Network Traffic Camera
(for Checkpoint and Intersection Violation System)

Quick Start Guide
© 2020 Hangzhou Hikvision Digital Technology Co., Ltd. All rights reserved.

This Manual is the property of Hangzhou Hikvision Digital Technology Co., Ltd. or its affiliates (hereinafter referred to as “Hikvision”), and it cannot be reproduced, changed, translated, or distributed, partially or wholly, by any means, without the prior written permission of Hikvision. Unless otherwise expressly stated herein, Hikvision does not make any warranties, guarantees or representations, express or implied, regarding to the Manual, any information contained herein.

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

Trademarks Acknowledgement
● 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.

LEGAL 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 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 INSPECTION, 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 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

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.

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

Safety Instructions

<table>
<thead>
<tr>
<th>Laws and Regulations</th>
<th>Use of the product must be in strict compliance with the local laws and regulations. Please shut down the device in prohibited area.</th>
</tr>
</thead>
</table>
| Power Supply         | • Use of the product must be in strict compliance with the local electrical safety regulations.  
                        • Use the power adapter provided by qualified manufacturer. Refer to the product specification for detailed power requirements.  
                        • It is recommended to provide independent power adapter for each device as adapter overload may cause over-heating or a fire hazard.  
                        • Make sure that the power has been disconnected before you wire, install, or disassemble the device.  
                        • DO NOT directly touch exposed contacts and components once the device is powered up to avoid electric shock.  
                        • DO NOT use damaged power supply devices (e.g., cable, power adapter, etc.) to avoid electric shock, fire hazard, and explosion.  
                        • DO NOT directly cut the power supply to shut down the device. Please shut down the device normally and then unplug the power cord to avoid data loss.  
                        • DO NOT block the power supply equipment to plug and unplug conveniently.  
                        • Make sure the power supply has been disconnected if the power adapter is idle.  
                        • Make sure the device is connected to the ground firmly. |

<table>
<thead>
<tr>
<th>Transportation, Use, and Storage</th>
</tr>
</thead>
<tbody>
<tr>
<td>● To avoid heat accumulation, good ventilation is required for a proper operating environment.</td>
</tr>
<tr>
<td>● Store the device in dry, well-ventilated, corrosive-gas-free, no direct sunlight, and no heating source environment.</td>
</tr>
<tr>
<td>● Avoid fire, water, and explosive environment when using the device.</td>
</tr>
<tr>
<td>● Avoid lightning strike for device installation. Install a lightning arrester if necessary.</td>
</tr>
<tr>
<td>● Keep the device away from magnetic interference.</td>
</tr>
<tr>
<td>● Avoid device installation on vibratory surface or places, and avoid equipment installation on vibratory surface or places subject to shock (ignorance may cause device damage).</td>
</tr>
<tr>
<td>● DO NOT touch the heat dissipation component to avoid burns.</td>
</tr>
<tr>
<td>● DO NOT expose the device to extremely hot, cold, or humidity environments. For temperature and humidity requirements, see device specification.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Maintenance</th>
</tr>
</thead>
<tbody>
<tr>
<td>● If smoke, odor, or noise arises from the device, immediately turn off the power, unplug the power cable, and contact the service center.</td>
</tr>
<tr>
<td>● If the device is abnormal, contact the store you purchased it or the nearest service center. DO NOT disassemble or modify the device in any way (For the problems caused by unauthorized modification or maintenance, the company shall not take any responsibility).</td>
</tr>
<tr>
<td>● Keep all wrappers after unpacking them for future use. In case of any failure occurred, you need to return the device to the factory with the original wrapper. Transportation without the original wrapper may result in damage to the device and the company shall not take any responsibility.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Network</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Please enforce the protection for the personal information and the data security as the device may be confronted with the network security problems when it is connected to the Internet. Please contact us when the device might exist network security risks.</td>
</tr>
<tr>
<td>● Please understand that you have the responsibility to configure all the passwords and other security settings about the device, and keep your user name and password.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>DO NOT disconnect the power during formatting, uploading, and downloading. Or files may be damaged.</td>
</tr>
</tbody>
</table>
## TABLE OF CONTENTS

**Chapter 1 Introduction** ............................................................................................................. 6  
1.1 Overview ............................................................................................................................. 6  
1.2 Key Feature ......................................................................................................................... 6  
1.3 System Requirement ........................................................................................................... 6  
1.4 Appearance and Interfaces ............................................................................................... 7  
  1.4.1 Appearance ................................................................................................................. 7  
  1.4.2 Interfaces ................................................................................................................... 7  
**Chapter 2 Construction Solution** .......................................................................................... 9  
2.1 Construction Solution I ......................................................................................................... 9  
2.2 Construction Solution II ....................................................................................................... 9  
**Chapter 3 Installation** ......................................................................................................... 11  
3.1 Install Lens .......................................................................................................................... 11  
3.2 Insert TF card ....................................................................................................................... 11  
3.3 Insert Guard Shield ............................................................................................................. 11  
3.4 Install Camera on Horizontal Pole ...................................................................................... 12  
**Chapter 4 Network Connection** .......................................................................................... 14  
4.1 Wire over LAN ..................................................................................................................... 14  
4.2 Activate the Camera .......................................................................................................... 15  
  4.2.1 Activate via SADP Software ....................................................................................... 15  
  4.2.2 Activate via Web Browser ............................................................................................ 17  
4.3 Login .................................................................................................................................... 18
Chapter 1 Introduction

1.1 Overview
Integrated with video collection, smart encoding compression, and network transmission, network traffic camera can capture pictures and recognize vehicle features, such as license plate number, vehicle type, vehicle color, and vehicle brand. It is widely used in highway safety checkpoint, city safety checkpoint, and intersections.

1.2 Key Feature
● Supports H.265/H.264.
● Multiple application modes, e.g., checkpoint single I/O, checkpoint vehicle detector, RS-485 radar, mixed-traffic lane, and video analysis E-police.
● Supports violation detection, e.g., driving on the lane line, red light running, wrong-way driving, prohibition violation, etc., which can effectively prevent violations.
● Supports dual shutters, enabling the camera to capture while video monitoring.
● Supports flash light control according to brightness condition and time schedule, enabling the camera to capture while IO output.
● Supports multiple supplement light types, e.g., strobe, burst, etc.
● Supports violation image composition, forming full evidence for enforcement.

**NOTE**
Functions may vary with different models. Please refer to actual product.

1.3 System Requirement
● CPU: 1.0 GHz or higher.
● RAM: 1 G or higher.
● Display: 1024 × 768 resolution or higher.
● Web Browser: Internet Explorer 8.0 and above version, Mozilla Firefox 5.0 and above version.
1.4 Appearance and Interfaces

1.4.1 Appearance

The interfaces are mainly located on the rear panel.

Figure 1-1 Appearance

Figure 1-2 Rear Panel
<table>
<thead>
<tr>
<th>Interface</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAN1/LAN2</td>
<td>10/100/1000 M Ethernet interface</td>
</tr>
<tr>
<td>TF</td>
<td>TF card slot</td>
</tr>
<tr>
<td>PWR</td>
<td>Power indicator</td>
</tr>
<tr>
<td></td>
<td>Ground</td>
</tr>
<tr>
<td>RTG</td>
<td>RS-232 interface for debugging and temperature shield control via transparent channel.</td>
</tr>
<tr>
<td>D1-D3</td>
<td>RS-485 interface, for transferring RS-485 input information (such as radar, vehicle detector, etc.).</td>
</tr>
<tr>
<td>SYNC</td>
<td>Synchronization input</td>
</tr>
<tr>
<td>T1</td>
<td>Input trigger</td>
</tr>
<tr>
<td>F1-F7</td>
<td>Flash light trigger output</td>
</tr>
<tr>
<td>USB</td>
<td>USB interface</td>
</tr>
<tr>
<td>12 VDC</td>
<td>12 VDC power input</td>
</tr>
</tbody>
</table>

**NOTE**

The USB interface can only be connected to USB flash drive. It is not allowed to charge other devices or connect other loads.
Chapter 2 Construction Solution

2.1 Construction Solution I

The following construction takes example of 3 MP camera in the scene of bidirectional 4 lanes without speed detection.

- The pole height is 6 m. We recommend that captured position should be 26 m or above horizontal distance from the camera to meet LPR requirement.
- Flash light is built in the guard shield for light supplement of multiple lanes, improving license plate capture and recognition rate.
- The camera will capture multiple pictures continuously. To guarantee the second picture quality, the picture bottom in captured position should be 18 to 20 m horizontal distance from the pole.

2.2 Construction Solution II

The following construction takes example of 9 MP camera in the scene of bidirectional 6 lanes with radar speed detection.
The pole height is 6 m. We recommend that captured position should be 26 m or above horizontal distance from the camera to meet LPR requirement.

Flash light is built in the guard shield for light supplement of multiple lanes, improving license plate capture and recognition rate.

The camera will capture multiple pictures continuously. To guarantee the second picture quality, the picture bottom in captured position should be 18 to 20 m horizontal distance from the pole.

**NOTE**

Radar is used for speed detection.
Chapter 3 Installation

3.1 Install Lens

Step 1 Pull out the sensor protective cover. Install the lens, and rotate it 90 clockwise until it is fixed.

Step 2 Connect the lens cable plug to the auto iris interface.

NOTE

If the camera only supports manual iris, skip step 2.

3.2 Insert TF card

Install the TF card according to arrow direction as shown in the Figure 3-1.

NOTE

If you want to take out the TF card, press it inwards lightly to pop it up.

Figure 3-1 Install TF Card

3.3 Insert Guard Shield

Step 1 Pull upward the buckle, and take hook off the guard shield cover. Open the guard shield.
Step 2 Take off the bottom plate from the guard shield, and fix the camera on it by included screws.

Step 3 Fix the guard shield cover on the camera.

Step 4 Connect the cable with the camera, and thread the cable through the hole in bottom.

3.4 Install Camera on Horizontal Pole

**NOTE**

Cardan joint consists of 2 parts. Upper part includes 2 screw holes, and lower part is connected with hoop.
Step 1 Install the hoop.

1) Loosen the hoop screws and open the hoop.
2) Pull the hoop ring, and shrink the hoop to the thickness of the horizontal pole.
3) Install the hoop bracket on the horizontal pole.

Figure 3-5 Install Hoop

Step 2 Align the screw holes at the bottom of the cardan joint with the hoop, screw in, and tighten the screws, to install the cardan joint on the hoop.

Figure 3-6 Install Cardan Joint

Step 3 Fix the whole camera with sun shield on the horizontal pole with the cardan joint.

Figure 3-7 Fix Camera on Horizontal Pole
Chapter 4 Network Connection

**NOTE**

- You shall acknowledge that the use of the product with Internet access might be under network security risks. For avoidance of any network attacks and information leakage, please strengthen your own protection. If the product does not work properly, please contact with your dealer or the nearest service center.
- To ensure the network security of the camera, we recommend you to have the camera assessed and maintained termly. You can contact us if you need such service.

**Before you start:**

To view and configure the camera via a LAN, you need to connect the camera in the same subnet with your computer, and install the SADP to search and change the IP address of the camera.

### 4.1 Wire over LAN

The following figures show the two ways of cable connection between a camera and a computer.

- Directly connect the camera to the computer with a network cable.
- Set camera over the LAN via a switch or a router.

![Network Cable](image)

**Figure 4-1 Direct Connection**
4.2 Activate the Camera

You are required to activate the camera first by setting a strong password for it before you can use it. Multiple activation methods are supported. Here we take example of activation via web browser and SADP.

**NOTE**

Refer to the user manual of client software for the activation via client software.

4.2.1 Activate via SADP Software

SADP software is used for detecting the online device, activating the camera, and resetting the password.

**NOTE**

Get the SADP software from the official website, and install the SADP according to the prompts.

Step 1 Run the SADP software to search the online devices.

Step 2 Check the device status from the device list, and select the inactive device.
Step 3 Create a password, and confirm it.

Step 4 Click **Activate** to activate the device.

---

**WARNING**

**STRONG PASSWORD RECOMMENDED**— We highly recommend you create a strong password of your own choosing (using a minimum of 8 characters, including upper case letters, lower case letters, numbers, and special characters) in order to increase the security of your product. And we recommend you reset your password regularly, especially in the high security system, resetting the password monthly or weekly can better protect your product.

Step 5 Change the device IP address to the same subnet with your computer by either modifying the IP address manually or checking **Enable DHCP**.
Step 6 Input the password and click **Modify** to activate your IP address modification.

### 4.2.2 Activate via Web Browser

Step 1 Power on the camera, and connect the camera to the network.

Step 2 Input the IP address into the address bar of the web browser, and press Enter to enter the activation interface.

Step 3 Create a password.
**WARNING**

**STRONG PASSWORD RECOMMENDED**— We highly recommend you create a strong password of your own choosing (using a minimum of 8 characters, including upper case letters, lower case letters, numbers, and special characters) in order to increase the security of your product. And we recommend you reset your password regularly, especially in the high security system, resetting the password monthly or weekly can better protect your product.

Step 4 Confirm the password.

Step 5 Click **OK** to save the password and enter the live view interface.

### 4.3 Login

You can log in to the camera via web browser.

Step 1 Open the web browser.

Step 2 In the browser address bar, enter the IP address of the camera, and press the **Enter** key to enter the login interface.

Step 3 Enter **User Name** and **Password**.

Step 4 Click **Login**.

![Figure 4-6 Login](image)

Step 5 Install the plug-in before viewing the live video and operating the camera. Follow the installation prompts to install the plug-in.

**NOTE**

You may have to close the web browser to install the plug-in. Please reopen the web browser and log in again after installing the plug-in.

0403022000122
See Far, Go Further