Release Notes for AVR IoT AWS Sensor Node on GitHub

What is the AVR IoT AWS Sensor Node?

AVR IoT AWS Sensor Node is a secure, Wi-Fi connected solution for an IoT node. It enables developers to send and receive data between a sensor node and the AWS Cloud Platform.

What's New

2.0.2 – The wifi.cfg drag and drop experience improved

Bugfix

- UART2 Rx pin was floating when the application started, leading to the possibility of receiving garbage data by the application, on a file 'drag and drop' event. Enabled pull-up on the UART2 Rx pin to fix this issue.

2.0.1 – Initial release on GitHub

Features

- Initial release of firmware supporting communication with AWS IoT Core.
- Sensor data reflecting captured temperature and light values published from AVR IoT WA board to cloud using telemetry topic at a periodic (1) second interval.
- Firmware implementing use of the AWS shadow service, subscribing to a shadow topic for monitoring of a desired 'Toggle' state value.

Improvements

- Improved Cloud interface added to application features allowing for easy swap between cloud platforms.

Bugfix

- Updated interrupt priority levels to address issue of missing character intermittently during 'drag and drop' of the wifi.cfg file to the CURIOSITY drive.

System Requirements

- MPLAB® X IDE v5.30 or later
- Compilers
  - XC8 compiler v2.10 or later
  - AVR GCC compiler v5.4.0 or later

Hardware

- AVR-IOT WA Development Board (ATmega4808): https://www.microchipdirect.com/product/EV15R70A

- Components:
  - ATWINC1510 WiFi™ network controller
  - ATECC608A (pre-provisioned) Cryptoauthentication™ device
  - TEMT6000 light sensor
  - MCP9808 precision temperature sensor
  - MCP73871 Li-Ion battery charger o MIC35055 switching regulator
  - 2x push buttons
  - 4x LEDs

Known Issues

- XC8 Compiler v2.05 or later: Supported by optimization **level 1, 2 (free)** and **level s (pro)** Optimization level 3 (pro) is not supported
- AVR GNU Toolchain v3.62: Supported by optimization **level 1, 2 (free)** and **level s (pro)**. Optimization level 3 (pro) is not supported

Documentation Support

- ATmega4808 Product Page: https://www.microchip.com/wwwproducts/en/ATMEGA4808
- ATWINC1510 Product Page: https://www.microchip.com/wwwproducts/en/ATWINC1500
- ATECC608A Product Page: https://www.microchip.com/wwwproducts/en/ATECC608A
- AVR-IoT WA Development Board: https://www.microchipdirect.com/product/EV15R70A

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- General Technical Support – Frequently Asked Questions (FAQs), technical support requests, online discussion groups/forums (http://forum.microchip.com), Microchip consultant program member listing
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