

HTTP API OF AI

Version 3.0.4

Release notes			
Version	Description	Date	Authors
V3.0.1	First	2023/07/25	Kuang
V3.0.2	Add light, sound, and smart module capabilities; Add parameter acquisition and configuration for human-vehicle/tripwire/perimeter detection.	2024/02/04	Shawn
V3.0.3	Add face detection config and smart work status configuration	2024/08/05	Shawn
V3.0.4	Default use of Digest authentication	2024/12/20	Shawn

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1.Smart Module Capability

1.1 Description

Get smart module capability.

1.2 Get smart module capability

1.2.1 Grammar

Get smart module capability:

```
http://<DeviceIP>/cgi/ability.cgi?ability=ai_pv,ai_vg,ai_region,ai_face
```

1.2.2 Parameter

Parameter	Value	Description
ai_pv	practical	Human Vehicle Detection module,0 not supported, 1 supported
ai_vg	practical	Cross Line Detection module,0 not supported, 1 supported
ai_region	practical	Perimeter protection module,0 not supported, 1 supported
ai_face	practical	Face module,0 not supported, 1 supported

1.2.3 Example

Get smart module capability

REQUEST

```
http://192.168.2.188/cgi/ability.cgi?ability=ai_pv,ai_vg,ai_region,ai_face
```

RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: text/plain;charset=utf-8
```

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<root>
```

```
<version version='1' />
```

```
<ai_pv>1</ai_pv>
```

```
<ai_vg>1</ai_vg>
```

```
<ai_region>1</ai_region>
```

```
<ai_face>1</ai_face>

</root>
```

2. Smart module working status

2.1 Description

Get human & vehicle, cross line detection, perimeter protection and face detection enable status.

2.2 Grammar

Get smart module working status:

```
http://<DeviceIP>/cgi/ai.cgi?get=workingstatus
```

Set smart module working status:

```
http://<DeviceIP>/cgi/ai.cgi?set=workingstatus&data=<?xml version="1.0"
encoding="utf-8"?><root><workingstatus><ai_pv>0</ai_pv><ai_vg>0</ai_vg><ai_regi
on>0</ai_region><ai_face>0</ai_face></workingstatus></root>
```

2.3 Parameter

Parameter	Value	Description
ai_pv	practical	Human Vehicle Detection module,0-disable, 1-enable
ai_vg	practical	Cross Line Detection module,0-disable, 1-enable
ai_region	practical	Perimeter protection module,0-disable, 1-enable
ai_face	practical	Face module,0-disable, 1-enable

2.4 Example

2.4.1 Get smart module working status parameter

REQUEST

```
http://192.168.2.104/cgi/ai.cgi?get=workingstatus
```

RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: text/plain; charset=utf-8
```

```
<?xml version="1.0" encoding="GBK"?>
<root>
  <workingstatus>
    <ai_pv>1</ai_pv>
    <ai_vg>0</ai_vg>
    <ai_region>0</ai_region>
    <ai_face>0</ai_face>
  </workingstatus>
</root>
```

2.4.2 Set smart module working status parameter

REQUEST

```
http://192.168.2.104/cgi/ai.cgi?set=workingstatus&data=<?xml version="1.0"
encoding="utf-8"?><root><workingstatus><ai_pv>1</ai_pv><ai_vg>0</ai_vg><ai_regi
on>0</ai_region><ai_face>0</ai_face></workingstatus></root>
```

RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: text/plain; charset=utf-8
```

```
<?xml version="1.0" encoding="utf-8"?>
<root>
```

```
<code>0</code>

<error>successful</error>

</root>
```

3.Smart LinkageActions

3.1 Description

This instruction is to simplify the configuration of (PD&VD, LCD, PID) module linkage action, after using this instruction, the configuration of (PD&VD, LCD, PID) module parameters can be configured without the sequence of <action> node, and this instruction is best called after the configuration of (PD&VD, LCD, PID) module parameters.

This group of directives will get and set the data in Xml format consisting of PD&VD, tripwire detection (LCD), and area intrusion (PID) parameters, which contain module parameters, on/off, and sound file IDs.

3.2 Grammar

Get smart linkageactions parameter:

```
http://<DeviceIP>/cgi/ai.cgi?get=perimeter_actions
```

3.3 Parameter

Parameter	Value	Description
module_actions	practical	module_actions access to the linkage action parameters of different modules PD&VD:perimeterintrusion_actions LCD:linecrossing_actions PID:perimeterintrusion_actions

<voice>	practical	voice
on	practical	Audio linkageaction switch. 0 disable, 1enable
fileid	practical	Indicates the id of the linked sound file, starting from 0.
<light>	practical	light
on	practical	Light linkageaction switch. 0 disable, 1enable

3.4 Example

3.4.1Get smart linkageactions parameter

REQUEST

```
http://192.168.2.171/cgi/ai.cgi?get=perimeter_actions
```

RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: text/plain;charset=utf-8
```

```
<?xml version="1.0" encoding="GBK"?>
<root>
  <voice on='1' fileid='4' />
  <light on='0' />
</root>
```

3.4.2Set smart linkageactions parameter

REQUEST

```
http://192.168.2.171/cgi/ai.cgi?set=perimeter_actions&data=<?xml version="1.0"
encoding="utf-8"?><root><voice on='1' fileid='4' /><light on='0' /></root>
```

RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: text/plain;charset=utf-8
```

```
<?xml version="1.0" encoding="utf-8"?>
```



```
<root>

  <code>0</code>

  <error>successful</error>

</root>
```

4.Human-Vehicle detection

4.1 Description

This group of commands will get and set the Xml format data consisting of Human-Vehicle detection parameters, the parameters include Human-Vehicle detection switch, detection time, linkage action, area drawing information, detection type (human, car, motorcycle, bicycle), picture frame prompt, detection interval, sensitivity, threshold and so on.

4.2 Grammar

Get Human-Vehicle detection configuration

```
http://<DeviceIP>/cgi/ai.cgi?get=perimeter
```

Set Human-Vehicle detection configuration

```
http://<Device IP>/cgi/ai.cgi?set=perimeter&data=<?xml version="1.0"
encoding="utf-8"?><root><perimeter ch='0' xxx><action>xxx</action><segment xxx
/></perimeter></root>
```

4.3 Parameter

Parameter	Value	Description
<perimeter>	none	Indicates the corresponding channel of Human-Vehicle detection
ch	index	Indicates the channel number, the range is [0-7], channel 0

		indicates the first sensor, the default is 0, and so on.
on	practical	Indicates Human-Vehicle detection switch. 0 means off, 1 means on
drawline_flag	practical	Indicates the picture frame cue switch. 0 is off, 1 is on
sensitivity	practical	Indicates sensitivity, range (0~100)
detect_type	practical	Indicates the type of detection, by bit or form Human: 0x2 Vehicle: 0x4 Motocycle: 0x8 Bicycle: 0x10
leve_interval	practical	Detection interval, range (3-255) s
score	practical	Face confidence threshold, range (0.01-1)
<action>	practical	Indicates the linkage action after Human-Vehicle detection is triggered, there are eight values in total, each value represents the ID of the linkage action, and the value of -1 is not used.
<polygon>	practical	Indicates Human-Vehicle detection area
id	practical	Indicates the current detection area ID, maximum support for 8 areas
<point>	practical	Indicates the coordinates in the plotting area
id	practical	Indicates the coordinate ID of the plot, supports up to 8 coordinate points.
x	practical	x-point coordinates, range (0-100)
y	practical	y-point coordinates, range (0-100)
<segment>	none	Segment node
id	index	Indicates the time period ID
on	practical	Indicates whether the time period is on or off. 0 is on, 1 is off
begin_day	practical	Date indicating the start time of the time period, Monday through Sunday, in the range (1 to 7)

begin_hour	practical	Indicates the hour of the start time of the time period, the range is (0~23), unit: hours
begin_minute	practical	Indicates the minutes of the start time of the time period, the range is (0~59), unit: minutes
begin_second	practical	Indicates the seconds of the start time of the time period, the range is (0~59), unit: second
begin_millisec	practical	Indicates the milliseconds of the start time of the time period, the range is (0~1000), unit: milliseconds
end_day	practical	The date indicating the end time of the time period, Monday through Sunday, in the range (1 to 7)
end_hour	practical	Indicates the hour of the end time of the time period, the range is (0~23), unit: hour
end_minute	practical	Indicates the minutes of the end time of the time period, range (0~59), unit: minutes
end_second	practical	Indicates the seconds of the end time of the time period, range (0~59), unit: seconds
end_millisec	practical	Indicates the milliseconds of the end time of the time period, range (0~1000), unit: milliseconds

4.4 Example

4.4.1 Get Human-Vehicle detection parameter

REQUEST

```
http://192.168.2.171/cgi/ai.cgi?get=perimeter
```

RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: text/plain;charset=utf-8
```

```
<?xml version="1.0" encoding="GBK"?>

<root>

    <version version='1' />

    <perimeter ch='0' on='1' drawline_flag='1' sensitivity='66' detect_type='30' leave_interval='10'
score='0.40'>

        <action>-1</action>

        <action>-1</action>

        <action>-1</action>

        <action>-1</action>

        <action>-1</action>

        <action>-1</action>

        <action>-1</action>

        <action>-1</action>

        <polygon id='0'>

            <point id='0' x='0' y='0' />

            <point id='1' x='0' y='100' />

            <point id='2' x='100' y='100' />

            <point id='3' x='100' y='0' />

        </polygon>

        <polygon id='1'>

            <point id='0' x='-1' y='-1' />

        </polygon>

        <polygon id='2'>

            <point id='0' x='-1' y='-1' />

        </polygon>

        <polygon id='3'>

            <point id='0' x='-1' y='-1' />

        </polygon>

        <polygon id='4'>
```

```
<point id='0' x='-1' y='-1' />

</polygon>

<polygon id='5'>

    <point id='0' x='-1' y='-1' />

</polygon>

<polygon id='6'>

    <point id='0' x='-1' y='-1' />

</polygon>

<polygon id='7'>

    <point id='0' x='-1' y='-1' />

</polygon>

<segment id='0' on='1' begin_day='7' end_day='7' begin_hour='0'
begin_minute='0' begin_second='0'
begin_millisec='0' end_hour='24' end_minute='0' end_second='0'
end_millisec='0' type='0'></segment>

<segment id='1' on='1' begin_day='1' end_day='1' begin_hour='0'
begin_minute='0' begin_second='0'
begin_millisec='0' end_hour='24' end_minute='0' end_second='0'
end_millisec='0' type='0'></segment>

<segment id='2' on='1' begin_day='2' end_day='2' begin_hour='0'
begin_minute='0' begin_second='0'
begin_millisec='0' end_hour='24' end_minute='0' end_second='0'
end_millisec='0' type='0'></segment>

<segment id='3' on='1' begin_day='3' end_day='3' begin_hour='0'
begin_minute='0' begin_second='0'
begin_millisec='0' end_hour='24' end_minute='0' end_second='0'
end_millisec='0' type='0'></segment>

<segment id='4' on='1' begin_day='4' end_day='4' begin_hour='0'
begin_minute='0' begin_second='0'
```

```

begin_millisec='0' end_hour='24' end_minute='0' end_second='0'
end_millisec='0' type='0'></segment>

<segment id='5' on='1' begin_day='5' end_day='5' begin_hour='0'
begin_minute='0' begin_second='0'
begin_millisec='0' end_hour='24' end_minute='0' end_second='0'
end_millisec='0' type='0'></segment>

<segment id='6' on='1' begin_day='6' end_day='6' begin_hour='0'
begin_minute='0' begin_second='0'
begin_millisec='0' end_hour='24' end_minute='0' end_second='0'
end_millisec='0' type='0'></segment>

</perimeter>

</root>

```

4.4.2 Set Human-Vehicle detection parameter

Example: Enabling Human-Vehicle detection in Channel 0.

Tip: Channel information must be specified.

REQUEST

```

http://192.168.2.171/cgi/ai.cgi?set=perimeter&data=<?xml version="1.0"
encoding="utf-8"?><root><perimeter ch='0' on='1'></perimeter></root>

```

RESPONSE

HTTP/1.0 200 OK

Content-type: text/plain;charset=utf-8

```

<?xml version="1.0" encoding="utf-8"?>
<root>
  <code>0</code>
  <error>successful</error>
</root>

```

5.CrossLine detection

5.1 Description

This group of commands will get and set the Xml format data composed of LCD parameters, which contain LCD switch, detection time, linkage action, area drawing information, detection type, picture frame prompt, detection interval, sensitivity, threshold and so on.

5.2 Grammar

Get crossline detection parameter:

```
http://<DeviceIP>/cgi/ai.cgi?get=linecrossing
```

Set crossline detection parameter:

```
http://<Device IP>/cgi/ai.cgi?set=linecrossing&data=<?xml version="1.0"
encoding="utf-8"?><root><linecrossing ch='0' xxx><action>xxx</action><segment xxx
/></linecrossing></root>
```

5.3 Parameter

Parameter	Value	Description
<linecrossing>	none	Indicates the corresponding channel of the crossline detection
ch	index	Indicates the channel number, the range is [0-7], channel 0 indicates the first sensor, the default is 0, and so on.
on	practical	Indicates crossline detection on/off switch. 0 is off, 1 is on.
drawline_flag	practical	Indicates the picture frame cue switch. 0 is off, 1 is on.
draw_video_osd	practical	Indicates tripwire lines drawn superimposed on the video stream.
leve_interval	practical	Detection interval, range (3-255) s
score	practical	Algorithm confidence threshold, range (0.01-1).

<max_motor_vehicle_size>	ignore	Motor Vehicle Inspection Area, Maximum Inspection Area Range.
w	ignore	width
h	ignore	height
<min_motor_vehicle_size>	ignore	Motor Vehicle Inspection Area, Minimum Inspection Area Range
w	ignore	width
h	ignore	height
<max_nonmotor_vehicle_size>	ignore	Non-motorized vehicle inspection area, maximum inspection area range
w	ignore	width
h	ignore	height
<min_nonmotor_vehicle_size>	ignore	Non-motorized vehicle inspection area, minimum inspection area range
w	ignore	width
h	ignore	height
<max_human_body_size>	ignore	Human detection area, maximum detection area range
w	ignore	width
h	ignore	height
<min_human_body_size>	ignore	Human detection area, minimum detection area range
w	ignore	width
h	ignore	height
<action>	practical	Indicates the linkage action after crossline detection is triggered, there are eight values in total, each value represents the ID of the linkage action, the value of -1 is not in use, and the order of each value has to be corresponded to when it is turned

		on, and the value of each value has to be corresponded to.
<line>	practical	Indicates the crossline detection area, and supports up to 8 areas.
id	Index	Indicates the current detection area ID in the range [0-7].
enable	practical	Indicates area detection switch. 0 is off, 1 is on
percentage	practical	ignore
detect_type	practical	Indicates the type of detection, by bit or form Human: 0x2 Vehicle: 0x4 Motorcycle: 0x8 Bicycle: 0x10
sensitivity	practical	Indicates sensitivity, range (0~100)
double_direct	practical	Indicates trigger direction: 0: A->B 1:B->A 2:A<-->B
forbidden_direct	practical	Indicates the direction of the tripwire arrow, with the range (1-4) indicating the direction of the first through fourth quadrants.
<start_point>	practical	starting coordinate
x	practical	x-point coordinates, range (0-100)
y	practical	y-point coordinates, range (0-100)
<end_point>	practical	ending coordinate
x	practical	x-point coordinates, range (0-100)
y	practical	y-point coordinates, range (0-100)
<segment>	none	Segment node
id	index	Indicates the time period ID
on	practical	Indicates whether the time period is on or off. 0 is on, 1 is off
begin_day	practical	Date indicating the start time of the time period, Monday through Sunday, in the range (1 to 7)
begin_hour	practical	Indicates the hour of the start time of the time period, the range is (0~23), unit: hours

begin_minute	practical	Indicates the minutes of the start time of the time period, the range is (0~59), unit: minutes
begin_second	practical	Indicates the seconds of the start time of the time period, the range is (0~59), unit: second
begin_millsec	practical	Indicates the milliseconds of the start time of the time period, the range is (0~1000), unit: milliseconds
end_day	practical	The date indicating the end time of the time period, Monday through Sunday, in the range (1 to 7)
end_hour	practical	Indicates the hour of the end time of the time period, the range is (0~23), unit: hour
end_minute	practical	Indicates the minutes of the end time of the time period, range (0~59), unit: minutes
end_second	practical	Indicates the seconds of the end time of the time period, range (0~59), unit: seconds
end_millsec	practical	Indicates the milliseconds of the end time of the time period, range (0~1000), unit: milliseconds

5.4 Example

5.4.1 Get crossline detection parameter

REQUEST

```
http://192.168.2.171/cgi/ai.cgi?get=linecrossing
```

RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: text/plain;charset=utf-8
```

```
<?xml version="1.0" encoding="GBK"?>
```

```
<root>
```

```
<version version='2' />

<linecrossing ch='0' on='0' drawline_flag='1' draw_video_osd='0' leave_interval='5' score='0.40'>

  <max_motor_vehicle_size w='9999' h='9999' />

  <min_motor_vehicle_size w='120' h='120' />

  <max_nonmotor_vehicle_size w='9999' h='9999' />

  <min_nonmotorvehicle_size w='120' h='120' />

  <max_human_body_size w='9999' h='9999' />

  <min_human_body_size w='120' h='120' />

  <action>-1</action>

  <action>-1</action>

  <action>-1</action>

  <action>-1</action>

  <action>-1</action>

  <action>-1</action>

  <action>-1</action>

  <action>-1</action>

  <line id='0' enable='0' percentage='0' double_direct='0' sensitivity='80' priority='0'
time_threshold='1'
  forbidden_direct='3' detect_type='30'>

    <start_point x='10' y='20' />

    <end_point x='10' y='80' />

  </line>

  <line id='1' enable='0' percentage='0' double_direct='0' sensitivity='80' priority='0'
time_threshold='1'
  forbidden_direct='3' detect_type='30'>

    <start_point x='20' y='20' />

    <end_point x='20' y='80' />

  </line>

  <line id='2' enable='0' percentage='0' double_direct='0' sensitivity='80' priority='0'
```

```
time_threshold='1'

    forbidden_direct='3' detect_type='30'>

    <start_point x='30' y='20' />

    <end_point x='30' y='80' />

</line>

<line id='3' enable='0' percentage='0' double_direct='0' sensitivity='80' priority='0'
```

```
time_threshold='1'

    forbidden_direct='3' detect_type='30'>

    <start_point x='40' y='20' />

    <end_point x='40' y='80' />

</line>

<line id='4' enable='0' percentage='0' double_direct='0' sensitivity='80' priority='0'
```

```
time_threshold='1'

    forbidden_direct='3' detect_type='30'>

    <start_point x='50' y='20' />

    <end_point x='50' y='80' />

</line>

<line id='5' enable='0' percentage='0' double_direct='0' sensitivity='80' priority='0'
```

```
time_threshold='1'

    forbidden_direct='3' detect_type='30'>

    <start_point x='60' y='20' />

    <end_point x='60' y='80' />

</line>

<line id='6' enable='0' percentage='0' double_direct='0' sensitivity='80' priority='0'
```

```
time_threshold='1'

    forbidden_direct='3' detect_type='30'>

    <start_point x='70' y='20' />

    <end_point x='70' y='80' />

</line>
```

```
<line id='7' enable='0' percentage='0' double_direct='0' sensitivity='80' priority='0'
time_threshold='1'

    forbidden_direct='3' detect_type='30'>

    <start_point x='80' y='20' />

    <end_point x='80' y='80' />

    </line>

    <segment id='0' on='1' begin_day='7' end_day='7' begin_hour='0' begin_minute='0'
begin_second='0'

    begin_millisecond='0' end_hour='24' end_minute='0' end_second='0' end_millisecond='0'
type='0'></segment>

    <segment id='1' on='1' begin_day='1' end_day='1' begin_hour='0' begin_minute='0'
begin_second='0'

    begin_millisecond='0' end_hour='24' end_minute='0' end_second='0' end_millisecond='0'
type='0'></segment>

    <segment id='2' on='1' begin_day='2' end_day='2' begin_hour='0' begin_minute='0'
begin_second='0'

    begin_millisecond='0' end_hour='24' end_minute='0' end_second='0' end_millisecond='0'
type='0'></segment>

    <segment id='3' on='1' begin_day='3' end_day='3' begin_hour='0' begin_minute='0'
begin_second='0'

    begin_millisecond='0' end_hour='24' end_minute='0' end_second='0' end_millisecond='0'
type='0'></segment>

    <segment id='4' on='1' begin_day='4' end_day='4' begin_hour='0' begin_minute='0'
begin_second='0'

    begin_millisecond='0' end_hour='24' end_minute='0' end_second='0' end_millisecond='0'
type='0'></segment>

    <segment id='5' on='1' begin_day='5' end_day='5' begin_hour='0' begin_minute='0'
begin_second='0'

    begin_millisecond='0' end_hour='24' end_minute='0' end_second='0' end_millisecond='0'
```

```

type='0'></segment>

    <segment id='6' on='1' begin_day='6' end_day='6' begin_hour='0' begin_minute='0'
begin_second='0'

        begin_millisec='0' end_hour='24' end_minute='0' end_second='0' end_millisec='0'
type='0'></segment>

    </linecrossing>

</root>

```

5.4.2 Set crossline detection parameter

Example: Enabling crossline detection in channel 0.

Tip: Channel information must be specified.

REQUEST

```

http://192.168.2.171/cgi/ai.cgi?set=linecrossing&data=<?xml version="1.0"
encoding="utf-8"?><root><linecrossing ch='0' on='1'></linecrossing></root>

```

RESPONSE

HTTP/1.0 200 OK

Content-type: text/plain; charset=utf-8

```

<?xml version="1.0" encoding="utf-8"?>

<root>

    <code>0</code>

    <error>successful</error>

</root>

```

6. Perimeter Protection

6.1 Description

This group of commands will get and set the Xml format data consisting of PID parameters, which contain PID switch, duration, linkage action, area drawing information, detection type, picture frame

prompt, detection interval, sensitivity, threshold, detection direction and so on.

6.2 Grammar

Get perimeter protection configuration:

```
http://<DeviceIP>/cgi/ai.cgi?get=perimeterintrusion
```

Set perimeter protection configuration:

```
http://<Device IP>/cgi/ai.cgi?set=perimeterintrusion&data=<?xml version="1.0"
encoding="utf-8"?><root><perimeterintrusion ch='0' xxx><action>xxx</action><segment xxx
/></perimeterintrusion></root>
```

6.3 Parameter

Parameter	Value	Description
<perimeterintrusion>	none	Indicates the channel corresponding to the perimeter protection
ch	index	Indicates the channel number, the range is [0-7], channel 0 indicates the first sensor, the default is 0, and so on.
on	practical	Indicates a perimeter protection switch. 0 is off, 1 is on
drawline_flag	practical	Indicates the picture frame cue switch. 0 is off, 1 is on
draw_video_osd	practical	Indicates the area lines drawn superimposed in the video stream
leve_interval	practical	Detection interval, range (3-255) s
score	practical	Face confidence threshold, range (0.01-1)
<max_motor_vehicle_size>	ignore	Motor Vehicle Inspection Area, Maximum Inspection Area Range.
w	ignore	width
h	ignore	height
<min_motor_vehicle_s	ignore	Motor Vehicle Inspection Area, Minimum Inspection Area

ize>		Range
w	ignore	width
h	ignore	height
<max_nonmotor_vehicle_size>	ignore	Non-motorized vehicle inspection area, maximum inspection area range
w	ignore	width
h	ignore	height
<min_nonmotor_vehicle_size>	ignore	Non-motorized vehicle inspection area, minimum inspection area range
w	ignore	width
h	ignore	height
<max_human_body_size>	ignore	Human detection area, maximum detection area range
w	ignore	width
h	ignore	height
<min_human_body_size>	ignore	Human detection area, minimum detection area range
w	ignore	width
h	ignore	height
<action>	practical	Indicates the linkage action after perimeter protection is triggered, there are eight values in total, each value represents the ID of the linkage action, the value of -1 is not in use, and the order of each value has to be corresponded to when it is turned on, and the value of each value has to be corresponded to.
<polygon>	practical	Indicates perimeter protection detection area
id	practical	Indicates the current detection area ID, maximum support for 8 areas

enable	practical	Indicates area detection switch. 0 is off, 1 is on
direct	practical	Detection direction: Enter: 0 Leave: 1 Enter+Leave: 2
sensitivity	practical	Indicates sensitivity, range (0~100)
priority	practical	Algorithm detection priority
time_threshold	practical	Time threshold, how long to enter the area to trigger
detect_type	practical	Indicates the type of detection, by bit or form Human: 0x2 Vehicle: 0x4 Motorcycle: 0x8 Bicycle: 0x10
<point>	practical	Indicates the coordinates in the plotting area
id	practical	Indicates the coordinate ID of the plot, supports up to 8 coordinate points.
x	practical	x-point coordinates, range (0-100)
y	practical	y-point coordinates, range (0-100)
<segment>	无	Segment node
id	index	Indicates the time period ID
on	practical	Indicates whether the time period is on or off. 0 is on, 1 is off
begin_day	practical	Date indicating the start time of the time period, Monday through Sunday, in the range (1 to 7)
begin_hour	practical	Indicates the hour of the start time of the time period, the range is (0~23), unit: hours
begin_minute	practical	Indicates the minutes of the start time of the time period, the range is (0~59), unit: minutes
begin_second	practical	Indicates the seconds of the start time of the time period, the range is (0~59), unit: second

begin_millisec	practical	Indicates the milliseconds of the start time of the time period, the range is (0~1000), unit: milliseconds
end_day	practical	The date indicating the end time of the time period, Monday through Sunday, in the range (1 to 7)
end_hour	practical	Indicates the hour of the end time of the time period, the range is (0~23), unit: hour
end_minute	practical	Indicates the minutes of the end time of the time period, range (0~59), unit: minutes
end_second	practical	Indicates the seconds of the end time of the time period, range (0~59), unit: seconds
end_millisec	practical	Indicates the milliseconds of the end time of the time period, range (0~1000), unit: milliseconds

6.4 Example

6.4.1 Get perimeter protection configuration

REQUEST

```
http://192.168.2.171/cgi/ai.cgi?get=perimeterintrusion
```

RESPONSE

```
HTTP/1.0 200 OK
```

```
Content-type: text/plain;charset=utf-8
```

```
<?xml version="1.0" encoding="GBK"?>
<root>
  <version version='4' />
  <perimeterintrusion ch='0' on='0' drawline_flag='1' draw_video_osd='0' leave_interval='5'
score='0.40'>
    <max_motor_vehicle_size w='9999' h='9999' />
    <min_motor_vehicle_size w='120' h='120' />
```

```
<max_nonmotor_vehicle_size w='9999' h='9999' />

<min_nonmotorvehicle_size w='120' h='120' />

<max_human_body_size w='9999' h='9999' />

<min_human_body_size w='120' h='120' />

<action>-1</action>

<action>-1</action>

<action>-1</action>

<action>-1</action>

<action>-1</action>

<action>-1</action>

<action>-1</action>

<action>-1</action>

<action>-1</action>

<polygon id='0' enable='0' percentage='0' direct='0' sensitivity='80' priority='0' time_threshold='5'
  detect_type='30'>

  <point id='0' x='25' y='25' />

  <point id='1' x='25' y='75' />

  <point id='2' x='75' y='75' />

  <point id='3' x='75' y='25' />

</polygon>

<polygon id='1' enable='0' percentage='0' direct='0' sensitivity='80' priority='0' time_threshold='5'
  detect_type='30'>

  <point id='0' x='25' y='25' />

  <point id='1' x='25' y='75' />

  <point id='2' x='75' y='75' />

  <point id='3' x='75' y='25' />

</polygon>

<polygon id='2' enable='0' percentage='0' direct='0' sensitivity='80' priority='0' time_threshold='5'
  detect_type='30'>

  <point id='0' x='25' y='25' />
```

```
<point id='1' x='25' y='75' />

<point id='2' x='75' y='75' />

<point id='3' x='75' y='25' />

</polygon>

<polygon id='3' enable='0' percentage='0' direct='0' sensitivity='80' priority='0' time_threshold='5'
  detect_type='30'>

  <point id='0' x='25' y='25' />

  <point id='1' x='25' y='75' />

  <point id='2' x='75' y='75' />

  <point id='3' x='75' y='25' />

</polygon>

<polygon id='4' enable='0' percentage='0' direct='0' sensitivity='80' priority='0' time_threshold='5'
  detect_type='30'>

  <point id='0' x='25' y='25' />

  <point id='1' x='25' y='75' />

  <point id='2' x='75' y='75' />

  <point id='3' x='75' y='25' />

</polygon>

<polygon id='5' enable='0' percentage='0' direct='0' sensitivity='80' priority='0' time_threshold='5'
  detect_type='30'>

  <point id='0' x='25' y='25' />

  <point id='1' x='25' y='75' />

  <point id='2' x='75' y='75' />

  <point id='3' x='75' y='25' />

</polygon>

<polygon id='6' enable='0' percentage='0' direct='0' sensitivity='80' priority='0' time_threshold='5'
  detect_type='30'>

  <point id='0' x='25' y='25' />

  <point id='1' x='25' y='75' />
```

```
<point id='2' x='75' y='75' />

<point id='3' x='75' y='25' />

</polygon>

<polygon id='7' enable='0' percentage='0' direct='0' sensitivity='80' priority='0' time_threshold='5'
  detect_type='30'>

  <point id='0' x='25' y='25' />

  <point id='1' x='25' y='75' />

  <point id='2' x='75' y='75' />

  <point id='3' x='75' y='25' />

</polygon>

<segment id='0' on='1' begin_day='7' end_day='7' begin_hour='0' begin_minute='0'
begin_second='0'

  begin_millisec='0' end_hour='24' end_minute='0' end_second='0' end_millisec='0'
type='0'></segment>

  <segment id='1' on='1' begin_day='1' end_day='1' begin_hour='0' begin_minute='0'
begin_second='0'

  begin_millisec='0' end_hour='24' end_minute='0' end_second='0' end_millisec='0'
type='0'></segment>

  <segment id='2' on='1' begin_day='2' end_day='2' begin_hour='0' begin_minute='0'
begin_second='0'

  begin_millisec='0' end_hour='24' end_minute='0' end_second='0' end_millisec='0'
type='0'></segment>

  <segment id='3' on='1' begin_day='3' end_day='3' begin_hour='0' begin_minute='0'
begin_second='0'

  begin_millisec='0' end_hour='24' end_minute='0' end_second='0' end_millisec='0'
type='0'></segment>

  <segment id='4' on='1' begin_day='4' end_day='4' begin_hour='0' begin_minute='0'
begin_second='0'

  begin_millisec='0' end_hour='24' end_minute='0' end_second='0' end_millisec='0'
```

```

type='0'></segment>

    <segment id='5' on='1' begin_day='5' end_day='5' begin_hour='0' begin_minute='0'
begin_second='0'

    begin_millisec='0' end_hour='24' end_minute='0' end_second='0' end_millisec='0'
type='0'></segment>

    <segment id='6' on='1' begin_day='6' end_day='6' begin_hour='0' begin_minute='0'
begin_second='0'

    begin_millisec='0' end_hour='24' end_minute='0' end_second='0' end_millisec='0'
type='0'></segment>

    </perimeterintrusion>

</root>

```

6.4.2 Set perimeter protection configuration

Example: Enabling perimeter protection in channel 0.

Tip: Channel information must be specified.

REQUEST

```

http://192.168.2.171/cgi/ai.cgi?set=perimeterintrusion&data=<?xml version="1.0"
encoding="utf-8"?><root><perimeterintrusion ch='0' on='1'></perimeterintrusion></root>

```

RESPONSE

HTTP/1.0 200 OK

Content-type: text/plain; charset=utf-8

```

<?xml version="1.0" encoding="utf-8"?>

<root>

    <code>0</code>

    <error>successful</error>

</root>

```

7.Face detection

7.1 Description

Get and set the Xml format data composed of face detection parameters, including face detection switch, capture mode, duration, linkage action, area drawing information, detection type, frame prompts, detection interval, sensitivity, threshold and so on.

7.2 Grammar

Get face detection parameter:

```
http://<DeviceIP>/cgi/ai.cgi?get=face
```

Set face detection parameter:

```
http://<Device IP>/cgi/ai.cgi?set=face&data=<?xml version="1.0"
encoding="utf-8"?><root><face ch=' 0'   xxx><action>xxx</action><segment xxx
/></ace></root>
```

7.3 Parameter

Parameter	Value	Description
<face>	无	
ch	index	Indicates the channel number, the range is [0-7], channel 0 indicates the first sensor, the default is 0, and so on.
on	practical	Enabel: 0-disable 1-enable
drawline_flag	practical	Draw line flag,0-disable,1-enable
draw_face_info	practical	Face mass fraction switch, 0-disable,1-enable
draw_video_osd	practical	The area lines drawn in the video stream.
leve_interval	practical	Detection interval, range (3-255) s

capture_picture	practical	Number of snaps in effect priority mode(1-3)
score	practical	Face confidence threshold, range (0.01-1)
open_snap_mode	Ignore	
snap_mode	practical	snap mode,0-Effect Priority 1-Speed Priority 2-Periodic Selection
periodic_interval	practical	Periodic selection duration,1-1800000ms
speed_duration	practical	Number of speed priority mode(1-3)
<action>	practical	Indicates the linkage action after perimeter protection is triggered, there are eight values in total, each value represents the ID of the linkage action, the value of -1 is not in use, and the order of each value has to be corresponded to when it is turned on, and the value of each value has to be corresponded to.
<polygon>	practical	Face detection area
id	practical	Indicates the current detection area ID, maximum support for 8 areas
enable	practical	Indicates area detection switch. 0 is off, 1 is on
sensitivity	practical	Indicates sensitivity, range (0~100)
min_face_pixel	practical	Detect the minimum pixel, with the range dynamically adjusted based on resolution.
max_face_pixel	practical	<p>Detect the maximum pixel, with the range dynamically adjusted based on resolution. Actual display is calculated based on the main stream resolution width, with a base range of (104-2604)px.</p> <p>Web display: Parameters can be converted according to the following formula.</p> <p>Example: Main stream resolution width is 1920.</p> <p>min: $\text{round}(1.00 \times 104 / 10000 \times 1920) == 20$</p> <p>max: $\text{round}(1.00 \times 2604 / 10000 \times 1920) == 500$</p>

		<p>Required device parameters: Parameters set for the IPC can be converted according to the following formula.</p> <p>Example:min:20px max:500px</p> <p>min:$1.00 \times 20 / 1920 \times 10000 == 104$</p> <p>max:$1.00 \times 500 / 1920 \times 10000 == 2604$</p>
<point>	practical	Indicates the coordinates in the plotting area
id	practical	Indicates the coordinate ID of the plot, supports up to 8 coordinate points.
x	practical	x-point coordinates, range (0-100)
y	practical	y-point coordinates, range (0-100)
<segment>	无	Segment node
id	index	Indicates the time period ID
on	practical	Indicates whether the time period is on or off. 0 is on, 1 is off
begin_day	practical	Date indicating the start time of the time period, Monday through Sunday, in the range (1 to 7)
begin_hour	practical	Indicates the hour of the start time of the time period, the range is (0~23), unit: hours
begin_minute	practical	Indicates the minutes of the start time of the time period, the range is (0~59), unit: minutes
begin_second	practical	Indicates the seconds of the start time of the time period, the range is (0~59), unit: second
begin_millisec	practical	Indicates the milliseconds of the start time of the time period, the range is (0~1000), unit: milliseconds
end_day	practical	The date indicating the end time of the time period, Monday through Sunday, in the range (1 to 7)
end_hour	practical	Indicates the hour of the end time of the time period, the range is (0~23), unit: hour
end_minute	practical	Indicates the minutes of the end time of the time period, range (0~59), unit: minutes


```
<polygon id='0' enable='0' sensitivity='80' min_face_pixel='104'
max_face_pixel='2604'>

    <point id='0' x='10' y='10' />

    <point id='1' x='10' y='90' />

    <point id='2' x='90' y='90' />

    <point id='3' x='90' y='10' />

</polygon>

<segment id='0' on='1' begin_day='1' end_day='1' begin_hour='0'
begin_minute='0' begin_second='0'
    begin_millisec='0' end_hour='24' end_minute='0' end_second='0'
end_millisec='0' type='0'></segment>

<segment id='1' on='1' begin_day='2' end_day='2' begin_hour='0'
begin_minute='0' begin_second='0'
    begin_millisec='0' end_hour='24' end_minute='0' end_second='0'
end_millisec='0' type='0'></segment>

<segment id='2' on='1' begin_day='3' end_day='3' begin_hour='0'
begin_minute='0' begin_second='0'
    begin_millisec='0' end_hour='24' end_minute='0' end_second='0'
end_millisec='0' type='0'></segment>

<segment id='3' on='1' begin_day='4' end_day='4' begin_hour='0'
begin_minute='0' begin_second='0'
    begin_millisec='0' end_hour='24' end_minute='0' end_second='0'
end_millisec='0' type='0'></segment>

<segment id='4' on='1' begin_day='5' end_day='5' begin_hour='0'
begin_minute='0' begin_second='0'
    begin_millisec='0' end_hour='24' end_minute='0' end_second='0'
end_millisec='0' type='0'></segment>

<segment id='5' on='1' begin_day='6' end_day='6' begin_hour='0'
begin_minute='0' begin_second='0'
```

```

        begin_millisec='0' end_hour='24' end_minute='0' end_second='0'
end_millisec='0' type='0'></segment>

        <segment id='6' on='1' begin_day='7' end_day='7' begin_hour='0'
begin_minute='0' begin_second='0'

        begin_millisec='0' end_hour='24' end_minute='0' end_second='0'
end_millisec='0' type='0'></segment>

    </face>

</root>

```

7.4.2 Set face detection parameter

Example: Enable face detection in channel 0.

REQUEST

```

http://192.168.2.171/cgi/ai.cgi?set=face&data=<?xml version="1.0"
encoding="utf-8"?><root><face ch='0' on='1'></face></root>

```

RESPONSE

HTTP/1.0 200 OK

Content-type: text/plain; charset=utf-8

```

<?xml version="1.0" encoding="utf-8"?>
<root>
    <code>0</code>
    <error>successful</error>
</root>

```