



How to integrate with Hikvision LPR function via ISAPI

Version: 1.0

Date: 2015-02-12

1. Overview

Vehicle Detection and Mixed-traffic Detection are available for the road traffic monitoring. In Vehicle Detection, the passed vehicle can be detected and the picture of its license plate can be captured; besides, the vehicle color, vehicle logo and other information can be recognized automatically.

In Mixed-traffic Detection, the pedestrian, motor vehicle and non-motor vehicle can be detected, and the picture of the object (for pedestrian/non-motor vehicle/motor vehicle without license plate) or license plate (for motor vehicle with license plate) can be captured. You can send alarm signal to notify the surveillance center and upload the captured picture to FTP server.

Note:

Road traffic function varies according to different camera models.

2. Services and General Resources

This part just introduces some key features (different with other general cameras) that you need to pay attention to. Those that the documentation doesn't mention are same as other IP cameras.

2.1 APIs of LPR Funtion

2.1.1 /ISAPI/Traffic/channels/<ID>/vehicleDetect

/ISAPI/Traffic/channels/<ID>/vehicleDetect		General Resource v2.0
GET		
Description	It is used to get the configuration of vehicle detection.	
Query	None	
Inbound Data	None	
Success Return	VehicleDetectCfg	
PUT		
Description	It is used to update the configuration of vehicle detection.	
Query	None	
Inbound Data	VehicleDetectCfg	
Success Return	ResponseStatus	
Notes:		
The number of PlateRecogRegion should be same with the number of lane.		

VehicleDetectCfg XML Block

```
<VehicleDetectCfg version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <enabled>                <!-- req, xs:boolean -->                </enabled>
  <nation> <!-- opt, xs:string,"EU,ER" --> </nation>
```

```

<stateOrProvince> <!-- opt, xs:interger --> </stateOrProvince>
<VehicleDetectSceneList>
  <VehicleDetectScene/>
</VehicleDetectSceneList>
</VehicleDetectCfg>

```

/ISAPI/ContentMgmt/search		General Resource v2.0
GET POST		
Description	It is used to search picture.	
Query	None	
Inbound Data	CMSearchDescription	
Success Return	CMSearchResult	
Notes:		
//recordType.meta.std-cgi.com/ vehicleDetection		

CMSearchDescription XML Block

```

<CMSearchDescription version="1.0" xmlns=" http://www.std-cgi.org/ver20/XMLSchema">
  <searchID><!-- req, xs: uuid --></searchID>
  <timeSpanList>
    <timeSpan>
      <startTime><!-- req, xs:time, ISO8601 time --></startTime>
      <endTime><!-- req, xs:time, ISO8601 time --></endTime>
    </timeSpan>
  </timeSpanList>
  <metadataList>
    <metadata>
      <metadataDescriptor><!-- req, xs:string --></metadataDescriptor>
      <SearchProperty>
        <plateSearchMask><!-- opt, xs:string,1-31 --></plateSearchMask>
        <stateOrProvince><!-- opt, xs:interger --></stateOrProvince>
        <nation> <!-- opt, xs:string,"EU,ER" --> </nation>
      </SearchProperty>
    </metadata>
  </metadataList>
  <searchResultPosition> <!-- opt, xs: interger --></searchResultPosition>
  <maxResults><!-- opt, xs: interger --></maxResults>
</CMSearchDescription>

```

2.1.2 /ISAPI/System/Video/inputs/channels/ID/VCAResource

/ISAPI/System/Video/inputs/channels/ID/VCAResource		General Resource v2.0
--	--	-----------------------

GET	
Description	Get the parameter configuration of VCA resources.
Query	None
Inbound Data	None
Success Return	VCAResource
PUT	
Description	Set the parameter configuration of VCA resources.
Query	None
Inbound Data	VCAResource
Success Return	ResponseStatus
Notes:	

VCAResource XML Block

```
<VCAResource version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <type> <!--req,xs:string,
"basicBehavior,fullBehavior,facesnapBehavior,facesnap,TFS,smartVehicleDetection,smartHVTDe
ction,smartDetection, vehicleDetection" --> </type>
</VCAResource>
```

2.1.3 /ISAPI/Event/notification/httpServers/ID

/ISAPI/Event/notification/httpServers/ID		General Resource v2.0
GET		
Description	It is used to get the configuration of a particular http server.	
Query	None	
Inbound Data	None	
Success Return	HttpServer	
PUT		
Description	It is used to set the configuration of a particular http server.	
Query	None	
Inbound Data	HttpServer	
Success Return	ResponseStatus	
Notes:		
<enabled> Enable the event alarm uploading via ISAPI or not.		
<protocolType> HTTPS is not supported.		
<httpAuthenticationMethod> MD5digest is not supported.		
<uploadPicture> whether there is need to upload the picture.		

HttpServer XML Block

```
<HttpServer version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
```

```

<url> <!-- req, xs:string --> </url>
<enabled> <!-- req, xs:boolean --> </enabled>
<protocolType> <!-- opt, xs:string, "HTTP,HTTPS" --> </protocolType>
<parameterFormatType>
<!-- opt, xs:string, "XML,querystring" -->
</parameterFormatType>
<addressingFormatType>
  <!-- req, xs:string, "ipaddress,hostname" -->
</addressingFormatType>
<hostName> <!-- dep, xs:string --> </hostName>
<ipAddress><!-- dep, xs:string --> </ipAddress>
<ipv6Address> <!-- dep, xs:string --> </ipv6Address>
<portNo> <!-- opt, xs:integer --> </portNo>
<userName> <!-- dep, xs:string --> </userName>
<password><!-- dep, xs:string --> </password>
<httpAuthenticationMethod>
<!-- req, xs:string, "MD5digest,none,basic" -->
</httpAuthenticationMethod>
<uploadPicture><!--opt, xs:boolean --> </uploadPicture>
</HttpServer>

```

2.1.4 HTTP Notification Alert

http://<ipAddress>:<portNo>/<url>		General Resource v2.0
POST		
Description	HTTP notification alert request.	
Query		
Inbound Data		
Success Return		
Notes:		
Alarm info is the query of url, picture exists in the http body.		
channel=		
dateTime=		
eventType= vehicleDetection		
licensePlate=		
region=		
country=		
vehicleType=		
vehicleColor=		

Notification XML Alert

```

POST
/?channelID=1&dateTime=2014-12-30T11:03:40+08:00&eventType=vehicleDetection&licensePlat

```

e=1234567®ion=EU&country=France&vehicleType=motorVehicle&vehicleColor=black
HTTP/1.1
Authorization: Basic YWRtaW46MTIzNDU=
Content-Type:image/jpeg
Content-Length:15453

(The binary data of JPEG is omitted.)

3. Appendix

Number	Timeline	Version	Person	Description
1	2014.12.30	V1.0.0	Linming He	Creat