

# Integration of 2N devices with Schneider Wiser for KNX controller



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# **1** Elementary configuration

This chapter describes configuration of Wiser for KNX and 2N devices for their elementary interoperability. At the end of this chapter you will be able to have consistent visualization displayed on Indoor Touch for SIP telephony and Room Control.

### 1.1 Configuration of Wiser for KNX

Before you start with configuration of Wiser for KNX related to 2N, check that following steps were done:

- Set of IP address
- Set of IP/TP mode
- Import of KNX objects

File archive delivered with this Application Note contains complete Demo project, which can be imported. This Demo project is based on virtual KNX addresses and serves as an illustration of graphical interface and sample of 2N API interoperability script.

### **1.2** Visualization configuration of Wiser for KNX

#### Custom font

Assigning of Roboto Regular like custom font will change graphic design of font in Visualization – consistent with 2N Indoor Touch. Change of custom font consists of two steps:

1) Import Roboto Regular font
 2) Change custom font

#### Step 1: Import Roboto Regular font

- a) Open your web browser
- b) Connect to device, fill device's IP address (Default IP: 192.168.0.10)
- c) Login to Configurator (Default login: admin, Default password: admin)
- d) Click to Vis. Graphics and choose Fonts tab
- e) Click to Add font
- f) Choose Roboto-Regular.ttf
- g) Click Save

File:	Choose file Roboto-Regular.ttf
Only TTE and	OTE fants are supported. Dago relead is required for new
	OTF fonts are supported. Page reload is required for new ne visible in the visualization editor

Figure 1 – Font



#### Step 2: Change custom font:

a) Go to Configurator

b) Click to Vis. Configuration icon

c) Set custom font as Roboto-regular

Custom font: Roboto	Custom font:	Roboto	Y
---------------------	--------------	--------	---

Figure 2 – Roboto

Custom font for Visualization is now changed.

#### **PC/Tablet view**

Change of PC/Tablet view:

a) Go to Configuratorb) Click to Vis. Configuration iconc) Set PC/Tablet view as Align to top left

PC/Tablet view: Align plans to top left, no size limit

Figure 3 – PC/Tablet view

Visualization can be now displayed without borders on Indoor Touch.

#### Use dark theme

Change of color theme for visualization:

#### a) Go to Configurator

- b) Click to Vis. Configuration icon
- c) Check Use dark theme as Align to top left

Visualization is now displayed in dark colors, which are more suitable for black touch panels.

Use dark theme:	*
-----------------	---

Figure 4 – Dark theme



#### How to move between plans

There are two possibilities how to navigate between created Plans.

- Via Swipe gesture This feature have to be enabled in Vis. Configuration.
- Via Sidebar We recommend to set sidebar as "Show as overlay (auto-hide)"

#### Recommended setting of Vis. configuration

Vis. configuration		×
PC/Tablet sidebar:	Show as overlay (auto-hide)	¥
PC/Tablet view:	Align plans to top left, no size limit	¥
PC/Tablet page transition:	No transition	¥
PC/Tablet auto-size upscaling:		
PC/Tablet background color:	×	
PC/Tablet background image:	×	¥
Custom font:	Roboto	*
Use dark theme:		
Enable swipe gesture:		
Dim inactive visualization after:	minutes	
Dimming level:	80 🗘 %	
Show alerts in PC/Tablet:		
	Save	incel

Figure 5 – Vis. configuration

#### Import of SE pre-made 2N graphic for visualization

Pre-made SE 2N graphic packages are useful for visualization, which will be displayed on 2N<sup>®</sup> Indoor Touch. Pre-made SE graphic and build-in 2N<sup>®</sup> Indoor Touch graphic have matching design.

Import of pre-made SE 2N graphic consists of two steps:

1) Import of Icons
 2) Import of Images



#### Step 1: Import of Icons

a) Open your web browser
b) Connect to device, fill device's IP address (Default IP: 192.168.0.10)
c) Login to Configurator (Default login: admin, Default password: admin)
d) Click to Vis. Graphics
e) Click to Icons tab
f) Click to Add icons
g) Choose Icons\_BB\_Graphic\_pack.zip
h) Click Save

Step 2: Import of Images

a) Go to Configurator
b) Click to Vis. Graphics
c) Click to Images / Backgrounds tab
d) Click to Add images
e) Choose Images\_BB\_Graphic\_pack.zip
f) Click Save

SE 2N graphic is now available in the device.

### 1.3 Create visualization

Visualization suitable for 2N® Indoor Touch needs specific settings:

- **Resolution of the plan**:1024 x 534
- **Background color of the plan:** We recommend using Black as Background color, as SE 2N graphic packages are tuned for black background.
- **Recommendation Vis. Structure:** Sorted by rooms, we recommend creating plans, which have structure based on Rooms.



Figure 6 – Levels / Plans



#### **Creation of Visualization**

Creation of Visualization consists of two steps:

1) Create Vis. structure

2) Create Visualization

#### Step 1: Create Visualization structure

- a) Open your web browser
- b) Connect to device, fill device's IP address (Default IP: 192.168.0.10)
- c) Login to Configurator (Default login: admin, Default password: admin)
- d) Click to "plus" symbol and add plan
- e) Edit setting to your needs, but take into consider points above (resolution, background)
- f) Click to Save
- g) Repeat steps d)-f) if needed

Plan		3
Parent:	Main	
Name:	Living room	
Plan size:	1024 🗘 534 🗘 🗐 🗸	
Layout:	-	~
PC/Tablet visualization:	Show	~
Smartphone visualization:	Show	~
Pin code:		
Primary background image:	×	¥
Secondary background image:	×	~
Background color:	#000000 × ~	
Smartphone background color:	× ~	
Repeat background image:		
Fixed primary background:		
	Save Ca	ancel

Figure 7 – Plan

#### Step 2: Create Visualization

- a) Go to Visualization tab
- b) Select Plan you want to edit
- c) Click to Unlock current plan for editing
- d) Add objects you want to use in Visu
- e) Click to Save and reload plan

Visualization for 2N<sup>®</sup> Indoor Touch is now prepared.



### **1.4** Home page examples

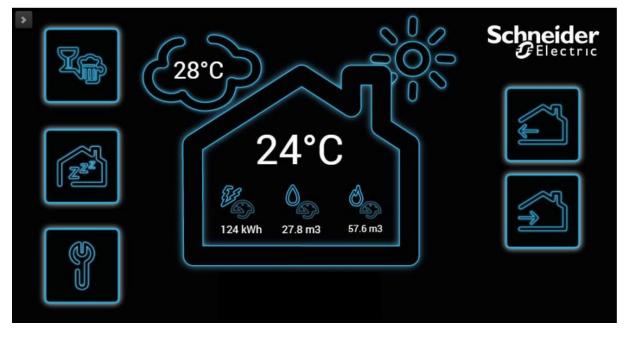


Figure 8 – home page example 1



Figure 9 – home page example 2



Main elect	ricity meter	Main wate	er meter	Main gas meter		
Yearly	124 kWh	Yearly	27.8 m3	Yearly	57.6 m3	
Monthly	16 kWh	Monthly	34 m3	Monthly	33 m3	
Weekly	8 kWh	Weekly	7 m3	Weekly	11 m3	
Actual	257 Wh	Actual	4 l/min	Actual	6 dm3/min	
Price per kWh	0.26€	Price per m3	2.75€	Price per m3	1.12€	
Mains	; OK	Water	leak	GAS	S OK	

Figure 10 – home page example 3



# 2 Configuration of 2N devices

This section describes how to configure calls between 2N intercom and 2N<sup>®</sup> Indoor Touch.

### 2.1 How to configure 2N intercom

As a very first step go to the section "Directory – Users", create a new user and set the "Phone Number" to be dialed once you press an appropriate button of the intercom. If you want to call to the 2N<sup>®</sup> Indoor Touch 2.0 unit, the number has to be filled in a format: "device:name". In our example the device name "IDT" is being used, see the picture below.

				2N IP Verso	CZ   EN   DE   FR   IT   ES   RU	Logout
<b>(</b>	Directory	<u>10</u>	<b>₽</b>		Search	
.h	Users	>	Name		Accesses	
Ω	Time Profiles			No Available	Table Data	
X	nine Promes		15 •			
₩ % \$	Holidays					
			Figure 11 - Director	у		
	Directory	<b>(</b> 0)	▲ Back to List	2N IP Verso	CZ   EN   DE   FR   IT   ES   RU	Logout
÷	Directory	-26				
JI.			User Basic Information ~			
6	Users	>		Name	2N Indoor Touch	
& % ✿	Time Profiles		1. Contraction of the second s	E-mail Ial Number		
$\underline{\mathbf{X}}$	Holidays			iai Number		
			User Phone Numbers ~			
			Number 1			
			Pho	ne Number	device:IDT	
			Т	ime Profile	<ul> <li>● [not used] • O </li> </ul>	
			2N® IP E	ye Address		
			Parallel call to followi	ng number		

Figure 12 – Phone number settings

In the next step you can set the intercom to automatically pick up the incoming calls in order to easily reach it at any time. Go to the section  $\Im$  "*Services – Phone – Calls*" and enable *Automatic Pickup* for incoming calls for both SIP1 and SIP2, see the picture below.



			2N IP Verso CZ   EN   DE   FR   IT   ES   RU	Logout
€	Services	*	SIP 1 SIP 2 Calls Audio Video 2N Indoor Units	
.h			General Settings ~	1
	Phone	>	Call Time Limit 120 [s]	
<u>N</u>	Streaming			
≫ \$	Onvif		Incoming Calls ~	
	E		Call Answering Mode (SIP1) Automatic 🔹	
	E-mail		Call Answering Mode (SIP2) Automatic 🔹	
	Automation		Pick up in 0 [s]	

Figure 13 - Services

Last step is to assign newly created contact to quick dial button.

Hardware 🌣	Basic Settings ~
	Button Function During Call Hang Up 🔹
Switches	Answer Incoming Call by Button None 🔻
Door	Restore Network Settings By Buttons 🖌
Audio	Quick Dial Buttons ~
Camera	Main Unit Buttons
Keypad	1 × 2N Indoor Touch
Buttons >	





# 2.2 How to configure 2N<sup>®</sup> Indoor Touch

To be able to receive calls on the **2N**<sup>\*</sup> **IP Mobile (Intercoms)** you need to set the device name first. The device name is used by the intercom for the call routing instead of the IP address. Go to the application Intercoms and then to the section "*Settings - Device name*" and set the desired name, in our example we use "IDT", see the pictures below.

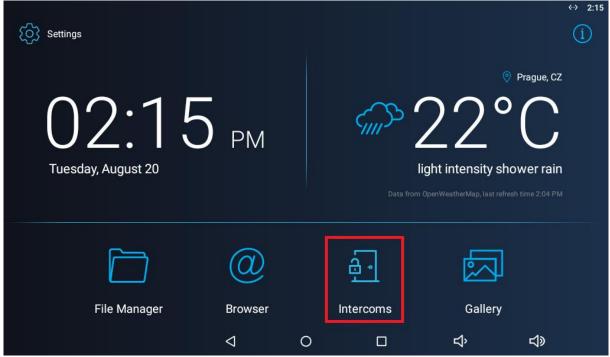


Figure 15 – Launcher

					<>	2:15
÷	2N <sup>®</sup> IP Mobile					
₩2	Do Not Disturb (DND)					
۵	General Settings					
لات	Call Settings					
ଦ	My2N/SIP Configuration					
C.	Video					
ഹ	Recorder					
Ð	Input and output					
		$\bigtriangledown$	0	ц	<b>り</b>	

Figure 16 – General settings



					<i>«</i> ···>	2:16
← General S	ettings					
General						
Device name IDT						
Password						
Access key						
Autosnapshot Currently ON						•
Push to talk Currently ON						•
Logging Currently ON						•
		$\bigtriangledown$	0	Ŷ	り の	

Figure 17 – Device name settings

The application automatically scans your LAN network and looks for all connected 2N IP intercoms. You can easily add them in the "*Devices*" section by clicking on the "+" button.

						10:54
		I	Devices			
	Devices					
5	Call Log					
ŧ	Dial Pad			No devices		
( <b>i</b> )	About			NO UEVICES		
Û	Settings					
?	Help					
		Û	$\Box$		<b>■</b> }•	<b>4</b> (-1)

Figure 18 – Add intercoms to the phonebook



In the LAN devices list you can see all **2N**<sup>®</sup> **IP Intercoms** available. By clicking on the specific row you can add selected intercoms only, or by clicking on the checkbox in the right upper corner you can add all of them at once.

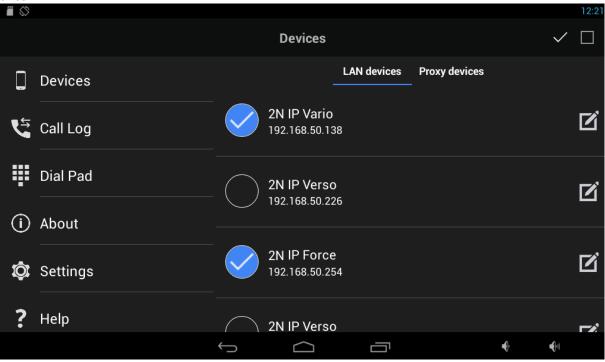


Figure 19 – Choose the intercom which should be a part of the phonebook

By clicking on the confirmation button you have just added the desired local devices to the list and the application is ready to call.

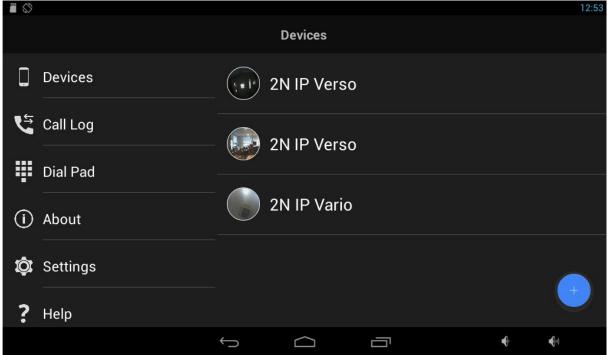


Figure 20 – Devices in phonebook



By selecting the desired 2N IP Intercom in the list of Devices you can watch the video stream, place a call, open the door lock, listen to the audio stream preview and also make an instant screenshot.

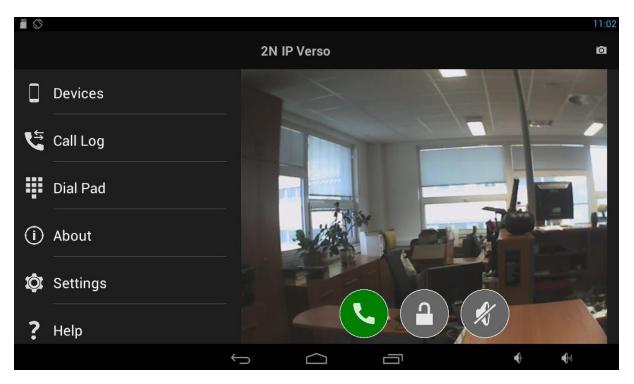
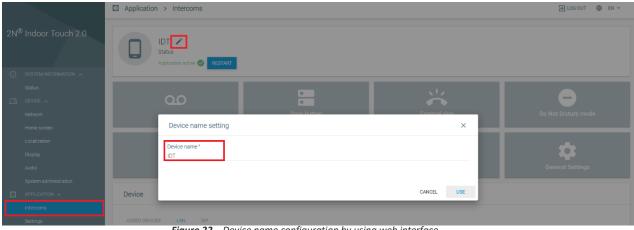


Figure 21 – Call to a specific intercom

2N<sup>®</sup> Indoor Touch can be also configured by using web interface of the unit. Device name can be specified in the section "Application – Intercoms"



*Figure 22* – Device name configuration by using web interface



		Application > Intercoms			🔁 LOG OUT 🛛 🖶 EN 🗸
2N <sup>@</sup>	<sup>9</sup> Indoor Touch 2.0	IDT × Status Application active @ RESTART			
G					
				<u>, 1</u> 2	
됴		00	•	$\sim$	-
		Recorder	Door button	External ring	Do Not Disturb mode
		$\frown$			
		6	<··>	<b>S</b>	<b></b>
		My2N	SIP Proxy	Call Settings	General Settings
		Device			
		ADDED DEVICES LAN SIP			
		Device name			
		192.168.10.213			1
		2N IP Verso 192.168.10.41			i

2N IP Intercoms can be added to the phone book in the same section.

Figure 23 – Add device to phonebook by using web interface

For more details please refer to our FAQ websites	
<u>faq.2n.cz</u>	



# 3 Interconnection between 2N<sup>®</sup> Indoor Touch and Wiser For KNX controller

You can access Wiser for KNX's web interface by using web browser of the 2N<sup>®</sup> Indoor Touch. Open browser and fill the IP address of the Wiser for KNX.

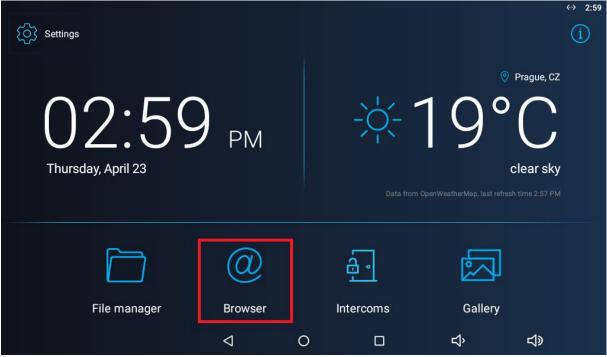


Figure 24 – Web browser

You can also adjust settings on 2N<sup>®</sup> Indoor Touch to make the access more user friendly. You can enable:

- Auto start of the browser with predefined IP address
- Enable web browser full screen view

Auto start of the browser can be enabled in "*Settings – Administrator mode – Advanced – URL to be opened on startup*".



Settings					↔ 2:59 (j)
D2:59	<b>)</b> PM		(1) (1)	© 19°	clear sky
	@		<u>a</u> .		
File manager	Browser		Intercoms	Gallery	
	4	0		сř	<b>↓</b> >

Figure 25 - Settings

						↔ 3:00	þ
Settin	gs					ADMINISTRATOR MODE	
Device							
*	Do Not Disturb mode		<b>f</b>	Home screen			
•	Sound & notification		Ø	Display			
	Storage		*	Advanced			
•	Licence		•	Device Info			
Wireless	s & networks						
	Ethernet						
2N <sup>®</sup> IP N	Лobile						
		$\triangleleft$	0		Ŷ	<b>↓</b> ≫	

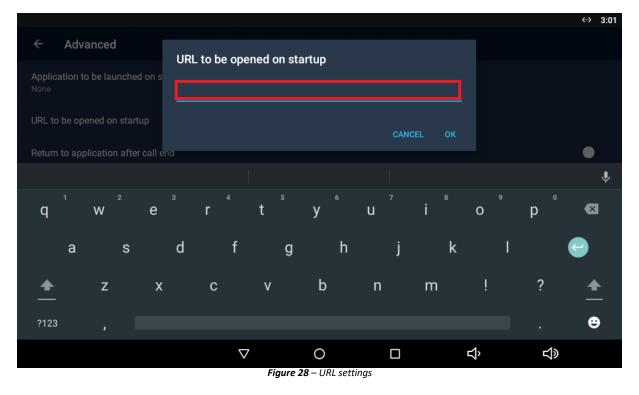
Figure 26 – Advanced settings



← Advanced					≪→ 3:00
Application to be launched on startup None					
URL to be opened on startup					
Return to application after call end					•
Enable service mode					
Set Android Launcher					
	$\triangleleft$	0	Ц	<b>↓</b> ≫	

Figure 27 – Startup web browser setting

Define the IP address of the Wiser for KNX controller.





You can switch the web browser to full screen view by enabling quick control in "*Browser – Settings – Labs – Quick controls*"

	≪-> 3:04
G Google Google X +	:
← → C ତ ≙ https://www.google.com/?gws_rd=ssl	Refresh
VŠE OBRÁZKY	Forward
	New tab
	Share page
	Find on page
Google	Request desktop site 🗌
Coogie	Page info
	Settings
Zkuste Google v jazyce: English	
	<b>↓</b> »

Figure 29 – Web browser settings

				≪-> 3:04
← Settings				
General				
Privacy & security				
Accessibility				
Advanced				
Bandwidth management				
Labs				
	$\bigtriangledown$	0	Ŷ	<b>↓</b> »

Figure 30 – Web browser settings - labs



				<↔ 3:05
← Labs				
Quick controls Slide thumb from the left or right edge to ope	n quick controls and hide	app and URL bars		
	$\bigtriangledown$	0	Ŷ	<b>り</b>

Figure 31 – Quick controls enabled



# 4 2N IP intercom API

**HTTP API** is an application interface designed for control of selected **2N IP intercoms** functions via the **HTTP**. It enables **2N IP intercoms** to be integrated easily with third party products, such as home automation, security and monitoring systems, etc.

HTTP API provides the following services:

- **System API** provides intercom configuration changes, status info and upgrade.
- Switch API provides switch status control and monitoring, e.g. door lock opening, etc.
- I/O API provides intercom logic input/output control and monitoring.
- Audio API provides audio playback control and microphone monitoring.
- Camera API provides camera image control and monitoring.
- **Display API** provides display control and user information display.
- E-mail API provides sending of user e-mails.
- **Phone/Call API** provides incoming/outgoing call control and monitoring.
- Logging API provides reading of event records.

Set the transport protocol (**HTTP** or **HTTPS**) and way of authentication (**None**, **Basic** or **Digest**) for each function. Create up to five user accounts (with own username and password) in the **HTTP API** configuration for detailed access control of services and functions.

Use the configuration web interface on the **Services / HTTP API** tab to configure your **HTTP API**. Enable and configure all the available services and set the user account parameters. Refer to **http(s)://ip\_intercom\_address/apitest.html** for a special tool integrated in the intercom **HTTP** server for **HTTP API** demonstration and testing.

#### 4.1 HTTP API Services Security

Set the security level for each **HTTP API** service via the **2N IP intercom** configuration web interface on the **Services / HTTP API** tab: disable/enable a service and select the required communication protocol and user authentication method.

You can set the required transport protocol for each service separately:

- HTTP send requests via HTTP or HTTPS. Both the protocols are enabled and the security level is defined by the protocol used.
- **HTTPS** send requests via **HTTPS**. Any requests sent via the unsecured **HTTP** are rejected by the intercom. **HTTPS** secures that no unauthorised person may read the contents of sent/received messages.



Set authentication methods for the requests to be sent to the intercom for each service. If the required authentication is not executed, the request will be rejected. Requests are authenticated via a standard authentication protocol described in **RFC-2617**. The following three authentication methods are available:

- None no authentication is required. In this case, this service is completely unsecure in the LAN.
- **Basic** Basic authentication is required according to **RFC-2617**. In this case, the service is protected with a password transmitted in an open format. Thus, we recommend you to combine this option with **HTTPS** where possible.
- **Digest** Digest authentication is required according to **RFC-2617**. This is the default and most secure option of the three above listed methods.

We recommend you to use the **HTTPS + Digest** combination for all the services to achieve the highest security and avoid misuse. If the other party does not support this combination, the selected service can be granted a dispensation and assigned a lower security level.

<b>(</b>	Services 🛠	Services Acco	unt 1 Accou	unt 2 Account 3 Acco	ount 4 Account 5
	Phone	HTTP API Se	rvices ~ enabled	CONNECTION TYPE	AUTHENTICATION
×.4	Streaming	System API	✓	Secure (TLS) •	Digest 🔻
<mark>&amp;</mark> ☆	Onvif	Switch API	✓	Secure (TLS) •	Digest 🔻
	E-Mail	I/O API	✓	Secure (TLS) •	Digest •
	Automation	Audio API	~	Secure (TLS) •	Digest •
	HTTP API >	Camera API	✓	Secure (TLS) 🔻	Digest v
	User Sounds	Display API	✓	Secure (TLS) 🔻	Digest 🔻
	Web Server	E-mail API	✓	Secure (TLS) 🔻	Digest 🔹
	Audio Test	Phone/Call API	~	Secure (TLS) •	Digest 🔻
	SNMP	Logging API	~	Secure (TLS) 🔻	Digest •

Figure

API

**32** – HTTP



## 4.2 User Acounts

With **2N IP intercom** you can manage up to five user accounts for access to the **HTTP API** services. The user account contains the user's name, password and **HTTP API** access privileges.

Services 🛠	Services Account 1 Account 2 Acco	ount 3 Account 4 Acc	count 5
Phone	Account Enabled User Settings ~		
Streaming	Usernam	vms	
ONVIF	Passwo	rd •••	
E-Mail	User Privileges ~		
Automation	DESCRIPTION	MONITORING	CONTROL
HTTP API >	System Access		
User Sounds	Phone/Call Access		
Web Server	I/O Access	✓	✓
Audio Test	Switch Access		
SNMP	Audio Access		
	Camera Access	✓	
	Display Access		
	E-mail Access		
	UID (Cards & Wiegand) Access		
	Keypad Access		

Figure 33 – HTTP API

