RM Bridge - API Documentation

Version History

v 1.0.0	27-Jun-2015	Jochen Ruehl	Initial version
v 1.1.0	17-Apr-2016	Jochen Ruehl	RM Pro+ support
v 1.2.0	21-Apr-2016	Jochen Ruehl	Command `clear_devices` added

Table of Contents

Introduction

This document describes the protocol to communicate with the Android RM which which can communicate with BroadLink™ RM1 and RM2 devices.

Restrictions

Although the Android RM Bridge does support BroadLink™ *Open API* specification, the description of the *Open AP*I is not subject to this document.
The reason for this is that the *Open AP*I documentation is subject to BrodaLink™'s NDA.

Command Overview

Command ID	Command	Description
1000	registered_devices	Returns a list of currently registered devices on the bridge.
1001	probe_devices	Updates the list of registered devices of the bridge.
1002	learn_code	Sets the RM device into learning mode.
1003	get_code	Retrieves a learned code from the RM device.
1004	send_code	Sends a code to the RM device.
1005	delete_code	Deletes a stored code shortcut from the bridge.
1006	list_codes	Retrieves the listed of code shortcuts.
1007	add_coddes	Adds new code shortcuts to the list of shortcuts.
1008	freqscan	Performs a frequency scan. Only available for RM Pro+ devices.
1009	freqscan_learn_cancel	Cancels a frequency scan or learn request.

		Only available for RM Pro+ devices.
1010	clear_devices	Clears the list of registered devices.
1011	temperature	Ambient temperature in °C. Only available for RM2 and RM Pro+ devices.

Sequence Diagram

RM Bridge - Learning Code Sequence
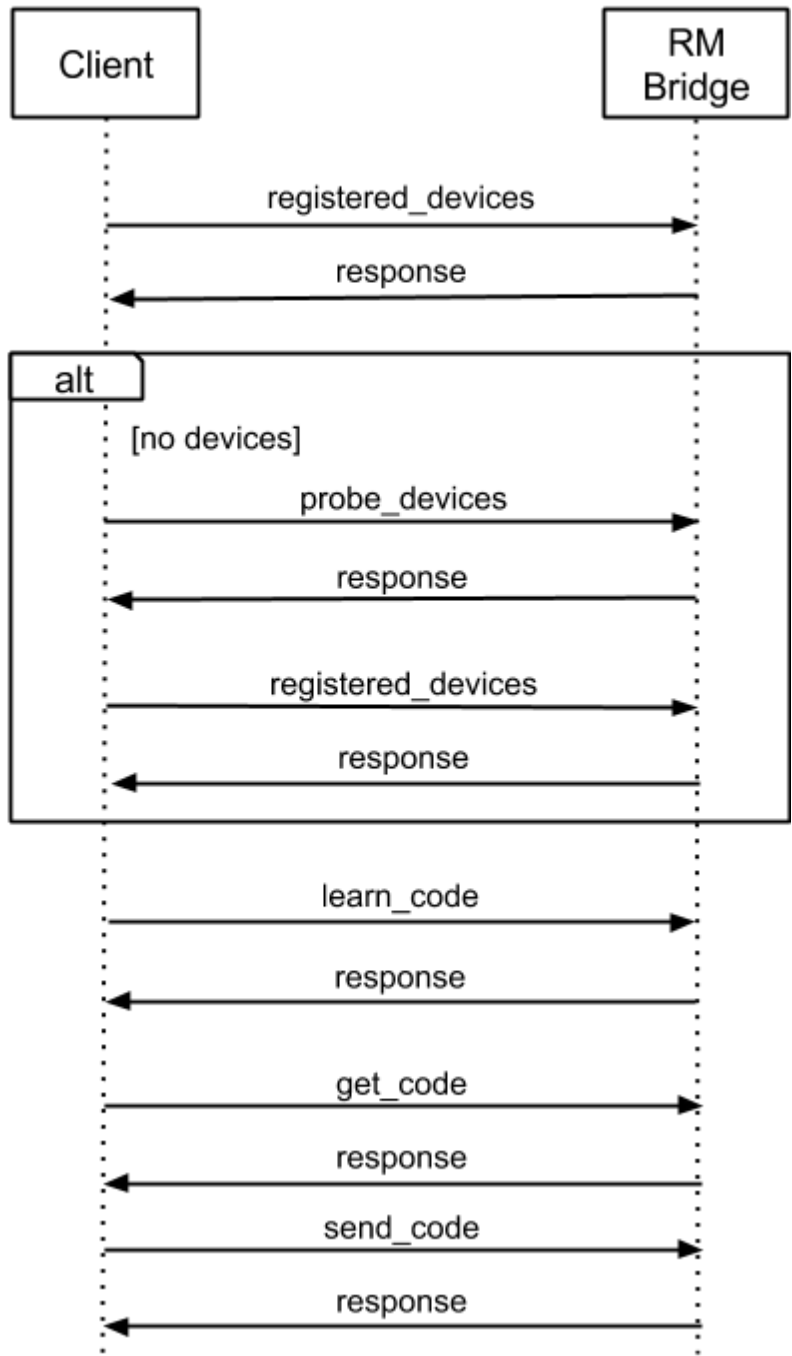
RM Pro+ devices need to do a `scanfreq` (1008) command prior to calling `learn_code` (1002) when learning RF codes.

Overview

Requests can be sent to the RM Bridge by using RAW POST/POST or GET requests. Regarding RAW POST request, the command data can be sent as is inside the POST request.

POST and GET request the following parameters can be supplied:

Parameter Name	Description
cmd	Contains the API command as JSON string
callback	Specifies the JSONP callback function (optional)
jsonp	Specifies the JSONP callback function (optional)

The return code of an request is stored inside the response parameter *code*. Apart from zero, all other values indicate an error.

Command Shortcuts

When providing a *name* argument to the *get_code* API command, calling the code via shortcut is possible by calling the following URI:

```
http://<ip>:<port>/code/<name>
```

To send an already stores command shortcut to a different device the following URI can be used:

```
http://<ip>:<port>/<mac-address>/code/<name>
```
Since: RM Bridge 1.3.0

Temperature Shortcut

Since: RM Bridge 1.3.0

To get the temperature of a device (only supported for RM2 and RM Pro+ devices), the following URI can be used:

```
http://<ip>:<port>/temperature
```

Specification

This section contains the specification of the RM Bridge API.

registered_devices

Since: RM Bridge 1.2.0

Retrieves all registered devices from the RM Bridge.

The bridge registers all found devices on startup. To update the list of registered devices, use the command *probe_devices*.

Request Arguments

Argument Name	Description
api_id	Command ID (1000)
command	Command name (optional)

Example

```
{
    "api_id":1000,
    "command":"registered_devices"
}
```

Response Arguments

The argument list contains the list of all available devices registered by the bridge.
The description only lists name and MAC address, because these are the only parameters needed by the bridge API. The real result contains much more parameters, which are not listed here to respect the BroadLink™ NDA.

Argument Name	Description
code	Return code
list	List of available devices
mac	Device MAC address
name	Device name
msg	Return message

Example

```
{
    "code": 0,
    "list": [
        {
            "mac": "00:11:22:33:44:55",
```

```
              "name": "eRemote",
              ...
          }
     ],
     "msg": "Execute success"
}
```

probe_devices

Since: RM Bridge 1.2.0

Requests the bridge to update its list of registered devices.

Request Arguments

Argument Name	Description
api_id	Command ID (1001)
command	Command name (optional)

Example

```
{
     "api_id":1001,
     "command":"probe_devices"
}
```

Response Arguments

Argument Name	Description
code	Return code
msg	Return message

Example

```
{
     "code": 0,
     "msg": "Probe devices success"
}
```

clear_devices
Since: RM Bridge 1.3.0

Clears all registered devices.

Note: Due to an issue with the underlying *BroadLlink* library devices that were already discovered will not be discovered again, until *RM Bridge* is stopped and restarted.

Request Arguments

Argument Name	Description
api_id	Command ID (1010)
command	Command name (optional)

Example

```
{
     "api_id":1010,
     "command":"clear_devices"
}
```

Response Arguments

Argument Name	Description
code	Return code
msg	Return message

Example

```
{
     "code": 0,
     "msg": "Devices cleared"
}
```

learn_code
Since: RM Bridge 1.2.0

Sets the RM device into learning mode.
This is signaled by the red LED on the device.

Request Arguments

Argument Name	Description
api_id	Command ID (1002)
command	Command name (optional)
mac	Device MAC address

Example

```
{
    "api_id":1002,
    "command":"learn_code",
    "mac": "00:11:22:33:44:55"

}
```

Response Arguments

Argument Name	Description
code	Return code
msg	Return message

Example

```
{
    "code": 0,
    "msg": "rm2 enter study mode success"
}
```

get_code
Since: RM Bridge 1.2.0

Retrieves the code the RM device has learned by using the *learn_code* command.

Request Arguments

Argument Name	Description
api_id	Command ID (1003)
command	Command name (optional)
mac	Device MAC address
name	Store named code shortcut on bridge (optional)

Example

```
{
    "api_id":1003,
    "command":"get_code",
    "mac": "00:11:22:33:44:55"
    "name": "test"
}
```

Response Arguments

Argument Name	Description
code	Return code
data	Data of learned code
msg	Return message

Example

```
{
    "data":
"e90b3400091f091f091f0a1f0920091f0920091f091f092009201c0c09201c0c0
820092008201c0d09201c0c0820092008201d0c0900013300000000",
    "code": 0,
    "msg": "rm2 enter study mode success"
}
```

send_code
Since: RM Bridge 1.2.0

Send the code data to the specified RM device.

Request Arguments

Argument Name	Description
api_id	Command ID (1004)
command	Command name (optional)
mac	Device MAC address (optional if *name* is defined)
data	Code data (optional if *name* is defined)
name	Code shortcut stored on bridge (optional)

Example

```
{
      "api_id":1004,
      "command":"send_code",
      "mac": "00:11:22:33:44:55",
      "data":
"e90b3400091f091f091f0a1f0920091f0920091f091f092009201c0c09201c0c0
820092008201c0d09201c0c0820092008201d0c0900013300000000"

}
```

or

```
{
      "api_id":1004,
      "command":"send_code",
      "name": "test"
}
```

Response Arguments

Argument Name	Description
code	Return code
msg	Return message

Example

```
{
```

```
    "data":
"e90b3400091f091f091f0a1f0920091f0920091f091f092009201c0c09201c0c0
820092008201c0d09201c0c0820092008201d0c0900013300000000",
    "code": 0,
    "msg": "rm2 send data success"
}
```

delete_code

Since: RM Bridge 1.2.0

Deletes a code shortcut with the given *name* attribute from the bridge.

Request Arguments

Argument Name	Description
api_id	Command ID (1005)
command	Command name (optional)
name	Code shortcut stored on bridge. To delete all shortcuts, use "*".

Example

```
{
    "api_id":1005,
    "command":"delete_code",
    "name": "test"

}
```

Response Arguments

Argument Name	Description
code	Return code
msg	Return message

Example

```
{
    "code": 0,
    "msg": "Code has been deleted"
```

```
}
```

list_codes

Since: RM Bridge 1.2.0

Lists all code shortcuts currently stored on the bridge

Request Arguments

Argument Name	Description
api_id	Command ID (1006)
command	Command name (optional)

Example

```
{
    "api_id":1006,
    "command":"list_codes"
}
```

Response Arguments

Argument Name	Description
code	Return code
msg	Return message
list	List of codes shortcuts

Example

```
{
    "code": 0,
    "msg": "List of code shortcuts",
    "list": [
            {
            "data":
"e90098010a1b0c1c0b1d0a1d0a1d0a1d0b1d091e0a1e1e090a1d1e0a081f
1c0c091e1c0c0720081f081f1c0c07000134081f071f082008200720081f0
91f071f0821071f081f0820091e1c0b08201b0d071f1b0d07201b0e062007
22071f1a0d07000133072008200820062008 1f091f0720081f08200721072
```

0072007211a0d07201a0d07211a0d081f1a0e0621062206211a0e05000134
0721062206220520072107200720072106210721062007211a0d06211
a0e0622190e0522190e0621062206211a0e0500013407200820072007200 8
200720072008200720072007210720072 01b0d07201b0c07211a0e0622190
d0622062007201b0d07000133081f08200720082007200721071f082 00720
081f081f0820081f1b0e06201b0c081f1c0c07211a0d081f09200720190d0
7000133081f091f081f081f091e091f081f0820081f081f091f1b0c081f1b
0d07201b0d07211b0b07201b0d1b0c1b0d1c0c1b0b07000135071e091e091
f081f081f091f0820081e091f081f091e1c0c081f1c0c081f1c0c071f1c0d
071f1c0c1b0c1c0b1b0d1b0c080005dc",
            "mac": "11:22:33:44:55:66",
            "name": "test"
        }
    ]
}

add_codes
Since: RM Bridge 1.2.0

Adds new code shortcuts to the shortcut collection of the bridge.

Request Arguments

Argument Name	Description
api_id	Command ID (1007)
command	Command name (optional)
list	List of code shortcuts

Example

```
{
    "api_id":1007,
    "command":"add_codes",
    "list": [
        {
            "data":
```
"e90098010a1b0c1c0b1d0a1d0a1d0a1d0b1d091e0a1e1e090a1d1e0a081f1c0c0
91e1c0c0720081f081f1c0c07000134081f071f082008200720081f091f071f082
1071f081f0820091e1c0b08201b0d071f1b0d07201b0e06200722071f1a0d07000
1330720082008200620081f091f0720081f08200721072007200721 1a0d07201a0
d07211a0d081f1a0e0621062206211a0e05000134072106220622052007210720 0
720072106210721062008 2106211a0d06211a0e0622190e0522190e06210622062
11a0e0500013407200820072007200820072007200820072007200721072007201

```
b0d07201b0c07211a0e0622190d0622062007201b0d07000133081f08200720082
007200721071f08200720081f081f0820081f1b0e06201b0c081f1c0c07211a0d0
81f09200720190d07000133081f091f081f081f091e091f081f0820081f081f091
f1b0c081f1b0d07201b0d07211b0b07201b0d1b0c1b0d1c0c1b0b07000135071e0
91e091f081f081f091f0820081e091f081f091e1c0c081f1c0c081f1c0c071f1c0
d071f1c0c1b0c1c0b1b0d1b0c080005dc",
                "mac": "11:22:33:44:55:66",
                "name": "test"
            }
        ]
}
```

Response Arguments

Argument Name	Description
code	Return code
msg	Return message

<u>Example</u>

```
{
     "code": 0,
     "msg": "Codes added to collection"
}
```

freqscan
Since: RM Bridge 1.2.3

Performs a frequency scan and returns the result after the given period of time.
This command is only available for RM Pro+ devices.

Request Arguments

Argument Name	Description
api_id	Command ID (1008)
command	Command name (optional)
mac	Device MAC address
duration	Time to wait for scan results in milliseconds (optional). Defaults to 10 seconds.

Example

```
{
    "api_id":1008,
    "command":"freqscan",
    "mac":"11:22:33:44:55:66",
    "duration":7000
}
```

Response Arguments

Argument Name	Description
code	Return code
msg	Return message

Example

```
{
    "code": 0,
    "msg": "Frequency scan ok"
}
```

freqscan_learn_cancel
Since: RM Bridge 1.2.3

Cancels a frequency scan or learn request.
This command is only available for RM Pro+ devices.

Request Arguments

Argument Name	Description
api_id	Command ID (1009)
command	Command name (optional)
mac	Device MAC address

```
{
     "api_id":1009,
     "command":"freqscan_learn_cancel",
     "mac":"b4:43:0d:c3:10:57"
}
```

Response Arguments

Argument Name	Description
code	Return code
msg	Return message

Example

```
{
     "code": 0,
     "msg": "Cancel study mode success"
}
```

temperature
Since: RM Bridge 1.3.0

Returns the ambient temperature in °C.

Request Arguments

Argument Name	Description
api_id	Command ID (1011)
command	Command name (optional)
mac	Device MAC address

Example

```
{
    "api_id":10011,
    "command":"temperature",
    "mac":"11:22:33:44:55:66"
}
```

Response Arguments

Argument Name	Description
code	Return code
msg	Return message
temperature	Ambient temperature in °C

Example

```
{
    "temperature": 25.799999,
    "code": 0,
    "msg": "Refresh rm2 status success"
}
```