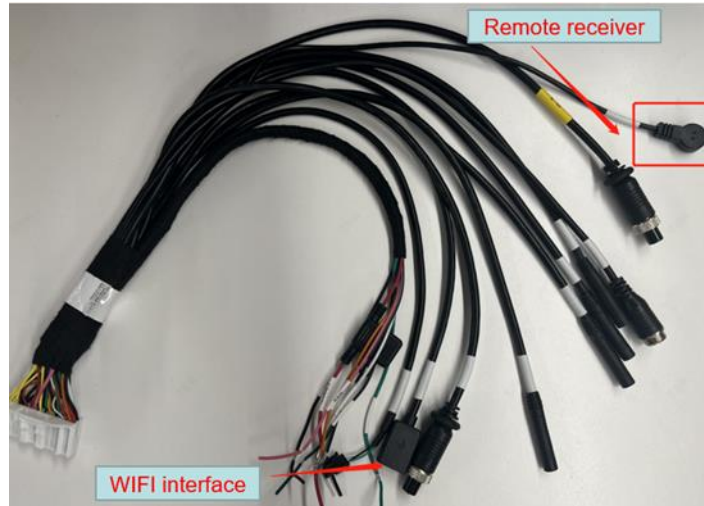











Figure 4-5 Signal Receiver

The accompanying remote control and its function are shown below.



Figure 4-6 Remote Control

Table 4-1 Remote Control Functions

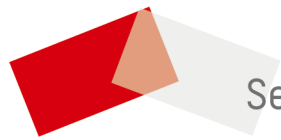
Name	Function
	Long press to restart
	Menu
	2D/3D view swithcing
	“Up” in the menu
	Play the previous video in the playback interface
	Back to previous action
	“Page Up” in the menu
	“Slow motion” in the playback interface
	“Confirm” in the menu
	“Play/Pause” in the playback interface
	“Page Down” in the menu
	“Fast motion” in the playback interface
0	For date/time setting
	“Down” in the menu
	Play the next video in the playback interface
C	In the preview interface, swith output standard
1	For date/time setting
	On 2D/3D view, swith to front view
2	For date/time setting
	On 2D/3D view, swith to back view
3	For date/time setting
	On 2D/3D view, swith to left view
4	For date/time setting
	On 2D/3D view, swith to right view

5	For date/time setting
6	For date/time setting
7	For date/time setting
8	For date/time setting
9	For date/time setting

Press the **MENU** button of the remote control to show the menu option.

Table 4-2 GUI Interface

First Oder	Second Oder	Third Oder
Settings	Fisheye correction	Yes/No Setting
	3D Display	Yes/No Setting
	Vehicle model setting	Bus/School Bus/Car/Others
	Display output standard	CVBS/TVI/AHD
	Signal Standard	PAL / NTSC
	Camera type setting	TVI/AHD camera
	Restore to factory setting	Yes/No Setting
	Format storage Media	Yes/No Setting
	Date/time setting	Setting Interface
	Plate setting	Setting Interface
	Video bite rate	1/2/4/6M
	Front trajectories	Yes/No Setting
	Back trajectories	Yes/No Setting
	Output resolution setting	720P/1080P
Camera resolution	720P/1080P	
Playback	Ordinary recording	All storage recording
Device Information	System and storage information	/



See Far, Go Further