BLEThrowie

Device info

- Powered by a CR2032 battery,
- Collects temperature, humidity and light level measurements,
- Provides current value of measurements (refreshed every 5 seconds),
- Provides logged measurements for past 24 hours (one for each hour),
- Device provides Bluetooth Low Energy GATT table for accessing measurements via API;

Sensor BLE tables

The sensor provides one GATT service for obtaining measurements.
The service id is a739aa00-f6cd-1692-994a-d66d9e0ce048.

This service provides the attributes for reading current temperature, current humidity, current light level, the history of temperature, humidity, light level during previous 24 hours and the attribute to change the device name. Here is the list of attributes:

Attribute Id	Name	Description	Type	Example
a739a000-f6cd-1692-994a-d66d9e0ce048	Current Temperature	Temperature in Celsius multiplied by 100. Measured once every 5 seconds while connected.	16-bit integer	2155 (21.55C)
a739b000-f6cd-1692-994a-d66d9e0ce048	Current Humidity	Relative humidity in percent multiplied by 100. Measured once every 5 seconds while connected.	16-bit integer	7501 (75.01%)
a739c000-f6cd-1692-994a-d66d9e0ce048	Current Light level	Light level from photo resistor - actually its voltage value from voltage divider with photo-resistor. Values can be interpreted like this: - 0 - 450 - dark - 450 - 1200 - bright - 1200 - 2000 - very bright Measured once every 5 seconds while connected.	16-bit integer	547 (bright)
a739ffff-f6cd-1692-994a-d66d9e0ce048	Sensor name	Sensor name for advertising and displaying on iOS and android applications. Name	20 bytes of 8-bit chars	Window Temperature Sensor

		change is effective after resetting device (reinserting its battery)	symbols	
a739a001-f6cd-1692-994a-d66d9e0ce048	Temperature log for past 0-5 hours	logged temperature values for the past 6 hours.	Array of 6 16-bit integers	2155, 2011, 1968, 1877, 1788, 1600 (21.55C, 20.11C, 19.68C, 18.77C, 17.88C, 16,00C)
a739a002-f6cd-1692-994a-d66d9e0ce048	Temperature log for past 6-11 hours		Array of 6 16-bit integers	1533, 1433, 1430, 1400, 1450, 1500 (15.33C, 14.33C, 14.30C, 14.00C, 15.50C, 15,00C)
a739a003-f6cd-1692-994a-d66d9e0ce048	Temperature log for past 12-17 hours		Array of 6 16-bit integers	1500, 1633, 1730, 1800, 1850, 1900 (15.00C, 16.33C, 17.30C, 18.00C, 18.50C, 19,00C)
a739a004-f6cd-1692-994a-d66d9e0ce048	Temperature log for past 18-23 hours		Array of 6 16-bit integers	2000, 2100, 2130, 2155, 2201, 2118 (20.00C, 21.00C, 21.30C, 21.55C, 22.01C, 21,18C)
a739b001-f6cd-1692-994a-d66d9e0ce048	Humidity log for past 0-5 hours		Array of 6 16-bit integers	7845, 7989, 8032, 8123, 8212, 8400 (78.45%, 79.89%, 80.32%, 81.23%, 82.12%, 84.00%)
a739b002-f6cd-1692-994a-d66d9e0ce048	Humidity log for past 6-11 hours		Array of 6 16-bit integers	8467, 8567, 8570, 8600, 8550, 8500 (84.67%, 85.67%, 85.70%, 86.00%, 85.50%, 85.00%)
a739b003-f6cd-1692-994a-d66d9e0ce048	Humidity log for past 12-17 hours		Array of 6 16-bit integers	8500, 8367, 8270, 8200, 8150, 8100 (85.00%, 83.67%, 82.70%, 82.00%, 81.50%, 81.00%)
a739b004-f6cd-1692-994a-d66d9e0ce048	Humidity log for past 18-23 hours		Array of 6 16-bit integers	8000, 7900, 7870, 7845, 7799, 7882 (80.00%, 79.00%, 78.70%, 78.45%, 77.99%, 78.82%)
a739c001-f6cd-1692-994a-d66d9e0ce048	Light level log for past 0-5 hours		Array of 6 16-bit integers	1700, 1600, 1555, 1144, 900, 700

a739c002-f6cd-1692-994a-d66d9e0ce048	Light level log for past 6-11 hours		Array of 6 16-bit integers	600, 587, 540, 540, 447, 301
a739c003-f6cd-1692-994a-d66d9e0ce048	Light level log for past 12-17 hours		Array of 6 16-bit integers	277, 230, 150, 230, 530, 657
a739c004-f6cd-1692-994a-d66d9e0ce048	Light level log for past 18-23 hours		Array of 6 16-bit integers	700, 800, 900, 1444, 1647, 1699

Sensor workings:

If sensor is disconnected from device:

- It advertises its presence every 2 seconds,
- It measures humidity, temperature and light levels every hour and stores to history log,
- After the hourly measurement the new values are places on the top off log list and older values are shifter to +1 position on the array (the oldest value is discarded);

If sensor is connected to device:

- It does not advertise,
- It measures humidity, temperature and light levels every 5 seconds. Those values are available as Current Temperature, Current Humidity, and Current Light level attributes,
- It measures humidity, temperature and light levels every hour and stores to history log,
- After the hourly measurement the new values are places on the top off log list and older values are shifter to +1 position on the array (the oldest value is discarded);

Getting started:

- Get the app from iTunes or Google Play,
- Insert sensor battery,
- Refresh sensor list,
- Wait for sensor to appear on sensors list,
- Rename sensor in order to add more meaningful name (Optional).

Troubleshooting:

- Sensor is not visible - replace sensor battery,
- Sensor may be connected to another device and therefore not advertising – switch program into background mode;