

# Video Matrix RESTful API

User Guide

## Introduction

The information enclosed defines ATEN's VM RESTful APIs — RESTlink. Each authorized client can configure and control ATEN VM Series devices via these APIs, with all request and response messages encoded in JSON.

### Revision History

Revision	Date	Editor	Description of Change
1.00	2019-05-30	Jack Liao	Initial version.

### Compatible Firmware Versions

Make sure your VM series devices are of the following versions of firmware before proceeding:

Model	Compatible Firmware Version
VM1600A	v4.3.423 or later
VM3200	v2.1.204 or later
VM3250	v2.1.208 or later
VM51616H	v3.5.344 or later
VM5808H	v3.5.344 or later
VM6404HB	v1.0.074 or later

## Table of Contents

Introduction .....	2
Revision History.....	2
Compatible Firmware Versions .....	2
1 Response .....	4
1.1 Status Codes.....	4
1.2 Response Messages .....	5
2 Authentication .....	6
2.1 Basic Authentication .....	6
2.2 Token Authentication .....	7
3 System .....	8
3.1 System Information.....	8
3.2 Video Board Information .....	9
3.3 Video Extender Information .....	10
4 Network .....	11
4.1 Network Settings.....	11
5 Account .....	13
5.1 User Accounts .....	13
5.2 Current Account.....	15
6 Video.....	16
6.1 Device Configuration.....	16
6.2 Scaler Resolutions .....	17
6.3 Input Ports.....	18
6.4 Output Ports.....	20
6.5 Video Connection .....	24
6.6 Video Profiles.....	25
6.7 Current Profile.....	26
7 Audio.....	27
7.1 Device Configuration.....	27
7.2 Input Ports.....	28
7.3 Output Ports.....	30
7.4 Audio Connection .....	32

# 1 Response

## 1.1 Status Codes

For every RESTful request sent to an ATEN device, it shall respond with an HTTP status code.

The request results corresponding to each status code are described as follows.

- Success
  - 200 OK
  - 201 Created
  - 202 Accepted
  - 204 No content
- Client errors
  - 400 Bad request
  - 401 Unauthorized
  - 403 Forbidden
  - 404 Not found
  - 405 Method not allowed
  - 413 Payload too large
- Server errors
  - 500 Internal server error
  - 501 Not implemented
  - 503 Service unavailable

## 1.2 Response Messages

In addition to status codes, ATEN devices also enclose the related detailed descriptions within the HTTP message body, in the following format.

```
{
  "code" : {error code},
  "message" : "{error description}"
}
```

Status Code	<code>	<message>
200 OK		
201 Created		
202 Accepted		
204 No content		
400 Bad request	40000	"The value of <field> is invalid: {value}."
	40001	"The value of <field> is unsupported: {value}."
	40002	"The operation on <field> is disallowed."
	40003	"The field cannot be recognized: <field>."
	40004	"No message content found."
401 Unauthorized	40100	"User account is unauthorized."
403 Forbidden	40300	"The demand on the resource is refused."
404 Not found	40400	"The resource is not found: {url}."
	40401	"The instance of the resource is not found: {idx}."
405 Method not allowed	40500	"The operation is disallowed."
413 Payload Too Large	41300	"The message is too large."
500 Internal Server Error	50000	"System error."
501 Not implemented	50100	"API version is unsupported."
503 Service unavailable	50300	"System is overloaded."
	50301	"System is down for maintenance."
	50302	"Service is not ready."
	50303	"Maximum is exceeded."
	50304	"System is in the recovery mode."

## 2 Authentication

The client must first be authenticated in order to access ATEN device via RESTful APIs, which can be done through one of these two methods: **basic authentication** or **token authentication**.

### 2.1 Basic Authentication

In basic authentication, each request MUST contain a header field in the form of — `Authorization: Basic <credentials>` — where `<credentials>` is the base64 encoding of username and password, separated by a colon.

```
{
  "authorization" : "<base64{username:password}>"
}
```

## 2.2 Token Authentication

To use token authentication, the client MUST first get a token from the ATEN device. Then all configuration and control to the ATEN device are allowed by putting this token in the 'Authentication' header of each request.

### API

/api/v1.0/auth/tokens

### Request

- POST: request an authorized token for accessing ATEN device. (Login)

Field	Type	Value	Description
authorization	string	base64('username:password')	Authentication code encoded in base64.

- DELETE: end access to the ATEN device. (Logout)

### Response

- Success

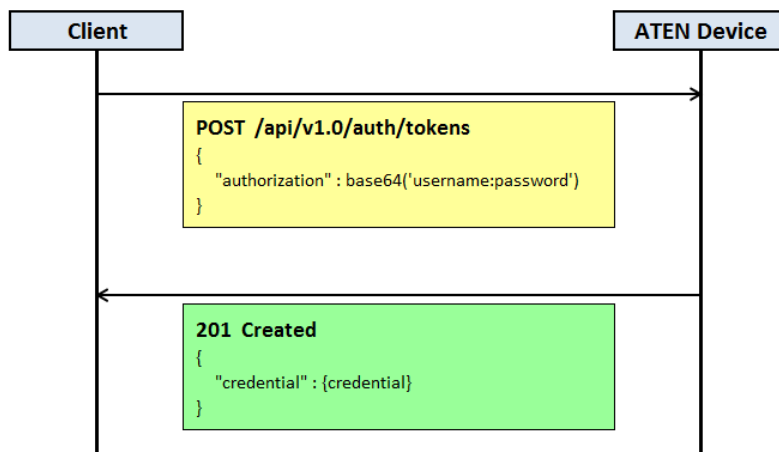
201 Created

Field	Type	Value	Description
credential	string	{credential}	Token.

- Failure

401 Unauthorized

### Example



## 3 System

System APIs are used for getting the general information of the ATEN device and its peripherals.

### 3.1 System Information

System information contains model type, device name, firmware version, and etc.

#### API

/api/v1.0/system/info

#### Request

■ GET: get system information.

■ PATCH: modify system information

Field	Type	Value	Description
deviceName	string	{device name}	Device name.

#### Response

■ Success

200 OK

Field	Type	Value	Description
type	string	{model type}	Model type.
modelName	string	{model name}	Model name.
deviceName	string	{device name}	Device name.
serialNumber	string	{serial number}	Device serial number.
uptime	number	{system uptime}	System uptime in seconds.
fwVersion	string	{FW version}	Firmware version.



## 3.2 Video Board Information

(VM1600A / VM3200 / VM3250 only)

Video board information contains the board type, interface count, and model name of each video board. If video extenders are attached, the related information is included as well. Note that video board information is only supported by video modular products.

### API

/api/v1.0/system/videoBoards

/api/v1.0/system/videoBoards/<id>

### Request

- GET: get information of all video boards or a single video board specified.

### Response

- Success

200 OK

1. For all video boards:

Field	Type	Value	Description	
maxInputCount	number	{maximum input video board count}	Maximum number of input video boards supported.	
maxOutputCount	number	{maximum output video board count}	Maximum number of output video boards supported.	
videoBoards	array (object)		Container of all video board information.	
	id	string	{video board ID}	Video board ID.
	type	string	{video board type }	Video board type.
	idx	number	{video board index}	Video board index.
	modelName	string	{model name}	Model name.
	interfaceCount	number	{interface count}	Number of Interfaces supported.
	fwVersion	string	{FW version}	Firmware version.
	videoExts	object		Video extender information, if attached (see 3.3 Video Extender Information).

2. For a single video board:

Field	Type	Value	Description
id	string	{video board ID}	Video board ID.
type	string	{video board type }	Video board type.
idx	number	{video board index}	Video board index.
modelName	string	{model name}	Model name.
interfaceCount	number	{interface count}	Number of Interfaces supported.
fwVersion	string	{FW version}	Firmware version.
videoExts	object		Video extender information, if attached (see 3.3 Video Extender Information).

### 3.3 Video Extender Information

(VM7514 / VM8514 only)

Video extender information contains the extender type, interface count, and model name of each video extender.

#### API

/api/v1.0/system/videoExts

/api/v1.0/system/videoExts/<id>

#### Request

- GET: get information of all video extenders or a single video extender specified.

#### Response

- Success

200 OK

1. For all video extenders:

Field	Type	Value	Description
maxTxCount	number	{maximum Tx video extender count}	Maximum number of Tx video extenders supported.
maxRxCount	number	{maximum Rx video extender count}	Maximum number of Rx video extenders supported.
videoExts	array (object)		Container of all video extender information.
id	string	{video extender ID}	Video extender ID.
type	string	{video extender type }	Video extender type.
idx	number	{video extender index}	Video extender index.
modelName	string	{model name}	Model name.
interfaceCount	number	{interface count}	Number of Interface supported.
fwVersion	string	{FW version}	Firmware version.

2. For a single video extender:

Field	Type	Value	Description
id	string	{video extender ID}	Video extender ID.
type	string	{video extender type }	Video extender type.
idx	number	{video extender index}	Video extender index.
modelName	string	{model name}	Model name.
interfaceCount	number	{interface count}	Number of Interfaces supported.
fwVersion	string	{FW version}	Firmware version.

## 4 Network

### 4.1 Network Settings

Network settings contain the information and configurations of each network interface.

#### API

/api/v1.0/network/interfaces

/api/v1.0/network/interfaces/<id>

#### Request

■ GET: get settings of all network interfaces or a single network interface specified.

■ PATCH: modify settings of all network interfaces or a single network interface specified.

1. For all network interfaces:

Field	Type	Value	Description
interfaces	array (object)		Container of all network interface settings.
id	string	{network interface ID}	Network interface ID.
macAddr	string	{MAC address}	MAC address.
mode	object		Network mode.
value	number	0	DHCPv4.
		1	Reserved.
		2	
		3	IPv4 fixed.
		4	Reserved.
ip4Addr	string	{IPv4 address}	IPv4 address.
ip4Mask	string	{IPv4 address}	IPv4 network mask.
ip4Gateway	string	{IPv4 address}	IPv4 gateway.

2. For a single network interface:

Field	Type	Value	Description
mode	object		Network mode.
value	number	0	DHCPv4.
		1	Reserved.
		2	
		3	IPv4 fixed.
		4	Reserved.
ip4Addr	string	{IPv4 address}	IPv4 address.
ip4Mask	string	{IPv4 address}	IPv4 network mask.
ip4Gateway	string	{IPv4 address}	IPv4 gateway.

## Response

### ■ Success

200 OK

#### 1. For all network interfaces:

Field	Type	Value	Description
interfaces	array (object)		Container of all network interface settings.
id	string	{network interface ID}	Network interface ID.
macAddr	string	{MAC address}	MAC address.
mode	object		Network mode.
valid	array (number)		Indicates network modes supported.
value	number	0	DHCPv4.
		1	Reserved.
		2	
		3	IPv4 fixed.
		4	Reserved.
ip4Addr	string	{IPv4 address}	IPv4 address.
ip4Mask	string	{IPv4 address}	IPv4 network mask.
ip4Gateway	string	{IPv4 address}	IPv4 gateway.

#### 2. For a single network interface:

Field	Type	Value	Description
id	string	{network interface ID}	Network interface ID.
macAddr	string	{MAC address}	MAC address.
mode	object		Network mode.
valid	array (number)		Indicates network modes supported.
value	number	0	DHCPv4.
		1	Reserved.
		2	
		3	IPv4 fixed.
		4	Reserved.
ip4Addr	string	{IPv4 address}	IPv4 address.
ip4Mask	string	{IPv4 address}	IPv4 network mask.
ip4Gateway	string	{IPv4 address}	IPv4 gateway.

## 5 Account

### 5.1 User Accounts

Manage user accounts, including their username, password, description, and privilege.

#### API

/api/v1.0/account/users

/api/v1.0/account/users/<id>

#### Request

- GET: get settings of all user accounts or a single user account specified.
- DELETE: remove the user account specified.
  
- POST: create a new user account.
- PATCH: modify settings of all user accounts or a single user account specified.

1. For all user accounts:

Field	Type	Value	Description
users	array (object)		Container of all user account information.
id	string	{user ID}	User ID.
	name	{user name}	Username.
	password	{user password}	User password.
	description	{user description}	User description.
	privilege	object	User privilege.
	value	number	0 1 2

2. For a single user account:

Field	Type	Value	Description
Name	string	{user name}	Username.
password	string	{user password}	User password.
description	string	{user description}	User description.
privilege	object		User privilege.
value	number	0	Basic user.
		1	Advanced user.
		2	Administrator.

## Response

■ Success

200 OK

1. For all user accounts:

Field	Type	Value	Description
users	array (object)		Container of all user account settings.
id	string	{user ID}	User ID.
name	string	{user name}	User name.
description	string	{user description}	User description.
privilege	object		User privilege.
valid	array (number)		Indicates user privileges supported.
value	number	0	Basic user.
		1	Advanced user.
		2	Administrator.

2. For a single user account:

Field	Type	Value	Description
id	string	{user ID}	User ID.
name	string	{user name}	Username.
description	string	{user description}	User description.
privilege	object		User privilege.
valid	array (number)		Indicates user privileges supported.
value	number	0	Basic user.
		1	Advanced user.
		2	Administrator.

## 5.2 Current Account

Manage the current account, including its username, password, description, and privilege.

### API

/api/v1.0/account/users/me

### Request

■ GET: get settings of the current account.

■ PATCH: modify settings of the current account.

Field	Type	Value	Description
name	string	{user name}	Username.
password	string	{user password}	User password.
description	string	{user description}	User description.
privilege	object		User privilege.
		0	Basic user.
value	number	1	Advanced user.
		2	Administrator.

### Response

■ Success

200 OK

Field	Type	Value	Description	
id	string	{user ID}	User ID.	
name	string	{user name}	Username.	
description	string	{user description}	User description.	
privilege	object		User privilege.	
		valid	array (number)	Indicates user privileges supported.
		0		Basic user.
value	number	1		Advanced user.
		2		Administrator.

## 6 Video

ATEN devices provide APIs for configuring their video-related settings, including video configuration, video input/output ports, video connection, and etc.

### 6.1 Device Configuration

Contains all video configurations of the ATEN device.

#### API

/api/v1.0/video/configs

#### Request

- GET: get device's video configurations.
- PATCH: modify device's video configurations.

Field	Type	Value	Description
edid	object		EDID mode.
value	number	1	Use ATEN's default EDID.
		2	Use EDID of the 1 <sup>st</sup> video output port.
		3	Use remixed EDID.
osd	object		OSD setting.
value	number	1	Turn OSD off.
		2	Turn OSD on.
blank	object		Blank screen setting.
value	number	1	Turn blank screen off.
		2	Turn blank screen on.

#### Response

- Success

200 OK

Field	Type	Value	Description
scaler	number	0	Support scaling.
		1	Scaling unsupported.
edid	object		EDID mode.
value	number	0	EDID unsupported.
		1	Use ATEN's default EDID.
		2	Use EDID of the 1 <sup>st</sup> video output port.
		3	Use remixed EDID.
osd	object		OSD setting.
value	number	0	OSD unsupported.
		1	Turn OSD off.
		2	Turn OSD on.
blank	object		Blank screen setting.
value	number	0	Blank screen unsupported.
		1	Turn blank screen off.
		2	Turn blank screen on.



## 6.2 Scaler Resolutions

(With scaler VM models only)

Scaler resolutions enumerate the scaler-supported video resolutions.

### API

/api/v1.0/video/scalerResolutions

### Request

- GET: get the scaler-supported video resolutions.

### Response

- Success

200 OK

Field	Type	Value	Description
scalerResolutions	array (object)		Container of scaler video resolutions.
id	number	{scaler resolution ID}	Scaler resolution ID.
description	string	{scaler resolution description}	Scaler resolution description.

## 6.3 Input Ports

### API

/api/v1.0/video/inputs

/api/v1.0/video/inputs/<id>

### Request

- GET: get information of all video input ports or a single video input port specified.
  - PATCH: modify configuration of all video input ports or a single video input port specified.
1. For all video input ports:

Field	Type	Value	Description
inputs	array (object)		Container of all video input ports.
id	string	{video input ID}	Video input ID.
	string	{video input name}	Video input name.
	object		HDCP mode.
	value	number	1
2			HDCP v1.4 supported.
3			HDCP v2.2 supported.

2. For a single video input port:

Field	Type	Value	Description
name	string	{video input name}	Video input name.
hdcpc	object		HDCP mode.
value	number	1	Without HDCP.
		2	HDCP v1.4 supported.
		3	HDCP v2.2 supported.

## Response

■ Success

200 OK

1. For all video input ports:

Field	Type	Value	Description		
inputs	array (object)		Container of all video input ports.		
id	id	string	{video input ID}	Video input ID.	
	name	string	{video input name}	Video input name.	
	type	string	{video input type}	Video input type.	
	idx	number	{ video input type index}	Video input type index.	
	status	number	0	Normal; source is connected.	
			1	Source is disconnected.	
			2	Unavailable.	
	hdcp	object		HDCP mode.	
	valid	array (number)			Indicates the HDCP modes supported.
			value	number	0
1					Without HDCP.
2					HDCP v1.4 supported.
3					HDCP v2.2 supported.

2. For a single video input port:

Field	Type	Value	Description		
id	string	{video input ID}	Video input ID.		
name	string	{video input name}	Video input name.		
type	string	{video input type}	Video input type.		
idx	number	{ video input type index}	Video input type index.		
status	number	0	Normal; source is connected.		
		1	Source is disconnected.		
		2	Unavailable.		
hdcp	object		HDCP mode.		
valid	array (number)			Indicates the HDCP modes supported.	
		value	number	0	HDCP unsupported.
				1	Without HDCP.
				2	HDCP v1.4 supported.
				3	HDCP v2.2 supported.

## 6.4 Output Ports

### API

/api/v1.0/video/outputs

/api/v1.0/video/outputs/<id>

### Request

- GET: get information of all video output ports or a single video output port specified.
  - PATCH: modify configuration of all video output ports or a single video output port specified.
1. For all video output ports:

Field	Type	Value	Description
outputs	array (object)		Container of all video output ports.
id	string	{video output ID}	Video output ID.
name	string	{video output name}	Video output name.
seamlessSwitch	object		Seamless switch setting.
value	number	1	Turn seamless switch off.
value	number	2	Turn seamless switch on.
transitionMode	object		Transition mode setting.
value	number	1	Turn transition mode off.
value	number	2	Slow transition speed.
value	number	3	Normal transition speed.
value	number	4	Fast transition speed.
resolution	number	{scaler resolution ID}	Scaler resolution ID (see 6.2 Scaler Resolutions).
fixHDCP	object		Fixed-HDCP setting.
value	number	1	Turn fixed-HDCP off.
value	number	2	Turn fixed-HDCP on.
osd	object		OSD setting.
value	number	1	Turn OSD off.
value	number	2	Turn OSD on.
cec	object		CEC setting.
value	number	1	Turn CEC off.
value	number	2	Turn CEC on.
blank	object		Video blanking setting.
value	number	1	Turn video blanking off.
value	number	2	Turn video blanking on.

2. For a single video output port:

Field	Type	Value	Description
name	string	{video output name}	Video output name.
seamlessSwitch	object		Seamless switch setting.
value	number	1	Turn seamless switch off.
		2	Turn seamless switch on.
transitionMode	object		Transition mode setting.
value	number	1	Turn transition mode off.
		2	Slow transition speed.
		3	Normal transition speed.
		4	Fast transition speed.
resolution	number	{scaler resolution ID}	Scaler resolution ID (see 6.2 Scaler Resolutions).
fixHDCP	object		Fixed-HDCP setting.
value	number	1	Turn fixed-HDCP off.
		2	Turn fixed-HDCP on.
osd	object		OSD setting.
value	number	1	Turn OSD off.
		2	Turn OSD on.
cec	object		CEC setting.
value	number	1	Turn CEC off.
		2	Turn CEC on.
blank	object		Video blanking setting.
value	number	1	Turn video blanking off.
		2	Turn video blanking on.

## Response

■ Success

200 OK

1. For all video output ports:

Field	Type	Value	Description		
outputs	array (object)		Container of all video output port information.		
id	string	{video output ID}	Video output ID.		
name	string	{video output name}	Video output name.		
type	string	{video output type}	Video output type.		
idx	number	{video output type index }	Video output type index.		
status	Number	0	Normal; sink is connected.		
		1	Sink is disconnected.		
		2	Unavailable.		
seamlessSwitch	object		Seamless switch setting.		
valid	array (number)		Indicates the seamless switch settings supported.		
		value	number	0	Seamless switch unsupported.
				1	Turn seamless switch off.
		2	Turn seamless switch on.		
transitionMode	object		Transition mode setting.		
valid	array (number)		Indicates the transition mode settings supported.		
		value	number	0	Transition mode unsupported.
				1	Turn transition mode off
				2	Slow transition speed.
				3	Normal transition speed.
4	Fast transition speed.				
resolution	number	{scaler resolution ID}	Scaler resolution ID (see 6.2 Scaler Resolutions).		
fixHDCP	object		Fixed-HDCP setting.		
valid	array (number)		Indicates the fixed-HDCP settings supported.		
		value	number	0	Fixed-HDCP unsupported.
				1	Turn fixed-HDCP off.
		2	Turn fixed-HDCP on.		
osd	object		OSD setting.		
valid	array (number)		Indicates the OSD settings supported.		
		value	number	0	OSD unsupported.
				1	Turn OSD off.
		2	Turn OSD on.		
cec	object		CEC setting.		
valid	array (number)		Indicates the CEC settings supported.		
		value	number	0	CEC unsupported.
				1	Turn CEC off.
		2	Turn CEC on.		
blank	object		Video blanking setting.		
valid	array (number)		Indicates the video blanking settings supported.		
		value	number	0	Video blanking unsupported.
				1	Turn video blanking off.
		2	Turn video blanking on.		

2. For a single video output port:

Field	Type	Value	Description		
id	string	{video output ID}	Video output ID.		
name	string	{video output name}	Video output name.		
type	string	{video output type}	Video output type.		
idx	number	{ video output type index}	Video output type index.		
status	Number	0	Normal; sink is connected.		
		1	Sink is disconnected.		
		2	Unavailable.		
seamlessSwitch	object		Seamless switch setting.		
valid	array (number)		Indicates the seamless switch settings supported.		
		value	number	0	Seamless switch unsupported.
				1	Turn seamless switch off.
				2	Turn seamless switch on.
transitionMode	object		Transition mode setting.		
valid	array (number)		Indicates the transition mode settings supported.		
		value	number	0	Transition mode unsupported.
				1	Turn transition mode off.
				2	Slow transition speed.
				3	Normal transition speed.
				4	Fast transition speed.
resolution	number	{scaler resolution ID}	Scaler resolution ID (see 6.2 Scaler Resolutions).		
fixHDCP	object		Fixed-HDCP setting.		
valid	array (number)		Indicates the fixed-HDCP settings supported.		
		value	number	0	Fixed-HDCP unsupported.
				1	Turn fix-HDCP off.
				2	Turn fix-HDCP on.
osd	object		OSD setting.		
valid	array (number)		Indicates the OSD settings supported.		
		value	number	0	OSD unsupported.
				1	Turn OSD off.
				2	Turn OSD on.
cec	object		CEC setting.		
valid	array (number)		Indicates the CEC settings supported.		
		value	number	0	CEC unsupported.
				1	Turn CEC off.
				2	Turn CEC on.
blank	object		Video blanking setting.		
valid	array (number)		Indicates the video blanking settings supported.		
		value	number	0	Video blanking unsupported.
				1	Turn video blanking off.
				2	Turn video blanking on.

## 6.5 Video Connection

Video connection indicates the relationship between the video input and video output ports.

### API

/api/v1.0/video/connections

/api/v1.0/video/connections/<id>

### Request

■ GET: get the information of all video connections or a single video connection specified.

■ PATCH: modify all video connections or a single video connection specified.

1. For all video connections:

Field	Type	Value	Description
connections	array (object)		Container of all video output port connections.
id	string	{video output ID}	Video output ID.
videoInput	string	""	Null port.
		{video input ID}	Video input ID.

2. For a single video connection:

Field	Type	Value	Description
videoInput	string	""	Null port.
		{video input ID}	Video input ID.

### Response

■ Success

200 OK

1. For all video connections:

Field	Type	Value	Description
connections	array (object)		Container of all video output port connections.
id	string	{video output ID}	Video output ID.
videoInput	string	""	Null port.
		{video input ID}	Video input ID.

2. For a single video connection:

Field	Type	Value	Description
id	string	{video output ID}	Video output ID.
videoInput	string	""	Null port.
		{video input ID}	Video input ID.



## 6.6 Video Profiles

Video profile contains the basic information of video profiles, such as the profile name. The client can refer to all profiles or a single profile specified.

### API

/api/v1.0/video/vmProfiles

/api/v1.0/video/vmProfiles/<id>

### Request

GET: get basic information of all video profiles or a single profile specified.

DELETE: remove a video profile specified.

PATCH: modify the information of all video profiles, a single profile specified, or the current profile.

1. For all video profiles:

Field	Type	Value	Description
profiles	array (object)		Container of all video profiles.
id	string	{profile ID}	Video profile ID.
name	string	{profile name}	Video profile name.

2. For single video profile:

Field	Type	Value	Description
name	string	{profile name}	Video profile name.

### Response

■ Success

200 OK

1. For all video profiles:

Field	Type	Value	Description
maxCount	number	{max profile count}	Maximum number of video profiles.
profiles	array (object)		Container of all video profiles.
id	string	{profile ID}	Video profile ID.
name	string	{profile name}	Video profile name.

2. For a single video profile:

Field	Type	Value	Description
id	string	{profile ID}	Video profile ID.
name	string	{profile name}	Video profile name.

## 6.7 Current Profile

The client can get the basic information of the current video profile, or play another profile as the current one.

### API

/api/v1.0/video/vmProfiles/now

### Request

GET: get basic information of the current video profile.

DELETE: remove the current video profile.

PATCH: change the current video profile.

Field	Type	Value	Description
id	string	{profile ID}	Video profile ID.

### Response

■ Success

200 OK

Field	Type	Value	Description
id	string	""	No video currently being played back.
		"undefined"	The current video being played does not belong to any video profile.
		{profile ID}	Video profile ID.
name	string	{profile name}	Video profile name.

## 7 Audio

ATEN devices provide APIs for configuring their audio-related settings, including audio configuration, audio input/output ports, audio connections, and etc.

### 7.1 Device Configuration

Contains all audio configurations of the ATEN device.

#### API

/api/v1.0/audio/configs

#### Request

- GET: get device's audio configurations.
- PATCH: modify device's audio configuration.

Field	Type	Value	Description
volume	number	-1	Audio volume. (VM1600A / VM3200 / VM3250 only)
		0 ~ maximum volume	
mute	object		Mute setting.
value	number	1	Unmute.
		2	Mute.

#### Response

- Success

200 OK

Field	Type	Value	Description
volume	number	-1	Audio volume. (VM1600A / VM3200 / VM3250 only)
		0 ~ maximum volume	
mute	object		Mute setting.
valid	array (number)		Indicates the mute settings supported.
value	number	0	Mute unsupported.
		1	Unmute.
		2	Mute.

## 7.2 Input Ports

### API

/api/v1.0/audio/inputs

/api/v1.0/audio/inputs/<id>

### Request

- GET: get information of all audio input ports or a single audio input port specified.
  - PATCH: modify configuration of all audio input ports or a single audio input port specified.
1. For all audio input ports:

Field	Type	Value	Description
inputs	array (object)		Container of all audio input port information.
id	string	{audio input ID}	Audio input ID.
	string	{audio input name}	Audio input name.
	object		Mute setting.
	value	Number	1
2			Mute.

2. For a single audio input port:

Field	Type	Value	Description
name	string	{audio input name}	Audio input name.
mute	object		Mute setting.
value	Number	1	Unmute.
		2	Mute.

## Response

### ■ Success

200 OK

#### 1. For all audio input ports:

Field	Type	Value	Description			
inputs	array (object)		Container of all audio input port information.			
id	string	{audio input ID}	Audio input ID.			
		{audio input name}	Audio input name.			
		{audio input type}	Audio input type.			
		{ audio input type index}	Audio input type index.			
		0	number	0	Normal; source is connected.	
				1	Source is disconnected.	
				2	Unavailable.	
		mute	object		Mute setting.	
				valid	array (number)	Indicates the mute settings supported.
				value	Number	0
1	Unmute.					
2	Mute.					

#### 2. For a single audio input port:

Field	Type	Value	Description	
id	string	{audio input ID}	Audio input ID.	
name	string	{audio input name}	Audio input name.	
type	string	{audio input type}	Audio input type.	
idx	number	{ audio input type index}	Audio input type index.	
status	number	0	Normal; source is connected.	
		1	Source is disconnected.	
		2	Unavailable.	
mute	object		Mute setting.	
		valid	array (number)	Indicates the mute settings supported.
		value	Number	0
1	Unmute.			
2	Mute.			

## 7.3 Output Ports

### API

/api/v1.0/audio/outputs

/api/v1.0/audio/outputs/<id>

### Request

- GET: get information of all audio output ports or a single audio output port specified.
- PATCH: modify configuration of all audio output ports or a single audio output port specified.
  1. For all audio output ports:

Field	Type	Value	Description
outputs	array (object)		Container of all audio output port information.
id	string	{audio output ID}	Audio output ID.
		{audio output name}	Audio output name.
		-1	Audio output volume.
		0 ~ maximum volume	
		object	
value	number	1	Unmute.
		2	Mute.

2. For a single audio output port:

Field	Type	Value	Description
name	string	{audio output name}	Audio output name.
volume	number	-1	Audio output volume.
		0 ~ maximum volume	
mute	object		Mute setting.
value	number	1	Unmute.
		2	Mute.

## Response

### ■ Success

200 OK

#### 1. For all audio output ports:

Field	Type	Value	Description	
outputs	array (object)		Container of all audio output port information.	
	id	string	{audio output ID}	Audio output ID.
	name	string	{audio output name}	Audio output name.
	type	string	{audio output type}	Audio output type.
	idx	number	{ audio output type index}	Audio output type index.
	status	number	0	Normal; sink is connected.
			1	Sink is disconnected.
			2	Unavailable.
	volume	number	-1	Audio output volume.
			0 ~ maximum volume	
	mute	object		Mute setting.
	valid	array (number)		Indicates the mute settings supported.
	value	Number	0	Mute unsupported.
			1	Unmute.
			2	Mute.

#### 2. For a single audio output port:

Field	Type	Value	Description	
id	string	{audio output ID}	Audio output ID.	
name	string	{audio output name}	Audio output name.	
type	string	{audio output type}	Audio output type.	
idx	number	{ audio output type index}	Audio output type index.	
status	number	0	Normal; sink is connected.	
		1	Sink is disconnected.	
		2	Unavailable.	
volume	number	-1	Audio output volume.	
		0 ~ maximum volume		
mute	object		Mute setting.	
	valid	array (number)		Indicates the mute settings supported.
	value	Number	0	Mute unsupported.
			1	Unmute.
			2	Mute.

## 7.4 Audio Connection

Audio connection indicates the relationship between audio input and audio output ports.

### API

/api/v1.0/audio/connections

/api/v1.0/audio/connections/<id>

### Request

■ GET: get the information of all audio connections or a single audio connection specified.

■ PATCH: modify all audio connections or a single audio connection specified.

1. For all audio connections:

Field	Type	Value	Description
connections	array (object)		Container of all audio output port connections.
id	string	{audio output ID}	Audio output ID.
audioInput	array (string)	""	Null port.
		{audio input ID}	Audio input ID.

2. For a single audio connection:

Field	Type	Value	Description
audioInput	array (string)	""	Null port.
		{audio input ID}	Audio input ID.

### Response

■ Success

200 OK

1. For all audio connections:

Field	Type	Value	Description
connections	array (object)		Container of all audio output port connections.
id	string	{audio output ID}	Audio output ID.
audioInput	array (string)	""	Null port.
		{audio input ID}	Audio input ID.

2. For a single audio connection:

Field	Type	Value	Description
id	string	{audio output ID}	Audio output ID.
audioInput	array (string)	""	Null port.
		{audio input ID}	Audio input ID.