

The HTTP API Interface of Online QR Code Access Control

1. Introduction

The controller submits a Http request to the server after swiping the card or scan QRCode, and then the server answers, finally the controller operates the action. If offline, the device can deal it by itself. It can validate QRcode or IC card or ID card, if it is valid, the door will open. When online, the server will validate the information. When it has no access to internet, offline QRcode can also open the door. Surely the QRcode should comply with the principles of opening the door. After connecting to the internet, the records of opening the door will be uploaded automatically. If the times of opening the door should be recorded, this information will also be uploaded after connecting to the internet. This is to say if some QRcode can only open the door once, after online opening, when in offline condition later, this QRcode could not open the door any more.

1.2 Communications

The system uses IP address, the interface parameter communication uses JSON; http post requests ip (support DNS<domain name resolution>)

Interface access address: `http://IP/ota/otaservice`

Client request URL : <http://IP/URI>

HTTP request mode: POST

Online access controller protocol

1. Request Opening

Interface description	Request opening
URL	<code>http://IP/URI_forOpendoor</code> (URI_forOpendoor customizable)
Request mode	http post request
POST request data	<code>Type=0&SCode=A7CB6016&DeviceID=008139961114&ReaderNo=1&ActIndex=1&SN=001&UserName=admin&PassWord=666</code> 1) Type: upload data type 0 IC card number, 1 QRcode/Barcode data; 2 ID card number; 3 password 4 Bluetooth data 2) SCode: the data of the above type 3) DeviceID: MAC address code of the device, 12 length 4) ReaderNo: when the device has multiple input peripherals, such as IC reader 1, 2; 2D code reader 1, 2; then 1 means enter and 2 means exit; 5) ActIndex the relay position of act; it refers to to act which reply; generally it is 1, 2; if two relays act at the same time, the value is 3. 6) Project no.: if not use, this field will null”

	<p>7) User name: some customers need the user name ; if not use, this field will null</p> <p>8 admin User password: sometime user password is needed; if not, this field will null</p> <p>a. Example of Mifare 1 card :</p> <pre>POST /api/Device/OpenDoor HTTP/1.1 Host: 192.168.1.253:18887 Content-Type: application/x-www-form-urlencoded Connection: keep-alive Content-Length: 82 Type=0&SCode=07D9B1ED&OpenEvent=12&DeviceID=008921089686&ReaderNo=1&ActIndex=1</pre> <p>b. Example of QRcode or barcode</p> <pre>Host: 192.168.1.253:18887 Content-Type: application/x-www-form-urlencoded Connection: keep-alive Content-Length: 118 Type=1&SCode=https://u.wechat.com/MBBWoKnr60IBNY4taHgVwds&OpenEvent=00&DeviceID=008921089686&ReaderNo=1&ActIndex=1</pre> <p>c. Example of password key</p> <pre>POST /api/Device/OpenDoor HTTP/1.1 Host: 192.168.1.253:18887 Content-Type: application/x-www-form-urlencoded Connection: keep-alive Content-Length: 83 Type=3&SCode=123456789&OpenEvent=00&DeviceID=008120042235&ReaderNo=1&ActIndex=1</pre>
<p>server return data (JSON)</p>	<pre>{ "ResultCode": "1" // 1 means success; 0 is failure "ActIndex": "1" // 1 allow to open relay 1, 2 allow to open relay 2,3 to open relay 1 and //relay 2 "Time1": "000A" // set the relay1 delaytime, Without this field, the default time is taken "Time2": "0005" // set the relay2 delaytime, Without this field, the default time is taken "Audio": "04" // value 04 (enter) , please check voice list; if not use voice, please don' t //use the "Audio" field "Msg": "Success" // success or failure validation hint, if device has TFT screen, The contents //of the MSG field will be displayed on the TFT screen }</pre> <p>For example:</p> <pre>HTTP/1.1 200 Content-Type: application/json;charset=UTF-8 Content-Length: 62</pre>

	{“resultCode”:“1”,“actIndex”:“1”,“msg”:“Success”,“audio”:“04”}

2. Event request

interface description	upload records
URL	http://IP/URI_forRecord (URI_forRecord can be defined by customers)
Request mode	http post request
POST data	<p>SCode=A7CB6016&DeviceID=008139961114&SN=001 &UserName=admin&PassWord=666</p> <p>1)SCode:record upload data [card number (8 bytes) + event time (12 bytes) + event number (2 bytes) + reader no. (2 bytes)]X records numbers (16 hexadecimal)</p> <p>2) DeviceID.: MAC address code of device: 12 length (for example:008139000015)</p> <p>3)ProjectNo.: if not use, default “SN=001”</p> <p>4)User Name: if not use, default “UserName=admin1”, else “UserName=XXXXXX”</p> <p>5>Password: if not use, default “PassWord=admin1”, else “PassWord=XXXXXX”</p> <p>One Event upload: POST /jl_webTrans/Event.htm HTTP/1.1 Host: 192.168.1.253:18887 Content-Type: application/x-www-form-urlencoded Content-Length: 92</p> <p>SCode=000000001710231214390100&DeviceID=008139212274&SN=0001&UserName=admin1&PassWord=admin1 00000000//CardID is 4 byptes 171023121439//yymddhhmss 01//Event number (01→ “Remote open door”) 00//Reader number is 00</p> <p>Multi-Event upload: POST /api/door/door_offline_data HTTP/1.1 Host: 192.168.1.253:80</p>

<p>POST data</p>	<pre>DeviceTime=171018142347&Version=DL800M2SV5. 2. 11DoorStatus=01&DeviceID=008139961114&SN=001 &UserName=admin&PassWord=666</pre> <p>1)Device' s Time: 171018142347 (2017-10-18 14:23:47)</p> <p>2)Version: Device' s version</p> <p>3)DoorStatus: 00 the first bit is the state of Magnetic switch1, the second bit is the state of Magnetic switch 2, 0 mean the door close,1 mean the door open</p> <p>4) Project no. : if not use, default "SN=001"</p> <p>5) User name: some customers need the user name ; if not use, default is "admin=admin"</p> <p>6) User password: sometime user password is needed; if not, default is "password=admin"</p> <p>For example:</p> <pre>POST /api/door/door_heart_beat HTTP/1.1 Host: 192.168.1.253:80 Content-Type: application/x-www-form-urlencoded Content-Length: 124</pre> <pre>DeviceTime=171101092832&Version=1102DL800M2SV5. 3. 02&DoorStatus=11&DeviceID=008139212274&SN=001&UserName=admin&PassWord=admin</pre>
<p>server return data (JSON)</p>	<pre>{ "ResultCode": "1", // 1 means success; 0 is failure "ActIndex": "1", //if with "ActIndex" field, same as <OPEN API>, can open the relay then //opendoor or gate "CorrectTime": "211202160630", //with CorrectTime filed, will check device datetime "Msg": "Success" } //if device has tft screen, the Msg content will display on the TFT screen.</pre> <p>For example</p> <pre>HTTP/1.1 200 Server: nginx/1.12.2 Date: Wed, 01 Nov 2017 01:16:29 GMT Content-Type: application/json;charset=UTF-8 Content-Length: 62</pre> <pre>{"ResultCode": "1", "CorrectTime": "211202160630", "Msg": "HeartSuccess"}</pre> <p>General Command with the heartbeat API</p> <p>There is a general command "SetCMD", This command is designed to be compatible with all commands in TCP/UDP communication protocols. To see all commands in the TCP communication protocol documentation, only the "command"+ "Return state=FF" and "Command data". If "Command data" is empty, then, only reserve the "Command" data.</p> <p>Step 1. Wait for heartbeat to upload.</p> <p>Step 2. Then the platform responds with commands that need to be sent to the device, such as obtaining the datatime, remote open etc.</p> <p>Step 3. If the return status is successful, so the platform can send next command to device.</p>

Set datetime: 3300
remoteOpen: 5000FF01

Sample1: get the datetime

Step1: get heartbeat data from gateway
POST /api/Device/DoorHeart HTTP/1.1
Host: 192.168.1.253:18887
Content-Type: application/x-www-form-urlencoded
Connection: keep-alive
Content-Length: 125

DeviceTime=250219143717&Version=1101DL600H1HV1.3.59&DoorStatus=11&NumberOfCard=2&NumberOfSortCard=0&DeviceID=009925028203

Step2: After receiving the device's heartbeat, respond with the following data:

"SetCMD": "3300" to obtain the datetime
HTTP/1.1 200
Server: nginx/1.12.2
Date: Wed, 01 Nov 2017 01:16:29 GMT
Content-Type: application/json; charset=UTF-8
Content-Length: 62

```
{"ResultCode": "1", "SetCMD": "3300", "Msg": "Success"}
```

Step3: Get the return command status and return data
POST /api/Device/DoorHeart HTTP/1.1
Host: 192.168.1.253:18887
Content-Type: application/x-www-form-urlencoded
Connection: keep-alive
Content-Length: 165

DeviceTime=250219145510&Version=1101DL600H1HV1.3.59&DoorStatus=11&NumberOfCard=2&NumberOfSortCard=0&SetCMDReturn=00&SetCMDData=250219145510&DeviceID=009925028203

GetCMDStatus=00 return command status 00: OK
GetCMDData=250219145510 return data is the datetime of lock.

2.Event number and event name table

CString EventString[100]=

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{  
    "Normal punching card", "Remote open", "Dual verification", "Password Open", "duress code Open",  
    "Customize Input Open", "Primary Card Open", "Button Open", "the door is normally closed", "Customize 1 Alarm",  
    "Customize 2 Alarm", "Customize 3 Alarm", "Customize 4 Alarm", "No Permission Time Zone", "Invalid Password",  
    "Invalid Dual Verification", "No permission to open the door", "", "illegal card", "punching the card by double-card",  
    "Door Sensor Alarm", "Duress Alarm", "", "the overdue card", "",  
    "all along open door", "remote closing", "urgent opening", "urgent closing", "the door is closed urgently",  
    "all along close door", "recover door status", "3 card punching", "4 card punching", "5 card punching",  
    "3 card invalid", "4 card invalid", "5 card invalid", "3 card open", "4 card open",  
    "5 card open", "1 Confirm open", "2 Confirm open", "3 Confirm open", "4 Confirm open",  
    "5 Confirm open", "repeat punching", "card experit", "Remote confirm open", "wait for PWD",  
    "", "", "", "", "",  
    "", "", "", "", "",  
    "", "", "", "card deleted", "",  
    "", "", "", "", "",  
    "QR OpenDoor", "QR times not enough", "QR Expired", "Start date Error", "MAC Error",  
    "Project code Error", "Room code Error", "QR Key Error", "QR length Error", "Device Expired",  
    "MAC Counter Error", "Other error", "", "", "",  
    "", "", "", "", "",  
    "BT OpenDoor", "BT times not enough", "BT Expired", "BT Start date Error", "BT MAC Error",  
    "BT Project code Error", "BT Room code Error", "BT Key Error", "BT length Error", ""  
};
```

3.Audio and address list:

0x15: five beeps

0x1E: Voice of success meizi-Australia

0x1F: Failure alarm alert meizi-Australia

0x25: AccessDenied liao Spanish

0x26: AccessGranted liao Spanish

0x27: DoorClosed liao Spanish

0x28: DoorOpened liao Spanish

0x29: DoorOpeningWarning liao Spanish

0x2A: Zutritt-verweigert German

0x2B: Zutritt-gewhrt German

0x2C: Willkommen-bei-Gautsch German

0x2D: Sie-haben-Zutritt German

0x2E: Herzlich-Willkommen-bei-G German

0x2F: Herzlich-WillkommenGerman

0x30: Access Denied India-Hemin English

0x31: Access Granted India-Hemin English

0x32: Door Closed India-Hemin English

0x33: Door Opened India-Hemin English

0x3F: Success Korean-Sunny Korean

0x40:Open Poland-Meizi English

0x41:otwarte Poland-Meizi Polish

0x42:please go Poland-Meizi English

0x43:prosze przejsc Poland-Meizi Polish

0x44:QR Code Invalid Poland-Meizi English

0x45:QR code niewazny Poland-Meizi Polish