ANPR via ISAPI

Description

This manual defines the HTTP-based OPEN Intelligent Security Application Programming Interface (ISAPI).The OPEN Intelligent Security API is used for the intelligent security clientsoftware or system to communicate with the devices.

Authorization and WWW-Authentication

The request sent to device should be authenticated by the Digest Access method of the RFC 2617 protocol, so all the devices should support the Digest Access method.
Each request must be sent with Authorization header field. Otherwise, HTTP response (401) will be returned with WWW-Authenticate header field.
For details about the Digest Authentication, refer to the website:
http://www.ietf.org/rfc/rfc2617.txt.

How to get ANPR alarm via ISAPI

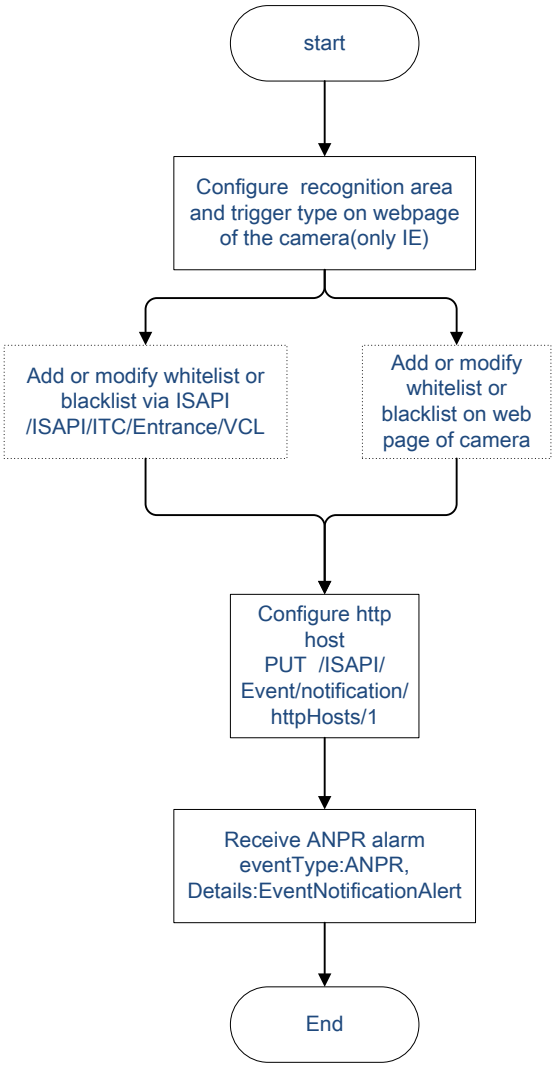
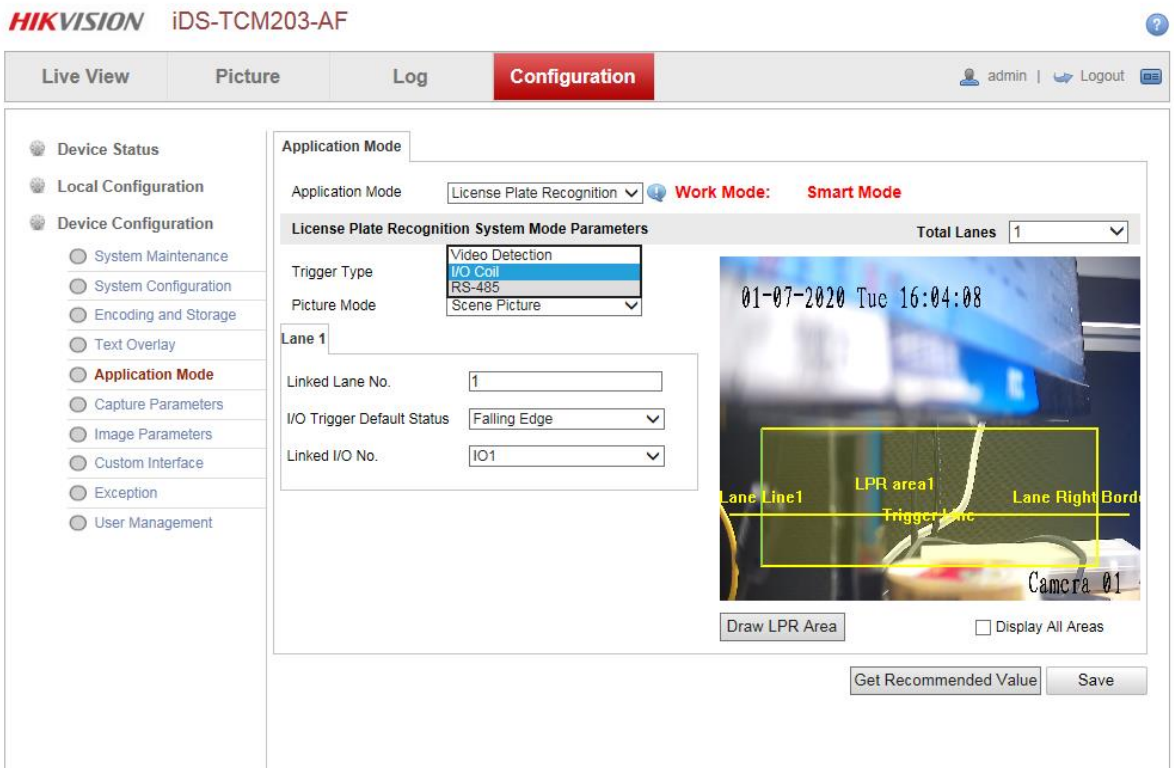


Figure 1 Programming flow of configuring ANPR alarm

For detailed ISAPI protocol or operation on camera, please refer to)1, 2), 3) and 4)

1)configure recognition area and trigger type

please select Application Mode as “License Plate Recognition” and then configure **trigger type and** draw **LPR area** and on the web page of the camera. Please install plugin on IE at first.



2)configure white/black list

please configure white/black list via ISAPI protocol or on web page of the camer. if you don't need white/blac list function, please ingore this part.

Configure by ISAPI protocol:

a. add license plate one by one

URL:	/ISAPI/ITC/Entrance/VCL
Method:	PUT
Description:	Add or modify one license plate to list
Authentication	digest
Query Parameters:	None
Inbound Data:	<?xml version="1.0" encoding="utf-8"?> <SetVCLData> <VCLDataList> <singleVCLData> <id>0</id> <runNum>0</runNum> <listType>0</listType> <plateNum>123</plateNum>

	<cardNo/> <startTime>0000-00-00T00:00:00Z</startTime> <endTime>0000-00-00T00:00:00Z</endTime> </singleVCLData> </VCLDataList> </SetVCLData> Note: value of listType 0:Whitelist 1:Blacklist 2:Graylist 3:Yellolist 4:Otherlist
Return:	

URL:	/ISAPI/ITC/Entrance/VCL
Method:	DELETE
Description:	Delete one license plate to list
Authentication	digest
Query Parameters:	None
Inbound Data:	<?xml version="1.0" encoding="utf-8"?> <VCLDelCond> <delVCLCond>1</delVCLCond> <plateNum>123</plateNum> <plateColor>0</plateColor> <plateType>0</plateType> <cardNo>123</cardNo> </VCLDelCond> Note: delVCLCond (value is 1) and plateNum are necessary.
Return:	

b. add license plate in batch:

Step1:

Export list (excel file) on webpage of camera at first, no ISAPI protocol

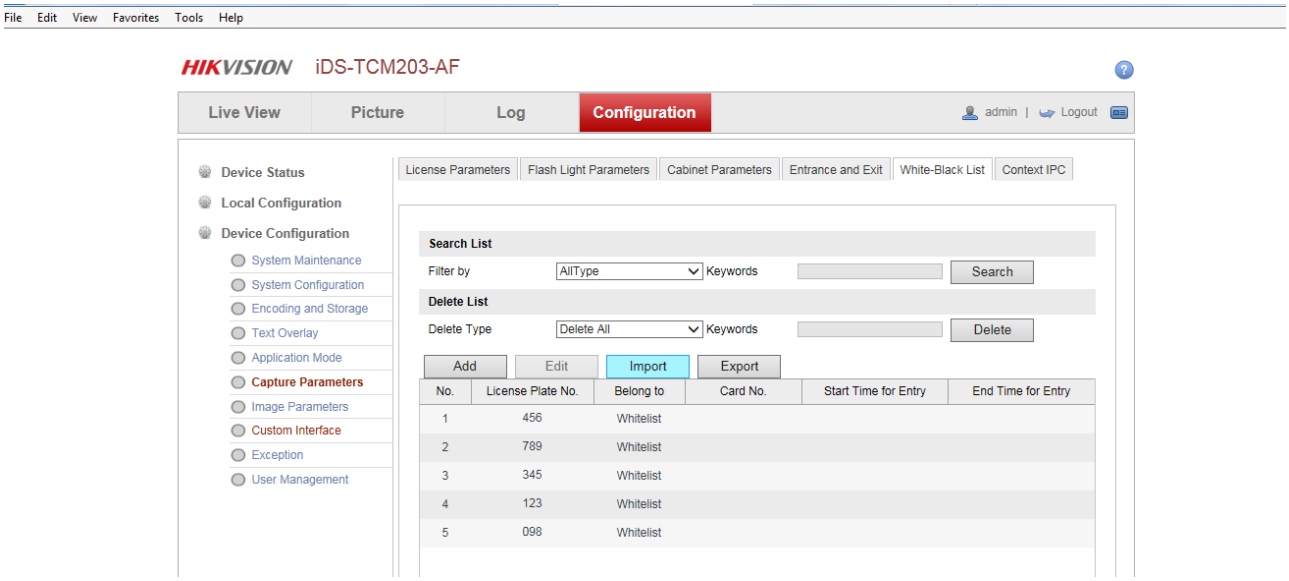
Sorry that our camera only support export license plate by IE plugin.

Step 2

URL:	/ISAPI/ITC/Entrance/VCL
Method:	POST
Description:	Import license plate list
Authentication	digest
Query Parameters:	None
Inbound Data:	Excel file exported in step 1 in binary
Return:	

configure on web page of camera:

Please refer to the webpage of the camera for configuratioin



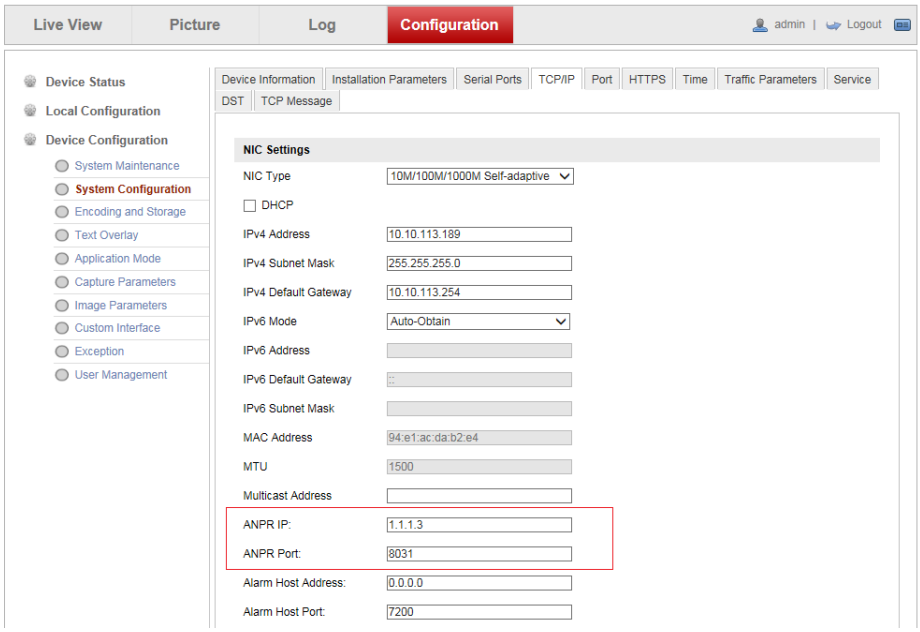
3)set HTTP host information

your platform is the HTTP server, our camera will send ANPR information via HTTP request with POST method to your platform.

URL:	/ISAPI/Event/notification/httpHosts/1
Method:	PUT
Description:	set HTTP host information
Authentication	digest

Query Parameters:	None
Inbound Data:	<?xml version="1.0" encoding="UTF-8"?> <HttpHostNotification version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema"> <id>1</id> <url>/hehe</url> <addressingFormatType>ipaddress</addressingFormatType> <ipAddress>1.1.1.3</ipAddress> <portNo>8031</portNo> </HttpHostNotification>
Return:	

Note:
please modify ipAddress and portNo to your platform.
You can check the configuration on the web page of the camera



4)Parse ANPR alarm

when ANPR alarm is triggered, your platform should receive ANPR alarm(includes license plate picture, background picture and ANPR information), like below(only shows ANPR information):

<EventNotificationAlert version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">

<ipAddress>10.10.113.194</ipAddress>

<ipv6Address>::</ipv6Address>

<portNo>16064</portNo>

<protocol>HTTP</protocol>

<macAddress>00:00:00:18:01:27</macAddress>

<channelID>1</channelID>

<dateTime>2019-10-09T14:43:59+08:00</dateTime>

<activePostCount>1</activePostCount>

<eventType>ANPR</eventType>

<eventState>active</eventState>

<eventDescription>ANPR</eventDescription>

<channelName>IP CAPTURE CAMERA</channelName>

<ANPR>

<licensePlate>CVI500</licensePlate>

<line>1</line>

<confidenceLevel>100</confidenceLevel>

<plateType>unknown</plateType>

<plateColor>other</plateColor>

<licenseBright>95</licenseBright>

<pilotsafebelt>unknown</pilotsafebelt>

<vicepilotsafebelt>unknown</vicepilotsafebelt>

<pilotsunvisor>unknown</pilotsunvisor>

<vicepilotsunvisor>unknown</vicepilotsunvisor>

<envprosign>unknown</envprosign>

<dangmark>unknown</dangmark>

<uphone>unknown</uphone>

<pendant>unknown</pendant>

<tissueBox>unknown</tissueBox>

<label>unknown</label>

<decoration>unknown</decoration>

<plateCharBelieve>100,100,99,100,100,100</plateCharBelieve>

<speedLimit>0</speedLimit>

<illegalInfo>

<illegalCode>0</illegalCode>

</illegalInfo>

<vehicleType>unknown</vehicleType>

<featurePicFileName>1</featurePicFileName>

<detectDir>8</detectDir>

<detectType>3</detectType>

<barrierGateCtrlType>0</barrierGateCtrlType>

<alarmDataType>0</alarmDataType>

<dwIllegalTime>0</dwIllegalTime>

<vehicleInfo>

<index>-1459617792</index>

<vehicleType>0</vehicleType>

<colorDepth>0</colorDepth>

<color>unknown</color>

<speed>0</speed>

<length>0</length>

<vehicleLogoRecog>0</vehicleLogoRecog>

<vehileSubLogoRecog>0</vehileSubLogoRecog>

<vehileModel>0</vehileModel>

</vehicleInfo>

<pictureInfoList>

<pictureInfo>

<fileName>licensePlatePicture.jpg</fileName>

<type>licensePlatePicture</type>

<dataType>0</dataType>

</pictureInfo>

<pictureInfo>

<fileName>detectionPicture.jpg</fileName>

<type>licensePlatePicture</type>

<dataType>0</dataType>

<vehicleHead>back</vehicleHead>

<redLightTime>0</redLightTime>

<absTime>20191009144359425</absTime>

<plateRect>

<X>51713</X>

<Y>15105</Y>

<width>11264</width>

<height>4096</height>

</plateRect>

</pictureInfo>

</pictureInfoList>

</ANPR>

<UUID>3b2995fa-1dd2-11b2-9ed9-9aca868f1879</UUID>

<picNum>2</picNum>

<monitoringSiteID></monitoringSiteID>

<deviceID></deviceID>

</EventNotificationAlert>

Value of vehicle type:
0-other vehicle, 1-small-sized vehicle, 2-large-sized vehicle, 3-pedestrian trigger, 4-two wheeler trigger, 5- tricycle

Valude of vehicle color:
"unknown", "white", "silver"-
silvery, "gray", "blacks"-balck, "red", "deepBlue"-dark blue, "blue", "yellow", "green", "brown", "pink", "purple", "deepGray"-dark gray, "cyan", "orange"

Code of vehicle logo:

1026	ALFAROMEO
1027	ASTONMARTIN
1028	AUDI

1030	PORSCHE
1031	BUICK
1032	BJQICHE
1033	BQZHIDAO
1034	BQWEIWANG
1035	BQYINXIANG
1036	BENZ
1037	BMW
1038	BAOJUN
1039	BAOLONG
1040	BENTLEY
1041	BRABUS
1043	HONDA
1044	PEUGEOT
1045	BYD
1046	CHANGHE
1048	GREATWALL
1049	CHANGAN
1050	DS
1051	SOUEAST
1053	VOLKSWAGEN
1054	DADI
1056	DODGE
1059	DAIHATSU
1060	TOYOTA
1063	FEREARI
1064	FORD
1066	FUDI
1067	FIAT
1069	MITSUOKA
1070	GZYUNBAO
1071	GQCHUANQI
1074	QOROS
1076	HUAPU
1077	HUATAI
1078	HAFEI
1079	HUMMER
1080	HAIMA
1081	HONGQI
1083	GEELYAUTO
1084	JEEP
1085	JAGUAR
1086	JIANGNAN
1088	CHRYSLER

1089	CADILLAC
1091	KANDIONE
1093	LAMBORGHINI
1094	LIFAN
1095	ROLLSROYCE
1096	LINCOLN
1097	EVERUS
1098	LIANHUA
1100	LOTUS
1101	LANDROVER
1102	SUZUKI
1103	LUFENG
1104	LEXUS
1105	RENAULT
1107	MINI
1108	MASERATI
1109	MEIYA
1110	MCLAREN
1111	MAYBACH
1112	MAZDA
1114	LUXGEN
1115	NJJINLONG
1116	OPEL
1117	ACURA
1119	VENUCIA
1120	CHERY
1121	KIA
1123	NISSAN
1124	RUIQI
1125	ROEWE
1127	SMART
1128	MITSUBISHI
1129	SQDATONG
1131	SHUANGHUAN
1132	SHUANGLONG
1133	SUBARU
1134	SKODA
1135	SAAB
1138	TIANMA
1139	TEALA
1141	DENZA
1143	WEILIN
1144	VOLVO
1145	WCYINGZHI

1146	XINKAI
1147	XINDADI
1148	XINYATU
1149	HYUNDAI
1150	SEAT
1151	CHEVROLET
1152	CITROEN
1154	YONGYUAN
1156	INFINITI
1157	MUSTANG
1159	YUJIE
1160	ZXAUTO
1161	ZHONGHUA
1163	ZOTYE
1164	KNOWBEANS
1165	KAIYI
1166	HUASONG
1167	JXWUSHILING
1168	BORGWARD
1169	SQTONGJIA
1170	HANJIANG
1171	ZINORO
1172	LUDIFANGZHOU
1173	HANTENG
1175	CHANGJIANG
1176	SWM
1177	KEYTON
1180	BISU
1181	CAKUAYUE
1537	ANKAI
1538	ANYUAN
1540	BBZHONGQI
1546	CHENGGONG
1547	CHANGLONG
1549	CASHANGYONG
1552	DONGFENG
1554	DAEWOO
1555	DAYUN
1556	DIMA
1557	DONGWO
1559	FUTIAN
1561	GMC
1562	GQJIAO
1566	HUALING

1570	HUIZHONG
1571	HIGER
1574	HTYUANTONG
1575	HANGTIAN
1576	HUANGHAI
1577	HEIBAO
1578	JIULONG
1579	JIANGHUAI
1580	JIANGHUAN
1581	JIANGLING
1584	JINBEI
1585	JINLONG
1586	KAIMA
1587	KAWEI
1588	KAIRUI
1590	LIANHE
1592	MAN
1594	NONGYONGCHE
1596	NANJUN
1597	QINGLING
1598	YOUNGMANONE
1599	SYZHONGGONG
1600	SHSHITONG
1602	TRICYCLE
1603	SQYWKHY
1606	SHAOLIN
1608	SHIFENG
1609	SUNWIN
1611	SHENYE
1612	SHUCHI
1613	SHANQI
1614	SCANIA
1615	TANGJUN
1619	WANFENG
1620	WUZHENG
1621	WULING
1626	XUGONG
1629	FAW
1630	YAXING
1631	IVECO
1633	YUTONG
1634	YANGZI
1635	YANTAI
1636	YUEJIN

1637	YINTIAN
1639	ZGZHONGQI
1641	ZHONGTONGONE
1642	ZHONGSHUN
1644	ZHONGDA
1646	JGZHONGKA
1647	WUZHOULONG
1648	COACH
1651	PICKUP
1654	JIJIANG
1674	DONGFANGHONG
1676	QINGQI
1677	TRUCK
1678	SPYCAR
1679	TRAILCAR
1683	GUILIN
1684	SCHYUNDAI
1688	WANXIANG
1690	LFSHIJUN
1691	CHANGAN
1692	ZLZHONGGONG
1693	YINLONG
1695	YIXING
1696	XIWO
1697	YANGZIJIANG
1698	SUITONG
1702	ZHONGTIANFC
1703	WANDA
1704	SHANGRAO
1705	ZHONGZHI
1706	ZCSDDIANDONG
1707	ZHONGTONGTWO
1708	GLCOACH
1709	BEIJING
1710	BEIFANG
1711	BFNAPULAN
1712	HUACHUAN
1713	YOUYI
1714	TONGXIN
1715	MG
1716	JIACHUAN
1717	NVSHEN
1718	SHILI
1719	SHAOLINTWO

1720 CHUANJIAO
1721 CHUANMA
1722 GUANGQI
1723 GQRIYE
1724 KANGDITWO
1725 HENGTIAN
1726 HENGTONG
1727 XINFUDA
1728 XINLONGMA
1729 CHUANLAN
1730 CHUFENG
1731 JMCJM
1732 JMCZQ
1733 HAIOU
1734 MUDAN
1735 LEOPAARD
1736 SHENLONG
1737 FOTONSD
1738 HONGXING
1739 SHUCHITWO
1740 SHUDU
1741 HENGSHAN
1742 YUEXI
1743 YUANCHENG
1744 JINLV
1745 CAOUSHANG
1746 YOUNGMANTWO
1747 LINK
1748 FEIDIE
1749 FEICHI
1750 LISHAN
1751 JUNWEI
1752 NANQI
1753 DAHAN
1754 CHUNZHOU
1755 DIANKA
1756 HTWANSHAN
1757 ZOBENZFC
1758 YUNDU
1759 JUNMA
1760 GUOJIN
1761 WEIMA
1762 OULA
1763 NIO

1764	LADA
1765	JETOUR
1766	FORO
1767	HICOM
1768	JAC
1769	JEEP
1770	JEEP
1771	PERODUA
1772	UD
1773	TOYOTA
1774	TOYOTA
1775	ISUZU
1776	HYUNDAI-ROHENS
1777	BEIBEN TRUCK
1778	SSANGYONG
	SSANGYONG-OLD
1779	VERSION
1780	HAVAL
1781	DAIHATSU
1782	DAEWOO
1783	PROTON
1784	PROTON
1785	PROTON
1786	GEELY-EMGRAND
1787	HINO
1788	UNKNOW
1789	KIA
1790	KIA-OLD VERSION
1791	KIA-BORREGO
1792	ALFA
1793	EQUUS-OLD VERSION
1794	RENAULT SAMSUNG
1795	MALAYSIA_UNKNOWN 1
1796	AUCHAN
1797	BONLUCK
1798	JDMC
1799	WANXIANG
1800	SATE
1801	FLM
1802	SRM
1803	GEOMETRY
1804	BAOJUN-RS-5