AEROSENSE

Assure: Home Care Assistant

Wavve: Contactless Sleep Sensor

Wavve Hub & Kit: Elderly Home Care System

Your-cloud-restful-api

V1.5

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HISTORY

Date	Version	Modification
04-06-2023	V1.0	Release.
05-29-2023	V1.1	Sub-device connect/disconnect.
08-22-2023	V1.2	Radar connect
11-1-2023	V1.3	To push the firmware upgrade Status
11-26-2024	V1.4	Time format that complies withISO-8601； Fall-alert-cancellation
02-24-2025	V1.5	2.9 Battery life of the sub-device; 2.10 Multi-target detection and target coordinates.

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1. Introduction

The RESTful APIs of your Cloud that are requested are listed in this document. Once the radar is connected to our Cloud, these interfaces will be used to communicate between the clouds so that the notifications can be sent to your Cloud. Once the APIs are requested by our Cloud, a reply of 200 from your Cloud is expected indicating that the connection is successful. Otherwise the connection is considered failed. If it fails, another two attempts will be made. If none were successful, this request will be abandoned. Please note that you will also be requested to send us the Base url of the HTTP service of your RESTful, for example (http://xxx.xxx.com:80).

2. Cloud-to-Cloud RESTful APIs

2.1. Alarm push

Url:/api/alarm

Method: POST

Produces: application/x-www-form-urlencoded, application/json

Consumes: */*

Description: To receive alarm push notify. All the alerts or alarms will be pushed via this interface. For example, FallDetect(0x0009)

Example:

```
{
 "alarmEndTime": "",
 "alarmStartTime": "",
"alarmZonedEndTime": "",
 "alarmZonedStartTime": "",
 "alarmType": 0,
 "deviceMac": "",
 "deviceName": "",
 "functionId": 0,
 "radarId": ""
}
```

Request parameter:

Parameter	Description	In	Required?	Data Type	schema
alarm dto	Alarm dto	body	true	Alarm dto	Alarm

Parameter	Description	In	Required?	Data Type	schema
					dto
alarmEndTime	alarmEndTime(yyyy-MM-dd HH:mm:ss)		true	string(date-time)	
alarmStartTime	alarmStartTime(yyyy-MM-dd HH:mm:ss)		true	string(date-time)	
alarmZonedStartTime	ISO-8601 standard datetime		true	string(date-time)	
alarmZonedEndTime	ISO-8601 standard datetime		true	string(date-time)	
alarmType	alarm type , 1:remind 2:alert		true	integer(int32)	
deviceMac	Sub device MAC address		false	string	
deviceName	Sub device name		false	string	
functionId	Please refer to the alert type enumeration value list for specific values		true	integer(int32)	
radarId	Radar id		true	string	

Response status:

Status code	Description	Schema
200	OK	restful api response object«Void»
201	Created	
401	Unauthorized	
403	Forbidden	
404	Not Found	

Response Example:

Parameter	Description	Type	schema
code	response code	string	

This is a confidential document.

Parameter	Description	Type	schema
msg	response description message	string	

Response Example:

```
{
	"code": "200",
	"msg": "success"
}
```

2.2. Radar connect push

Url:/api/radar/connect

Method: POST

Produces: application/x-www-form-urlencoded, application/json

Consumes: */*

Note: To receive the radar connect push notify. It is an SDK 0x01 function.

Example:

```
{
 "firmwareVersion": "",
 "online": false,
 "radarAddress": "",
 "radarId": "",
 "radarType": 0,
 "serverTime": "",
 "zonedServerTime": "",
"assignedRoomId": ""
}
```

Request parameter:

Parameter	Description	In	Required?	Data Type	schema
radar information dto	Radar information dto	body	true	Radar information dto	Radar information dto
firmwareVersion	radar firmware version		true	string	
online	radar is online		true	boolean	
radarAddress	radar connect ip address		false	string	

This is a confidential document.

Parameter	Description	In	Required?	Data Type	schema
radarId	radar id		true	string	
radarType	radar type		true	integer(int32)	
serverTime	current server date time		ture	string(date-time)	
zonedServerTime	Time in the format of ISO-8601		true	string(date-time)	
assignedRoomId	ID of the room that the radar is assigned to.		false	integer(int64)	

Response status:

Status code	Description	schema
200	OK	restful api response object«Void»
201	Created	
401	Unauthorized	
403	Forbidden	
404	Not Found	

Response Example:

Parameter	Description	Type	schema
code	response code	string	
msg	response description message	string	

Response Example:

```
{
        "code": "200",
        "msg": "success"
}
```

2.3. Radar disconnect push

Url:/api/radar/disconnect

Method: POST

This is a confidential document.

Produces: application/x-www-form-urlencoded,application/json

Consumes: */*

Note: To receive radar disconnect push notify.

Example:


```
{
  "firmwareVersion": "",
  "online": false,
  "radarAddress": "",
  "radarId": "",
  "radarType": 0,
  "serverTime": "",
"zonedServerTime": ""
}
```


Request parameter:

Parameter	Description	In	Required?	Data Type	schema
radar information dto	Radar information dto	body	true	Radar information dto	Radar information dto
firmwareVersion	radar firmware version		true	string	
online	radar is online		true	boolean	
radarAddress	radar connect ip address		false	string	
radarId	radar id		true	string	
radarType	radar type		true	integer(int32)	
serverTime	current server date time(yyyy-MM-dd HH:mm:ss)		true	string(date-time)	
zonedServerTime	ISO-8601 standard datetime		true	string(date-time)	

Response status:

Status code	Description	schema
200	OK	restful api response object«Void»

This is a confidential document.

Status code	Description	schema
201	Created	
401	Unauthorized	
403	Forbidden	
404	Not Found	

Response Example:

Parameter	Description	Type	schema
code	response code	string	
msg	response description message	string	

Response Example:

```
{
        "code": "200",
        "msg": "success"
}
```

2.4. Radar heart rate push

Url:/api/radar/heart-rate

Method: POST

Produces: application/x-www-form-urlencoded, application/json

Consumes: */*

Note: To receive radar heart rate push notify. It is a Wavve SDK 0x03e8 function.

Example:

```
{
  "heartRateValue": 0,
  "personExist": false,
  "radarId": "",
  "respiratoryValue": 0
}
```

Request parameter:

Parameter	Description	In	Required?	Data Type	schema
heart rate data dto	Heart rate data dto	body	true	Heart rate data dto	Heart rate data dto

This is a confidential document.

Parameter	Description	In	Required?	Data Type	schema
heartRateValue	heart rate value		true	number(float)	
personExist	Moving target detected within the FOV		true	boolean	
radarId	radar id		true	string	
respiratoryValue	respiratory value		true	number(float)	

Response status:

Status code	Description	schema
200	OK	restful api response object«Void»
201	Created	
401	Unauthorized	
403	Forbidden	
404	Not Found	

Response Example:

Parameter	Description	Type	schema
code	response code	string	
msg	response description message	string	

Response Example:

```
{
        "code": "200",
        "msg": "success"
}
```

2.5. Add-on (sub-device) connect push

Url:/api/sub-device/connect

Method: POST

Produces: application/x-www-form-urlencoded,application/json

Consumes:*/*

Note: To receive the push notification of the connection status of the add-ons.

This is a confidential document.

Example:

```
{
  "deviceMac": "",
  "deviceName": "",
  "deviceType": 0,
  "onlineState": false,
  "radarId": "",
  "roomId": 0
}
```

Request parameter:

Parameter	Description	In	Required?	Data type	schema
subDeviceDTO	SubDeviceDTO	body	true	SubDeviceDTO	SubDeviceDTO
deviceMac	Sub device MAC address		false	string	
deviceName	Sub device name		false	string	
deviceType	Sub device type. Please refer to the enumeration value list for specific values		false	integer(int32)	
onlineState	Sub device online state. true: online false: offline		false	boolean	
radarId	radar id		true	string	
roomId	Assigned room id		false	integer(int64)	

Response status:

Status code	Description	schema
200	OK	restful api response object«Void»
201	Created	
401	Unauthorized	
403	Forbidden	
404	Not Found	

Response parameter:

Parameter	Description	Type	schema
code	response code	string	

This is a confidential document.

Parameter	Description	Type	schema
msg	response description message	string	

Response Example:

```
{
	"code": "200",
	"msg": "success"
}
```

2.6. Add-on (sub-device) disconnect push

Url:/api/sub-device/disconnect

Method: POST

Produces: application/x-www-form-urlencoded,application/json

Consumes:*/*

Note: To receive the push notification of the disconnection status of the add-ons.

Example:

```
{
 "deviceMac": "",
 "deviceName": "",
 "deviceType": 0,
 "onlineState": false,
 "radarId": "",
 "roomId": 0
}
```

Request parameter:

Parameter	Description	In	Required?	Data type	schema
subDeviceDTO	SubDeviceDTO	body	true	SubDeviceDTO	SubDeviceDTO
deviceMac	Sub device MAC address		false	string	
deviceName	Sub device name		false	string	
deviceType	Sub device type. Please refer to the enumeration value list for specific values		false	integer(int32)	
onlineState	Sub device online state. true: online false: offline		false	boolean	

This is a confidential document.

Parameter	Description	In	Required?	Data type	schema
radarId	radar id		true	string	
roomId	Assigned room id		false	integer(int64)	

Response status:

Status code	Description	schema
200	OK	restful api response object«Void»
201	Created	
401	Unauthorized	
403	Forbidden	
404	Not Found	

Response parameter:

Parameter	Description	Type	schema
code	response code	string	
msg	response description message	string	

Response Example:

```
{
  "code": "200",
  "msg": "success"
}
```

2.7. To push the firmware upgrade Status

url:/api/firmware/upgrade-status

method:POST

produces:application/x-www-form-urlencoded,application/json

consumes:*/*

Note: To push the firmware upgrade status

Example:

```
{
 "radarId": "",
 "radarVersion": "",
 "upgradeResult": false,
```


This is a confidential document.

```
  "upgrading": false
}
```


Params:

name	description	in	require	type	schema
firmwareUpgradeStatusDTO	FirmwareUpgradeStatusDTO	body	true	FirmwareUpgradeStatusDTO	FirmwareUpgradeStatusDTO
radarId	Radar id		true	string	
radarVersion	Current radar firmware version		true	string	
upgradeResult	Upgrade status of the radar firmware		true	boolean	
upgrading	Whether the radar upgrade will be repeatedly attempted within the 24hrs		true	boolean	

Status:

code	description	schema
200	OK	restful api response object«Void»
201	Created	
401	Unauthorized	
403	Forbidden	
404	Not Found	

Response Params:

name	description	type	schema
code	response code	string	
msg	response description message	string	

Response Example:


```
{
        "code": "200",
```


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```
        "msg": "success"
}
```

2.8. Fall alert cancellation

url:/api/eliminate-alarm

method:POST

produces:application/x-www-form-urlencoded,application/json

consumes:*/*

Note: The potential falls picked up by radar may not always generate a positive fall alert that is sent to the server, but may be cancelled if large movements are detected within the buffer time. In this case, the radar will report a fall-alert-cancellation to the server to cancel the previous alert that is sent via the /api/alarm port.

Example:

```
{
 "eliminateTime": "",
 "eliminateZonedTime": "",
 "functionId": 0,
 "radarId": ""
}
```

Params:

name	description	in	require	type	schema
eliminateAlarmDTO	EliminateAlarmDTO	body	true	EliminateAlarmDTO	EliminateAlarmDTO
eliminateTime	eliminateTime (yyyy-MM-dd HH:mm:ss)		true	string(date-time)	
eliminateZonedTime	ISO-8601 standard datetime		true	string(date-time)	
functionId	functionId, Please refer to the alert type enumeration value list for specific values		true	integer(int32)	
radarId	radar id		true	string	

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Status:

code	description	schema
200	OK	restful api response object«Void»
201	Created	
401	Unauthorized	
403	Forbidden	
404	Not Found	

Response Params:

name	description	type	schema
code	response code	string	
msg	response description message	string	

Response Example:

```
{
        "code": "200",
        "msg": "success"
}
```

2.9. Battery life of the sub-device

url:/api/sub-device/power

method:POST

produces:application/x-www-form-urlencoded,application/json

consumes:*/*

Note: The battery life of the sub-device will be pushed when it is reported by the sub device.

Example:

```
{
 "voltage": 0,
 "power": 0,
 "deviceMac": “”,
 "radarId": ""
}
```

Params:

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name	description	in	require	type	schema
subDevicePowerDTO	SubDevicePowerDTO	body	true	SubDevicePowerDTO	SubDevicePowerDTO
voltage	Voltage Value		true	integer(int32)	
power	Battery Level Value		true	integer(int32)	
deviceMac	Sub-device MAC Address		true	string	
radarId	radar id		true	string	

Status:

code	description	schema
200	OK	restful api response object «Void»
201	Created	
401	Unauthorized	
403	Forbidden	
404	Not Found	

Response Params:

name	description	type	schema
code	response code	string	
msg	response description message	string	

Response Example:

```
{
	"code": "200",
	"msg": "success"
}
```

2.10. Multi-target detection and coordinates.

url:/api/radar/person-position-detect

method:POST

produces:application/x-www-form-urlencoded,application/json

This is a confidential document.

consumes:*/*

Note: The number and coordinates of the moving targets detected by the radar. It is refreshed every 10 s. It is available for radar firmware version of 2.8.1.44 and later. Please note that it reports moving targets only. Please note that the coordinates is for only one moving target. If there are more than one moving target, the coordinates will be the one that moves the earliest. If the targets starting moving in the same time, the coordinates will be the one nearest to the radar.

Example:


```
{
 "movingNum": 0,
 "motionSnr": 0,
 "motionXYZ": [],
 "personXYZ": [],
 "radarId": ""
}
```


Params:

name	description	in	require	type	schema
personPositionDetectionDTO	PersonPositionDetectionDTO	body	true	PersonPositionDetectionDTO	PersonPositionDetectionDTO
movingNum	Number of moving targets		true	integer(int32)	
motionSnr	Detection Signal Strength		true	number(float)	
motionXYZ	The coordinates (x,y,z) of the targets with minor motion		true	array	number(float)
personXYZ	The coordinates (x,y,z) of the moving target, for example a walker.		true	array	number(float)
radarId	radarId		true	string	

Status:

code	description	schema

This is a confidential document.

code	description	schema
200	OK	restful api response object «Void»
201	Created	
401	Unauthorized	
403	Forbidden	
404	Not Found	

Response Params:

name	description	type	schema
code	response code	string	
msg	response description message	string	

Response Example:

```
{
	"code": "200",
	"msg": "success"
}
```

3. Support

Please contact support@ax-end.com for any help or more information.

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