|  |  |  |
| --- | --- | --- |
| **Revision** | **Change Details** | **Date** |
| 1.0 | Information about BLE profile | Aug 11, 2015 |
| 1.1 | Update new version of Firmware | Mar 30, 2017 |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

Firmware - Green House Proto

# GreenHouseProto Profile

## Device information service

### Service UUID: 0x180A

### Characteristic:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name** | **UUID** | **UUID type** | **Permissions** | **Length** | **Default Value** |
| System ID | 0x2A23 | 16-bit | Read | 8 | System ID of Shade |
| Model Number | 0x2A24 | 16-bit | Read | 21 | "Model Number" |
| Serial Number | 0x2A25 | 16-bit | Read | 21 | "Serial Number" |
| Firmware Revision | 0x2A26 | 16-bit | Read | 21 | "Firmware Revision" |
| Hardware Revision | 0x2A27 | 16-bit | Read | 21 | "Hardware Revision" |
| Software Revision | 0x2A28 | 16-bit | Read | 21 | "Software Revision" |
| Manufacturer Name | 0x2A29 | 16-bit | Read | 21 | "Manufacturer Name" |

## GreenHouseProto service

### Service UUID: 0xFF00

### Characteristic:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Name** | **UUID** | **UUID type** | **Permis**  **-sions** | **Len**  **-gth** | **Descriptor** |
| Request | 0xFF01 | 16-bit | Read,  Write | 20 | Receive requests from App   |  |  | | --- | --- | | 0x01 | Activate Backup Power Interrupt | | 0x02 | Disconnect Backup Power Interrupt | | 0x03 | Check Battery Status | | 0x04 | Start Test Battery and Charging System Interrupt | | 0x05 | Stop Test Battery and Charging System Interrupt | | 0x06 | Data Logger Interrupt | |
| Read Parameter | 0xFF02 | 16-bit | Read,  Write | 7 | Characteristic is used to read parameter on device.  Packet from App:   |  |  | | --- | --- | | 0x01 | Connection Status | | 0x02 | Current Timestamp | | 0x03 | MCU Temp | | 0x04 | Pack Temp | | 0x05 | Main Volt | | 0x06 | Pack Volt | | 0x07 | Load Time | | 0x08 | Load Volt | | 0x09 | Charge Time | | 0x0A | Charge Volt | | 0x0B | Pack Main Pin | | 0x0C | Pack Charging Pin | | 0x0D | Battery SOC |   Response Packet from device:   |  |  | | --- | --- | | Connection Status | **Byte 0** : 0x01  **Byte 1–4** : 4 byte of int format | | Current Timestamp | **Byte 0** : 0x02  **Byte 1–4** : Total of second from 2016-10-01 00:00:00:00  **Byte 5–6** : Millisecond at now | | MCU Temp | **Byte 0** : 0x03  **Byte 1–4** : 4 byte of float format | | Pack Temp | **Byte 0** : 0x04  **Byte 1–4** : 4 byte of float format | | Main Volt | **Byte 0** : 0x05  **Byte 1–4** : 4 byte of float format | | Pack Volt | **Byte 0** : 0x06  **Byte 1–4** : 4 byte of float format | | Load Time | **Byte 0** : 0x07  **Byte 1–4** : Total of second from 2016-10-01 00:00:00:00  **Byte 5–6** : Millisecond at now | | Load Volt | **Byte 0** : 0x08  **Byte 1–4** : 4 byte of float format | | Charge Time | **Byte 0** : 0x09  **Byte 1–4** : Total of second from 2016-10-01 00:00:00:00  **Byte 5–6** : Millisecond at now | | Charge Volt | **Byte 0** : 0x0A  **Byte 1–4** : 4 byte of float format | | Pack Main Pin | **Byte 0** : 0x0B  **Byte 1–4** : 4 byte of int format | | Pack Charging Pin | **Byte 0** : 0x0C  **Byte 1–4** : 4 byte of int format | | Battery SOC | **Byte 0** : 0x0D  **Byte 1–4** : 4 byte of int format | |
| Write Parameter | 0xFF03 | 16-bit | Read,  Write | 7 | App use this characteristic to update parameter on device  Packet from App:   |  |  | | --- | --- | | Current Timestamp | **Byte 0** : 0x02  **Byte 1–4** : Total of second from 2016-07-01 00:00:00:00  **Byte 5–6** : Millisecond at now | | Option W00 | **Byte 0** : 0x0E  **Byte 1–3** : 3 byte of string format | | Option W02 | **Byte 0** : 0x0F  **Byte 1–3** : 3 byte of string format | |
| Update Parameter | 0xFF04 | 16-bit | Notify | 7 | Device use this characteristic to update value of parameter on App  Receive Packet from device:   |  |  | | --- | --- | | Connection Status | **Byte 0** : 0x01  **Byte 1–4** : 4 byte of int format | | Current Timestamp | **Byte 0** : 0x02  **Byte 1–4** : Total of second from 2016-10-01 00:00:00:00  **Byte 5–6** : Millisecond at now | | MCU Temp | **Byte 0** : 0x03  **Byte 1–4** : 4 byte of float format | | Pack Temp | **Byte 0** : 0x04  **Byte 1–4** : 4 byte of float format | | Main Volt | **Byte 0** : 0x05  **Byte 1–4** : 4 byte of float format | | Pack Volt | **Byte 0** : 0x06  **Byte 1–4** : 4 byte of float format | | Load Time | **Byte 0** : 0x07  **Byte 1–4** : Total of second from 2016-10-01 00:00:00:00  **Byte 5–6** : Millisecond at now | | Load Volt | **Byte 0** : 0x08  **Byte 1–4** : 4 byte of float format | | Charge Time | **Byte 0** : 0x09  **Byte 1–4** : Total of second from 2016-10-01 00:00:00:00  **Byte 5–6** : Millisecond at now | | Charge Volt | **Byte 0** : 0x0A  **Byte 1–4** : 4 byte of float format | | Pack Main Pin | **Byte 0** : 0x0B  **Byte 1–4** : 4 byte of int format | | Pack Charging Pin | **Byte 0** : 0x0C  **Byte 1–4** : 4 byte of int format | | Battery SOC | **Byte 0** : 0x0D  **Byte 1–4** : 4 byte of int format | |
| Notify Info | 0xFF05 | 16-bit | Notify | 3 | Device use this characteristic to send notify to App  Receive Packet from device:   |  |  | | --- | --- | |  | **Message** | | “W00” | “Pack temperature is below 2 Centigrade” | | “W02” | “Main Voltage at P0\_0 is below 10000 mV, indicating a very low or no Main battery” | |