**EEG\_SDK\_v1.1**

**Update:**

“eeg\_reading” update where to receive data from.

Add SDK for heartrate.

Add more SDK function for haptic sensor.

Note: All the operation below are based on Bluetooth connection between host(eg. PC) and EEG device..

EEG\_API

***eeg\_reading***

Description: this operation will enable eeg notification.

Implementation: Should set value “01:00” to uuid “0x2902” or Handle “0x0013” on EEG device through Bluetooth.

Then device will keep transmitting 18-bytes packets back to uuid “0x0012” or handle “0x2D37” in hex format like below.



Every EEG sample takes 3 bytes, so every packet contains 6 EEG samples. The EEG sampling rate is 500 samples/second.

Heartrate\_API

***heartrate\_reading***

Description: this operation will enable heartrate notification.

Implementation: should set value “01:00” to uuid “0x2902” or Handle “0x0020” on EEG device through Bluetooth. (NOTE: eeg\_reading’s uuid is same with heartrate\_reading’s uuid, maybe better to use handle for operation)

Then device will keep transmitting 20-bytes packets back to uuid “0x001F” or handle “0x2E37”.

Haptic\_sensor\_API

Description: haptic sensor in our device has attributes: duration, period, amplitude. Duration means how long haptic sensor keep running for one activation instruction; period means the how frequently it will vibrate; amplitude means for amplitude of vibration.

***haptic\_activate***

Description: this operation will activate haptic sensor and make it vibrate for a period of time.

Implementation: should write value **1** to Handle “0x001C” or Uuid “0x2D3A”.

***Haptic\_stop***

Description: this operation will stop the haptic sensor.

Implementation: should write value **2** to Handle “0x001C” or Uuid “0x2D3A”.

***Haptic\_increase\_duration***

Description: this operation will increase the time that haptic sensor work for one activation instruction, every “Haptic\_increase\_duration” operation will increase 1s.

Implementation: should write value **3** to Handle “0x001C” or Uuid “0x2D3A”.

***Haptic\_decrease\_duration***

Description: this operation will decrease the time that haptic sensor work for one activation instruction, every “Haptic\_increase\_duration” operation will decrease 1s.

Implementation: should write value **4** to Handle “0x001C” or Uuid “0x2D3A”.

***Haptic\_increase\_period***

Description: this operation will increase the period time that haptic sensor vibrate, every “Haptic\_increase\_period” operation will increase vibrating period for 100ms.

Implementation: should write value **5** to Handle “0x001C” or Uuid “0x2D3A”.

***Haptic\_decrease\_period***

Description: this operation will decrease the period time that haptic sensor vibrate, every “Haptic\_decrease\_period” operation will decrease vibrating period for 100ms.

Implementation: should write value **6** to Handle “0x001C” or Uuid “0x2D3A”.

***Haptic\_increase\_amplitude***

Description: this operation will increase the amplitude that haptic sensor vibrate, every “Haptic\_increase\_amplitude” operation will increase vibrating amplitude for one level.

Implementation: should write value **7** to Handle “0x001C” or Uuid “0x2D3A”.

***Haptic\_decrease\_amplitude***

Description: this operation will decrease the amplitude that haptic sensor vibrate, every “Haptic\_decrease\_amplitude” operation will decrease vibrating amplitude for one level.

Implementation: should write value **8** to Handle “0x001C” or Uuid “0x2D3A”.

Note: please notice since the firmware is still not all settled down, We may need to change the Handle/uuid for some operation in the future. But right now this API should work fine with our device.