

**Wi-SUN Enhanced HAN  
Plus Route-B Dual Stack  
J11 Firmware Distribution Server  
External Interface Specification**

**First Edition**

**English**



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## 1. Introduction

### 1.1 Purpose

In addition to Wi-SUN Enhanced HAN Plus Route-B Dual Stack support page on

<https://wisun.isb.co.jp/enhan/wer0/>

REST API can be used to download ROHM-made BP35C0-J11 firmware.



## 2. REST API

### 2.1 Overview of REST API

The following two REST APIs have been published.

API execution results are responded in JSON format.

- Get Firmware Version List API  
Returns the version information of firmware that is being published.
- Get Firmware Information API  
Returns firmware information on the corresponding version from the version information obtained via Get Firmware Version List API



## 2.2 Details of REST API

### 2.2.1 Get Firmware Version List API

Get Firmware Version List API returns the version information and release date of BP35C0-J11 firmware.

**Table 1: Get Firmware Version List API URI**

Method	URI
GET	<a href="https://wisun.isb.co.jp/enhan/wer0/api/versionlist/">https://wisun.isb.co.jp/enhan/wer0/api/versionlist/</a>

**Table 2: Get Firmware Version List API response**

Response
<pre>-----  [    {      "version": {versionNumber},      "date": {releaseDate}    },    ...    ...    {      "version": {versionNumber},      "date": {releaseDate}    }  ]  -----</pre>

**Table 3: Get Firmware Version List API parameter**

Parameter	Description
{versionNumber}	Version number
{releaseDate}	Release date of the corresponding version firmware



### 2.2.2 Get Firmware Information API

Get Firmware Information API returns the firmware information of a specified version number.

Firmware is managed by using two BANKs of BANK0 and BANK1 and there are two sets of firmware for each version number.

Download firmware from the respective download URI.

**Table 4: Get Firmware Information API URI**

Method	URI
GET	<a href="https://wisun.isb.co.jp/enhan/wer0/api/firmware/{versionNumber}/">https://wisun.isb.co.jp/enhan/wer0/api/firmware/{versionNumber}/</a>

**Table 5: Get Firmware Information API response**

Response
<pre> ----- {   "version" : {versionNumber},   "bank0" : {     "uri": {firmwareData},     "md5": {firmwareDataMd5}   },   "bank1" : {     "uri": {firmwareData},     "md5": {firmwareDataMd5}   } } ----- </pre>

**Table 6: Get Firmware Information API parameter**

Parameter	Description
{versionNumber}	Version number that is obtained via Get Firmware Version List API
{firmwareData}	URI for downloading firmware
{firmwareDataMd5}	MD5 hash value of firmware data



### 3. Sample scripts

#### 3.1 Execution environment

- python 3.5 or later with required python modules added are installed.
- The Internet is accessible.

Verified environment

- Ubuntu 16.04 LTS desktop 64-bit
- Python 3.5.2

The sample scripts use the following module.

Before executing the sample scripts, install the package.

urllib3

Installation instructions

1. Install pip (not necessary if installed).

```
$ sudo apt-get install python3-pip
```

2. Install the package.

```
$ python3 -m pip install urllib3
```

#### 3.2 File description

Table 7: Sample script file

File name	Description
<b>sample_download.py</b>	Sample scripts of firmware downloaded
<b>cacert.pem</b>	Root certificate and intermediate certificate

#### 3.3 Command option

Table 8: Sample script command option

Option	Description
<b>-n</b>	BANK number of firmware to download, 0 or 1 Example: -n 0



### 3.4 Execution example

By executing the sample scripts, the latest version of firmware is downloaded and the downloaded zip file is unzipped into the same directory as the sample scripts.

Execution example

```
$ python3 sample_download.py -n 0
```

```
Get firmware version list
-> Latest Version = 1.3.158A (date:2019-02-08)
Get firmware infomation
Get firmware data(BANK0)...
-> check MD5 OK
Download Complete: BP35C0_J11_040001030000158A_OTA_Bank0.zip
Extracting zip file
-> Found: BP35C0_J11_040001030000158A_OTA_Bank0.hex
```

Fig. 1: Execution result example