MQTT protocol of face recognition all in one machine

V1.24

catalog

*Modification record

Version number	date	Change type (A*M*D)	Modified by	abstract	Reviewer	remarks
V1-0.1	2019-11-27	A	CaiFF	newly build		
V1-0.2	2019-11-28	M	CaiFF	1. Modification5. Information upload of authentication and identification personnel 2. Modification6 information upload of strangers		
V1-0.3	2019-12-05	M	CaiFF	1. Increase4.5 delete all personnel lists 2. Increase7.3 obtaining the current software version 3. Increase9. Parameter configuration		
V1-0.4	2019-12-17	M	CaiFF	1. Increase9.2 sound and interface display parameters 2. Increase9.3 door opening conditions and output control		
V1-0.4	2020-01-17	M	CaiFF	1. Increase9.4 HTTP subscription push		
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V1-0.9	2020-03-09	M	CaiFF	1. Increase10 equipment online and offline notice		
V1-0.9	2020-03-10	M	CaiFF	1. Modification4.1 interface for adding and modifying personnel listExamples		
V1-10	2020-03-11	M	CaiFF	1. Modification10 equipment online and offline noticeTweet for topic / Basic 2. Increase9.6 mqtt report parameters		
V1-11	2020-03-21	M	CaiFF	3. Modification9.3 door opening conditions and output controlDoor opening verification mode 4. Delete9.5 temperature parametersMask temperature detection mode 5. Modification5. Information upload of authentication and identification personnelVerification type description 6. Modification6 information upload of strangersform		
V1-12	2020-04-06	M	CaiFF	1. Increase5. Information upload of authentication and identification personnelRecordID 2. Increase6 information upload of strangersSnapID 3. Increase9.6 mqtt report parametersParameters of network disconnection and continuous transmission 4. Increase9.7 restart the device 5. Increase9.8 system time 6. Increase9.9 factory restoration 7. Increase11. Continuous transmission after network interruption		
V1-13	2020-04-08	M	CaiFF	1. Increase12 advertising 2. Increase13 playing voice files		
V1-14	2020-04-17	M	CaiFF	1. Increase14 QR code		
V1-15	2020-04-21	M	CaiFF	1. Increase4.6 batch increase of personnel (URI)		

V1-16	2020-04-24	M	CaiFF	1. Increase14 QR codeReporting examples		
V1-17	2020-05-15	M	CaiFF	1. Increase4.6 batch increase of personnel (URI)Personnel similarity detection 2. Modify table style 3. Modify the built-in swipe rfidcard field to use with rfcardmode 4. Increase15 heart rate 5. Increase4.7 batch modification personnel (URI) 6. Increase4.8 query batch adding / modifying personnel progress 7. Increase4.9 batch deletion of personnel list 8. Increase5. Information upload of authentication and identification personnelList type and authentication result fields		
V1-18	2020-05-28	M	CaiFF	1. Increase9.3.5 introduction to door opening mode		
V1-19	2020-07-27	M	CaiFF	1、modify9.5 temperature parameters 2、increase4.10 batch adding or modifying personnel (URI) 3、Add telnum1, native and address field comments to the interface table involving the list 4、increase16 capture scene map 5、increase17 picture comparison similarity 6、increaseSearch local face database with image 7. Increase19 detect picture face		
V1-20	2020-07-30	M	CaiFF	1. Increase20 manual push control record		
V1-20	2020-08-06	M	CaiFF	1. Modification4.2.1 query the customid of the owner in the device		
V1-20	2020-08-06	M	CaiFF	1. Modification14 QR code, add picture display and display position size customization		
V1-21	2020-08-14	M	CaiFF	1. Increase4.2.3 multi person list query		

| V1-22 | 2020-09-05 | M | CaiFF | 1、increase9.10 face recognition parameters
2、increase4.1 add and modify interface error code of personnel list
3、increase4.2.2 error code for querying detailed information of single personnel list
4. Increase4.2.3 error code for multi person list query
5. Increase4.3 delete error code of single personnel list
6. Increase4.5 delete all personnel list error codes
7. ModificationError code (4) batch add personnel URI 4.7 batch modification personnel (URI) error codeand4.10 batch adding or modifying personnel (URI) error codes
8. Increase4.9 error code for batch deletion of personnel list
9. Increase9.1.3 setting system parameter error code
10. Increase9.2.3 setting error codes for sound and interface display parameters
11. Increase9.3.3 setting door opening conditions and output control error code
12. Increase9.4.3 setting HTTP subscription push parameter error code
13. Increase9.5.3 setting temperature parameter error code
14. IncreaseSetup of mqtt parameter
15. Increase3.9 face recognition parameter setting
16. Increase12.1 add / modify advertisement error code
17. Increase12.3 delete advertisement error code
18. IncreaseError code 13.1
19. Increase13.3 error code of playing voice file
20. Increase14.1 setting error code of QR code image
21. Increase16.1 error code of capturing scene map
22. Increase17.1 image comparison similarity error code
23. Increase18.1 search local face database error code with graph
24. Increase19.1 face error code detection | | |

V1-23	2020-10-21	M	CaiFF	1、increaseAppendix a.1 Nationalities And modify the national definition in the document 2、modify5. Information upload of authentication and identification personnel, add push type		
V1-23	2020-10-30	M	CaiFF	1. Increase21 ID card information reporting 2. Modification9.6 mqtt report parameters, add ID card information subscription report field		
V1-23	2020-11-05	M	CaiFF	1. Modification9.2 sound and interface display parameters 2. Modification9.3 door opening conditions and output control 3. Modification9.10 face recognition parameters		
V1-24	2020-11-24	M	CaiFF	1、increase22 manually push the capture record of strangers 2. Increase23 IC or RF card number reporting		

1 Overview

Mqtt (message queuing telemetry transport) is an instant messaging protocol developed by IBM.

It is a "lightweight" communication protocol based on publish / subscribe mode. It is built on TCP / IP protocol and designed for limited devices and low bandwidth, high latency or unreliable networks.

Face recognition machine adopts mqtt protocol v3.1.1, QoS: 1.

Mqtt is mainly used for document and document recognition.

2 function detailed design

Data exchange format:

1. Data exchange is mainly based on JSON format.

2. The image content is Base64 encoding or image URI address.

3 environment and client construction

In order to get started quickly and understand the working mechanism of mqtt, this chapter describes how to quickly load the mqtt intermediate proxy server on the windows side, as well as the mqtt.box or mqtt.fx (mqtt.box will have stuck in sending and subscribing to big data, mqtt.fx is only suitable for subscribing to receive topic messages, not for simulating and distributing data with Chinese characters).When the formal online platform docking, it is not necessary to build an intermediate proxy server and client tools on the windows side.The following is an introduction to the use of the intermediate development tools to build the proxy server and build a formal platform.

3.1 build windows mqtt platform service (not required, only required for windows testing)

1. Download and install JDK according to your own computer and system, as long as jdk8 (the following is the version of JDK I tested and installed)

2. Download apache-apollo-1.7.1-windows, with a link address http://archive.apache.org/dist/activemq/activemq-apollo/1.7.1/

3. Open the CMD as an administrator and enter the bin directory in the decompressed file

4. Execute the command: create a directory (the following path is an example)

apollo create myapollo C:\apache-apollo\broker

5. After successful creation, enter the broker / bin directory and execute the apollo-broker.cmd run command to start the service

6. Log in to http://Note that the password of the web page is m661127.0, but the password is the service port of m661127.0

3.2 mqtt client tool

Mqttbox is recommended

3.2.1 mqtt joining steps

First of all, a new firewall connection is opened and the system connection is closed
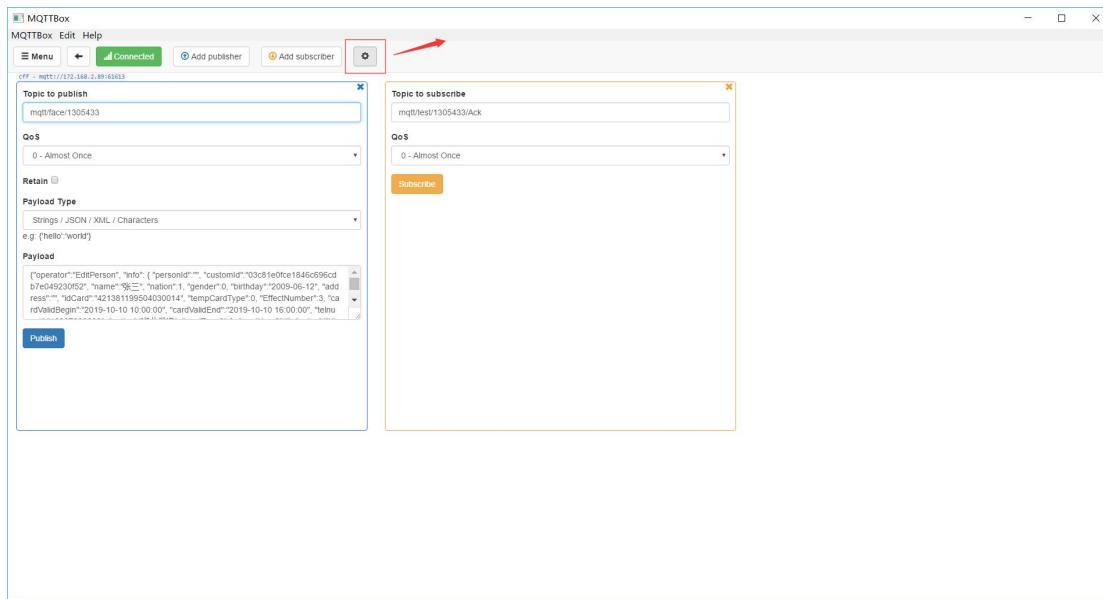
Mainly fill in mqtt service host address and port (Port default 61613) account and password
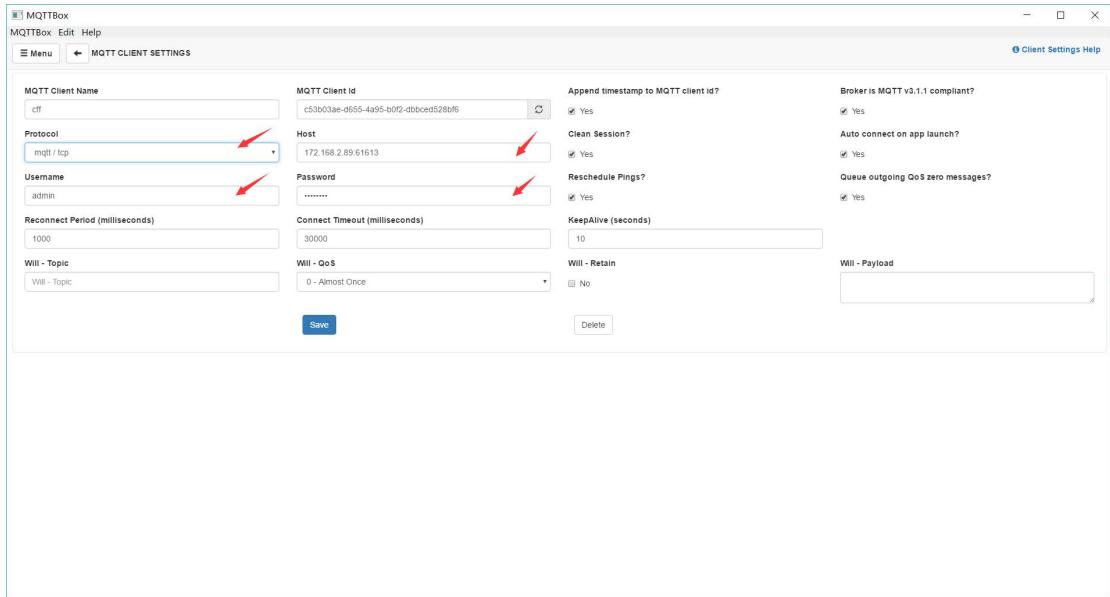
Green indicates successful connection
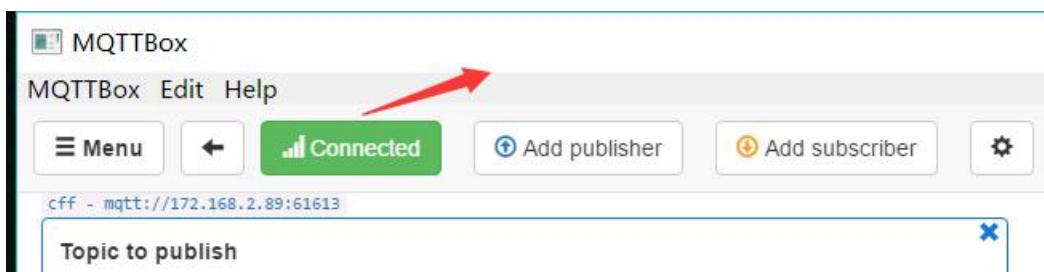
3.2.2 release topics

1. First, confirm whether the version of the all-in-one face recognition machine is suitable for this document, and check the mqtt settings of the all-in-one face recognition machine. The cloud ID number of the gate is generally filled in with the local ID of the all-in-one face recognition machine. The cloud address is the IP address of the host computer of the mqtt service created in the previous step, and the user name and password are consistent with those created in the previous step,Fill in the topic of cloud topic, that is, the topic that the all-in-one face recognition machine will subscribe to (which will be the topic published by the server, and the topic of the list of Personnel issued by the server).

Version information and local ID (local ID is unique)

Mqtt settings:

2. After adding a publisher to mqttbox, fill in the topic to be published, such as mqtt / face / ID. this topic is the topic that the mqttbox client sends information to the face recognition all-in-one machine. The ID can be the local ID of the face recognition all-in-one machine (unique and different machines), which can be filled in with reference to the data content below.
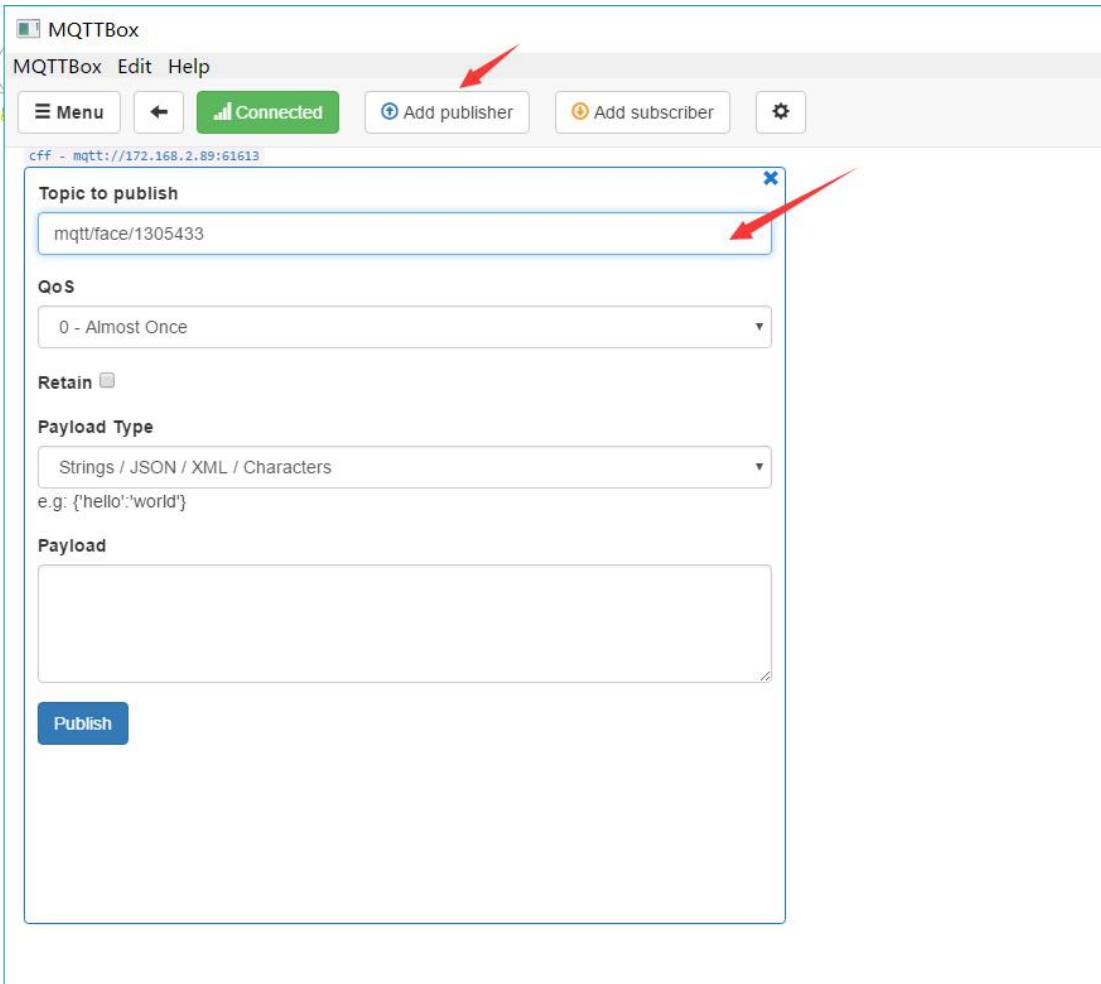
3.2.3 subscription topics

After setting the corresponding topic topic topic (mqtt / face / ID, where id refers to the local ID, such as 1305433), the face recognition all in one opportunity will send the face recognition results and stranger snapshot results to the corresponding topic below by default, and the authentication recognition result will be sent to the topic mqtt / face / ID / rec (where id refers to the local ID, such as 1305433);A stranger's snapshot is sent to the topic mqtt / face / ID / snap (where id refers to the local ID, e.g., 1305433); the QR code scanning information is sent to the topic mqtt / face / ID / QRcode (where id refers to the local ID, such as 1305433); the response server sends the instruction message result to the topic mqtt / face / ID / ack (where id refers to the local ID, such as 1305433).

After adding subscribers, subscribe to the above required topics; for example, the subscriber identifies the topic as shown in the following figure:

Push authentication information example:

{ "operator": "RecPush", "info": { "customId":"421381199504030001", "personId":"40", "direction":"unknow", "otype":"1", "personName":"张三", "facesluiceId":"1305433", "facesluiceName":"Face1", "cardNum2":"0", "time":"2019-11-29 10:06:54", "pic": "data:image/jpeg;base64,Qk3m5QAAAAAAADYAAAAoAAAAjAAAAlwAAAABABgAAAAAAAAAASCwAAEgsAAAAAAAAAAAAAT2pgTnJhUW5eTGtfS29fTnVmVnZrUHFjVHllWoFsU3hkU3hkUXdjS3tkToFpU4FrVX1rTHZIT3NIS2xmPltVJjQzGykoKjo5IDIxEhEUCQYIBwYMBQoOCwwQCwwQCgsPCQsMBwoQBQcRAggWAA0fFiQ+T39+R4F9GFRnHF5zKmI9JmV5lV54IGB5I2WCJGeGJmyKJW+MJ3KPKG6MJG+Plm2NJ2uOJWqLlGiGlmF/J2CAI2KBKGODlmKFlmGDJWKClmGDlmGDJmSFLGKBJmJ/JWeAlWOAlGB/l157J2B5J2B6JV54H1t4lVd1KVJpGh4wCQ4LEA4QGyYscJaHgauZhaiUia+dlLqombuqrsq3rsi2o8GuoMCokrejirSiibqmiLGfaol/XXZsa4dzeJ2DgqGEe5eDZlBtep2Ch6uTfKKMc457UGRfK0BBDxohCAkQAQUJAQIIAQlGBQQGBQEMGCUkeJ6PhsGwhLOIOkZGEA0SCxARCQwRChANDhUODRUMExoVNko+THRZWHVeUG9aT21aVHReUnhdVYBiWoRrS3hdSXFVUGxfTXFfVHRjVHBkTnJiTHBhT3BkUnJnUHZlVXxqW4JtVXxlVHpkSntjSntjUoBqU3tpT3hmUHZoS29pRGdfPVNOlzAzGSYolS4uFhgbCgcKBwYMBgoOCgwQDA0RCgsPCw0PCAsQBQcRAgcOAw4ZCkxkvV46GM2dsFk9kHVxxJmZ4JGN4lI95JWR+I2OBJmmIJmyMJnCOJW+NJm6NI26OI22NJGiLI2iLHmWGJGWEI15/IGGBlmB/Hl6BHVx+HF9+H1+BHmCBlGCCJWOCJGKAIWJ+H2KBlmKAJGB9J2B7J2B6JI57lFx5lVl2IFlvKT5TDw8XEAwPDg0WXoN0faiWiKybhq2dk7imoMGvo8Guq8e0q8ezpMGqk7eiibOhhrOgfaKUW3pxZH90cl12gqKJh6WlZoJuVnJfYoZogSHja6WhqGNaoF5TWZjLUBDGyMpCQsUBAALBAIIBwQGCCQELDRESOIJFb62b

Examples of pushing messages from strangers:

{ "operator": "StrSnapPush", "info": { "facesluiceId":"1305433", "facesluiceName":"Face1", "direction":"unknow", "time":"2019-11-29 10:09:47", "pic": "data:image/jpeg;base64,Qk3m5QAAAAAAADYAAAAoAAAAjAAAAlwAAAABABgAAAAAAAAAASCwAAEgsAAAAAAAAAAAAYHZ0YnZxYXJrWnBuVGxmXXRsYXhwZn11YHhuXnZnX3Hx0Z355aYB8Xm9vQ01UMztDTFlYTFtePUZKLzU6NTU9JyUuDwwVEQwVEAsUEw4XEAkWCgcWDAsbBgccBwwkAw0oBxUyEyZJ0hYZ42ZMFt6lVh/MWWJJNnCTPXOWOW+SM2eLMmmMM2yQMGuPN2+WPneeQXqhP3qhQneiP3ilPHiiQHqkDHeiPnmjOXegOHejN3aiN3eiOXWfPnSfPXWcQneeQXScQHGdPW6aP3GbRHKbQWyRQmSPRF2BLjITFA0XEw4QEg4QERISOkA/i6Wekqqlo7m0rMC7r8O+usrDwdDlwtDKxtbPvM7FrsXAp8K+pL25qsK6pcC3n7u1lK6riqGgX3B0UmJsPERFNmNvanFZcm1aY3lodFd2d293H31wZH1zcXt1gaKJh6WlZoJuVnJfYoZogSHja6WhqGNeiP3ilPHPPXOePXSbPnKaQ3aeQXKePm+bPW+ZQG6W1PGrobeiib6hvb6hvb6hw9DlwtDKxtbKvM7FrsXApcC3n7u1k66riaGgYXB0UmJsPERFNmNvanFZcm1aY3lodFd2d293H31wZH1zcXt1gaKJh6WVsOkNLNEBCSIJYRU1RNzxBMTl5LCs0Eg8YDQgRFA8YEw4XEGwXDQoZXDQoZXDAsbBgcRQBQohAgwlAg8rCh08G/rsK+pYRERIUFhkBKGjZxEwfJWPlLGrobeyqb6rsK9uMjBvczEvszGw9PMwtTLts31qcS/osK9osK9qG5dK9obgwdn9/Fw4VEq0PCBIYFA4TEyEFDFBETFDIUFBDYTHujiYpIkY

4 data transmission

All commands sent by the cloud platform (server) to the all-in-one face recognition machine are sent to the topic (mqtt / face / ID, where id refers to the local ID, for example, 1305433). The operation results of the face recognition all-in-one machine responding to the corresponding instructions are pushed to (mqtt / face / ID / ACK, where id refers to the local ID, such as 1305433).

4.1 interface for adding and modifying personnel list

If it involves the addition and modification of more than two people, the image should use the URI method, which is recommended4.6 batch increase of personnel (URI)or4.10 batch adding or modifying personnel (URI)This interface is not recommended for batch adding personnel. If the interval between two instructions is too small, it may cause15 heart rateIf it is necessary to use the interface, the interface will send the image data in Base64 mode with an interval of more than 1 second; if it is used to send images in the URI mode, the interval calls of this interface need to be more than 2 seconds, which needs to be debugged.

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		EditPerson	Add or modify single person
messageId	String		Message ID, distinguish each message
info			concrete content
personId	String (optional)		The ID generated on the all-in-one machine distinguishes each person, and the platform does not need to transmit it.
customId	String	Length 48 characters (including terminator)	The ID generated by the platform uniquely identifies different personnel. It is recommended to use the ID card number. If the device passed in the customid already exists, it will be regarded as modified; otherwise, it will be added

name	String	32 character end	Name of personnel
personType	int	0~1	0: White list: 1 blacklist
tempCardType	int	0~3	List type 0:Permanent list 1:Temporary list 1 (valid for time period) 2:Temporary list 2 (valid at the same time every day) 3 temporary list 3 (valid times)
cardValidBegin	String (optional)	2020-04-18 00:00:00	Start time of temporary list Required when the list type is temporary list 1 or 2
cardValidEnd	String (optional)	2020-12-20 23:59:59	Temporary list end time Required when the list type is temporary list 1 or 2
EffectNumber	int (optional)		Number of valid provisional list 3 It is required when the list type is temporary list 3
nation	int (optional)	1~57	nation 1: Han nationality SeeAppendix a.1 Nationalities
gender	int (optional)	0~1	Gender 0: Male 1: female
idCard	String (optional)		ID number, 32 characters in length (including ending character)
birthday	String (optional)		birthday 1992-06-15
telnum1	String (optional)		Phone number, 32 characters long (including terminator)
native	String (optional)		Native place, length 32 characters (including ending)
address	String (optional)		Address, length 72 characters (including terminator)
notes	String (optional)		Note (special version is reused as multi period policy group ID 1 ~ 255)
cardType2	int (optional)	0~3	The generating mode of wiegenka number 0: Public card number 1: Automatic generation 2: Manual input 3: No access control

WiegandType	int (optional)	0~1 or 6~7	The Wiegand agreement according to which the wagenka number is composed; when cardtype2 = 2, it is required; 0: 26 1: 34 6:26 digits (8 + 16 facility code + userid (equipment code + card number) should be filled in separately); 7:34 digits (8 + 24 facility code + userid) Default:1 (34 bits)
WGFacilityCode	int (optional)		Facility code; required when wiegandtype = 6 or 7; used with cardnum2. When wiegandtype = 0 or 1, it is not necessary to fill in.
cardNum2	int (optional)		Weigan access card number (userid) Cardtype2 is required when it is 2
CardMode	unsigned int (optional)	0~1	The access control card number adopts the mode 0: Decimal card number 1: Hexadecimal composition card number Default 0: Decimal card number
RFCardMode	unsigned int (optional)	0~1	The RF (ID) card number adopts the mode, aiming at the built-in card reader 0: Decimal card number 1: Hexadecimal composition card number Default 1: Hexadecimal composition card number
RFIDCard	String (optional)	If rfcardmode = 0, fill in the decimal string ("1369406761"); if rfcardmode = 1, fill in the hexadecimal string ("519f7d29")	ID card number, the maximum length is 10 characters. For the built-in swiping card model (including the ending character), if you just re edit the list and do not change the card number, you do not need to pass in the rfidcard keyword

cardType	int (optional)	0	Certificate type: 0 ID card
pic	String	When adding a list, choose either pic or picuri, and it is not necessary to modify the list without replacing pictures	Personnel picture (Base64 encoding, no more than 1m), and picuri 2, select 1
picURI	String	When adding a list, choose one from picuri or pic. It is not necessary to modify the list without replacing pictures	Personnel picture (URI address), and PIC 2, select 1

The same interface is used to add and modify the personnel list. Note that the image data corresponding to the distributed personnel list can be sent to the base64 data of the picture through the key value "picuri", or the cloud URI address of the picture sent by the key value "picuri", and the image data can be obtained by the face recognition all-in-one machine; one of the two is selected.If it is to modify the list of personnel, the key values "pic" and "picuri" may not be passed in if the picture replacement is not involved.

1. Distribution personnel list (Base64 data is used for pictures)

```
{
    "messageId":"ID:localhost-637050272518414388:79346:87:5",
    "operator":"EditPerson",
    "info":
    {
        "personId":"",
        "customId":"063c81e0fce184c696cdb7e049230f5e",
        "Name": Zhang San,
        "nation":1,
        "gender":0,
        "birthday":"1995-06-12",
        "address":"",
        "idCard":"421381199504030001",
        "tempCardType":0,
        "EffectNumber":3,
```

```
        "cardValidBegin":"2019-10-10 10:00:00",
        "cardValidEnd":"2019-10-10 16:00:00",
        "telnum1":"18888888888",
        "Native": Shenzhen, Guangdong Province,
        "cardType2":0,
        "cardNum2":"",
        "notes":"","personType":0,
        "cardType":0,
        "dwidentity":0,
        "Pic": "data: image / jpeg; Base64....."
    }

}
```

2. List of personnel to be issued (images are obtained by URI and all-in-one machine)

```
{

"messageId":"ID:localhost-637050272518414388:79346:87:5",
"operator":"EditPerson",
    "info":
    {
        "personId":"",
        "customId":"063c81e0fce184c696cdb7e049230f5e",
        "Name": Zhang San,
        "nation":1,
        "gender":0,
        "birthday":"1995-06-12",
        "address":"",
        "idCard":"421381199504030001",
        "tempCardType":0,
        "EffectNumber":3,
        "cardValidBegin":"2019-10-10 10:00:00",
        "cardValidEnd":"2020-10-10 16:00:00",
        "telnum1":"18888888888",
        "Native": Shenzhen, Guangdong Province,
        "cardType2":0,
        "cardNum2":"",
        "notes":"","personType":0,
        "cardType":0,
        "dwidentity":0,
```

"picURI":"https://btgoss.oss-cn-beijing.aliyuncs.com/image/xxx.jpg"

```
    }
}
```

4.2 query personnel list information

There are two query interfaces, one is to query the detailed information, the other is to query the customid of all personnel in the device.

4.2.1 query the customid of all personnel in the equipment

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		QueryPerson/ QueryPerson-Ack	QueryPerson:Query the customid of all personnel Queryperson ack: returned by querying the customid of all personnel
messageId	String		Message ID, distinguish each message
info			concrete content
facesluiceId	String		All in one machine device ID, return value
customId	String	Length 48 characters (including terminator)	The ID generated by the platform uniquely identifies different personnel. It is recommended to use the ID card number
TotalPersonNum	int		Total list number of all-in-one machine (including the list with empty customid, such as the list added by the web side), and return

			the parameter
QueryPersonNum	int		Query result list number of all-in-one machine (excluding the list with empty customid), return parameters

{
"operator":"QueryPerson",
"messageId":"ID:localhost-637046811507388956:23952:65:48",
    "info":
        {
        }

}

Confirmation message returned:

{
"messageId":"ID:localhost-637046811507388956:23952:65:48",
"operator": "QueryPerson-Ack",
"info": {
"facesluiceId":"1379743",
"TotalPersonNum":"99",
"QueryPersonNum":"98",
"Customid":
"063c81e0fce184c696cdb7e049230f5e23dfqwxc230000063c81e0fce184c696cdb7e049230f5e23d
fqwxc230001, / * 96 pieces of data are omitted here*/
"result":"ok"}
}

Customid is separated by.There may be duplicate IDs

4.2.2 query the detailed information of individual personnel list

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		SearchPerson/ SearchPerson-Ack	SearchPerson:Query the customid of a single person Searchperson ack: returned by querying the customid of a single person
messageId	String		Message ID, distinguish each message
info			concrete content
facesluiceId	String		All in one machine device ID, return value
customId	String	Length 48 characters (including terminator)	The ID generated by the platform uniquely identifies different personnel. It is recommended to use the ID card number
Picture	int (optional)	0 ~ 1 (default 0)	Include picture information 0:List without picture information 1:List with picture information
pic	String (optional)		Base64 encoding of image information (return parameter)

```
{
"messageId":"ID:localhost-637046811507388956:23952:65:48",
"operator":"SearchPerson",
     "info":
        {
            "customId":"063c81e0fce184c696cdb7e049230f5e",
            "Picture":"1"
        }
}
```

Confirmation message returned:

```
{
"messageId":"ID:localhost-637046811507388956:23952:65:48",
"operator": "SearchPerson-Ack",
"info": {
"facesluiceId":"5d0848e581c3e6f1938a035f",
"personId":"5",
"customId":"063c81e0fce184c696cdb7e049230f5e",
```

"Name": Zhang San,
"gender":"0",
"idCard":"421381199504030014",
"address":" ",
"creatTime":"2019-09-30T09:13:48",
"telnum1":" ",
"personType":"0",
"cardNum2":"0",
"result":"ok"
},
"pic": "data:image/jpeg;base64,Qk225QAAAAA......"
}

4.2.3 multi person list query

The interface supports two methods to query, but it does not support return with image search at present.The specific parameter fields returned can be referred to4.1 interface for adding and modifying personnel list。

Search Description:

1. Search by time: set the start time and end time of search, and the name is empty

2. Search by name or fuzzy search by name: set the start time and end time of search to be empty, and the name is not empty

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		SearchPersonList/ SearchPersonList-Ack	SearchPersonList:Multi person list query Searchpersonlist ack: multi person list query return
messageId	String		Message ID, distinguish each message
info			concrete content

facesluiceId	String		The ID of face recognition all-in-one machine. When the specific key value is passed in, the matching machine will be assigned to execute. If not, all machines that subscribe to the same topic will be executed
personType	int (optional)	0~2	List type 0:Whitelist 1:Blacklist 2:All
BeginTime	String (optional)	2018-08-13T00:00:00	Starting time of search
EndTime	String (optional)	2020-08-19T23:59:59	The end time of the search
gender	int (optional)	0~2	Gender 0:Male 1:Female 2:All
cardNum2	unsigned int (optional)		Access card number (reserved)
name	String (optional)		full name
BeginNO	int (optional)	Default:0	Query the starting position of the list, that is, from whom to start
RequestCount	int (optional)	1 ~ 2000 (default: 100)	The total number of messages returned from the query list is up to 2000 (without pictures at present). If it is set to be more than 2000, only 2000 messages will be returned.
Picture	int	0~1	Include picture information (reserved)
TotalPersonNum	int		Total number of matching lists, return parameters
PersonNum	int		Return the number of matching lists at a time and return parameters
List			Match list JSON array, return parameters

e. G.1, search according to time period

```
{
"messageId":"ID:localhost-637046811507388956:23952:65:48",
"operator":"SearchPersonList",
        "info": {
        "facesluiceId":"1326491",
```

            "personType":0,
            "BeginTime":"2018-08-13T00:00:00",
            "EndTime":"2020-08-19T23:59:59",
            "gender":2,
            "BeginNO":0,
            "RequestCount":100
        }
}

e. G.1, search and return according to time period

{
"messageId":"ID:localhost-637046811507388956:23952:65:48",
"operator": "SearchPersonList-Ack",
"info": {
"facesluiceId": "1326491",
"TotalPersonNum":102,
"PersonNum":100,
"List":[
{
"LibID":1,
"personType":0,
"name":"zstest",
"gender":0,
"nation":1,
"cardType":0,
"idCard":"421381199504030001",
"birthday":"1995-06-12",
"telnum1":"18888888888",
"native":"sz",
"address":" ",
"notes":" ",
"cardType2":0,
"cardNum2": 1,
"RFIDCard": "0",
"tempCardType": 0,
"customId": "063c81e0fce184c696cdb7e049230f5e",
"cardValidBegin":"0000-00-00 00:00:00",
"cardValidEnd":"0000-00-00 00:00:00"
},
/*The list data is omitted here*/
{

/*The list data is omitted here*/
}
]}
}

e. Search by name, or fuzzy
{
"messageId":"ID:localhost-637046811507388956:23952:65:48",
"operator":"SearchPersonList",
          "info": {
          "facesluiceId":"1326491",
          "personType":0,
          "BeginTime":"2018-08-13T00:00:00",
          "EndTime":"2020-08-19T23:59:59",
          "name":"cff",
          "gender":2,
          "BeginNO":0,
          "RequestCount":100
     }
}

e. G.2, search by name or fuzzy search return
{
"messageId":"ID:localhost-637046811507388956:23952:65:48",
"operator": "SearchPersonList-Ack",
"info": {
"facesluiceId": "1326491",
"TotalPersonNum":1,
"PersonNum":1,
"List":[
{
"LibID":101,
"personType":0,
"name":"cff_2",
"gender":0,
"nation":1,
"cardType":0,
"idCard":" ",
"birthday":"2019-08-11",

```
"telnum1":" ",
"native":" ",
"address":" ",
"notes":" ",
"cardType2":0,
"cardNum2": 1,
"RFIDCard": "0",
"tempCardType": 0,
"customId": " ",
"cardValidBegin":"0000-00-00 00:00:00",
"cardValidEnd":"0000-00-00 00:00:00"
}
]}
}
```

4.3 delete individual personnel list

The delete single personnel list interface is only applicable to delete a single personnel list. If you need to delete multiple personnel lists, it is recommended to use 4.9 to delete personnel lists in batch.

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		DelPerson	DelPerson:Delete single person list
messageId	String		Message ID, distinguish each message
info			concrete content
facesluiceId	String (optional)		All in one machine device ID, return value
customId	String	Length 48 characters (including terminator)	The ID generated by the platform uniquely identifies different personnel. It is recommended to use the ID card number

```
{
"operator":"DelPerson",
"messageId":"ID:localhost-637046811507388956:23952:65:48",
     "info":
```

```
{
    "customId":"063c81e0fce184c696cdb7e049230f5e"
}
}
```

4.4 add / modify / delete / confirmation information returned by personnel (received by platform)

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		EditPerson-Ack/ DelPerson-Ack	Editperson ack: Add / modify personnel return Delperson ack: delete person return
messageId	String		Message ID, distinguish each message
info			concrete content
facesluiceId	String (optional)		All in one machine device ID, return value
personId	String (optional)		ID automatically generated on the all-in-one machine, return value
customId	String (optional)	Length 48 characters (including terminator)	The ID generated by the platform uniquely identifies different personnel. It is recommended to use the ID card number
result	String	"ok"/"fail"	Operation results
detail	String (optional)		When the result is "fail", the error message

```
{
"messageId": "ID:hqvtsw013-45030-636591533573927379-1:3:1:1:1",
"operator": "EditPerson-Ack",
"info":
{
```

"facesluiceId":"0001",
"personId":"0001",
"customId":"063c81e0fce184c696cdb7e049230f5e",
"result":"ok",
"detail":""
}
}

4.5 delete all personnel lists

4.5.1 issue and delete the list of all personnel

Deleting all personnel lists will delete all personnel lists corresponding to the all-in-one face recognition machine, and the control records will also be deleted. The operation cannot be resumed and should be used with caution.If the interface is successful, the face recognition system will restart automatically.

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		DeleteAllPerson/ DeleteAllPerson-Ack	DeleteAllPerson:Delete all personnel lists Delete allperson ack: delete all personnel list return
messageId	String		Message ID, distinguish each message
info			concrete content
facesluiceId	String (optional)		All in one machine device ID, return value
deleteall	int	0~1	Delete all personnel list 1: Confirm deletion
result	String	"ok"/"fail"	Operation results
detail	String (optional)		When the result is "fail", the error message

{
"messageId":"ID:localhost-637046811507388956:23952:65:48",
"operator":"DeleteAllPerson",
    "info":
        {

"deleteall":"1"
        }
    }

4.5.2 delete all personnel list confirmation message reply

{
"messageId":"ID:localhost-637046811507388956:23952:65:48",
"operator": "DeleteAllPerson-Ack",
"info":
{
  "facesluiceId":"1305433",
"result":"ok"
}
}

4.6 batch increase of personnel (URI)

The purpose of batch adding personnel interface is to solve the problem caused by frequent calls of 4.1 to add and modify the interface of personnel list interface due to the working mechanism of mqtt queue, and to improve the speed of personnel distribution.At present, only batch distribution of personnel interface images is supported, and URI mode is adopted.The maximum number of batch adding personnel list of face recognition all-in-one machine is limited to 1000. Each time the platform calls the interface, it needs to wait for the previous batch adding personnel list to be added successfully before issuing the batch adding personnel list interface again.After calling the interface, the number of failures and successes as well as the information will be returned at one time. If the interface fails to be added, the information error code will be attached. Please refer to the appendix for the error codeError code (4) batch add personnel URI。 In the process of batch adding personnel list, other instructions related to adding / modifying / deleting the list cannot be called; after the batch adding personnel interface is issued, it can be called at intervals4.8 query batch adding / modifying personnel progressTo determine whether the interface is completed or not.

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		AddPersons/	AddPersons:Batch increase of personnel

			AddPersons-Ack/	Addpersons ack: batch add personnel return
messageId	String			Message ID, distinguish each message
DataBegin	String		Fixation:BeginFlag	Packet start identification to detect packet integrity
DataEnd	String		Fixation:EndFlag	End of packet identification, detection of packet integrity
PersonNum	int		1~1000	The number of personnel must be consistent with the number of JSON of corresponding personnel information
info				concrete content
[ ]				Personnel list JSON collection
customId	String			The ID generated by the platform is used to uniquely identify different personnel. It is recommended to use the ID card number with a length of 48 characters (including the ending character)
name	String		32 character end	Name of personnel
personType	int		0~1	0: White list: 1 blacklist
tempCardType	int		0~3	List type 0:Permanent list 1:Temporary list 1 (valid for time period) 2:Temporary list 2 (valid at the same time every day) 3 temporary list 3 (valid times)
cardValidBegin	String (optional)		2020-04-18 00:00:00	Start time of temporary list Required when the list type is temporary list 1 or 2
cardValidEnd	String (optional)		2020-04-20 23:59:59	Temporary list end time Required when the list type is temporary list 1 or 2
EffectNumber	int (optional)			Number of valid provisional list 3 It is required when the list type is temporary list 3
nation	int (optional)		1~57	nation 1: Han nationality See Appendix a.1 Nationalities
gender	int (optional)		0~1	Gender 0: Male 1: female
idCard	String (optional)			ID number, 32 characters in length (including ending character)

telnum1	String (optional)		Phone number, 32 characters long (including terminator)
native	String (optional)		Native place, length 32 characters (including ending)
address	String (optional)		Address, length 72 characters (including terminator)
birthday	String (optional)		birthday 1992-06-15
notes	String (optional)		Note (special version is reused as multi period policy group ID 1 ~ 255)
isCheckSimilarity	int (optional)	0~1	Detect the personnel similarity between the added image and the base database. If it is greater than the set black-and-white list verification threshold value, it will fail to be added. It is used to exclude the same personnel picture from being added multiple times. 0:Do not detect image similarity (default: 0) 1: Detect image similarity
cardType2	int (optional)	0~3	The generating mode of wiegenka number 0: Public card number 1: Automatic generation 2: Manual input 3: No access control
WiegandType	int (optional)	0~1 or 6~7	The Wiegand agreement according to which the wagenka number is composed; when cardtype2 = 2, it is required; 0: 26 1: 34 6:26 digits (8 + 16 facility code + userid (equipment code + card number) should be filled in separately); 7:34 digits (8 + 24 facility code + userid) Default:1 (34 bits)
WGFacilityCode	int (optional)		Facility code; required when wiegandtype = 6 or 7; used with cardnum2. When wiegandtype = 0 or 1, it is not necessary to fill in.
cardNum2	int		Weigan access card number (userid)

	(optional)		Cardtype2 is required when it is 2
CardMode	unsigned int (optional)	0~1	The mode of composition of Weigan access control card number 0: Decimal card number 1: Hexadecimal composition card number Default 0: Decimal card number
RFCardMode	unsigned int (optional)	0~1	The RF (ID) card number adopts the mode, aiming at the built-in card reader 0: Decimal card number 1: Hexadecimal composition card number Default 1: Hexadecimal composition card number
RFIDCard	int (optional)	If rfcardmode = 0, fill in the decimal string ("1369406761"); if rfcardmode = 1, fill in the hexadecimal string ("519f7d29")	ID card number, the maximum length is 10 characters, for the built-in card reader (including the end character)
cardType	int (optional)		Certificate type: 0 ID card
picURI	String	https://btgongpluss.oss-cn-beijing.aliyuncs.com/bigheadphoto/xxx.jpg	Personnel list image URI address
facesluiceId	String		Face recognition machine ID, return parameters
AddErrNum	int	0~1000	Batch increase the number of failed personnel, return the parameter
AddErrInfo	String		Add personnel failure information (customid + errCode) in batch, and return the parameter. See Appendix for errCode
AddSucNum	int	0~1000	Batch increase the number of successful personnel, return the parameter
AddSucInfo	String		Batch add personnel failure information (customid) and return parameters

4.6.1 batch increase of personnel

e. G.1, add 1000 lists in batch

{
"messageId":"AddPersonslist2020-04-13T19:07:00_00001",
"DataBegin":"BeginFlag",
"operator":"AddPersons",
"PersonNum":"1000",
"info":
[
    {
    "customId":"063c81e0fce184c696cdb7e049230f5e23dfqwxc230000",
    "name":"test000",
    "nation":1,
    "gender":0,
    "birthday":"1992-06-13",
    "Address": "Bao'an District, Shenzhen City, Guangdong Province",
    "idCard":"421381199504030000",
    "tempCardType":0,
    "EffectNumber":3,
    "cardValidBegin":"2020-04-13 00:00:00",
    "cardValidEnd":"2020-12-13 21:22:23",
    "telnum1":"13690880000",
    "Native": Shenzhen, Guangdong Province,
    "cardType2":0,
    "notes":"",
    "personType":0,
    "cardType":0,
    "picURI":"https://btgongpluss.oss-cn-beijing.aliyuncs.com/bigheadphoto/xxx.jpg"
    }

    ,

    /*The JSON data of 998 personnel lists is omitted here*/

    {

    "customId":"063c81e0fce184c696cdb7e049230f5e23dfqwxc230999",
    "name":"test999",

```
        "nation":1,
        "gender":0,
        "birthday":"1992-06-13",
        "Address": "Bao'an District, Shenzhen City, Guangdong Province",
        "idCard":"421381199504030999",
        "tempCardType":0,
        "EffectNumber":3,
        "cardValidBegin":"2020-04-13 00:00:00",
        "cardValidEnd":"2020-12-13 21:22:23",
        "telnum1":"13690880999",
        "Native": Shenzhen, Guangdong Province,
        "cardType2":2,
        "notes":"",
        "personType":0,
        "cardType":0,
        "WiegandType":1,
        "cardNum2":2765823488,
        "CardMode":0,
        "picURI":"https://btgongpluss.oss-cn-beijing.aliyuncs.com/bigheadphoto/xxx.jpg"
        }
]
    "DataEnd":"EndFlag"
}
```

4.6.2 batch increase of personnel return

e. G.1, batch add a list of 1000 to return

```
{
"messageId":"AddPersonslist2020-04-13T19:07:00_00001",
"operator": "AddPersons-Ack",
"info":
{
"facesluiceId":"1306612",
"AddErrNum":"1",
"AddSucNum":"999",
 "AddErrInfo":
[
    {"customId":"063c81e0fce184c696cdb7e049230f5e23dfqwxc230898","errcode":"474"}
],
"AddSucInfo":
[
    {"customId":"063c81e0fce184c696cdb7e049230f5e23dfqwxc230000"},
```

{"customId":"063c81e0fce184c696cdb7e049230f5e23dfqwxc230000"},

    /*996 returned data are omitted here*/

    {"customId":"063c81e0fce184c696cdb7e049230f5e23dfqwxc230999"}
],
"result":"ok"
  }
  }

4.7 batch modification personnel (URI)

The purpose of batch modifying personnel interface is to solve the problem caused by the working mechanism of mqtt queue. The issuing personnel frequently call 4.1 to add and modify the interface of personnel list interface, and improve the speed of modifying personnel.At present, only batch modification of personnel interface images is supported, using URI mode.The maximum number of batch modification personnel list of face recognition all-in-one machine is limited to 1000. Each time the platform calls the interface, it needs to wait until the last batch modification of personnel list is successful before issuing batch modification personnel list interface again.After calling the interface, the number of failures and successes as well as the information will be returned at one time. If the interface fails to be modified, the error code will be attached. Please refer to the appendix for the error code4.7 batch modification of personnel (URI) error codes.In the process of batch modifying the personnel list, other instructions about adding / modifying / deleting the list cannot be called.If you do not need to modify the list picture, you do not need to pass in picuri keyword and corresponding URI. If you do not need to change the weigenka number, you do not need to pass in the corresponding key fields such as cardtype2 and wiegandtype, and the corresponding values; if the built-in swipe version does not need to change the ID card number, you do not need to pass in the rfidcard keyword and corresponding value, otherwise,The interface for modifying the personnel list will directly cover the corresponding vegan card number and rfidcard (built-in card reader), which cannot guarantee the uniqueness of all the weigencard numbers or rfidcards in the list.

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		EditPersons/ EditPersons-Ack/	EditPersons:Batch modify personnel Editpersons ack: batch modify personnel return

messageId	String		Message ID, distinguish each message
DataBegin	String	Fixation:BeginFlag	Packet start identification to detect packet integrity
DataEnd	String	Fixation:EndFlag	End of packet identification, detection of packet integrity
PersonNum	int	1~1000	The number of personnel must be consistent with the number of JSON of corresponding personnel information
info			concrete content
[ ]			Personnel list JSON collection
customId	String		The ID generated by the platform is used to uniquely identify different personnel. It is recommended to use the ID card number with a length of 48 characters (including the ending character)
name	String	32 character end	Name of personnel
personType	int	0~1	0: White list: 1 blacklist
tempCardType	int	0~3	List type 0:Permanent list 1:Temporary list 1 (valid for time period) 2:Temporary list 2 (valid at the same time every day) 3 temporary list 3 (valid times)
cardValidBegin	String (optional)	2020-04-18 00:00:00	Start time of temporary list Required when the list type is temporary list 1 or 2
cardValidEnd	String (optional)	2020-04-20 23:59:59	Temporary list end time Required when the list type is temporary list 1 or 2
EffectNumber	int (optional)		Number of valid provisional list 3 It is required when the list type is temporary list 3
nation	int (optional)	1~57	nation 1: Han nationality SeeAppendix a.1 Nationalities
gender	int (optional)	0~1	Gender 0: Male 1: female
idCard	String (optional)		ID number, 32 characters in length (including ending character)
telnum1	String (optional)		Phone number, 32 characters long (including terminator)

native	String (optional)		Native place, length 32 characters (including ending)
address	String (optional)		Address, length 72 characters (including terminator)
birthday	String (optional)		birthday 1992-06-15
notes	String (optional)		Note (special version is reused as multi period policy group ID 1 ~ 255)
isCheckSimilarity	int (optional)	0~1	If the personnel similarity between the modified image and the base database is greater than the set black and white list verification threshold value, the registration image of the corresponding control record will not be deleted, and it will be smaller than the control record registration image before it will be deleted 0:Do not detect image similarity (default: 0) 1: Detect image similarity
cardType2	int (optional)	0~3	The generating mode of the Wegener card number is not transmitted if it is not changed 0: Public card number 1: Automatic generation 2: Manual input 3: No access control
WiegandType	int (optional)	0~1 or 6~7	The Wiegand agreement according to which the wagenka number is composed; when cardtype2 = 2, it is required; 0: 26 1: 34 6:26 digits (8 + 16 facility code + userid (equipment code + card number) should be filled in separately); 7:34 digits (8 + 24 facility code + userid) Default:1 (34 bits)
WGFacilityCode	int (optional)		Facility code; required when wiegandtype = 6 or 7; used with cardnum2.When wiegandtype = 0 or 1, it is not necessary to fill in.
cardNum2	int		Weigan access card number (userid)

	(optional)		Cardtype2 is required when it is 2
CardMode	unsigned int (optional)	0~1	The mode of composition of Weigan access control card number 0: Decimal card number 1: Hexadecimal composition card number Default 0: Decimal card number
RFCardMode	unsigned int (optional)	0~1	The RF (ID) card number adopts the mode, aiming at the built-in card reader 0: Decimal card number 1: Hexadecimal composition card number Default 1: Hexadecimal composition card number
RFIDCard	int (optional)	If rfcardmode = 0, fill in the decimal string ("1369406761"); if rfcardmode = 1, fill in the hexadecimal string ("519f7d29")	ID card number, the maximum length is 10 characters. For the built-in card reader (including the end character), it will not be transferred if it is not changed
cardType	int (optional)		Certificate type: 0 ID card
picURI	String	https://btgongpluss.oss-cn-beijing.aliyuncs.com/bigheadphoto/xxx.jpg	The URI address of the personnel list image is not transmitted if it is not changed
facesluiceId	String		Face recognition machine ID, return parameters
AddErrNum	int	0~1000	Batch modify the number of failed personnel, return the parameter
AddErrInfo	String		Batch modify personnel failure information (customid + errCode) and return parameters. See Appendix for errCode
AddSucNum	int	0~1000	Batch modify the number of successful personnel, return parameters
AddSucInfo	String		Batch modify personnel failure information (customid) and return parameters

4.7.1 batch modification personnel

e. G.1, batch modification list of 1000

```
{
"messageId":"EditPersonslist2020-05-10T19:07:00_00002",
"DataBegin":"BeginFlag",
"operator":"EditPersons",
"PersonNum":"1000",
"info":
[
    {
    "customId":"063c81e0fce184c696cdb7e049230f5e23dfqwxc230000",
    "name":"modify000",
    "telnum1":"13700880000"
    }

    ,

    /*The JSON data of 998 personnel lists is omitted here*/

    {

    "customId":"063c81e0fce184c696cdb7e049230f5e23dfqwxc230999",
    "name":"modify999",
    "picURI":"https://btgongpluss.oss-cn-beijing.aliyuncs.com/bigheadphoto/xxx111.jpg"
    }
]
    "DataEnd":"EndFlag"
}
```

Batch modification of personnel

e. G.1, batch add a list of 1000 to return

```
{
"messageId":"EditPersonslist2020-05-10T19:07:00_00002",
"operator": "EditPersons-Ack",
"info":
{
```

"facesluiceId":"1306612",

"AddErrNum":"1",

"AddSucNum":"999",

 "AddErrInfo":

[

    {"customId":"063c81e0fce184c696cdb7e049230f5e23dfqwxc230898","errcode":"461"}

],

"AddSucInfo":

[

    {"customId":"063c81e0fce184c696cdb7e049230f5e23dfqwxc230000"},

    {"customId":"063c81e0fce184c696cdb7e049230f5e23dfqwxc230000"},

    /*996 returned data are omitted here*/

    {"customId":"063c81e0fce184c696cdb7e049230f5e23dfqwxc230999"}

],

"result":"ok"

 }

 }

4.8 query batch adding / modifying personnel progress

This interface is mainly to solve the platform call4.6 batch add personnel list (URI)and4.7 batch modification of personnel list (URI)or4.10 batch adding or modifying personnel (URI)The time interval between the last polling of the interface.If the all-in-one face recognition machine reconnects with the server or the all-in-one face recognition machine suddenly turns off during the batch distribution process, it is certain that the final batch processing result cannot be returned. In this case, the platform needs to process the last batch distribution / modification again.

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		QueryProgress/ QueryProgress-Ack/	QueryProgress:Query batch add / modify personnel progress Queryprogress ack: query batch add / modify personnel progress return
messageId	String		Message ID, distinguish each message
facesluiceId	String		All in one machine ID, distinguish each

			machine
QueryType	String (optional)		Query type, return parameter Addpersons: batch add device list Editpersons: the device is in batch modification list status Editpersonsnew: the device is in batch add or modify list status None: the device is in the state of no batch add / modify list
Status	Int (optional)	0~2	Query status, return parameters 0: idle state 1: Addpersons busy 2: Editpersons busy 3: Editpersonsnew busy

4.8.1 query batch add / modify personnel progress

e. G.1, query the progress of batch adding / modifying personnel
```
{
"messageId":"ID:localhost-637050900934386959:42763:53:1",
"operator":"QueryProgress",
"info":
  {
  }
}
```

4.8.2 query batch add / modify personnel progress return

e. G.1, query batch add / modify personnel progress return
```
{
"messageId":"ID:localhost-637050900934386959:42763:53:1",
"operator": "QueryProgress-Ack",
"info": {
"facesluiceId":"1306612",
"QueryType":"AddPersons",
"Status":"1",
"result":"ok"
}
}
```

4.9 batch deletion of personnel list

A maximum of 200 personnel lists can be deleted at a time. When the maximum number of personnel lists is deleted, you need to wait for this command to return (generally it takes 7 seconds to complete) before issuing other instructions or issuing batch deletion personnel lists again. After deleting the list through this interface, the registration image of corresponding control records will be deleted, and the control records will not be deleted;Compared with deleting all personnel lists in 4.5, this interface does not delete control records but only lists.If the existing customid is passed in, it will execute successfully. If the non-existent customid is passed in, a prompt will be given in the failure. Deleting the non-existent customid will not affect the use of the platform. If the platform does not care, the failure return information of deleting the nonexistent customid will not be processed

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		DeletePersons/ DeletePersons-Ack/	DeletePersons:Batch delete personnel Delete persons ack: batch delete personnel return
messageId	String		Message ID, distinguish each message
DataBegin	String	Fixation:BeginFlag	Packet start identification to detect packet integrity
DataEnd	String	Fixation:EndFlag	End of packet identification, detection of packet integrity
PersonNum	int	1~200	The number of deleted personnel must be consistent with the total number of corresponding personnel information customid
info			concrete content
customId	String		The ID generated by the platform is used to uniquely identify different personnel. It is recommended to use the ID card number with a single length of 48 characters (including the ending character)
facesluiceId	String		Face recognition machine ID, return parameters
DelErrNum	int	0~200	The number of failed personnel deletion in batch. Return parameter

DelErrInfo	String		Batch delete personnel failure information (customid), return parameter
DelSucNum	int	0~200	The number of successful personnel deletion in batch, return the parameter
DelSucInfo	String		Batch delete personnel failure information (customid), return parameter

4.9.1 batch deletion of personnel

e. G.1, delete 200 lists in batch
{
"messageId":"2020-05-14 11:07:00 DeletePersons",
"DataBegin":"BeginFlag",
"operator":"DeletePersons",
"PersonNum":"200",
    "info":
        {
    "customId":
[
"063c81e0fce184c696cdb7e049230f5e23dfqwxc230000",
/*198 pieces of data are omitted here * /,
"063c81e0fce184c696cdb7e049230f5e23dfqwxc230199"
]
}
"DataEnd":"EndFlag"
}

4.9.2 batch deletion of personnel return

e. G.1, batch delete 200 items of the list and return
{
"messageId":"2020-05-14 11:07:00 DeletePersons",
"operator": "DeletePersons-Ack",
"info": {
"facesluiceId":"1306612",
"DelErrNum":"98",
"DelSucNum":"102",
"DelErrInfo":[{"customId":"063c81e0fce184c696cdb7e049230f5e23dfqwxc230000"},
/*96 pieces of data are omitted here * /,
{"customId":"063c81e0fce184c696cdb7e049230f5e23dfqwxc230098"}],
"DelSucInfo":[{"customId":"063c81e0fce184c696cdb7e049230f5e23dfqwxc230099"},
/*100 pieces of data are omitted here * /,

{"customId":"063c81e0fce184c696cdb7e049230f5e23dfqwxc230199"}],
"result":"ok"
}
}

4.10 batch adding or modifying personnel (URI)

Batch adding or modifying personnel (URI) interfaces are mainly4.6 batch increase of personnel (URI)and4.7 batch modification personnel (URI)Combining the two interfaces, if the "customid" personnel list imported from the platform already exists in the all-in-one face recognition machine, the corresponding operation is to modify the personnel list information; if the "customid" imported from the platform does not exist in the corresponding face recognition all-in-one machine, the corresponding operation is to add the personnel list.Call this interface. You can consider calling it no longer4.6 batch increase of personnel (URI)and4.7 batch modification personnel (URI)Two interfaces.At present, this interface only supports the use of URI for images. The maximum number of personnel lists added or modified by the all-in-one face recognition machine is limited to 1000. Each time the platform calls the interface, it needs to wait for the previous batch modification of the personnel list to be issued again.After calling the interface, the number of failures and successes as well as the information will be returned at one time. If the interface fails to be modified, the error code will be attached. Please refer to the appendix for the error code4.10 batch adding or modifying personnel (URI) error codes。 You can also call4.8 query batch adding / modifying personnel progressTo check whether the interface is complete.

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		EditPersonsNew/ EditPersonsNew-Ack/	EditPersonsNew:Batch modify personnel Editpersons new ack: batch modify personnel return
messageId	String		Message ID, distinguish each message
DataBegin	String	Fixation:BeginFlag	Packet start identification to detect packet integrity
DataEnd	String	Fixation:EndFlag	End of packet identification, detection of packet integrity
PersonNum	int	1~1000	The number of personnel must be consistent with the number of JSON of corresponding personnel information

info			concrete content
[ ]			Personnel list JSON collection
customId	String		The ID generated by the platform is used to uniquely identify different personnel. It is recommended to use the ID card number with a length of 48 characters (including the ending character). If the all-in-one machine already exists, it is a modified list; if the all-in-one machine does not exist, it is an added list
name	String	32 character end	Name of personnel
personType	int	0~1	0: White list: 1 blacklist
tempCardType	int	0~3	List type 0:Permanent list 1:Temporary list 1 (valid for time period) 2:Temporary list 2 (valid at the same time every day) 3 temporary list 3 (valid times)
cardValidBegin	String (optional)	2020-04-18 00:00:00	Start time of temporary list Required when the list type is temporary list 1 or 2
cardValidEnd	String (optional)	2020-04-20 23:59:59	Temporary list end time Required when the list type is temporary list 1 or 2
EffectNumber	int (optional)		Number of valid provisional list 3 It is required when the list type is temporary list 3
nation	int (optional)	1~57	nation 1: Han nationality SeeAppendix a.1 Nationalities
gender	int (optional)	0~1	Gender 0: Male 1: female
idCard	String (optional)		ID number, 32 characters in length (including ending character)
telnum1	String (optional)		Phone number, 32 characters long (including terminator)
native	String (optional)		Native place, length 32 characters (including ending)
address	String (optional)		Address, length 72 characters (including terminator)
birthday	String		birthday

	(optional)		1992-06-15
notes	String (optional)		Note (special version is reused as multi period policy group ID 1 ~ 255)
isCheckSimilarity	int (optional)	0~1	If the personnel similarity between the modified image and the base database is greater than the set black and white list verification threshold value, the registration image of the corresponding control record will not be deleted, and it will be smaller than the control record registration image before it will be deleted 0:Do not detect image similarity (default: 0) 1: Detect image similarity
cardType2	int (optional)	0~3	The generating mode of wiegenka number 0: Public card number 1: Automatic generation 2: Manual input 3: No access control
WiegandType	int (optional)	0~1 or 6~7	The Wiegand agreement according to which the wagenka number is composed; when cardtype2 = 2, it is required; 0: 26 1: 34 6:26 digits (8 + 16 facility code + userid (equipment code + card number) should be filled in separately); 7:34 digits (8 + 24 facility code + userid) Default:1 (34 bits)
WGFacilityCode	int (optional)		Facility code; required when wiegandtype = 6 or 7; used with cardnum2.When wiegandtype = 0 or 1, it is not necessary to fill in.
cardNum2	int (optional)		Weigan access card number (userid) Cardtype2 is required when it is 2
CardMode	unsigned int (optional)	0~1	The mode of composition of Weigan access control card number 0: Decimal card number 1: Hexadecimal composition

			card number Default 0: Decimal card number
RFCardMode	unsigned int (optional)	0~1	The RF (ID) card number adopts the mode. For the built-in card reader, the version number contains I, such as I4 and I6 0: Decimal card number 1: Hexadecimal composition card number Default 1: Hexadecimal composition card number
RFIDCard	int (optional)	If rfcardmode = 0, fill in the decimal string ("1369406761"); if rfcardmode = 1, fill in the hexadecimal string ("519f7d29")	ID card number, the maximum length is 10 characters, for the built-in card reader (including the end character)
cardType	int (optional)		Certificate type: 0 ID card
picURI	String	https://btgongpluss.oss-cn-beijing.aliyuncs.com/bigheadphoto/xxx.jpg	The URI address of the personnel list image is not transmitted if it is not changed
facesluiceId	String		Face recognition machine ID, return parameters
AddErrNum	int	0~1000	Batch modify the number of failed personnel, return the parameter
AddErrInfo	String		Batch modify personnel failure information (customid + errCode) and return parameters. See Appendix for errCode
AddSucNum	int	0~1000	Batch modify the number of successful personnel, return parameters
AddSucInfo	String		Batch modify personnel failure information (customid) and return parameters

4.10.1 batch adding or modifying personnel

e. G.1, add or modify 1000 lists in batch

```
{
"messageId":"EditPersonsNewlist2020-07-24T19:07:00_00002",
"DataBegin":"BeginFlag",
"operator":"EditPersonsNew",
"PersonNum":"1000",
"info":
[
    {
    "customId":"063c81e0fce184c696cdb7e049230f5e23dfqwxc230000",
    "name":"modify000",
    "telnum1":"13700880000"
    }

    ,

    /*The JSON data of 998 personnel lists is omitted here*/


    {

    "customId":"063c81e0fce184c696cdb7e049230f5e23dfqwxc230999",
    "name":"modify999",
    "picURI":"https://btgongpluss.oss-cn-beijing.aliyuncs.com/bigheadphoto/xxx111.jpg"
    }
]
    "DataEnd":"EndFlag"
}
```

4.10.2 batch adding or modifying personnel return

e. G.1, batch add or modify the list of 1000 returned
```
{
"messageId":"EditPersonsNewlist2020-07-24T19:07:00_00002",
"operator": "EditPersonsNew-Ack",
"info":
{
"facesluiceId":"1306612",
"AddErrNum":"1",
"AddSucNum":"999",
 "AddErrInfo":
[
    {"customId":"063c81e0fce184c696cdb7e049230f5e23dfqwxc230898","errcode":"461"}
```

```
],
"AddSucInfo":
[
      {"customId":"063c81e0fce184c696cdb7e049230f5e23dfqwxc230000"},
      {"customId":"063c81e0fce184c696cdb7e049230f5e23dfqwxc230000"},

       /*996 returned data are omitted here*/

      {"customId":"063c81e0fce184c696cdb7e049230f5e23dfqwxc230999"}
],
"result":"ok"
   }
   }
```

5.   Information   upload   of authentication   and   identification personnel

The information of the authentication and recognition personnel is pushed to the corresponding by the all-in-one face recognition machine3.2.2 release topics

Identify the topic corresponding to authentication in.If the device is set to be used in the mode of network interruption and continuous transmission, it is necessary to reply to the reported data, otherwise the device will send the same identification record; for details, please refer to11. Continuous transmission after network interruptionPart of the explanation.

Key	Type	Values	Description
operator		Operation sign, recosh	Authentication and identification result push (char)
customId	char		The personnel ID of each platform is generated
personid	char		The ID on the all-in-one machine

			distinguishes each person. The machine is generated and the platform is uncontrollable
RecordID	int		Control the ID of the record library, which is used to reply the face recognition machine when the network is disconnected
VerifyStatus	int	0 ~ 3 or 22,24	Certification results 0: nothing 1: allow 2: refuse 3: Not yet registered 22:To be verified (control record of door opening mode is 3: face verification + remote door opening mode) 24:No permission (special version of control record of non passage time)
PersonType	int	0~1	List type 0: White list 1: blacklist
facesluiceId			All in one machine ID, distinguish each machine
facesluiceName			Name of all in one machine
similarity1	float	0~100	Similarity of black and white list comparison
similarity2	float	0~100	Identity card comparison similarity
pic			Base64 encoding of pictures (within 1m)
time	char		Identification time
otype	int	Base validation type, (decimal representation). 1: Whitelist verification 2: ID card verification 3: White list + ID card verification 7: Mqtt remote door opening 21:RF card verification (built-in swipe card model)	1: Ordinary neutral machine: 1 ~ 3or7 or 21 ~ 22 or 24 ~ 25 or 27; 2: Support mask or temperature measuring machine: Support mask detection or (|) operation, and 0x100 indicates passing with mask detection; It supports temperature detection or (|) operation, and 0x200 indicates that it has temperature detection; Support mask + body temperature detection or (|) operation. 0x300

		22:RF card verification + whitelist verification (built-in swipe card model) 24:Wegenka verification 25:Wegenka + whitelist verification 27:HTTP remote door opening	indicates that the mask + body temperature detection is available; For example: Mask pass (256 = 0x100) Mask + whitelist verification (257 = 0x101) Body temperature pass (512 = 0x200) Body temperature + whitelist verification (513 = 0x201) Mask + body temperature (768 = 0x300) Mask + body temperature + Wigan swipe card + whitelist verification (793 = 0x319)
cardNum2	unsigned int		Wigan access control card number (int type on the gate)
RFIDCard	char		ID card number, the maximum length is 10 characters, for the built-in card reader (including the end character)
idCard	char		ID number
telnum	char		phone number
direction	char		Entrance and exit direction: entrance:"Enter", export: "exit", no direction: "unknown"
temperature	float		Real time detection of face temperature, when9.3 door opening conditions and output controlThe door opening verification mode set in can only return the detected temperature with body temperature detection (temperature detection machine version support)
temperatureAlarm	int		Real time detection of whether the face temperature exceeds the threshold, 0: not exceeded; 1: over (temperature detection machine version support)
PushType	int		Push type 0: reserved 1: Reserved 2: Call20 manual push control recordData return for

e. G.1, push and report authentication and identification results:

{
    "operator": "RecPush",
    "info":
{
"customId":"063c81e0fce184c696cdb7e049230f5e ",
"personId":"41",
"direction":"entr",
"otype":"1",
"Persistname": Zhang San,
"facesluiceId":"1305433",
"facesluiceName":"Face1",
"cardNum2":"2",
"time":"2018-03-07 14:01:01",
""pic":"data:image/jpeg;base64,/9j/4AAQSkZJRgABAQAAAQABAAD/2w......",
"otype":"1",
"temperature":"36.53",
"temperatureAlarm":"0"

    }

}

6 information upload of strangers

Turn on the stranger snapshot upload mode and push the stranger snapshot upload to the snapshot push topic. See 3.2.3 subscription topics。

Key	Type	Values	Description
operator		Operation flag, strsnappush	Stranger capture push (char)
SnapID	int		The ID of the stranger snapshot library is used to reply to the face recognition machine when the network is disconnected
facesluiceId	String		All in one machine ID, distinguish each machine
facesluiceName	String		Name of all in one machine
time	String	"2019-11-28 11:26:40"	Snapshot time of strangers
direction	String	Imported:"Enter", export: "exit", no direction: "unknown"	Import and export direction of all in one machine
temperature	float		Real time detection of face temperature, when9.3 door opening conditions and output controlThe door opening verification mode set in can only return the detected temperature with body temperature detection (temperature detection machine version support)
temperatureAlarm	int		Real time detection of whether the face temperature exceeds the threshold, 0: not exceeded; 1: over (temperature detection machine version support)
pic			Base64 encoding of pictures (within 1m)
PushType	int		Push type 0: reserved 1: Reserved 2: Call22 manually push the capture record of strangersData return for

e. 1

{
"operator": "StrSnapPush",
"info":
  {
"facesluiceId":"1305433",
"facesluiceName":"Face1",
"direction":"exit",
"time":"2019-11-28 11:26:40",
"pic":
"data:image/jpeg;base64,Qk3m5QAAAAAADYAAAoAAAAjAAAIwAAAABABgAAAA
AAAAAAASCwAAEg......",
"temperature":"36.53",
"temperatureAlarm":"0"
}
}

7 remote upgrade version and get version information

7.1 issue upgrade instructions

The server sends the face recognition information from the server to the face recognition server.

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		Upgrade/ Upgrade-Ack	Upgrade:Upgrade version Upgrade ack: upgrade version return
messageId	String		Message ID, distinguish each message
info			concrete content
facesluiceId	String		All in one machine device ID, return

	(optional)		value
name	String		Version name
path	String		The download path of the upgrade file. The suffix must be ". SWX"
result	String	"ok"/"fail"	Operation results
detail	String (optional)		When the result is "fail", the error message

```
{
"messageId":"ID:localhost-637050900934386959:42763:53:1",
"operator":"Upgrade",
"info":
    {
    "Name": "latest version",
    "path":"https://mqttxxxx.oss-cn-shenzhen.aliyuncs.com/face/ba30fcbe-4758-4e1c-a287-5ab4
48a475ed.swx"
    }
}
```

7.2 reply to upgrade confirmation message

```
{
"messageId":"ID:localhost-637050900934386959:42763:53:1",
"operator": "Upgrade-Ack",
"info": {
"facesluiceId":"5d0848e581c3e6f1938a035f",
"Name": "latest version",
"result":"ok"}
}
```

7.3 obtaining the current software version

7.3.1 issue command to obtain current software version

Parameter information (Note: optional is optional)

Key	Type	Values	Description

operator		Versions/ Versions-Ack	Versions:Get software version Versions ack: get software version return
messageId	String		Message ID, distinguish each message
info			concrete content
facesluiceId	String		All in one machine device ID, return value
name	String		Software version number
buildtime	String		Software version generation time
result	String	"ok"/"fail"	Operation results
detail	String (optional)		When the result is "fail", the error message

```
{
"operator": "Versions",
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"info":
    {
    }
}
```

Get current version information

```
{
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"operator": "Versions-Ack",
"info": {
"facesluiceId":"1305433",
"name":"v12.5.6L3M1-1.0.6.9 Beta",
"buildtime":"2019-12-02/10:46:05",
"result":"ok"
}
}
```

8 remote door opening

8.1 remote door opening

The server sends the corresponding door opening information to the face recognition all-in-one machine, and the face recognition machine performs the door opening action and UI prompt.

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		Unlock/ Unlock-Ack	Unlock:Remote door opening Unlock ack: remote door opening and return
messageId	String		Message ID, distinguish each message
info			concrete content
facesluiceId	String		All in one machine device ID, return value
uid	String (optional)	reserve	
openDoor	int (optional)	0~1	Door opening action 0: don't open the door 1: Open the door
showInfo	String (optional)	64 bytes (including terminator)	UI prompt information
result	String	"ok"/"fail"	Operation results
detail	String (optional)		When the result is "fail", the error message

```
{
"operator": "Unlock",
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"info":
    {
        "uid":"00021",
        "openDoor":"1",
        "Showinfo": "please pass"
```

```
    }
}
```

8.2 Reply of door opening confirmation information

```
{
"messageId": "XXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"operator": "Unlock-Ack",
info:{
    "uid":"00001",
    "facesluiceId":"0001",
    "result":"ok"
    }
}
```

9. Parameter configuration

9.1 system parameters

The system parameters are mainly related to the operation parameters of the face recognition all-in-one machine.

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		Getconfig/ Getconfig-Ack/ Upconfig/ Upconfig-Ack	Getconfig:Get system parameters Getconfig ack: get system parameters return Upconfig:Setting system parameters Upconfig ack: set system parameters return
messageId	String		Message ID, distinguish each message
info			concrete content
facesluiceId	String		All in one machine device ID, return value
Language	int	0~5	Device language: 0: English, 1:

(optional)			Simplified Chinese, 2: Traditional Chinese, 3: Portuguese, 4: Korean, 5: Russian (special version support), 6: Italian, 7: French, 8: Spanish, 9: Japanese; 10: changing the device language, the machine will restart
DataBaseEnable	int (optional)	0~1	Record snapshot + record ID card + record authentication (0 No, 1 yes); default: 1, if it is not enabled, snapshot, ID card and authentication image data will not be saved
IDcardType	int (optional)	0~1	ID card reader type, 0:Central control (idm30), Tengyan, Huashi (cvr-100b), Boya; 1:Idr210 was used as the control; 2:Central control (idm30, idm10); 3:Huashi (cvr-100uc)
CardReaderType	int (optional)	reserve	IC card reader type
CardOpenDoorWay	int (optional)	reserve	Card opening mode 0: face + card 1: face or card
FaceDisplay	int (optional)	0 ~ 1, the default is 1	Whether to display face frame 0:No 1:yes
LiveDetectType	int (optional)	0 ~ 2, default 1	In vivo detection mode 0: Live detection is always on, 1: turn it off, 2: turn it on according to the time period
LiveDetectTimeBeg	String (optional)	e.g.,07:00:00	Start time point of live detection every day Required when livedetecttype = 2
LiveDetectTimeEnd	String (optional)	e.g.,19:00:00	The end time of living body test every day Required when livedetecttype = 2
LiveThreshold	Double (optional)	e.g.,90.000000	Live detection threshold (not settable)
LiveFrameNum	int (optional)		The number of consecutive frames in vivo detection, the larger the number of frames, the longer the recognition time (can not be set)
LedLightType	int (optional)	0~5	Enable white light type 0: never 1: time control 2: photosensitive control 3: face sensing 4: face or time 5 face or light perception

LedBrightness	int (optional)		Use when white light is enabled
LedTimeBeg	String (optional)	e.g.,19:00:00	Start time of white light activation every day (white light activation time), which is required when ledlighttype = 1,4
LedTimeEnd	String (optional)	e.g.,07:00:00	The end time of white light activation (turn off white light time) is required when ledlighttype = 1,4
LedDisableAfterSec	int (optional)		Turn off the white light (face sensing) after a few seconds. Required when ledlighttype = 3,4,5
LcdBLDisable	int (optional)		Do you want to turn off the screen when there is no one Never, 1: turn off the backlight when no face is detected
LcdBLDisableAfterS ec	int (optional)		When lcdbldisable = 1, it is required to close the screen in seconds
ScreenBrightness	int (optional)	Default:50	Screen brightness (reserved)
WebTimeOut	int (optional)	2 ~ 10 default: 5	Web page login timeout (minutes)
reboot	int (optional)		Whether the machine is restarted or not, the return value is: 0: no restart, 1: restart
result	String	"ok"/"fail"	Operation results
detail	String (optional)		When the result is "fail", the error message

9.1.1 obtaining system parameters

{
"operator": "Getconfig",
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"info":
    {

```
    }
}
```

9.1.2 get system parameter return

```
{
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"operator": "Getconfig-Ack",
"info":
{
"facesluiceId":"1305433",
"Language":"1",
"DataBaseEnable":"1",
"IDcardType":"1",
"CardReaderType":"1",
"CardOpenDoorWay":"0",
"FaceDisplay":"1",
"LiveDetectType":"0",
"LiveDetectTimeBeg":"07:00:00",
"LiveDetectTimeEnd":"19:00:00",
"LiveThreshold":"90.340000",
"LiveFrameNum":"2",
"LedLightType":"0",
"LedTimeBeg":"07:00:00",
"LedTimeEnd":"19:00:00",
"LedBrightness":"50",
"LedDisableAfterSec":"30",
"LcdBLDisable":"0",
"LcdBLDisableAfterSec":"30",
"ScreenBrightness":"50",
"result":"ok"
}
}
```

9.1.3 setting system parameters

If you need to set the corresponding options of system parameters, you need to pass in the corresponding parameters. For specific parameter descriptions, see9.1 system parametersexplain.If the machine language is changed successfully, the all-in-one face recognition machine will be restarted.

e. G.1, change the type and time period of white light activation:

{
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"operator": "Upconfig",
"info":
{
"LedLightType":"1",
"LedTimeBeg":"20:00:00",
"LedTimeEnd":"08:00:00",
"LedBrightness":"60"
}
}

9.1.4 set system parameter return

{
 "messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXX",
 "operator": "Upconfig-Ack",
"info":
 {
"facesluiceId":"1305433",
"reboot":"0",
 "result":"ok"
}
}

9.2 sound and interface display parameters

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		GetSoundconfig/ UpSoundconfig/ GetSoundconfig-Ack/ UpSoundconfig-Ack	Get / set sound and interface display parameters Get / set sound and interface display parameters return
info			concrete content
facesluiceId	char		Face recognition all in one machine ID
VerifySuccAudio	int (optional)	0~1	Whether the authentication is successful or not

			0: No broadcasting
			1: Broadcast
VerifyFailAudio	int (optional)	0~1	If authentication fails, is voice broadcast 0: No broadcasting 1: Broadcast
Volume	int (optional)	0~100	Volume value
VerifySuccGuiTip	int (optional)	0~1	Is the authentication successful interface prompted 0: No hint 1: Tips
VerifyFailGuiTip	int (optional)	0~1	Is the authentication failure interface prompted 0: No hint 1: Tips
UnregisteredGuiTip	int (optional)	0~1	List not registered interface prompt 0: No hint 1: Tips
DisplayPicture	int (optional)	0~1	Image type prompted by successful comparison interface 0: Capture images 1: Registration image
RemoteCtrlAudio	int (optional)	0~1	Remote control of playing sound 0: Do not play sound 1: Play sound
IPHide	int (optional)	0~1	Is the interface IP hidden 0: Don't hide it 1: hide
IsShowName	int (optional)	0~2	If the comparison is successful, is the name prompt displayed 0: Do not show 1: display 2: Partial display (hide back part)
IsShowTitle	int (optional)	0~1	Display (discard) screen Title prompt 0: Do not show 1: display
IsShowVersion	int (optional)	0~1	Display the interface version number prompt (discard) 0: Do not show 1: display
IsShowDate	int (optional)	0~1	Discard date 0: Do not show

			1: display
IsShowTime	int (optional)	0~1	Whether the interface time prompt is displayed (discarded) 0: Do not show 1: display
IDCardNumHide	int (optional)	0~1	Whether the interface card number is hidden (built-in card reader) 0: Don't hide it 1: hide
ICCardNumHide	int (optional)	0~1	Whether the interface IC card number is hidden (except for the built-in swipe card model) 0: Don't hide it 1: hide
IsShowDeviceID	int (optional)	0~1	Display native ID 0: Do not show 1: display
IsShowPersonNum	int (optional)	0~1	Displays the number of registered lists 0: Do not show 1: display
VerifyTipContent	String (optional)	custom	UI text prompt for successful authentication (length less than 64 bytes) Default: please pass
UnregisterTipContent	String (optional)	custom	List unregistered UI text prompt (length less than 64 bytes) Default: stranger
BlacklistTipContent	String (optional)	custom	UI text prompt for authentication failure (length less than 64 bytes) Default: no access
result		Operation result, success: "OK" or "failure"	
detail		Return reason on failure	

9.2.1 acquiring sound and interface display parameters

e.g.,

```
{
"operator": "GetSoundconfig",
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"info":
    {

    }
}
```

9.2.2 acquisition of sound and interface display parameters return

e.g.,

```
{
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"operator": "GetSoundconfig-Ack",
"info":
{
"facesluiceId":"1305433",
"VerifySuccAudio":"1",
"VerifyFailAudio":"1",
"Volume":"90",
"VerifySuccGuiTip":"1",
"VerifyFailGuiTip":"1",
"UnregisteredGuiTip":"1",
"DisplayPicture":"1",
"RemoteCtrlAudio":"0",
"IPHide":"0",
"IsShowName":"1",
"IsShowTitle":"0",
"IsShowVersion":"0",
"IsShowDate":"1",
"IsShowTime":"1",
"ICCardNumHide":"0",
"Verifytipcontent": "please pass",
```

"Unregistertipcontent": "stranger,",
"Blacklisttipcontent": "no access",

"result":"ok"
}
}

9.2.3 setting sound and interface display parameters

e.g.,

{
"operator": "UpSoundconfig",
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"info":
    {
    "VerifySuccAudio":"1",
    "VerifyFailAudio":"0",
    "Volume":"80",
    "VerifySuccGuiTip":"1",
    "VerifyFailGuiTip":"0",
    "UnregisteredGuiTip":"1",
    "DisplayPicture":"0",
    "RemoteCtrlAudio":"0",
    "IPHide":"0",
    "IsShowName":"1",
    "IsShowTitle":"0",
    "IsShowVersion":"0",
    "IsShowDate":"1",
    "IsShowTime":"1",
    "ICCardNumHide":"0" ,
    "Verifytipcontent": "please pass",
    "Unregistertipcontent": "stranger,",
    "Blacklisttipcontent": "no access"
    }
}

9.2.4 setting sound and interface display parameters return

e.g.,

```
{
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"operator": "UpSoundconfig-Ack",
 "info":
{
"facesluiceId":"1305433",
"result":"ok"
}
}
```

9.3 door opening conditions and output control

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		GetDoorconfig/ UpDoorconfig/ GetSoundconfig-Ack/ UpSoundconfig-Ack	Get / set door opening conditions and output control Get / set door opening condition and output control return
info			concrete content
facesluiceId	char		Face recognition all in one machine ID
OpendoorWay	int (optional)	0~3	Door opening mode 0:Face opening mode, 1:Remote door opening mode, 2:Open door or remote face 3:Face verification + remote door opening mode
FaceThreshold	int (optional)	50~100	Black / white list comparison threshold
IDCardThreshold	int	50~100	Threshold comparison ID card

	(optional)		
VerifyMode	int (optional)	1: General neutral machine: 1 ~ 4 or 21 ~ 26 2: Support mask or temperature measuring machine: whether mask detection or temperature detection or (|) operation based door opening verification mode is required. Support mask detection or (|) operation, and 0x100 indicates mask detection and verification; Support temperature detection or (|) operation, and 0x200 indicates that it has temperature detection verification; Support mask + body temperature detection or (|) operation, and 0x300 indicates that it has mask + body temperature detection verification; For example: 1: Ordinary neutral machine 1) Whitelist verification: 1 2) Wegenka + whitelist verification: 25 2: Mask or temperature measuring machine 1) Single mask verification pass (261 = 0x105 = 0x100 & 5) 2) Mask + whitelist	Basic door opening verification mode.(the following base types are decimal) 1: Whitelist verification 2: ID card verification 3: White list + ID card 4: White list or ID card 5:Single mask or body temperature or separate mask + body temperature 21:RF card verification (built-in swipe card model) 22:RF card verification + whitelist Verification (built-in swipe card model) 23:RF card verification or whitelist verification (built-in swipe card model) 24:Wegenka verification 25:Wegenka + whitelist verification 26:Wegenka or whitelist verification

		verification (257 = 0x101 = 0x100 & 1) 3) Temperature alone (517 = 0x205 = 0x200 & 5) 4) Body temperature + whitelist verification (513 = 0x201 = 0x200 & 1) 5) Single mask + body temperature (773 = 0x305 = 0x300 & 5) 6) Mask + body temperature + Wigan swipe card + whitelist verification (793 = 0x319 = 0x300 & 25)	
VerifyResetTime	int (optional)	1~10(s)	Verify reset time (seconds) The UI displays the prompt information and the time that the same person does not recognize again during the reset time
Wiegand	int (optional)	0~1　or　4~7	The type of Wigan agreement. 0: 26 1: 34 4:26 bits (8 + 16): facility code + userid (equipment code + card number); 5:34 bits (8 + 24); 6:The number of digits to be filled in is 26 (16); 7:34 digits (8 + 24 to be filled in separately)
PublicMjCardNo	int (optional)		Public access card number
AutoMjCardBgnNo	int (optional)		Automatically generate the start card number of the access control card number
AutoMjCardEndNo	int (optional)		Automatically generate the end card number of access control card number
ControlType	int (optional)	0~2	Control door opening interface mode. 0:Wigan interface

| | | | 1:Switching value |
			2: Wigan interface + switching value
IOType	int (optional)	0~1	Open the door when controlling the opening interface mode. 0:close 1:to break off
IOStayTime	int (optional)	Default 200 (MS)	Holding time (MS)
Endian	int (optional)	0~1	Card reading mode 0:Big end mode 1:Small end mode
CardMode	int (optional)	0~1	Card number mode 0:decimal system 1:hexadecimal
IsOutFF	int (optional)	0~1	Stranger Wigan outputs 8 F's (Wigan opens the door) 0: No output 1: output
SnapResetTime	int (optional)	0-15 (default 0)	Identification interval time (s): identify the next person by comparing the waiting time after passing the comparison
result			Operation result, success: "OK" or "failure"
detail			The reason returned on failure

9.3.1 acquisition of door opening conditions and output control

e.g.,

```
{
"operator": "GetDoorconfig",
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"info":
    {

    }
}
```

9.3.2 obtain door opening conditions and output control return

e.g.,

```
{
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"operator":
"GetDoorconfig-Ack",
"info":
{
"facesluiceId":"1305433",
"OpendoorWay":"0",
"FaceThreshold":"90",
"IDCardThreshold":"50",
"VerifyMode":"1",
"VerifyResetTime":"2",
"Wiegand":"0",
"PublicMjCardNo":"2",
"AutoMjCardBgnNo":"3",
"AutoMjCardEndNo":"4",
"ControlType":"1",
"IOType":"1",
"IOStayTime":"200",
"Endian":"0",
"CardMode":"0",
"IsOutFF":"0",
"SnapResetTime":"0",
"result":"ok"
}
}
```

9.3.3 setting door opening conditions and output control

e.g.1,

```
{
"operator": "UpDoorconfig",
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
```

"info":
{
"OpendoorWay":"0",
"FaceThreshold":"90",
"IDCardThreshold":"50",
"VerifyMode":"1",
"VerifyResetTime":"2",
"Wiegand":"0",
"PublicMjCardNo":"2",
"AutoMjCardBgnNo":"3",
"AutoMjCardEndNo":"4",
"ControlType":"1",
"IOType":"1",
"IOStayTime":"200",
"Endian":"0",
"CardMode":"0",
"IsOutFF":"1",
"SnapResetTime":"0"

    }
}

e. G.2, change the black and white list verification threshold value

{
"operator": "UpDoorconfig",
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"info":
    {
    "FaceThreshold":"91"
    }
}

e. G.3, support the mask detection version, and change the door opening verification mode to separate mask verification

{
"operator": "UpDoorconfig",
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"info":
    {
    "VerifyMode":"261"

```
  }
}
```

e. G.4, support mask + temperature detection version, change the door opening verification mode to mask + body temperature + white list verification

```
{
"operator": "UpDoorconfig",
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"info":
    {
    "VerifyMode":"769"
    }
}
```

3.4.4 door opening conditions and output control

```
e.g.,
{
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"operator": "UpDoorconfig-Ack",
"info":
  {
    "facesluiceId":"1305433",
    "result":"ok"
    }
}
```

9.3.5 introduction to door opening mode

At present, the following face recognition modes are supported:Face opening mode, remote door opening mode, remote door opening or face opening mode, face verification + remote door opening mode.

0: face opening mode: face recognition integrated opportunity to push the stranger snapshot information and authentication comparison information, and directly execute the door opening and UI prompt information after the comparison. In this mode, calling the remote door opening command will be invalid.

1: Remote door opening mode: the all-in-one face recognition machine only pushes the snapshot information of strangers, but does not push the authentication comparison information. If the comparison is passed, it will not directly execute the door opening and UI information prompt. In this mode, the remote door opening

command can be called. This mode is mainly used for front-end snapshot, back-end comparison, and remote door opening at the back-end.

2: Remote door opening or face mode: face recognition integration can push the stranger snapshot information and authentication comparison information, and directly execute the door opening and UI prompt information after the comparison. In this mode, the remote door opening command can be called.

3: Comparison of UI + face information and face information of strangers will not pass the remote verification.In this mode, mqtt should be set in the mode of continuous transmission after network interruption, and identification record upload should be enabled.At this time, the face recognition all-in-one machine will push the authentication and comparison information to the cloud address (cloud platform) of mqtt subscription under the condition that the comparison is common. The cloud platform needs to reply to the data confirmation of disconnection and continuous transmission after receiving the push information of authentication subscription, and the all-in-one machine directly executes the door opening and UI information prompt without calling the remote door opening command.In this mode, it is necessary to pay attention to exclude whether the authentication data pushed is authentication comparison data of network disconnection and continuous transmission. If it is the authentication data of data transmission after disconnection, the returned data packet does not need to perform the open door action again.This problem may lead to the problem of time delay of the network, which may result in the delay of the data.

Face verification + remote door opening mode is used to reply the information confirmation package received when the network is disconnected for continuous transmission

Parameter information (Note: optional is optional)

Key	Type	Values	Description
PushAckType	int	2	2:Reply received authentication record information
SnapOrRecordID	int		Pushacktype = 2; fill in the received control record library ID
openDoor	int (optional)	0~1	Door opening action 0: don't open the door 1: Open the door
showInfo	String (optional)	64 bytes (including terminator)	UI prompt information

e. G.1, reply to need to open the door + UI prompt message

```
{
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"operator": "PushAck",
"info": {
"PushAckType":"2",
"SnapOrRecordID":"381",
"openDoor": "1",
"Showinfo": "XXX please pass"
}
}
```

e. G.2, reply does not need to open the door + UI prompt message

```
{
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"operator": "PushAck",
"info": {
"PushAckType":"2",
"SnapOrRecordID":"382",
"openDoor": "0",
"Showinfo": "access without permission"
}
}
```

9.4 HTTP subscription push

The corresponding parameters of HTTP address and push are set to the subscriber to push the data to the subscriber.The types of HTTP subscription push include: authentication result information subscription, stranger snapshot subscription, etc.If the breakpoint continuation function is enabled, the server needs to return packets {"code": 200, "desc": "OK",} for the pushed stranger snapshot information and authentication information.

Parameter information (Note: optional is optional)

Key	Type	Values	Description

operator		GetHTTPconfig/ UpHTTPconfig/ GetHTTPconfig-Ack/ UpHTTPconfig-Ack	Get / set HTTP subscription push Get / set HTTP subscription push return information
info			concrete content
facesluiceId	char		Face recognition all in one machine ID
ServerAddr	char		Server address, e.g., 192.168.2.11
ServerPort	int		Server port, e.g., 80
Verify	int	0~4	Authentication result subscription 0:No subscription 1:Subscription authentication result report (only with captured pictures) 2: Subscription authentication result report (only with registration image) 3: Subscription + Photo registration 4: Subscription authentication result report (without picture)
VerifyURL	char		The authentication result subscription URL, the default is / subscribe / verify
Snap	int	0~1	Snapshot subscription of stranger life 0:No subscription 1:Subscribe to stranger snapshot Report
SnapURL	char		Subscription URL for snapshot of strangers, default to / subscribe / snap
QRCode	int	0~1	QR code report subscription 0:No subscription 1:Subscribe to QR code report
QRCodeURL	char		QR code submit subscription URL, default is / subscribe / QRcode
IDCard	int	0~1	ID card information reporting subscription 0:No subscription 1:Subscription ID card information reporting
IDCardURL	char		ID card information reporting subscription URL, default is / subscribe / IDcard
BeatInterval	int	30	heartbeat interval
BeatURL	char		Heartbeat URL, default / subscribe /

				heartbeat
TimedPush	int	0~1		Timing push 0:Not enabled 1:Enable
PushInterval	int			Timing push interval (seconds)
Auth	int	0~1		Do post submit the submitted information for authentication 0 : No authentication processing is required 1 : Post basic authentication
User	char (optional)			User name, maximum length 64 characters (including terminator) Required when auth = 1
Pwd	char (optional)			Password, maximum length 64 characters (including terminator) Required when auth = 1
ResumefromBreakpoint	int	0~1		Whether HTTP subscription push enables breakpoint continuation (in the mode of stranger snapshot subscription or authentication subscription), 0: not enabled, 1: enabled.Do not turn on the breakpoint continuation function, only ensure the push data, there may be lost data, do not need the server to return.If the function is enabled, the server needs to return the following JSON packets: {"code": 200, "desc": "OK",} 　After 10 seconds, if the all-in-one machine does not receive the correct data packet from the server, it will continue to push this message.
RFBPTimeBegin	char (optional)	Yyyy-mm-dd space HH: mm: SS		The default start time of breakpoint continuation can be left blank.The default is to set the time for stranger snapshot subscription, authentication subscription and breakpoint continuation function.When the stranger snapshot and authentication snapshot information push before the breakpoint is completed, this time will become the time to complete the

			breakpoint continuous transmission and push.e.g., 2018-03-12 09:10:00
detail			The reason returned on failure

9.4.1 get HTTP subscription push parameters

e.g.,

```
{
"operator": "GetHTTPconfig",
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"info":
    {


    }
}
```

9.4.2 get HTTP subscription push parameter return

e.g.,

```
{
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"operator": "GetHTTPconfig-Ack",
 "info":
{
"facesluiceId":"1306612",
"ServerAddr":"172.168.2.89",
"ServerPort":"80",
"Verify":"1",
"VerifyURL":"/Subscribe/Verify",
"Snap":"1",
"SnapURL":"/Subscribe/Snap",
"QRCode":"1",
"QRCodeURL":"/Subscribe/QRCode",
"IDCard":"1",
"IDCardURL":"/Subscribe/IDCard",
"BeatInterval":"30",
"BeatURL":"/Subscribe/HeartBeat",
"TimedPush":"0",
"PushInterval":"30",
"Auth":"0",
```

"UserName":"admin",
"PassWord":"admin",
"ResumefromBreakpoint":"1",
"RFBPTimeBegin":"2020-1-3 18:11:40",
  "result":"ok"
}
}

9.4.3 setting HTTP subscription push parameters

e. G.1, set HTTP subscription push authentication comparison (with snapshot picture) + stranger snapshot result report + open breakpoint continuation

{
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"operator": "UpHTTPconfig",
  "info":
{
"ServerAddr":"172.168.2.89",
"ServerPort":"80",
"Verify":"1",
"VerifyURL":"/Subscribe/Verify",
"Snap":"1",
"SnapURL":"/Subscribe/Snap",
"QRCode":"0",
"QRCodeURL":"/Subscribe/QRCode",
"IDCard":"0",
"IDCardURL":"/Subscribe/IDCard",
"BeatInterval":"30",
"BeatURL":"/Subscribe/HeartBeat",
"TimedPush":"0",
"PushInterval":"30",
"Auth":"0",
"UserName":"admin",
"PassWord":"admin",
"ResumefromBreakpoint":"1"
}
}

e. G.2, cancel all HTTP subscription push

{
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXX",

"operator": "UpHTTPconfig",
 "info":
{
"ServerAddr":"172.168.2.89",
"ServerPort":"80",
"Verify":"0",
"VerifyURL":"/Subscribe/Verify",
"Snap":"0",
"SnapURL":"/Subscribe/Snap",
"QRCode":"0",
"QRCodeURL":"/Subscribe/QRCode",
"IDCard":"0",
"IDCardURL":"/Subscribe/IDCard",
"BeatInterval":"30",
"BeatURL":"/Subscribe/HeartBeat",
"TimedPush":"0",
"PushInterval":"30",
"Auth":"0",
"UserName":"admin",
"PassWord":"admin",
"ResumefromBreakpoint":"1"
}
}

9.4.4 setting HTTP subscription push parameter return

{
 "messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"operator": "UpHTTPconfig-Ack",
"info":
{
"facesluiceId":"1306612",
 "result":"ok"
}
}

9.5 temperature parameters

The temperature parameter is mainly related to the temperature operation parameters of the face recognition all-in-one machine which supports the temperature detection.

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		GetTPTconfig/ UpTPTconfig/ GetTPTconfig-Ack/ UpTPTconfig-Ack	Get / set temperature parameters Get / set temperature parameter return
info			concrete content
facesluiceId	String		Face recognition all in one machine ID
TemperatureMode	int	0~1	Temperature display mode 0: centigrade temperature 1:fahrenheit
ShowAbnormalTemp	int	0~1	Display abnormal temperature Do not display 0: 1:display
TemperatureCheck	double	0.00	Temperature calibration
TemperatureLow	double	34.00 (default for clause C); 28.00 (default except for clause C)	Low temperature threshold
TemperatureHigh	double	37.30	High temperature threshold (default: 37.30)
EnvTemperature	double (optional)		Ambient temperature (reserved)
EnvTemperatureCheck	double (optional)		Ambient temperature calibration value (reserved)
OpenLaser	int (optional)	0~1	Switch on (laser reserved or not)
TempFaceMinW	int	100~500	The minimum face recognition pixel width of temperature measurement; the lower the temperature measurement distance, the farther the temperature measurement recognition distance is (default 350)
TempFaceMinH	int	50~1000	The larger the height, the smaller the recognition area
result			Operation result, success: "OK" or

			"failure"
detail			The reason returned on failure

9.5.1 obtaining temperature parameters

e.g.,

```
{
"operator": "GetTPTconfig",
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"info":
    {


    }
}
```

9.5.2 get temperature parameter return

e.g.,

```
{
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"operator": "GetTPTconfig-Ack",
"info":
{
"facesluiceId":"1305433",
"TemperatureCheck":"0.00",
"TemperatureHigh":"37.20",
"EnvTemperature":"17.00",
"EnvTemperatureCheck":"0.00",
"OpenLaser":"1",
"Distance":"350",
"result":"ok"
}
}
```

9.5.3 setting temperature parameters

e.g.,

```
{
"operator": "UpTPTconfig",
```

"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"info":
    {
    "facesluiceId":"1305433",
    "TemperatureCheck":"0.00",
    "TemperatureHigh":"37.20",
    "EnvTemperature":"17.00",
    "EnvTemperatureCheck":"0.00",
    "OpenLaser":"1",
    "Distance":"350"
    }
}

9.5.4 set temperature parameter return

e.g.,

{
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"operator": "UpTPTconfig-Ack",
 "info":
{
"facesluiceId":"1305433",
"result":"ok"
}
}

9.6 mqtt report parameters

Mqtt reporting parameters mainly involve setting whether to push stranger snapshot information push and authentication identification information push.

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		GetMQTTconfig/ UpMQTTconfig/ GetMQTTconfig-Ack/ UpMQTTconfig-Ack	Get / set mqtt report parameters Get / set mqtt report parameter return
info			concrete content
facesluiceId	char		Face recognition all in one machine ID

StrangerUploadType	int	0~1	Upload the snapshot information of strangers (default: 0) 0: Upload 1: Do not upload
RecordUploadType	int	0~2	Default information upload (1) 0:Do not upload 1:Identification record upload with captured pictures 2:Upload image without identification
Direction	int	0~2	Import and export direction of all in one machine 0:Imported 1:exit 2:No direction
QRCode	int	0~1	Default: QR code scanning result 0: do not upload 1: Upload
IDCard	int	0~1	Upload ID card information (default: 1) 0: do not upload 1: Upload
Card	int	0~1	IC or RF card number reporting (default: 1) 0: do not upload 1: Upload
ResumefromBreakpoint	int	0~1	Whether the breakpoint continuous transmission of mqtt stranger snapshot information and identification record is enabled (in the mode of stranger snapshot upload or identification record upload), 0: not enabled, 1: enabled.It does not enable the breakpoint continuous transmission function, only ensures the push data, and does not need the platform (cloud server) to return.If the function is enabled, the pushed stranger snapshot information and authentication information need to be returned by the server. For details, please refer to 9.7 instructions for network disconnection and

			continuous transmission After 10 seconds, if the all-in-one machine does not receive the correct data packet from the server, it will continue to push this message.
BeginTime	char (optional)	YYYY-MM-DDThh:mm:ss	The default start time of mqtt breakpoint continuation can be left blank.The default time is to set the time for stranger snapshot upload or identification record upload and enable breakpoint continuous transmission function.When the stranger snapshot and authentication record information push before the breakpoint is completed, this time will become the time to complete the breakpoint continuous transmission and push.e.g., 2020-04-01T09:10:00
ReConnect	int	0~1	Does the machine need to be reconnected (reserved) 0: no need 1: Need
Reboot	int	0~1	Whether the machine needs to be restarted (reserved) 0: no need 1: Need
result			Operation result, success: "OK" or "failure"
detail			The reason returned on failure

9.6.1 get mqtt report parameters

e.g.,

```
{
"operator": "GetMQTTconfig",
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"info":
    {
```

```
        }
}
```

9.6.2 get mqtt report parameter return

e.g.,

```
{
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"operator": "GetMQTTconfig-Ack",
"info": {
"facesluiceId":"1306612",
"StrangerUploadType":"0",
"RecordUploadType":"2",
"Direction":"0",
"ResumefromBreakpoint":"1",
"BeginTime": "2020-03-31T15:31:39",
"result":"ok"
}
}
```

9.6.3 setting mqtt reporting parameters

e. G.1, set to enable continuous transmission after disconnection, capture and report by strangers + report with authentication record (without authentication picture)

```
{
"operator": "UpMQTTconfig",
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"info":
    {
    "facesluiceId":"1305433",
    "StrangerUploadType":"0",
    "RecordUploadType":"2",
    "ResumefromBreakpoint":"1",
    "Direction":"1",
    }
}
```

e. G.2, set to do not turn on the network disconnection, authentication record report (with authentication picture)

```
{
"operator": "UpMQTTconfig",
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"info":
    {
    "facesluiceId":"1305433",
    "StrangerUploadType":"1",
    "RecordUploadType":"2",
    "ResumefromBreakpoint":"0",
    "Direction":"1",
    }
}
```

9.6.4 setting mqtt report parameter return

e.g.,

```
{
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"operator": "UpMQTTconfig-Ack",
 "info":
{
"facesluiceId":"1305433",
"result":"ok"
}
}
```

Restart the device

The restart device command will restart the device.

Key	Type	Values	Description
operator		RebootDevice/ RebootDevice-Ack	RebootDevice:reboot device Rebootdevice ack: restart device return
info			concrete content
facesluiceId	char		Face recognition all in one machine ID
result			Operation result, success: "OK" or

			"failure"
detail			The reason returned on failure

9.7.1 restart the device

e.g.,

```
{
"operator": "RebootDevice",
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"info":
    {

    }
}
```

9.7.2 restart device return

e.g.,

```
{
"operator": "RebootDevice-Ack",
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"info":
    {
        "facesluiceId":"1305433",
        "result":"ok"
    }
}
```

9.8 system time

The system time is mainly related to the system running time of the face recognition all-in-one machine.

Key	Type	Values	Description
operator		GetSysTime/ GetSysTime-Ack/ SetSysTime/ SetSysTime-Ack	GetSysTime:get SysTime Getsystime ack: get system time return SetSysTime:Set system time Setsystime ack: set system time return

info			concrete content
facesluiceId	char		Face recognition all in one machine ID
SysTime	char	YYYY-MM-DDThh-mm-ss	e.g., 2020-04-01T09:10:00
result			Operation result, success: "OK" or "failure"
detail			The reason returned on failure

9.8.1 obtaining system time

e.g.,

```
{
"operator": "GetSysTime",
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"info":
    {

    }
}
```

9.8.2 get system time return

e.g.,

```
{
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"operator": "GetSysTime-Ack",
"info": {
"facesluiceId":"1306612",
"SysTime":"2020-4-2T18:59:54",
"result":"ok"
}
}
```

9.8.3 setting system time

e.g.,

```
{
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"operator": "SetSysTime",
```

"info": {
"SysTime":"2020-4-1T17:59:54"
}
}

9.8.4 set system time return

e.g.,

{
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"operator": "SetSysTime-Ack",
"info": {
"facesluiceId":"1306612",
"result":"ok"
}
}

9.9 factory restoration

The restoration of factory mainly involves the parameter recovery of door opening conditions, sound settings, network parameters, snapshot records, log records, personnel list database, control records, system parameters, etc.The restoration of network parameters may lead to problems such as network connection failure; restoring the list database of factory personnel will delete the personnel list comparison base database, and at the same time delete the image of certification personnel corresponding to the control record; restoring the factory control record will delete the control record, irreversible operation, careful operation; only need to restore a certain item, there is no need to set other options to restore the factory.

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		SetFactoryDefault/ SetFactoryDefault-Ack	SetFactoryDefault:Return to factory Setfactorydefault ack: restore factory return
info			concrete content
facesluiceId	char		Face recognition all in one machine ID
DefaltDoorSet	unsigned char	0~1	Whether the door opening conditions are restored to the factory

	(optional)		0: No return to factory 1: Return to factory
DefaltSoundSet	unsigned char (optional)	0~1	Is the sound setting restored to factory 0: No return to factory 1: Return to factory
DefaltNetPar	unsigned char (optional)	0~1	Are network parameters restored to factory 0: No return to factory 1: Return to factory
DefaltCenterPar	unsigned char (optional)	0~1	Whether the central connection parameters are restored to the factory 0: No return to factory 1: Return to factory
DefaltCapture	unsigned char (optional)	0~1	Is the snapshot record + control record restored to the factory 0: No return to factory 1: Return to factory
DefaltLog	unsigned char (optional)	0~1	Is the log record restored to the factory 0: No return to factory 1: Return to factory
DefaltPerson	unsigned char (optional)	0~1	Whether the personnel list database + control records are restored to the factory 0: No return to factory 1: Return to factory
DefaltRecord	unsigned char (optional)	0~1	Whether the control records are restored to the factory 0: No return to factory 1: Return to factory
DefaltMaintainTime	unsigned char (optional)	0~1	Is the factory maintenance time of the system restored 0: No return to factory 1: Return to factory
DefaltSystemSettings	unsigned char (optional)	0~1	System parameters:Type of ID card reader; whether to record snapshot, ID card, authentication record and whether to restore factory 0: No return to factory 1: Return to factory
reboot			Whether the machine is restarted (return parameter)

			0: No restart required
			1: A restart is required
result			Operation result, success: "OK" or "failure"
detail			The reason returned on failure

9.9.1 factory restoration

e. G.1, the door opening condition is restored to the factory

```
{
"operator": "SetFactoryDefault",
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"info":
    {
        "DefaltDoorSet ":"1"
    }
}
```

e. G.2, the control record is restored to the factory (dangerous operation

```
{
"operator": "SetFactoryDefault",
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"info":
    {
        "DefaltRecord":"1"
    }
}
```

e. G.3, the personnel list database + control records are restored to the factory (dangerous operation

```
{
"operator": "SetFactoryDefault",
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"info":
    {
        "DefaltPerson":"1"
    }
}
```

9.9.2 restore factory return

e. G.1, open the door condition to return

{
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"operator": "SetFactoryDefault-Ack",
"info": {
"facesluiceId":"1306612",
"reboot":"0",
"result":"ok"
}
}

e. G.2, control record recovery return

{
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"operator": "SetFactoryDefault-Ack",
"info": {
"facesluiceId":"1306612",
"reboot":"1",
"result":"ok"
}
}

e. G.3, personnel list database + control record restore factory return

{
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"operator": "SetFactoryDefault-Ack",
"info": {
"facesluiceId":"1306612",
"reboot":"1",
"result":"ok"
}
}

9.10 face recognition parameters

Face recognition parameters are mainly related to the recognition parameters of face recognition all-in-one machine.As long as the minimum pixel of face is the minimum pixel value of the face in the video picture, it can correspond to the recognition distance.The X and Y values of the face detection area represent the

starting position of the video picture detection area, and the width and height of the face detection area represent the width and height of the video picture detected based on X and y.The width and height of face detection need to match the X and Y values of the face detection area. When x > 0, the face detection width should be less than (maximum face detection width - x). For the recognition distance corresponding to the minimum pixel of face detection, please refer to the appendix9.10 minimum pixel and recognition distance reference table for face recognitionIn general, only the smallest pixel of the face needs to be changed, and other parameters do not need to be changed again.

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		GetFaceconfig/ UpFaceconfig/ GetFaceconfig-Ack/ UpFaceconfig-Ack	GetFaceconfig:Get face recognition parameters UpFaceconfig:Setting face recognition parameters Getfaceconfig ack: get face recognition parameters return Upfaceconfig ack: set face recognition parameters return
info			concrete content
facesluiceId	String		Face recognition all in one machine ID
recDistance	Int	30 ~ 200 (unit: cm)	Recognition distance (CM)
faceMinPixel	Int	0~960	Face minimum pixel (obsolete, use recognition distance instead)
detectArea_x	Int	0 ~ 960 (default 0)	Start point of face detection area X (even number)
detectArea_y	Int	0 ~ 1280 (default 0)	Y start point of face detection area (even number)
detectArea_w	Int	0 ~ 960 (default 960)	Face detection area width (even)
detectArea_h	Int	0 ~ 1280 (default 1280)	Face detection area height (even number)
result			Operation result, success: "OK" or "failure"
detail			The reason returned on failure

9.10.1 obtaining face recognition parameters

e.g.,

{

"operator": "GetFaceconfig",
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"info":
    {

    }
}

9.10.2 get face recognition parameters return

e.g.,

{
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"operator": "GetFaceconfig-Ack",
"info": {
"facesluiceId":"1379743",
"recDistance":"200",
"faceMinPixel":"124",
"detectArea_x":"0",
"detectArea_y":"0",
"detectArea_w":"960",
"detectArea_h":"1280",
"result":"ok"
}
}

9.10.3 setting face recognition parameters

e.g.,

{
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"operator": "UpFaceconfig",
"info": {
"facesluiceId":"1379743",
"recDistance":"200",
"faceMinPixel":"124",
"detectArea_x":"0",
"detectArea_y":"0",
"detectArea_w":"960",
"detectArea_h":"1280"
}

}

9.10.4 set face recognition parameters return

e.g.,

```
{
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"operator": "UpFaceconfig-Ack",
"info": {
"facesluiceId":"1379743",
"result":"ok"}
}
```

10 equipment online and offline notice

It is mainly that after the device is connected to the platform, the device sends the device online notice actively; after the device is offline, the device sends the device offline notice actively.The device will actively push the online and offline notification message to the topic mqtt / face / basic.

Key	Type	Values	Description
operator		Online/ Online-Ack/ Offline	Online:Device Launch Notification Online ack: Reply of device receiving platform online Offline:Equipment offline notice
info			concrete content
facesluiceId	String		Face recognition all in one machine ID
username	String		Cloud user name
ip	String		Device IP address
facesname	String		Device name
time	String		Online time
result	char	"ok"	The platform sends the receiving equipment online confirmation message

10.1 equipment Launch Notification

On the premise of successful connection to the platform, the device sends an online notification message to the platform. After receiving the online notification message, the platform needs to reply to the device receiving the online notification reply. Otherwise, the device will continuously send the online notification message to the platform within an interval of about one minute until the platform confirmation message is received.By default, the topic of push online notification message is mqtt / face / basic.

e. G., the device sends online notification

```
{
"operator": "Online",
"info": {
"facesluiceId":"1305433",
"username":"admin",
"time":"2020-05-12 15:11:10",
"ip":"172.168.2.202",
 "facesname":"Face1"
 }
}
```

10.2 equipment receiving online notification reply

After receiving the online notification from the device, the platform needs to reply that the device has received the online notification. Otherwise, the device will continuously send the online notification instructions to the platform within the interval (about one minute) until receiving the platform confirmation information.

e. G. the platform replies to the receiving device online notification

```
{
"messageId":10201,
"operator":"Online-Ack",
"info":{
"facesluiceId":"1305433",
"result":"ok",
"detail":""
}
}
```

10.3 equipment offline notice

By default, the topic of the device push offline notification message is mqtt / face / basic.The device offline notice has been changed to a will to send the offline notice. The offline notice may be sent by the server after a short period of time under the network and other abnormal conditions.Offline notification can be used with heartbeat.

e. G., the device sends the offline notice

```
{
"operator": "Offline",
"info": {
"facesluiceId":"1305433"
}
}
```

11. Continuous transmission after network interruption

When pushing stranger snapshot information or authentication record information, mqtt can be set to whether to adopt the mode of network disconnection and continuous transmission. If it is not adopted by default, the platform (server) does not need to return every stranger snapshot information or authentication record information pushed; if the mode is used to push, the platform (server) will not be required to return each stranger snapshot information or authentication record information,The platform (server) needs to reply to each received snapshot information or authentication record information according to the following format within 10 seconds, otherwise face recognition all-in-one will push the same message in the next 10 seconds or so.If the platform (server) receives the snapshot information of strangers, set pushacktype to 1 and snaporrecordid to6 information upload of strangersIf the snaptype of the server is (snap2), the server will push the message if the5 information of certification and identification personnelUpload the recordid to reply to the face recognition all-in-one

machine.adopt20 manual push control recordand22 manually push stranger record reportingThe push type field in the reported data through these two manual push interfaces is 2.

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		PushAck/ PushAck-Ack/	Platform (server) receives push message confirmation The platform (server) receives the push message and confirms the return
info			concrete content
PushAckType	int	1~2	1:Reply to receive a stranger snapshot information 2:Reply received authentication record information
SnapOrRecordID	int		Pushacktype = 1; fill in the received stranger snapshot library ID Pushacktype = 2; fill in the received control record library ID
result			Operation result, success: "OK" or "failure"
detail			The reason returned on failure

11.1 reply received a stranger snapshot information

In the mode of continuous transmission after network interruption, when the push message of stranger snapshot is turned on, the platform needs to reply the information of face recognition all-in-one machine after receiving the information of stranger snapshot.
e. G.1, suppose the platform receives the following information from strangers
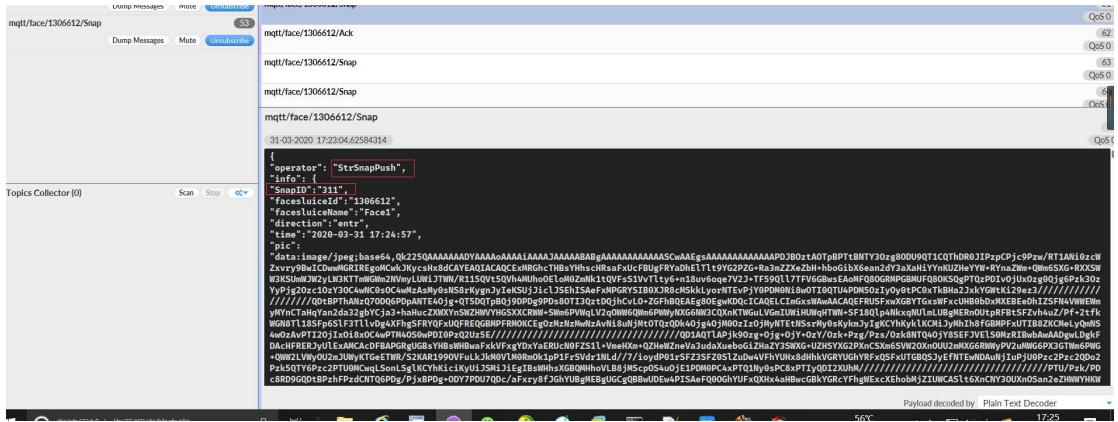
Then the platform needs to reply the face recognition all-in-one machine as follows

e. G.2 the platform replies and receives the information of strangers

```
{
"operator": "PushAck",
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"info": {
"PushAckType":"1",
"SnapOrRecordID":"311"
}
}
```

11.2 reply received a stranger snapshot information return
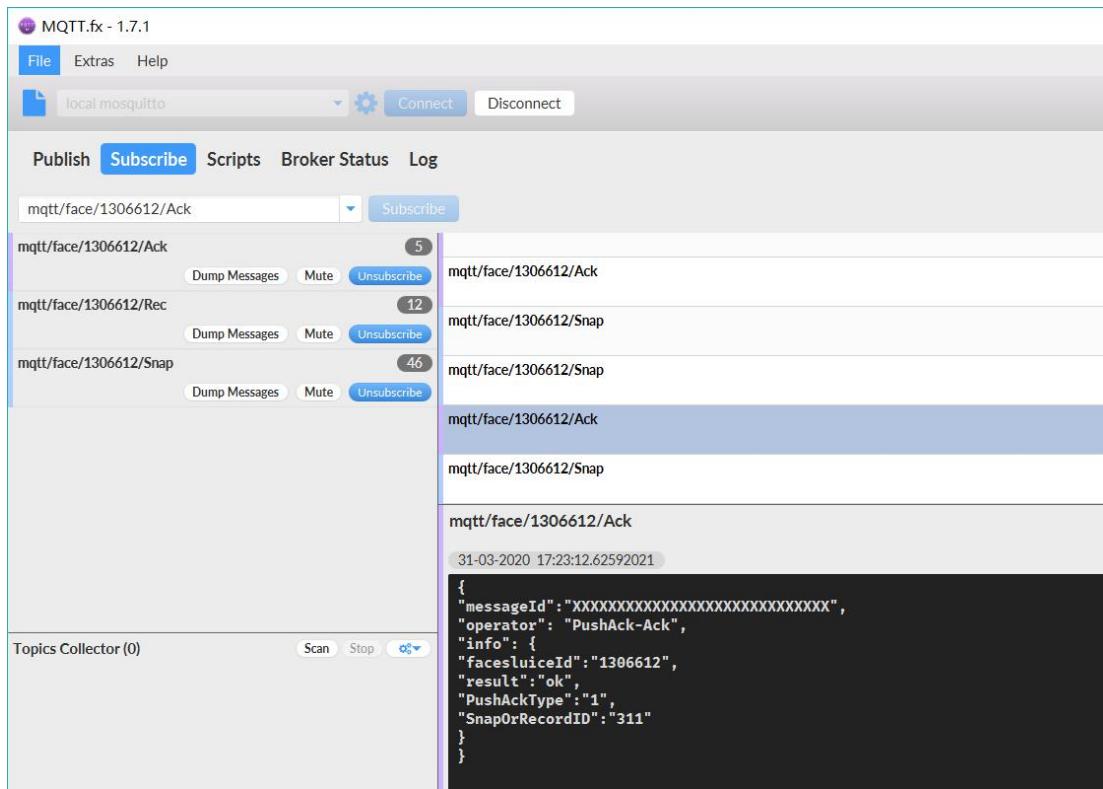
11.3 reply received authentication record information

In the mode of network disconnection and continuous transmission, when the authentication record push information is turned on, the platform receives the authentication record information and needs to reply the face recognition all-in-one machine information.

e. G.1, assuming that the platform receives the following control record information
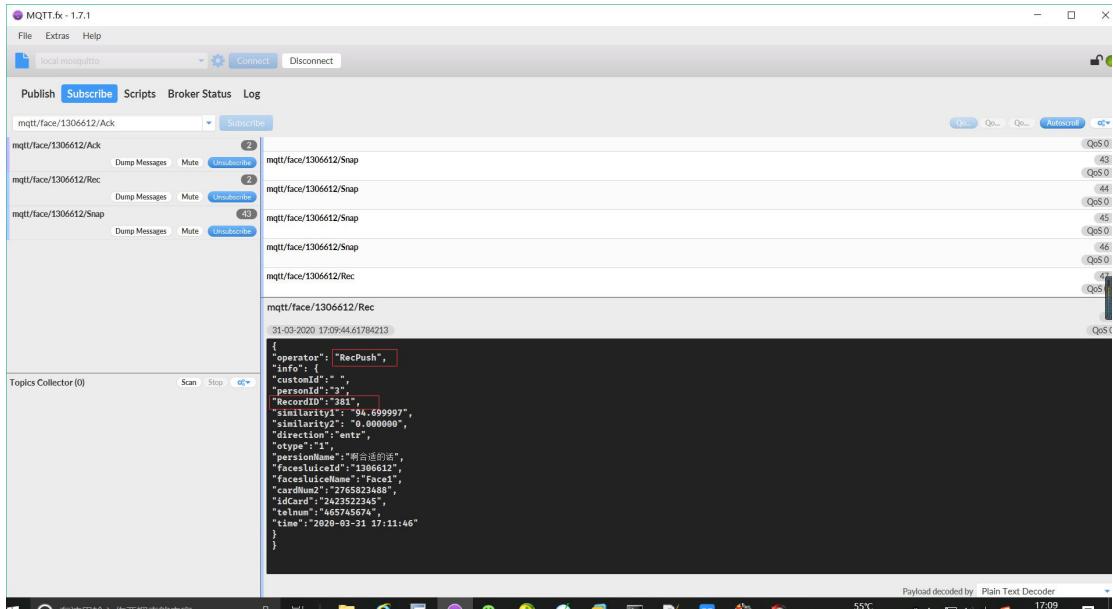
Then the platform needs to reply the face recognition all-in-one machine as follows

e. G.2 the platform replies to receive the authentication record information

```
{
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"operator": "PushAck",
"info": {
"PushAckType":"2",
"SnapOrRecordID":"381"
}
}
```
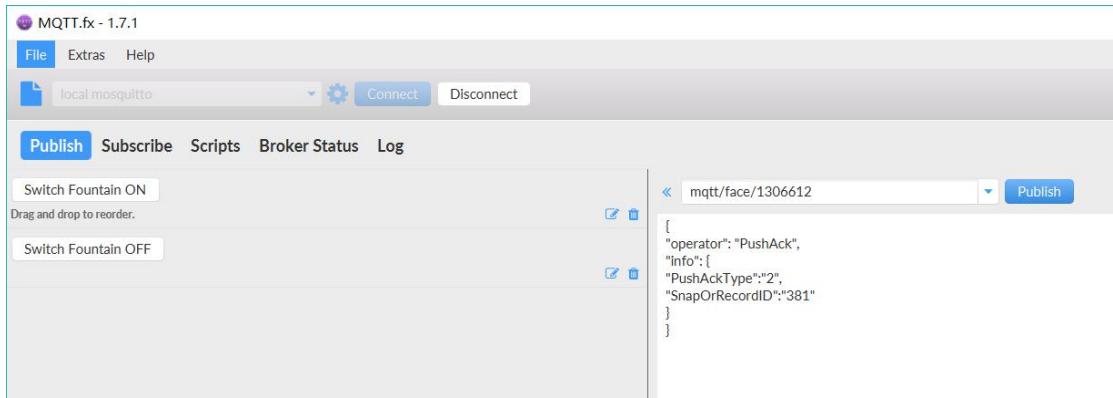
11.4 reply received authentication record information return
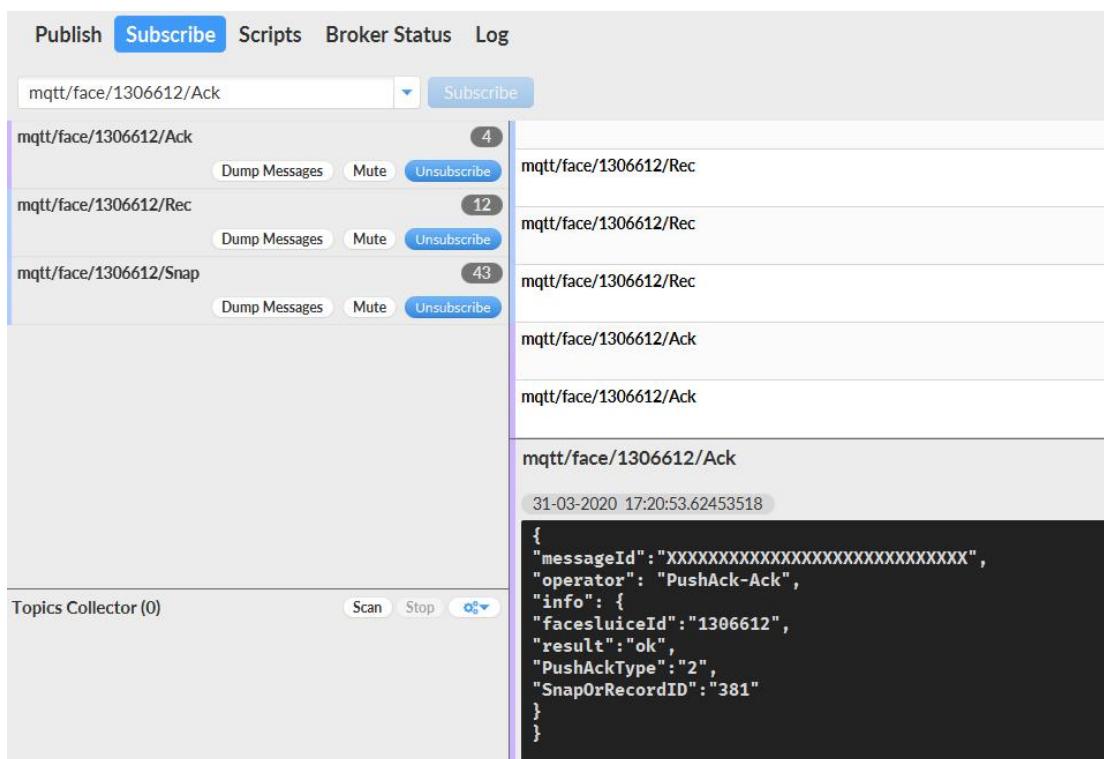
12 advertising

At present, it supports the maximum number of images in the format of "JPG / JPG", and supports the maximum number of pictures in the advertisement.The pixel size of 7-inch machine advertisement picture is 600 * 1024, and that of 8-inch machine advertisement picture is 800 * 1280.

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		EditAD/	EditAD:Add / modify ad
		EditAD-Ack/	Editad ack: Add / modify ad return
		DelAD/	DelAD:Delete advertisement

		DelAD-Ack/	Delad ack: delete ad return
messageId	char		Message ID, distinguish each message
info			concrete content
facesluiceId	char		Face recognition all in one machine ID
addid	char (optional)	Operation ID	reserve
path	char		Image download path
adslot	int	0~4	Advertising slot
polltime	int (optional)	The default is 10 seconds	Polling duration per ad
result	char	"ok"	

12.1 add / modify advertisement

e. G.1, add / modify advertising slot 0
{
"operator":"EditAD",
"messageId":"ID:localhost-637050888589478689:44009:24:40" ,
"info":
{
　　"adid":"",
　　"path":"http://pics.sc.chinaz.com/files/pic/pic9/201903/zzpic16841.jpg",
　　"adslot":"0",
　　"polltime":"10"
}
}

e. G.1, modify the polling time of each advertisement for 15 seconds
{
"operator":"EditAD",
"messageId":"ID:localhost-637050888589478689:44009:24:40" ,
"info":
{
　　"adid":"",
　　"adslot":"0",
　　"polltime":"15"

}
}

12.2 add / modify ad return

e. G.1, add / modify advertising slot 0 return

{
"messageId":"ID:localhost-637050888589478689:44009:24:40",
"operator": "EditAD-Ack",
"info": {
"facesluiceId":"1306612",
"adid":"",
"result":"ok"
}
}

e. G.1, modify the polling time of advertisement for 15 seconds

{
"messageId":"ID:localhost-637050888589478689:44009:24:40",
"operator": "EditAD-Ack",
"info": {
"facesluiceId":"1306612",
"adid":"",
"result":"ok"
}
}

12.3 deletion of advertisement

e. G.1, delete advertising slot 0

{
"operator":"DelAD",
"messageId":"ID:localhost-637050888589478689:44009:24:50" ,
"info":
{
   "adid":"",
   "adslot":"0"
}
}

12.4 delete advertisement return

e. G.1, delete advertisement slot 0 and return

{
"messageId":"ID:localhost-637050888589478689:44009:24:50",
"operator": "DelAD-Ack",
"info": {
"facesluiceId":"1306612",
"adid":"",
"result":"ok"
}
}

13 playing voice files

The face recognition all-in-one machine supports playing the original voice files of the all-in-one machine, as well as the voice files customized by customers.The customized voice file needs to meet the specific voice file format.All voice files need to use a single channel, the sampling rate is 16KHz, ending in ". Wav" format; if it is a customer-defined voice file, it needs to use the_C. At the end of "wav" format, upgrade the voice file in the web page file upgrade interface.

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		GetAudio/ GetAudio-Ack/ voiceplay/ voiceplay-Ack/	GetAudio:Get voice file Getaudio ack: get voice file return voiceplay:Playing voice files Voiceplay ack: playing voice file back
messageId	char		Message ID, distinguish each message
info			concrete content
facesluiceId	char		Face recognition all in one machine ID
AudioNum	int (optional)		Number of original sound files of all in one machine
AudioName	char (optional)		Original sound file name collection of all in one machine

AudioCustomerNum	int (optional)		Number of customized voice files for all in one machine
AudioCustomerName	char (optional)		User defined sound file name collection of all in one machine
voicetype	char	For example:welcome.wav	The name of the sound file to play
UsrType	char	If 1 ~ 2 is not transmitted by default, the original sound file of the all-in-one machine will be played	1:Play original sound file of all in one machine 2:Playing customized sound file of all in one machine
result			Operation result, success: "OK" or "failure"
detail			The reason returned on failure

13.1 obtaining voice files

e. Get voice file

```
{
"operator":"GetAudio",
"messageId":"ID:localhost-637050888589478689:44009:24:40" ,
"info":
{
}
}
```

13.2 get voice file return

e. G.1, get voice file and return

```
{
"messageId":"ID:localhost-637050888589478689:44009:24:40",
"operator": "GetAudio-Ack",
"info": {
"facesluiceId":"1306612",
"result":"ok",
"AudioNum":"35",
"AudioName":["VerifyFail.wav","VerifySuccess.wav","sorry.wav","sorry_en.wav","unrecorded.
wav","welcome.wav","welcome_en.wav","tempertureHigh.wav","NeedHelmet_en.wav","FailVeri
fy.wav","SnapSucc.wav","tempertureOkWelcome.wav","unrecorded_kr.wav","tempertureOkNR.
wav","theDoorOpen_en.wav","SLGreenWelcome.wav","sorry_pt.wav","SnapFail.wav","welcome
_kr.wav","FaceCollection.wav","welcome_pt.wav","theDoorOpen.wav","tempertureLow.wav","te
mpertureOk.wav","welcome_rs.wav","NeedRespirator.wav","verifyfail.wav","SwipeCard.wav","s
```

orry_kr.wav","Snaping.wav","unrecorded_en.wav","NeedHelmet.wav","unrecorded_rs.wav","Bru
shIDcard.wav","sorry_rs.wav"]

，

"AudioCustomerNum":"1",

"AudioCustomerName":["Fail_C.wav"]

}

}

13.3 playing voice files

e. G.1, play the original voice file of the all-in-one machine

```
{
"operator":"voiceplay",
"messageId":"ID:localhost-637050888589478689:44009:24:40" ,
"info":
{
"UsrType":"1",
"voicetype":"welcome.wav"
}
}
```

13.4 return of playing voice file

e. G.1, play back the original voice file of the all-in-one machine

```
{
"messageId":"ID:localhost-637050888589478689:44009:24:40",
"operator": "voiceplay-Ack",
"info": {
"facesluiceId":"1306612",
"result":"ok"
}
}
```

14 QR code

The two-dimensional code part can be divided into two parts. One is to display the QR code image on the whole UI interface of the all-in-one machine. The all-in-one machine supports two forms of displaying the QR code image. One is to directly send the string data of the QR code image to be encoded, and the all-in-one machine generates the two-dimensional code image; the other is to directly issue the

base64 image data of the QR code, and the all-in-one machine directly displays the picture;The other part is that the 485 interface of the all-in-one machine supports external QR code scanner, which can directly transmit and upload the QR code scanning result data.When the QR code scanning information upload mode is set for the face recognition all-in-one machine supporting external QR code scanner, the parameter settings are shown in9.6 mqtt report parameters; push the corresponding code scanning information results to the corresponding topic mqtt / face / ID / QRcode (where id refers to the local ID, for example, 1305433).For machines with different screen sizes, it is necessary to calculate the starting position and image size to avoid cross-border.If the base64 data of the image is issued, the original real image format of the image needs to be specified, otherwise the image data cannot be displayed normally.

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		ShowQRCode/ ShowQRCode-Ack/ QRCodePush	ShowQRCode:Set QR code image Showqrcode ack: set QR code image return QRCodePush:QR code scanning information push
messageId	char		Message ID, distinguish each message
info			concrete content
facesluiceId	char		The ID of face recognition all-in-one machine. When the specific key value is passed in, the matching machine will be assigned to execute. If not, all machines that subscribe to the same topic will be executed
facesluiceName			Name of all in one machine
ImageType	Int		Display image type 1:QR code image to be displayed 2:The format of the image to be displayed is PNG 3:The format of the image to be displayed is jpg 4:The format of the image to be displayed is BMP
AbsX	int	10 ~ maximum width of different UI (default: 10)	The display image is based on the x value of the UI start position
AbsY	int	10 ~ maximum value of	The display image is based on the y

		different UI heights (default: 10)	value of the UI start position
ImageW	int	Default: 200 ~ 10	Display image width
ImageH	int	Default: 200 ~ 10	Display image height
QRCodeData	char	32K bytes with Terminator	Imagetype = 1 is the QR code image string data to be encoded; Imagetype = 2 is Base64 data of PNG image to be displayed; Imagetype = 3 is Base64 data of JPG image to be displayed; Imagetype = 4 is Base64 data of BMP image to be displayed;
ShowStatus	int (optional)	0	Cancel QR code image display 0:Cancel display
QRCodeInfo	char		Reported QR code scanning result information
time	char		Time of reporting; G, 2020-04-17 14:04:25
result			Operation result, success: "OK" or "failure"
detail			The reason returned on failure

14.1 set QR code image

Support the QR code image information through3.2.2 release topicsThe topic of cloud topic in is sent to the all-in-one face recognition machine and displayed on the interface of the all-in-one face recognition machine.If a successful QR code image is sent to the server, it will be automatically cancelled in tens of seconds if the connection to the server fails or the server is reconnected. The cloud flat terminal needs to send the QR code image to the face recognition all-in-one machine every time it connects to the server,It is suggested to judge whether the face recognition all-in-one machine sends the equipment online notice to cooperate with whether the QR code image information needs to be sent again.

e. G.1, create a QR code image

{

"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",

"operator": "ShowQRCode",

"info":

{

```
"ImageType":"1",
"AbsX":"10",
"AbsY":"10",
"ImageW":"200",
"ImageH":"200",
"QRCodeData":"A1B2C3D4E5r6t7y8u9Pn"
}
}
```

e. 2, directly display the PNG format of the two-dimensional code picture

```
{
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"operator": "ShowQRCode",
"info":
{
"ImageType":"2",
"AbsX":"10",
"AbsY":"10",
"ImageW":"200",
"ImageH":"200",
```

"Qrcodedata" means "data: image / BMP: data: image / BMP; Base64,
ivivborw0kggoaaaaaaaaaaaaaaaaaaabuepe / aaaaqh01eqvr42u3yqqqqwww7 /
p0dnhwu2piyypb5qqq64iaaz / 9 / eeisjolx + 3gfkirjgcvjkr JK, jjkitakirjem bjkiqqjjscrjk / *
omitdata here omit data data ʌ data: image / BMP: data: image / BMP: Base64,
ivvborw0kggoaaaaaaaaaaaaabuepe / aaaaaaaaaaaaaaaaaabuepe /
aaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa* /"

```
}
}
```

e. G.3, cancel the QR code image

```
{
"messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"operator": "ShowQRCode",
"info":
{
"ShowStatus":"0"
}
}
```

14.2 set QR code image return

e. G.1, set QR code image return and E.g.2, cancel QR code image return

```
{
  "messageId":"XXXXXXXXXXXXXXXXXXXXXXXXXXXXXX",
"operator": "ShowQRCode-Ack",
"info": {
  "facesluiceId":"1333206",
"result":"ok"
  }
}
```

14.3 QR code scanning information reporting

e. G.1, reported QR code information

```
{
"operator":
"QRCodePush",
  "info": {
"facesluiceId":"1326491",
  "facesluiceName":"Face1",
  "QRCodeInfo":"https://u.wechat.com/123456ABCD",
"time":"2020-04-24 20:52:51"
}
}
```

15 heart rate

In order to solve the problem that many platforms can not detect the connection between the face recognition all-in-one machine and the platform in time, the device actively increases the heartbeat information, and the device will actively push the heartbeat message to the topic mqtt / face / heartbeat every 30 seconds.

Key	Type	Values	Description
operator		HeartBeat	Online:Device heartbeat
info			concrete content
facesluiceId	String		Face recognition all in one machine

			ID
time	String		Heartbeat time

15.1 heartbeat

The platform can detect whether the all-in-one face recognition machine is reconnected or shut down by not receiving the heartbeat for several times (at least twice). If the platform detects the reconnection, the command information sent during this period needs to be sent again if it does not get a reply.

e. G., device sends heartbeat

```
{
"operator": "HeartBeat",
"info":
{
   "facesluiceId":"1306612",
   "time":"2020-05-10 19:43:34"
}
}
```

16 capture scene map

The interface for capturing the snapshot scene graph mainly allows the platform to call the interface to obtain a scene graph. Frequent calls of this interface may affect the identification of the main thread.In view of the fact that customers may set the subscription topics of multiple all-in-one face recognition machines to be consistent, and it is not necessary for multiple devices to execute the snapshot scene map at the same time. As long as one machine executes, the results can be known. Therefore, if the faceluiceid field and key value are passed in, a specific machine will be specified for execution. If the facesluiceid field and key value are not passed in, the system will be executed by a specific machine,All machines that subscribe to the same topic will do this.

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		GetSceneSnap/ GetSceneSnap-Ack	GetSceneSnap:Get capture scene map Get snap: return to scene capture
messageId	String		Message ID, distinguish each

			message
facesluiceId	String (optional)		The ID of face recognition all-in-one machine. When the specific key value is passed in, the matching machine will be assigned to execute. If not, all machines that subscribe to the same topic will be executed
info			concrete content
ImgType	Int	0 ~ 2 (default: 2)	Capture image data return type 0: yuv, 1: bmp, 2: jpeg
ImgQuality	Int (optional)	55~100	Imgtype = 2 is required, compressed image quality (default: 55)
ImgData	String		Returned snapshot Base64 data

16.1 capture scene map

e. G.1, get the capture scene map
```
{
    "operator":"GetSceneSnap",
    "messageId":"ID:localhost-637050888589478689:44009:24:40" ,
    "info": {
        "facesluiceId":"1379743",
        "ImgType":"2",
        "ImgQuality":"100"
        }
}
```

Capture scene 2.16

e. G.1, get the captured scene map and return
```
{
"messageId":"ID:localhost-637050888589478689:44009:24:40",
"operator": "GetSceneSnap-Ack",
"info": {
"facesluiceId":"1379743",
"ImgType":"2",
/
```
vqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqqq,
```
"result":"ok"}
}
```

17 picture comparison similarity

The image comparison similarity interface provides the similarity between two images.In view of the fact that customers may set the subscription topics of multiple all-in-one face recognition machines to be consistent, and the similarity of image comparison does not need to be executed by multiple devices at the same time. As long as one machine executes, the results will be known. Therefore, if the facesluiceid field and key value are passed in, a specific machine will be specified for execution. If the facesluiceid field and key value are not passed in,All machines that subscribe to the same topic will do this.

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		GetPictureSimilarity/ GetPictureSimilarity-Ack	GetPictureSimilarity:Picture comparison similarity Getpicturesimilarity ack: image comparison similarity return
messageId	String		Message ID, distinguish each message
facesluiceId	String (optional)		The ID of face recognition all-in-one machine. If the specific key value is passed in, the matching machine will be assigned to execute. If not, all machines that have subscribed to the same topic will be executed. It is recommended that a single machine be designated for execution.
info			concrete content
picinfo1	String		Base64 encoded data of face picture 1 (no more than 1m)
picinfo2	String		Base64 encoded data of face picture 2 (no more than 1m)

17.1 picture comparison similarity

e. G.1, the picture comparison similarity

```
{
    "operator":"GetPictureSimilarity",
    "messageId":"ID:localhost-637050888589478689:44009:24:40" ,
```

"info": {
    "facesluiceId":"1379743",
    "Picinfo1": "data: image / BMP; Base64, / 9j / 4aaqskzjrg / * omit data * / caowl / 9K
=",

    "Picinfo2": "data: image / BMP; Base64, / 9j / 4aaqskzjrg / * data omitted here * / wblsf
    / 9K ="
        }
}

17.2 image comparison similarity return

e. G.1, image comparison similarity return

{
"messageId":"ID:localhost-637050888589478689:44009:24:40",
"operator": "GetPictureSimilarity-Ack",
"info": {
"facesluiceId":"1379743",
"Similarity":"94.0",
"result":"ok"}
}

Search local face database with image

The local face database interface is provided by graph search, and the corresponding results are obtained by comparing the images with the local face database of the all-in-one machine. In view of the fact that customers may set the subscription topics of multiple all-in-one face recognition machines to be consistent, and it does not need to be executed by multiple devices to search the local face database. As long as one machine executes, the results will be known. Therefore, if the faceluiceid field and key value are passed in, it will specify a specific machine to execute. If the facesluiceid field and key value are not passed in, the user can select the corresponding machine to execute, All machines that subscribe to the same topic will do this.

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		GetPictureSearch/ GetPictureSearch-Ack	GetPictureSearch:Search local face database by graph

			Getpicturesearch ack: search local face database by image
messageId	String		Message ID, distinguish each message
facesluiceId	String (optional)		Face recognition all-in-one machine ID. if the specific key value is passed in, it will be executed by matching machine. If not, it will be executed by all machines subscribing to the same topic. It is recommended to specify a single machine for execution
info			concrete content
MaxSimilarity	float		Similarity threshold
MaxNum	int		Maximum number of entries (only one is returned at present)
picinfo	String		Base64 encoded data of face image (no more than 1m)

18.1 search local face database by graph

e. G.1 to search the local face database
{
"operator": "GetPictureSearch",
"messageId":"ID:localhost-637050888589478689:44009:24:40" ,
"info": {
"facesluiceId":"1379743",
"MaxSimilarity":80,
"MaxNum":1
    },
"picinfo":"data:image/jpeg;base64,/9j/4AAQSkZJRgABAQAAAQAB......"
}

18.2 search local face database by graph

The maximum number of returned items is 20. The returned parameter information is composed of personnel information + personnel information + personnel information... Specific fields can be referred to 4.1 interface for adding and modifying personnel list Parameter information.

{
"messageId":"ID:localhost-637050888589478689:44009:24:40",
"operator": "GetPictureSearch-Ack",
"info": {
"facesluiceId":"1379743",
"TotalNum": 1,
"SearchInfo":
[{
"personType": "0",
"name": "cff",
"cardType2":"0",
"cardNum2": "1",
"gender": "0",
"nation": "1",
"idCard": " ",
"birthday": "2019-07-25",
"telnum1": " ",
"native": " ",
"address": " ",
"notes": " ",
"customId": " 123cdeqw",
"Time": "2020-07-25/17:21:15"
}]
},
"result":"ok"
}

19 detect picture face

The face detection interface provides rough detection of whether the face can be extracted from the image. In view of the fact that customers may set the subscription topics of multiple all-in-one face recognition machines to be consistent, and it is not necessary for multiple devices to perform image face detection at the same time. As long as one machine executes, the results will be known. Therefore, if the facesluiceid field and key value are passed in, a specific machine will be specified for execution. If the facesluiceid field and key value are not passed in, the user will specify a specific machine to execute, All machines that subscribe to the same topic will do this.

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		DetectFaceFromPic/ DetectFaceFromPic-Ack	DetectFaceFromPic:Face detection Detectface from pic ack: detect face in picture
messageId	String		Message ID, distinguish each message
facesluiceId	String (optional)		Face recognition all-in-one machine ID. if the specific key value is passed in, it will be executed by matching machine. If not, it will be executed by all machines subscribing to the same topic. It is recommended to specify a single machine for execution
info			concrete content
picinfo	String		Base64 encoded data of face image (no more than 1m)
DetectFace	Int	0~1	detection result 0: no face was detected 1: Face detected

19.1 face detection in pictures

e. G.1, detect face in picture

{
"operator": "DetectFaceFromPic",
"messageId":"ID:localhost-637050888589478689:44009:24:40" ,
"info": {
"facesluiceId":"1379743",
"picinfo":"data:image/jpeg;base64,/9j/4AAQSkZJRgABAQAAAQAB......"
}
}

19.2 face detection image return

e. G.1, face detection image return

{
"messageId":"ID:localhost-637050888589478689:44009:24:40",

"operator": "DetectFaceFromPic-Ack",

"info": {

"facesluiceId":"1379743",

"DetectFace":"1",

"result":"ok"}

}

20 manual push control record

Manual push control record interface is mainly to solve the problem of server side5. Information upload of authentication and identification personnelIf the control record reported by the interface is lost, manually set the interface again, and the all-in-one machine will actively upload the authentication results within the time period to the server through the authentication subscription topic mqtt / face / ID / rec (where id refers to the local ID, such as 1305433).This interface needs to ensure that it is connected to the server and that the identification record subscription is enabled.This interface is a control record that is forced to be pushed and searched. No matter whether or not the network interruption and continuous transmission mode is adopted, the control record uploaded by this interface does not need the server's reply. At the same time, it should be noted that the data reported by this interface may be saved for multiple times because the same record has been reported to the server before.5. Information upload of authentication and identification personnelPushtype in can distinguish whether it is a control record pushed manually or not.

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		ManualPushRecords/ ManualPushRecords-Ack	ManualPushRecords:Set manual push control record Manual pushrecords ack: set manual push control record return
info			concrete content
facesluiceId	String (optional)		Face recognition all-in-one machine ID. if the specific key value is passed in, it will be executed by matching machine. If not, it will be executed by all machines subscribing to the same topic. It is recommended to specify a single machine for

			execution
TimeS	string	YYYY-MM-DDThh:mm:ss	Start time of control record to be pushed.e.g., 2020-07-29T21:50:05
TimeE	string	YYYY-MM-DDThh:mm:ss	The end time of the control record to be pushed.e.g., 2020-07-29T21:50:05
Name	string (optional)		Control record matching exact name (reserved)
RecordNum	int (optional)		Total number of control records matched (return value), 0: no matching data was found

20.1 setting manual push control record

e. Set manual push control record

```
{
"operator": "ManualPushRecords",
"messageId":"ID:localhost-637050888589478689:44009:24:40" ,
"info": {
"facesluiceId":"1326491",
"TimeS":"2020-07-28T6:00:00"，
"TimeE":"2020-08-12T23:00:00"
}
}
```

20.2 setting manual push control record return

e. Set manual push control record return

```
{
"messageId":"ID:localhost-637050888589478689:44009:24:40",
"operator": "ManualPushRecords-Ack",
"info": {
"facesluiceId":"1326491",
"RecordNum":"8",
"result":"ok"}
}
```

21 ID card information reporting

ID card information reporting needs 9.6 mqtt report parameters Set up ID card subscription upload. In the open door mode with ID card verification, the ID card information swiped will be reported to the corresponding platform. The topic of ID card information pushed by the device is mqtt / face / ID / IDcard (where id refers to the local ID, such as 1305433).

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		IDCardPush	IDCardPush:ID card information push
info			concrete content
facesluiceId	String		The ID of face recognition all-in-one machine. When the specific key value is passed in, the matching machine will be assigned to execute. If not, all machines that subscribe to the same topic will be executed
facesluiceName	String		Name of all in one machine
time	String	2020-10-30 12:01:07	Swipe ID card time year month day hour: minute: Second
IDCard_Idno	String		ID card No.
IDCard_Name	String		full name
IDCard_Gender	Int		Gender 0: Male 1: female
IDCard_Nation	Int		nation:See Appendix a.1 Nationalities
IDCard_Birthday	String	1992-06-17	birthday:Year month day
IDCard_Address	String		address
IDCard_Idissue	String		Issuing authority
IDCard_Idperiod	String	20090828-20190828	term of validity:Mm / DD / yyyy - mm / DD / yyyy
IDCard_photo	String		ID card photo Base64 encoded data

21.1 reporting of ID card information

e. 1.1
{
    "operator":"IDCardPush",
    "info":{
        "facesluiceId":"1326491",
        "facesluiceName":"Face1",
        "time":"2020-10-13 15:00:38",
        "IDCardInfo":{
            "IDCard_Idno":"421126198702054321",
            "IDCard_Name ":" Li Mou ",
            "IDCard_Gender":0,
            "IDCard_Nation":1,
            "IDCard_Birthday":"1984-12-11",
            "IDCard_Address: "Qichun County, Hubei Province",
            "IDCard_"Public Security Bureau of Qichun county",
            "IDCard_Idperiod":"20090828-20190828",
            "IDCard_Photo ":" data: image / jpeg; Base64, / 9j / 4aaqskzjrg / * data omitted
here * / caowl / 9K="
        }
    }
}

22 manually push the capture record of strangers

Manual push stranger record interface is mainly to solve the problem of server side6 information upload of strangersIf the control record reported by the interface is lost, manually set it through the interface again, and the all-in-one machine can upload the snapshot records of strangers in the time period again, and send them to the server through mqtt / face / ID / snap (where id refers to the local ID, such as 1305433).This interface needs to ensure that the server is connected and the stranger subscription is enabled.This interface is mandatory to push and search the stranger snapshot records. No matter whether the continuous transmission mode is adopted or not, there is no impact on the interface. The server does not need to reply to the stranger snapshot records uploaded by this interface. At the same time, it should be noted that the data reported by this

interface may be saved for multiple times because the same record has been reported to the server before.6 information upload of strangersPushtype in can distinguish whether it is a control record pushed manually or not.

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		ManualPushSnaps/ ManualPushSnaps-Ack	ManualPushSnaps:Set up manual push stranger record Manual pushsnapshots ack: manually push stranger records back
info			concrete content
facesluiceId	String (optional)		Face recognition all-in-one machine ID. if the specific key value is passed in, it will be executed by matching machine. If not, it will be executed by all machines subscribing to the same topic. It is recommended to specify a single machine for execution
TimeS	string	YYYY-MM-DDThh:mm:ss	Record the starting time of a stranger who needs to be pushed.e.g., 2020-11-18T08:00:00
TimeE	string	YYYY-MM-DDThh:mm:ss	Record the ending time of a stranger who needs to be pushed.e.g., 2020-11-18T23:59:59
RecordNum	int (optional)		Total number of matched stranger snapshot records (return value), 0: no matching data was found

22.1 setting up manual push stranger record

e. Set manual push control record
{
"operator": "ManualPushSnaps",
"messageId":"ID:localhost-637050888589478689:44009:24:40" ,
"info": {
"facesluiceId":"1326491",
"TimeS":"2020-11-18T6:00:00"，
"TimeE":"2020-11-18T23:00:00"

}
}

22.2 setting manual push stranger record return

e. Set manual push control record return
{
"messageId":"ID:localhost-637050888589478689:44009:24:40",
"operator": "ManualPushSnaps-Ack",
"info": {
"facesluiceId":"1326491",
"RecordNum":"8",
"result":"ok"}
}

23 IC or RF card number reporting

IC or RF card number reporting needs9.6 mqtt report parametersIC or RF card number subscription upload, in the open door mode with card swiping verification, the card number information will be reported to the corresponding platform. The topic of IC or RF card number information pushed by the device is mqtt / face / ID / card (where id refers to the local ID, such as 1305433).

Parameter information (Note: optional is optional)

Key	Type	Values	Description
operator		CardPush	CardPush:IC or RF card number information push
info			concrete content
facesluiceId	String		The ID of face recognition all-in-one machine. When the specific key value is passed in, the matching machine will be assigned to execute. If not, all machines that subscribe to the same topic will be executed
facesluiceName	String		Name of all in one machine
time	String	2020-11-20 12:01:07	Time: year, month, hour
CardInfo	String		Key number information card

Endian	Int		Card reading mode of large and small end of card number (currently set by face machine) 0:Big end mode 1:Small end mode
CardMode	Int		Make up IC or RF (ID) card number mode, (card number mode currently set by face machine) 0: Decimal card number 1: Hexadecimal composition card number
CardNum	String		Card number

23.1 IC or RF card number reporting

e. G.1, information reported by IC or RF card number

{
"operator": "CardPush",
"info":
{
"facesluiceId":"1306612",
"facesluiceName":"Face1",
"time":"2020-11-20 14:28:32",
"CardInfo":
{
"CardMode": "1",
"Endian": "1",
"CardNum": "86664719"
}
}
}

*Appendix

4.1 add and modify interface error code of personnel list

code	Type	String	Description
200	int		The operation was successful
460	int	"Data out of range"	Single packet data more than 1m
461	int	"can't find customId"	Failed to get 'customid' keyword
462	int	"Parameter error"	Failed to get keyword 'info'
463	int	"pic base64 data decode err"	Base64 failed to decode data
464	int	"Get pic Person Feature err, please change a pic"	Face feature extraction failed
465	int	"other"	Database operation failed
466	int		reserve
467	int	"Person num is full"	The list database is full
468	int	"get URI pic data len too short"	Get URI image data less than 1000 bytes
469	int	"get URI pic data len too long"	Get URI image data more than 1m (picture pixels are limited to 1080p)
470	int	"get URI server ip error"	Failed to resolve the server address of the picture
471	int	"get pic and connect URI IP error"	Getting the URI image timed out or failed to download the image. (note whether the DNS of the device is correct)
472	int	"get pic and get URI error"	The keyword "pic" was not passed in and the keyword "picuri" was not passed in
473	int	"RFIDCard already exist"	Rfidcard card number already exists (for built-in swipe card model)
474	int	"Get WGFacilityCode error"	Failed to get keyword 'wgfacility code'
475	int	"Get cardNum2 error"	Failed to get keyword 'cardnum2'
476	int	"cardNum2 already exist"	Cardnum2 vegenka already exists

4.2.2 error code for querying detailed information of single personnel list

code	Type	String	Description
460	int	"Data out of range"	Single packet data more than 1m
461	int		reserve
462	int	"Parameter error"	Failed to get keyword 'info'
463	int	"Parameter customId error"	Failed to get 'customid' keyword
464	int	"can't find customId's person"	Query no matching list

4.2.3 multi person list query error code

code	Type	String	Description
460	int	"Data out of range"	Single packet data more than 1m
461	int		reserve
462	int	"Parameter error"	Failed to get keyword 'info'
465	int	"Unknow facesluiceId"	"Facesluiceid" matching failed
466	int	"can not find person"	Query no matching list

4.3 delete error code of single personnel list

code	Type	String	Description
200	int		The operation was successful
461	int	"can't find customId"	Failed to get 'customid' keyword
462	int	"Parameter error"	Failed to get keyword 'info'
464	int	"can't find customId's person"	Query no matching list

4.5 delete all personnel list error codes

code	Type	String	Description
460	int	"Data out of range"	Single packet data more than 1m
462	int	"Parameter error"	Failed to get keyword 'info'
463	int	"Parameter deleteall error"	Failed to get keyword 'deleteall'

Error code (4) batch add personnel URI

Code refers to the success or failure of the whole command execution, and errCode refers to the error code of batch operation interface for single operation.

code	Type	String	Description
410	int	"AddPersons is busy"	The batch add interface is busy. The last batch add instruction has not been completed
411			reserve
412	int	"can not find DataBegin"	Failed to get keyword 'databegin'
413	int	"can not find DataEnd"	Failed to get keyword 'dataend'
414	int	"Parameter error"	Failed to get keyword 'info'
415	int	"can not find PersonNum"	Failed to get keyword 'personnum'
416	int	"PersonNum out of range"	The total number of lists exceeds the maximum of 1000
417	int	"json of person's data is not equal PersonNum"	The number of JSON array lists obtained is different from the value of personnum
418	int	"can not find info"	Failed to get keyword 'info'
460	int	"Data out of range"	Single packet data more than 1m

errcode	Type	String	Description
461	int		Customid already exists
462	int		Rfidcard already exists, (built-in swipe card model)
463	int		Failed to get picuri keyword
464	int		Failed to resolve the server address of the picture
465	int		Getting URI image timed out or failed to download image (pay attention to whether the DNS of the device is correct)
466	int		Failed to get URI image data content
467	int		Image size should not exceed 1080p
468	int		Face feature extraction failed
469	int		Database failed to write image data
470	int		Database failed to write list data
471	int		reserve
472	int		reserve

473	int		reserve
474	int		reserve
475	int		The wegenka already exists
476	int		Failed to get wgfacilitycode keyword
477	int		Failed to get cardnum2 keyword
478	int		The similarity between the personnel picture and the bottom database picture is too high (the personnel picture already exists)

4.7 batch modification personnel (URI) error code

Code refers to the success or failure of the whole command execution, and errCode refers to the error code of batch operation interface for single operation.

code	Type	String	Description
410	int	"EditPersons is busy"	The batch modify interface is busy. The last batch modification instruction has not been completed
411			reserve
412	int	"can not find DataBegin"	Failed to get keyword 'databegin'
413	int	"can not find DataEnd"	Failed to get keyword 'dataend'
414	int	"Parameter error"	Failed to get keyword 'info'
415	int	"can not find PersonNum"	Failed to get keyword 'personnum'
416	int	"PersonNum out of range"	The total number of lists exceeds the maximum of 1000
417	int	"json of person's data is not equal PersonNum"	The number of JSON array lists obtained is different from the value of personnum
418	int	"can not find data"	Failed to get keyword 'data'
460	int	"Data out of range"	Single packet data more than 1m

errcode	Type	String	Description
461	int		No customid keyword was passed in
462	int		Customid does not exist. This list does not exist

463	int		reserve
464	int		Failed to resolve the server address of the picture
465	int		Getting URI image timed out or failed to download image (pay attention to whether the DNS of the device is correct)
466	int		Failed to get URI image data content
467	int		Image data is too large
468	int		Face feature extraction failed
469	int		Database failed to write image data
470	int		reserve
471	int		reserve
472	int		reserve
473	int		reserve
474	int		reserve
475	int		reserve
476	int		Failed to get wgfacilitycode keyword
477	int		Failed to get cardnum2 keyword
478	int		reserve
479	int		Failed to modify person list information

4.9 error code for batch deletion of personnel list

Code refers to the success or failure of the whole command execution, and errCode refers to the error code of batch operation interface for single operation.

code	Type	String	Description
410	int		reserve
411	int		reserve
412	int	"can not find DataBegin"	Failed to get keyword 'databegin'
413	int	"can not find DataEnd"	Failed to get keyword 'dataend'
414	int	"Parameter error"	Failed to get keyword 'info'
415	int	"can not find PersonNum"	Failed to get keyword 'personnum'
416	int	"PersonNum out of range"	The total number of deleted lists exceeds the maximum of 200
417	int	"json of person's data is not equal PersonNum"	The number of JSON array lists obtained is different from the value of personnum
418	int	"can not find customId"	Failed to get 'customid' keyword

4.10 batch adding or modifying personnel (URI) error codes

Code refers to the success or failure of the whole command execution, and errCode refers to the error code of batch operation interface for single operation.

code	Type	String	Description
410	int	"EditPersonsNew is busy"	The batch add or modify interface is busy. The last batch add or modify instruction has not been completed
411			reserve
412	int	"can not find DataBegin"	Failed to get keyword 'databegin'
413	int	"can not find DataEnd"	Failed to get keyword 'dataend'
414	int	"Parameter error"	Failed to get keyword 'info'
415	int	"can not find PersonNum"	Failed to get keyword 'personnum'
416	int	"PersonNum out of range"	The total number of lists exceeds the maximum of 1000
417	int	"json of person's data is not equal PersonNum"	The number of JSON array lists obtained is different from the value of personnum
418	int	"can not find data"	Failed to get keyword 'data'
460	int	"Data out of range"	Single packet data more than 1m

errcode	Type	String	Description
461	int		Failed to get customid
462	int		reserve
463	int		reserve
464	int		Failed to resolve the server address of the picture
465	int		Getting URI image timed out or failed to download image (pay attention to whether the DNS of the device is correct)
466	int		Failed to get URI image data content
467	int		Image data is too large
468	int		Face feature extraction failed
469	int		Database failed to write image data

470	int		reserve
471	int		reserve
472	int		reserve
473	int		reserve
474	int		reserve
475	int		Weigenka already exists
476	int		Failed to get wgfacilitycode keyword
477	int		Failed to get cardnum2 keyword
478	int		reserve
479	int		Failed to modify person list information
480	int		Rfcard already exists
481	int		Failed to get picuri keyword
482	int		Failed to read the image of an existing person

9.1.3 setting system parameter error code

code	Type	String	Description
461		"Set param fail"	set parameters failed
462	int	"Parameter error"	Failed to get keyword 'info'

9.2.3 setting error codes for sound and interface display parameters

code	Type	String	Description
462	int	"Parameter error"	Failed to get keyword 'info'

9.3.3 setting door opening conditions and output control error code

code	Type	String	Description
462	int	"Parameter error"	Failed to get keyword 'info'
463	int	"VerifyMode error"	Door opening verification mode error

9.4.3 setting HTTP subscription push parameter error code

code	Type	String	Description
462	int	"Parameter error"	Failed to get keyword 'info'
463	int	"ServerAddr error"	HTTP server address parameter error
464	int	"ServerPort error"	HTTP server port parameter error

9.5.3 setting temperature parameter error code

code	Type	String	Description
462	int	"Parameter error"	Failed to get keyword 'info'

Setup of mqtt parameter

code	Type	String	Description
462	int	"Parameter error"	Failed to get keyword 'info'
463	int	"ResumefromBreakpoint need Topic Snap or Verify"	At least one of "stranger" and "identification record" should be subscribed to in order to enable the mode

9.8.3 setting system time error code

code	Type	String	Description
462	int	"Parameter error"	Failed to get keyword 'info'
463	int	"Can't find SysTime"	Failed to get keyword 'systime'

3.9 face recognition parameter setting

code	Type	String	Description
462	int	"Parameter error"	Failed to get keyword 'info'
463	int	"unknow facesluiceId"	"Facesluiceid" matching failed

9.10 minimum pixel and recognition distance reference table for face recognition

Minimum pixel of face recognition	Approximate recognition distance (m)
100	2.18
120	1.92
140	1.60
150	1.52
160	1.43
180	1.26
200	1.14
220	1.02
240	0.90
260	0.85
280	0.83
300	0.78
350	0.67
400	0.50
450	0.48
500	0.45
550	0.41
600	0.37
650	0.34
700	0.3
750	0.27
800	0.24

12.1 add / modify advertisement error code

code	Type	String	Description

461	int	"Parameter error"	Failed to get keyword 'info'
462	int	"Can't find adslot"	Failed to get keyword 'adslot'
463	int	"AD num is full"	The passed in 'adslot' exceeds the maximum value
465	int	"AD file download fail"	Failed to download ad content
467	int	"unknow facesluiceId"	"Facesluiceid" matching failed

12.3 delete advertisement error code

code	Type	String	Description
461	int	"Parameter error"	Failed to get keyword 'info'
462	int	"Can't find adslot"	Failed to get keyword 'adslot'
463	int	"adslot out of range"	The passed in 'adslot' exceeds the maximum value

Error code 13.1

code	Type	String	Description
462	int	"Parameter error"	Failed to get keyword 'info'
463	int	"Can't find Audio"	Failed to get sound file, no sound file

13.3 error code of playing voice file

code	Type	String	Description
462	int	"Parameter error"	Failed to get keyword 'info'
463	int	"can't find voicetype param"	Failed to get keyword 'voicetype'
464	int	"can't find VoiceFileName"	Audio file does not exist
465	int		reserve

14.1 setting error code of QR code image

code	Type	String	Description
462	int	"Parameter error"	Failed to get keyword 'info'
463	int	"can't find QRCodeData Param"	Failed to get keyword 'qrcodedata'
464	int	"Unknow facesluiceId"	"Facesluiceid" matching failed

16.1 error code of capturing scene map

code	Type	String	Description
462	int	"Parameter error"	Failed to get keyword 'info'
463	int	"GetSceneSnap error"	Failed to capture panorama
464	int	"Version not support GetSceneSnap"	This interface is not supported in this version
465	int	"Unknow facesluiceId"	"Facesluiceid" matching failed

17.1 image comparison similarity error code

code	Type	String	Description
462	int	"Parameter error"	Failed to get keyword 'info'
463	int	"Unknow facesluiceId"	"Facesluiceid" matching failed
464	int	"Unknow pic1info"	Failed to get keyword 'pic1info'
465	int	"Unknow pic2info"	Failed to get keyword 'pic2info'
466	int	"base64_decode pic1info error"	"Pic1info" Base64 data decoding failed
467	int	"GetPersonFeature pic1info error"	Failed to obtain the facial features of "pic1info" (please replace the picture or check whether the base64 data of the picture is correct)
468	int	"base64_decode pic2info error"	"Pic2info" Base64 data decoding failed
469	int	"GetPersonFeature pic2info error"	Failed to obtain the facial features of "pic2info" (please replace the picture or check whether the base64 data of the picture is correct)

18.1 search local face database error code with graph

code	Type	String	Description
460	int	"Data out of range"	Single packet data more than 1m
461	int	"Unkonw facesluiceId"	"Facesluiceid" matching failed
462	int	"Parameter error"	Failed to get keyword 'info'
463	int	"Unkonw MaxSimilarity"	Failed to get keyword 'maxsimilarity'
464	int	"Unkonw MaxNum"	Failed to get keyword 'maxnum'
465	int	"Unkonw picinfo"	Failed to get keyword 'picinfo'

466	int	"No Meet Conditions Person"	No matching personnel
467	int	"GetPersonFeature picinfo error"	Failed to obtain the facial features of "picinfo" (please replace the picture or check whether the base64 data of the picture is correct)
468	int	"base64_decode picinfo error"	"Picinfo" Base64 data decoding failed

19.1 face error code detection

code	Type	String	Description
462	int	"Parameter error"	Failed to get keyword 'info'
463	int	"Unknow facesluiceId"	"Facesluiceid" matching failed
464	int	"Unknow picinfo"	Failed to get keyword 'picinfo'
465	int	"base64_decode picinfo error"	"Picinfo" Base64 data decoding failed

20.1 setting error code of manual push control record

code	Type	String	Description
462	int	"Parameter error"	Failed to get keyword 'info'
463	int	"Unknow facesluiceId"	"Facesluiceid" matching failed
464	int	"Unknow TimeS"	Failed to get keyword 'times'
465	int	"Unknow TimeE"	Failed to get keyword 'timee'
466	int	"Can't Find any record issue, please check TimeS and TimeE"	No matching control records
467	int	"Unknow RecordUploadType"	This interface needs to subscribe to the "identification record" upload first

22.1 set error code of manual push stranger record

code	Type	String	Description
462	int	"Parameter error"	Failed to get keyword 'info'
463	int	"Unknow facesluiceId"	"Facesluiceid" matching failed
464	int	"Unknow TimeS"	Failed to get keyword 'times'

465	int	"Unknow TimeE"	Failed to get keyword 'timee'
466	int	"Can't Find any snap issue, please check TimeS and TimeE"	No matching stranger snapshot record
467	int	"Unknow StrangerUploadType"	This interface needs to subscribe to "stranger" upload first

Appendix A

A. 1 nation

National numerical code (int)	nation
1	Chinese
2	Mongolia
3	return
4	hide
5	Uygur
6	seedling
7	Yi Nationality
8	strong
9	Bouyei
10	North Korea
11	full
12	Dong
13	Yao
14	white
15	Tujia
16	Hani
17	Kazakh
18	Dai nationality
19	Li
20	Lisu
21	Wa
22	She
23	mountain
24	Lahu
25	water
26	Dongxiang

27	Naxi
28	Jingpo
29	Kirgiz
30	Soil
31	daur
32	Mulao
33	Qiang Nationality
34	Brown
35	Sarah
36	Maonan
37	gelao
38	Xibe
39	Achang
40	Pumi
41	Tajikistan
42	anger
43	Uzbek
44	Russia
45	Ewenki
46	De ang
47	security staff
48	Guyu
49	Beijing
50	Tatar
51	Derung
52	Oroqen
53	Hezhen
54	Menba
55	loba
56	Gino
57	other