3D People Counter API Introduction_EN_V1.9

1.Protocol Description

Data reporting adopts HTTP protocol and POST+ JSON mode

Function: heartbeat, data upload

Heartbeat mechanism, upload heartbeat data every 1 minute, content: SN, timestamp, status.

Upload frequency: set 0 for real-time transmission, set 1 for once every 1 minute, set 5 for once every 5 minutes, and set 60 for once every 60 minutes

Data upload content: SN, data timestamp, statistical start time, statistical end time, number of people entering, number of people leaving, number of people passing through.

Data upload mode: people flow data supports incremental and summary reporting (if there is no reply, it defaults to incremental reporting mode)

Support the command to obtain historical data: support to obtain historical data within 90 days

2.Data reporting interface

2.1 Heartbeat interface

Request mode：POST

Address：http://XXXX.XXXX.XXXX.XXXX:XX /api/camera/heartBeat

Description of heartbeat report parameters			
Parameter name	**Required**	**Type**	**Description**
sn	yes	string	Device serial number
time	yes	long	UNIX timestamp for time synchronization

Sample of heartbeat report input parameter

Successful case：

```
{
   "sn":"2010010000000000",
   "time":1641434640
}
```

Description of heartbeat response parameters			
Request parameters			
Parameter name	**Required**	**Type**	**Description**
code	yes	int	Return code: 0: success, 1: SN does not exist; 2: Other: failed
msg	yes	string	Return information

Description of heartbeat response parameters			
Request parameters			
Parameter name	**Required**	**Type**	**Description**
code	yes	int	Return code: 0: success, 1: SN does not exist; 2: Other: failed
msg	yes	string	Return information
data.sn	yes	string	Device serial number
data.dataStartTime	No	long	UNIX timestamp, statistics start time
data.dataEndTime	No	long	UNIX timestamp, statistics end time
data.uploadInterval	No	long	Data reporting interval (minutes)
data.dataMode	No	string	"Add" is incremental and "total" is summary
data.time	yes	long	UNIX timestamp, server time
data.timezone	No	long	GMT timezone
Response results			

Response success cases:

```
{
  "code": 0,
  "msg": "success",
  "data": {
    "sn": " 2010010000000000",
    "dataStartTime": 1640995200,
    "dataEndTime": 1641038400,
    "timezone": -8,
  "uploadInterval": 5,
    "time": 1641434640
  }
}
```

Response failure cases:

```
{
  "code": 1,
  "msg": " Return information,describing the error information ； "
  }
```

2.2 Data upload interface

POST type

Adress：http/ https:// XXXX.XXXX.XXXX.XXXX:XX /api/camera/dataUpload

Real-time data report parameters			
Parameter name	**Required**	**Type**	**Description**
sn	yes	string	Device serial number
len	No	string	Data article number
startTime	yes	long	UNIX timestamp, statistics start time
endTime	yes	long	UNIX timestamp, statistics end time
time	yes	long	UNIX timestamp, Used for time synchronization
in	yes	int	Entry
out	yes	int	Exit
passby	yes	int	Passing through flow
turnback	yes	int	Turn back flow
avgStayTime	yes	int	The average stay time within the view of the camera field.（unit: ms）
inAdult	no	int	Number of adults leaving the current upload period
outAdult	no	int	Number of adults leaving the current upload period
passbyAdult	no	int	Number of adults in the current upload period
turnbackAdult	no	int	Number of turn back adults in the current upload period
inChild	no	int	Number of children entering the current upload period
outChild	no	int	Number of children leaving during the current upload period
passbyChild	no	int	Number of children passing through the current upload period
turnbackChild	no	int	Number of returned children in the current upload period
total	no	int	Sum of all data types

Real-time data report parameters			
Parameter name	**Required**	**Type**	**Description**
eventList.id	No	int	Event ID
eventList.timestamp	No	long	Event timestamp, unit: us
eventList.eventType	No	int	Event type [0: enter, 1: leave, 2: pass, 3: return] 100+x; corresponds to child mode, x is a normal event type
eventList.height	No	int	Person height
eventList.stayTime	No	long	stay time in the camera when people pas sing through under the camera, unit: ms

Sample of real-time data reporting input parameters

Successful cases:


```
{
  "code": 0,
  "msg": "success",
  "sn": "2010010000000000",
   "startTime": 1640995200,
 "endTime": 1641038400,
"time": 1641038400,
  "in": 1,
  "out": 3
  " passby ": 1641038400,
  " turnback ": 1,
  " avgStayTime ": 3
  "eventList": [{
     "id": 1,
     "timestamp": 161231947237000000,
     "eventType": 0,
     "height": 170,
     "stayTime": 1000
     },
      {
     "id": 2,
     "timestamp": 161231947237000000,
```

Real-time data report parameters

Parameter name	Required	Type	Description


```
    "eventType": 1,
    "height": 162,
    "stayTime": 3000
    }]

    }
  ]
}
```


Response parameter description

Parameter name	Type	Description
code	int	Return code: 0: success, 1: SN does not exist; 2: Other: failed
msg	string	Return information
data.sn	string	Equipment serial number
data.time	long	UNIX timestamp, server time

Response results

Successful cases:


```
{
  "code":0,
    "msg":" success "
    "data":{
      " sn":"2010010000000000"
      " time":1648606824
        }
}
```


Failure cases:


```
{
  "code": 1,
  "msg": "sn non-existent "
}
```

3.Stay data push (this option is not required, please connect if needed)

POST method
Address：http/ https:// XXXX.XXXX.XXXX.XXXX:XX /api/camera/dataUpload

Real-time/non-real-time data reporting parameters			
parameter name	**required**	**type**	**illustrate**
currentStay	Yes	long	Current number of residents
info.id	Yes	long	The internal ID of the resident person will not be repeated. The camera will reset to zero after restarting.
info.height	Yes	int	Personnel height
info.status	Yes	int	Camera internal information, resident status, platform does not need to be parsed
info.staytime	Yes	int	The length of time the person with the current ID has been staying

Response result

success case:

```
{
 "sn":"201000002209190025",
  "time":1667802959,
    "currentStay":2,
    "info":[
    {
      "id": 1,
      "height": 170,
      "status": 1,
      "staytime": 2000
    },
    {
      "id": 2,
      "height": 171,
      "status": 1,
      "staytime": 3000
    }
  ]
}
```

Response parameter description		
parameter name	**type**	**illustrate**
code	int	Return code: 0: Success, 1: SN does not exist; 2: Others: Failure
msg	string	returned messages

data.sn	string	devise serial number
data.time	long	Unix timestamp, server time

response result

success case:

```
{
  "code":0,
    "msg":"Reported successfully"
    "data":{
      " sn":"2010010000000000"
      " time":1648606824
          }
}
```

失败案例：

```
{
  "code": 1,
  "msg": "sn does not exist"
}
```

4.Historical data reporting (this option is optional, please contact us if needed)

POST method
Address:http/ https:// XXXX.XXXX.XXXX.XXXX:XX /api/camera/dataUpload

Historical data reporting parameters			
parameter name	**required**	**type**	**illustrate**
sn	yes	string	devise serial number
len	yes	string	Number of data items
data.time	yes	long	Historical passenger flow data time
data.startTime	yes	long	The starting time of historical data
data.endTime	yes	long	End time of historical data
data.in	yes	int	The number of people entering during the current upload time period
data.out	yes	int	The number of people leaving during the current upload time period
data.passby	yes	int	The number of people passing by during the current upload time period
data.turnback	yes	int	The number of people returning during the current upl

Real-time/non-real-time data reporting parameters			
parameter name	**required**	**type**	**illustrate**
			oad time period
data.avgStayTime	yes	int	The average stay time in the field of view of the passenger flow camera during the current upload time period (unit: ms)

response result

success case:

```
{
 "sn": "2010010000000000",
 "len":2,
 "data":[
   {
    "time": 1641038400,
    "startTime": 1640995200,
    "endTime": 1641038400,
    "in": 1,
    "out": 2,
    "passby": 2,
    "turnback": 3,
    "avgStayTime": 2000
   },
   {
    "time": 1641038400,
    "startTime": 1640995200,
    "endTime": 1641038400,
    "in": 1,
    "out": 2,
    "passby": 2,
    "turnback": 3,
    "avgStayTime": 2000
     }
 ]
}
```

Response parameter description		
parameter name	**type**	**illustrate**
code	int	Return code: 0: Success, 1: SN does not exist; 2: Others: Failure
msg	string	returned messages
data.sn	string	devise serial number
data.time	long	Unix timestamp, server time

response result

success case：

```
{
   "code":0,
      "msg":"Reported successfully"
      "data":{
        " sn":"2010010000000000"
        " time":1648606824
            }
}
```

Failure case：

```
{
   "code": 1,
   "msg": "sn does not exist"
}
```

5.Version record

Version：V1.0：
Date：2018/06/08
Description: first draft

Version：V1.2：
Date：2022/01/15
Description:
1. Add people flow data upload mode switching (increment, total),
2. Obtain historical passenger flow data within 90 years

Version：V1.3：
Description:
1、Data reporting support https
2、Increase personnel height data reporting

Version：V1.4
Date：2022/03/20
Modify: Correct sample format errors

Version：V1.5
Date： 2022/06/25
Modify: add timezone setting field to heartbeat interface

Version: V1.7
Time: 2022/12/8
Modify: The data upload interface adds statistics fields for adults and children

Version: V1.8
Time: 2023/9/5
Modify: Increase the number of residents and residence time

Version: V1.9
Time：2024/3/20
Modify:vOptimize content layout