

# R7 Network PTZ Dome Camera Firmware

## Version: V5.6.0 Release Note (External)

(2019-03-22)

### 1. Firmware Version Information

#### 1.1 Firmware Basic Information

PTZ:

IPD\_R7\_EN\_XXX\_5.6.0\_190128

Zoom camera:

IPZ\_R7\_EN\_XXX\_5.6.0\_190128

Positioning System:

IPTM\_R7\_EN\_NEU\_5.6.0\_190128

Explosion Proof PTZ:

IPDEX\_R7\_EN\_XXX\_5.6.0\_190128

Explosion Proof Zoom camera:

IPZOOM\_EX\_R7\_EN\_XXX\_5.6.0\_190128

Hllook PTZ:

IPDHL\_R7\_EN\_XXX\_5.6.0\_190128

#### 1.2 Compatibility Updates

All involved products are listed in the attachment:



5.6.0 R7  
products list.xlsx

Note: After upgrading to 5.6.0, the device can not be downgraded to 5.5.X, 5.4.X, etc.

## 2. Related Resource Versions

### 2.1 Built-in Resource Versions

- (1) SDK version: HCNetsDKV6.0.2.10\_build20190117\_win32
- (2) Play lib (PlayCtrl.dll): V7.3.6.0\_Build20190103
- (3) Transform package lib (SystemTransform.dll): V2.5.3.7\_Build20181109
- (4) Audio Intercommunication lib (AudioIntercom.dll): 1.4.0.6build20171113
- (5) iVMS 4200 client: V2.6.14.100 build20190116
- (6) Plugin: V4.0.1 build 190123

### 2.2 Protocol Versions

- (1) Onvif version: 17.12
- (2) ISAPI version: 2.4

### 2.3 Third-party Platform Software Versions

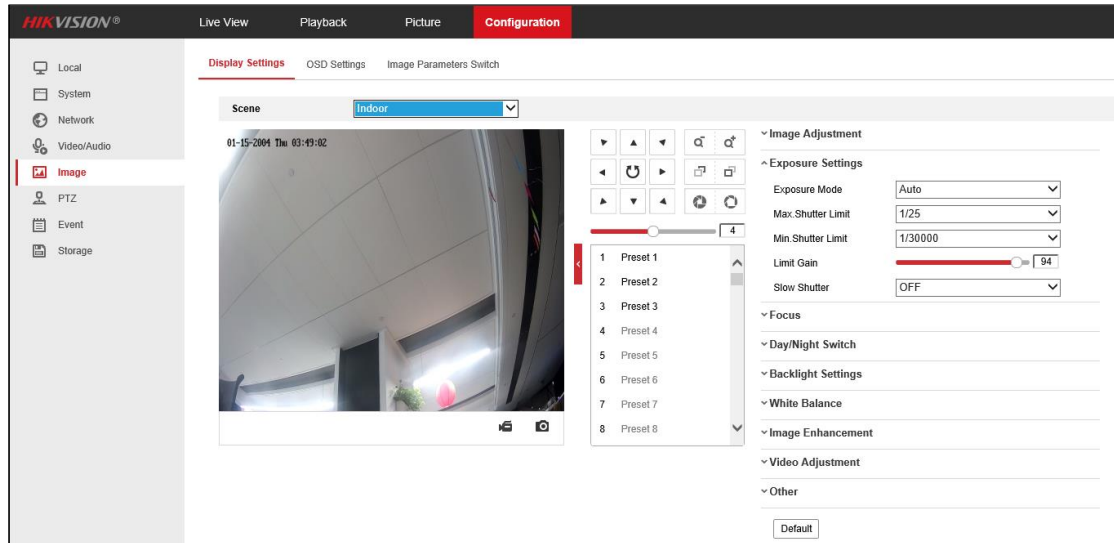
- (1) Milestone software version (Milestone Enterprise 8.1a(2016 R2 10.2a),Milestone driver version (Device Pack 10.1)
- (2) Milestone software version (Milestone Corporate 2018 R2), Milestone driver version (Device Pack 10.1)
- (3) Exacqvision software version (9.8.3.149440)
- (4) Avigilon Control Center 6.14.0.10
- (5) Intellect.v4.10.4
- (6) Digifort : V7.2.1
- (7) Axxon : AxxonNext-4.2.0.76971

## 3. Version Main Updates

### 3.1 New Functions

#### 3.1.1 Remove exposure level option

- The exposure algorithm is updated: the exposure level in the web plugin and the exposure level in the menu are removed;

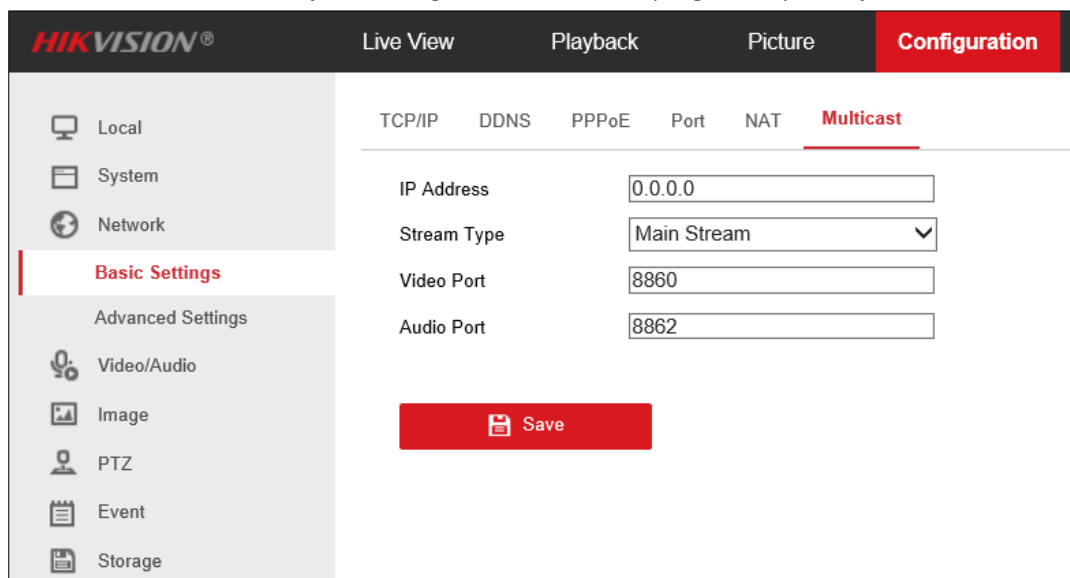


### 3.1.2 Day/Night switch configuration in zoom camera is consistent with PTZ

- 4 scene parameters: indoor/outdoor/day/night;
- ZMN0407 and ZCN0407-SDI, the default scene is indoor, and the default minimum focus distance is 1.5m (indoor), and 3m (outdoor);
- For zoom camera with more than 20x optical zoom, the default minimum focus distance is 3m (indoor), and 6m (outdoor);

### 3.1.3 Configure Multicast Live View Address

- Configure the multicast address and port on the configuration tab. Different channels and different streams can be configured with their own multicast ports.
- - This feature can only be configured via the web plugin temporarily.



### 3.1.4 Modify Intrusion Detection Time Threshold

- Intrusion time threshold can be set from 0 to 10, 5 as the default.

### **3.1.5 Update plugin Login solution**

- For security considerations, 5.6.0 updated plugin login solution;
- - After the upgrade from 5.5.X to 5.6.0, the plugin needs to be updated. Old plugin is not compatible with the new solution, and the new plugin can be compatible with the old package.
- The plugin will log out after 30 minutes of inactivity and will need to log in again, while preview and playback are not involved.

### **3.1.6 Update Metadata**

- RTSP over HTTPS preview is supported when metadata is enabled;
- Metadata enables users to integrate camera-based intelligence with server-based intelligence algorithms, reduce server stress and improve system performance; users need to complete the onvif and ISAPI metadata upload information;
- Metadata completion: intrusion detection, line-crossing detection, region entrance detection, region exiting detection), license plate;
- Metadata is supported on onvif and ISAPI, private information could be uploaded via Metadata, and the rule box and the target box are displayed on the preview tab.

### **3.1.7 Add scheduled tasks in zoom cameras**

- The following Scheduled tasks are supported in zoom cameras:
  - Auto scan, patrol, preset, or closed;
  - The priority of the scheduled tasks is higher than the park action, and lower than the alarm.

### **3.1.8 Default Protocol parameters are redefined**

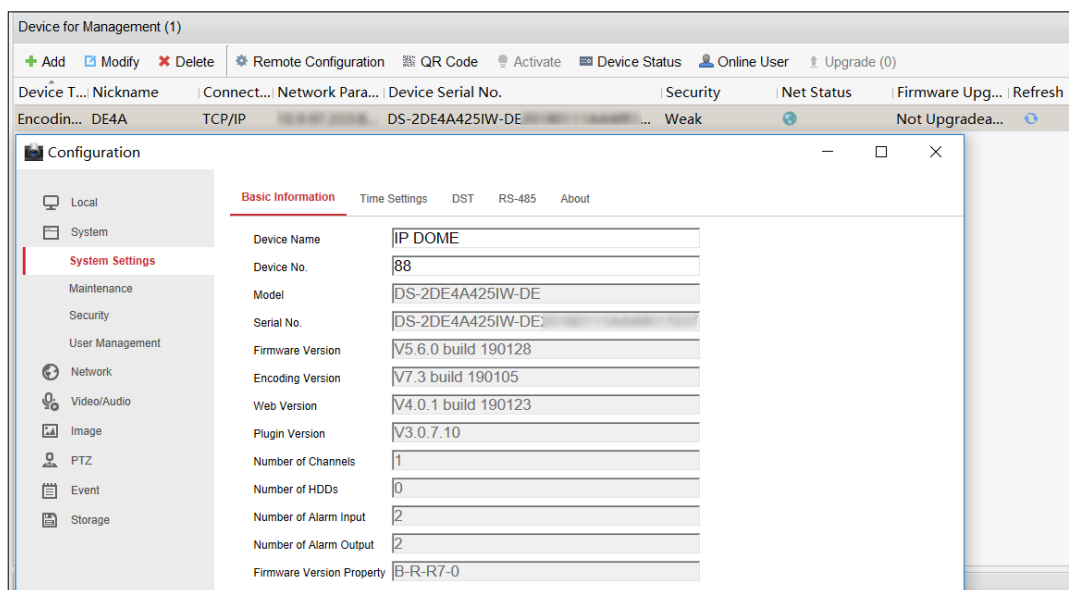
- HTTPS, WebSocket, SDK services
  - Enhanced SDK service is enabled by default. 'Restore' action keeps the parameters as before, while 'Default' would enable the enhanced SDK by default;
  - ONVIF service is not enabled by default, 'Restore' action keeps the parameters as before, while 'Default' would not enable ONVIF by default; websockets is not enabled by default, 'Restore' and 'Default' would not enable the websockets by default.
  - TLS1.1 and TLS1.2 are enabled by default, for both 'Restore' and 'Default' operations ;
  - For old devices upgrading to 5.6.0, maintain the original parameters: if the SDKS did not exist before, the new version is not enabled by default;
  - For the new cameras of 5.6.0, the SDKS (SDK over TLS) service is enabled by default.

### **3.1.9 Optimize of power-off memory solution**

- The focus value is recorded in power-off memory scenario.

### **3.1.10 Hik-Connect could operate the device to focus and zoom**

### **3.1.11 iVMS-4200 configure devices via web built-in method**



### 3.1.12 Hik-Connect verification code 'ABCDEF' cannot be configured

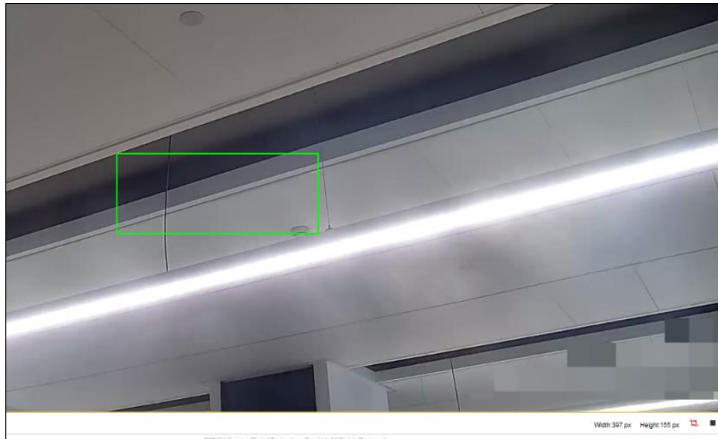
- When entering the 'ABCDEF' as password in SADP or web browser, the widget displays that the password cannot be configured;
- Widget warning: 6-12 letters or numbers, case sensitive; ABCDEF and any combination of in this order are not allowed. To ensure device security, it is recommended to set a combination of uppercase and lowercase letters + numbers for more than 8 digits;
- iVMS 4200 can configure the Hik-Connect verification code when the device is activated.

### 3.1.13 Add user name and password validation check

- User Name: within the following characters:
  - A-Z,a-z,0-9 and !#\$%&'()\*+,-./:&lt;=&gt;?@[^\_`{}}~Tab;
- Password: within the following characters:
  - A\_Z,a-z,0-9 and !"#%&'()\*+,-./:&lt;=&gt;?@[^\_`{}}~Tab;
- Involved modules: login, activation, user management, ONVIF user management, channel management;
- Old device compatibility: old device, new client app; -- Client and WEB login are not restricted, old user name can be logged in normally;
- New device, old client app; when setting unsupported user name and password, the interface reports an error. Password full of tabs is not supported.

### 3.1.14 Add Pixel Calculator Function

- One rectangle calculation (pixel value: width\* height). By plotting a rectangle on the current stream, The pixel value is calculated under the main stream resolution;
- Units are displayed as px, supported by both plugins and no plugins.



### 3.1.15 Upgrade specific SD cards

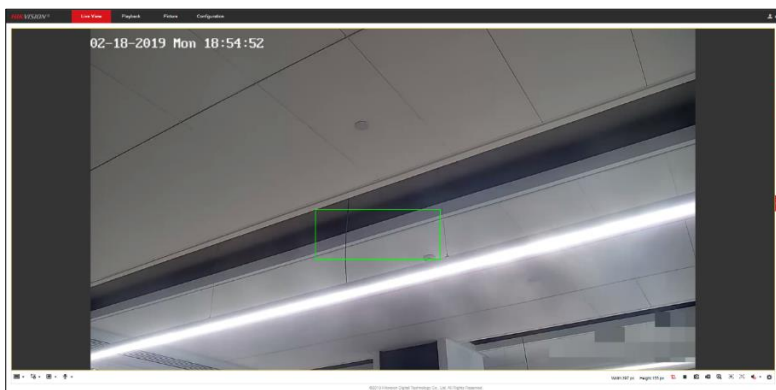
- Specific SD cards could be upgraded through PTZ devices;
- This upgrade is applicable to Hikvision MicroSD card products: L2 series (16G, 32G, 64G, 128G ), and H1 series (32G, 64G).

### 3.1.16 Add Korean OSD character set

- - Add character set selection to the OSD configuration tab, "GBK" and "EUC-KR" are available, and the default is "GBK"; you can switch the character set through the web and iVMS 4200;
- - After switching the set, the device needs to be rebooted, and the previously filled content will be cleared;
- - Korean set is supported in the date, channel name, and character overlay settings, while in the OSD menu it is not supported.
- The length of the Korean is as long as GBK and cannot exceed 44 ASCII characters.

### 3.1.17 Add Original Scale Aspect Ratio in IE Live View

- Original scale aspect ratio is added in IE plugin Live View view mode to solve the image deformation problem in 16:9, 4:3, original size, and adaptive mode.



### 3.1.18 'Configuration file Import' is Supported by Batch Configuration Tool

- Batch configuration tool supports batch import of device configuration files; which could be configured via bin file.

### 3.1.19 Add Alarm output delay option

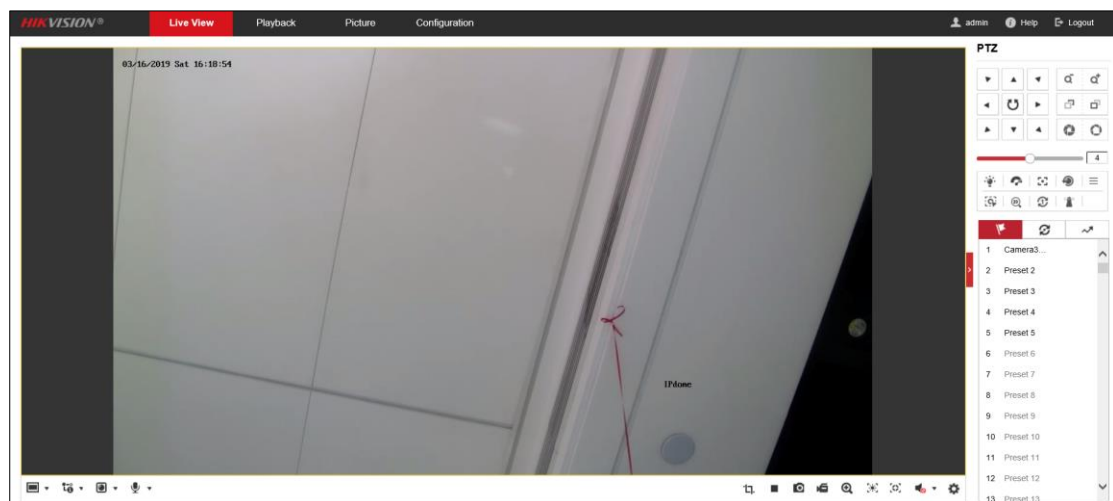
- Add alarm output delay configuration, 5s/10s... were available before, in order to adapt to different application environments, the configuration of 1s is added;
- Alarm output delay can be configured as manual, 1s, 5s, 10s, 30s, 1 min, 2 mins, 5 mins, 10 mins.

### 3.1.20 ROI region numbers are updated

- Maximum 4 ROIs are able to configured for PTZ, while 2 for zoom cameras.

### 3.1.21 PTZ is expanded in Live View by default

- PTZ is expanded in Live View by default



### 3.1.22 Focus value is memorized for presets

- Both focus and zoom values are memorized for all presets.

### 3.1.23 DE5 products specification is upgraded

- Auto tracking is added in DS-2DE5432IW-AE(B)、DS-2DE5425IW-AE(B).

### 3.1.24 Description is modified in event linkage method

- In the event linkage method of basic event and smart event, "Upload to FTP" is changed to "Upload to FTP/Memory Card/NAS";
- FTP is independent. When the SD card/NAS is configured simultaneous, NAS is uploaded firstly.

Area Settings > Arming Schedule > Linkage Method		
<input type="checkbox"/> Normal Linkage	<input type="checkbox"/> Trigger Alarm Output	<input type="checkbox"/> Trigger Recording
<input type="checkbox"/> Send Email	<input type="checkbox"/> A->1	<input type="checkbox"/> A1
<input type="checkbox"/> Notify Surveillance Center	<input type="checkbox"/> A->2	
<input checked="" type="checkbox"/> Upload to FTP/Memory Card/...		

### 3.1.25 Unify Hik-Central configuration

- In HD mode, the main stream is taken, and the main stream parameters remain unchanged;
- In equalization mode, if the substream resolution is 704×576/640×480/640×360, the resolution remains unchanged; else, the substream is modified to the default resolution;
- In smooth mode, if the substream resolution is 320×240/352×288, the resolution remains unchanged; else if the substream supports 320×240/352×288, the substream is modified to 320×240/352×288; else, the substream is switched to the default resolution;
- If the live view resolution is switched to HD in Hik-Connect, the main stream parameters at the device side are not changed.

### 3.1.26 The minimum focus distance is changed for DE4, DE2A PTZ

- The minimum focus distance is changed to 1.5m for indoor/outdoor scenes. The detailed products are listed below:



## 3.2 Security Requirements

### 3.2.1 Security of Wi-Fi devices is enhanced

- Wi-Fi component library is update. Wi-Fi could be set to on/off; default is on.

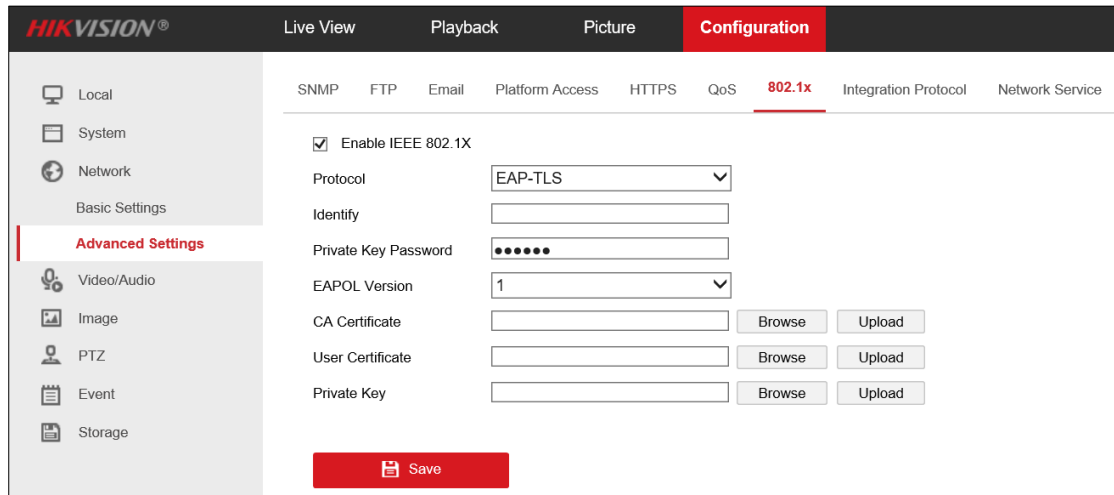
### 3.2.2 Self-signed Certificate Hostname/IP could be Modified

- The device needs to be automatically rebuilt for the default self-signed certificate. If 192.168.1.64 is detected, the certificate would be rebuilt. Random numbers (letters) are used;
- 'Restore' maintains the state before recovery, 'Default' recreates the self-signed certificate.

### 3.2.3 Add 802.1X authentication (EAP-TLS, EAP-LEAP)

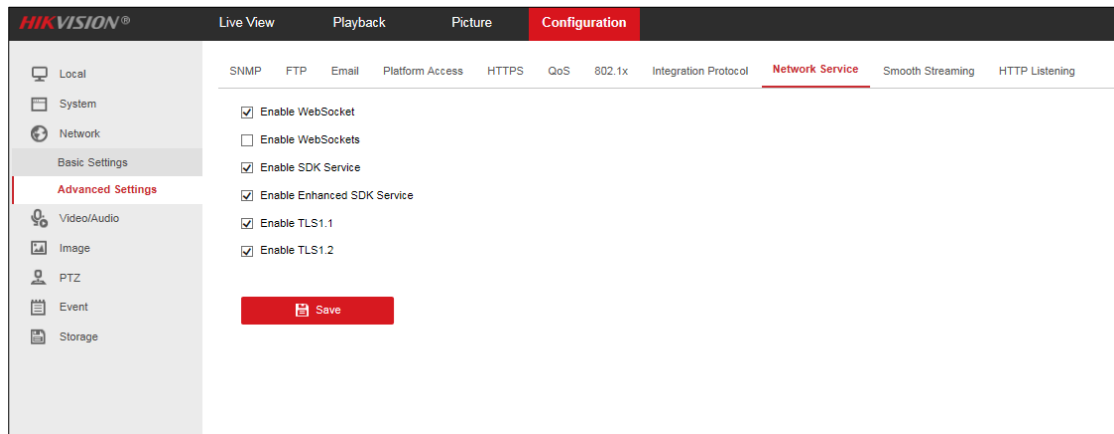
- 2 protocols of 802.1X is added: EAP-TLS, EAP-LEAP, and the certificate is not restored after 'Restore';

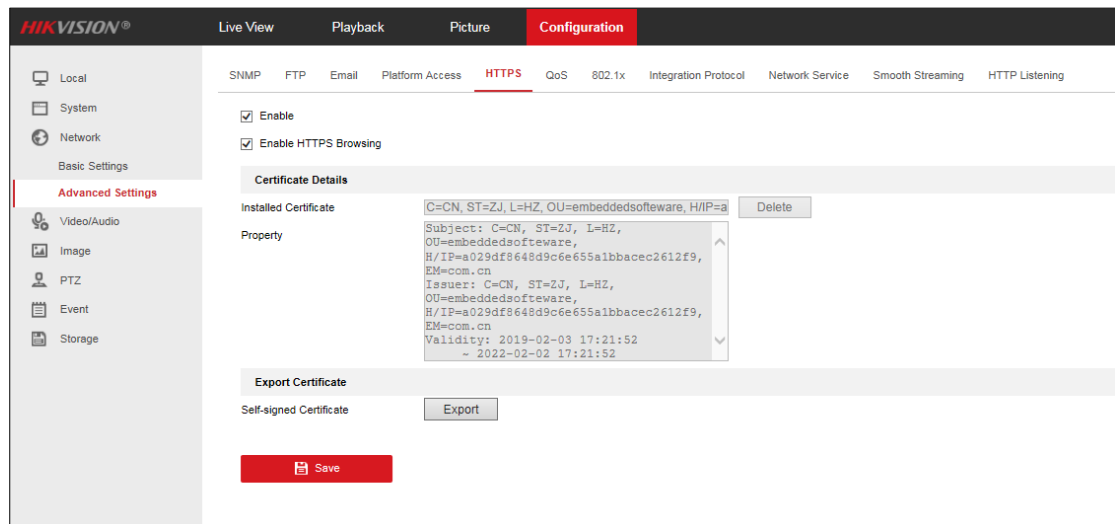




- Add SDK over TLS protocol port configuration. The default port is 8443, with the configuration range 2000~65535. It cannot be duplicated with other protocol ports. The name is an enhanced service port. For the SDK protocol that defaults to port 8000, the logic remains the same;
- SDK over TLS service could be enabled/disabled, and the default SDK over TLS service is enabled (for the 'Default' operation), and the name is to enabling the enhanced SDK service. SDK service could also be enabled/disabled, and the name is enabling the SDK service. 'Restore' maintains the parameters as before;
- When the service is provided through the SDK over TLS, the stream is sent by RTSP;
- The self-signed root certificate could be exported;
- A self-signed certificate is generated on the first boot, and the SDK over TLS service is started via a self-signed certificate. Certificate and https could be reused, without additional SDK over TLS certificate management;
- Device has a self-signed certificate before delivery. At this time, SDK over TLS is enable by default.
- A warning is added when Device certificate is deleted for Websockets, https, and SDK over TLS.

### 3.2.4 Upgrade SDK Over TLS Security & SDK Protocol Security Methods





### 3.2.5 Https is enabled by default, while disabled in page redirecting.

- Https is enabled by default. 'Restore' operation maintains the parameters as before. Full recovery is enabled by default; while 'Default' would enable https by default;
- https redirecting is supported, but is not enabled by default.