# Release Notes for MPLAB® Code Configurator AVR-IoT WG Sensor Node v1.1.0

## 1 What is MPLAB Code Configurator AVR-IoT WG Sensor Node

AVR-IoT WG Sensor Node is a secure, Wi-Fi connected solution for an IoT node. It enables users or developers to acquire sensor data and push it to the Google Cloud Platform.

## 2 What's New

- New Features:
  - MQTT subscribe functionality now fully implemented
  - Cloud_Services automatically subscribes to Google Cloud "config" topic at login
  - receiveFromCloud() callback exposed in main.c for convenience
- Bug fixes

## 3 System Requirements

- MPLAB® X IDE v5.10 or later
- AVR GCC Compiler v5.4.0 or later
- MCC Plugin v3.66 or later
- avr8bit_v1.1.1: https://www.microchip.com/mplab/mplab-code-configurator → **Current Download** → **AVR MCUs**
- FS Service v0.1.31 or later : https://www.microchip.com/mplab/mplab-code-configurator → **Current Download** → **Foundation Services**

## 4 Hardware (AVR-IOT WG Development Board AC164160)

- ATmega4808 AVR™ microcontroller
- ATWINC1510 WiFi™ network controller
- ATECC608A (pre-provisioned) Cryptoauthentication™ device
- TEMT6000 light sensor
- MCP9808 precision temperature sensor
- MCP73871 Li-Ion battery charger
- MIC35055 switching regulator
- 2x push buttons
- 4x LEDs

# 5 Documentation Support

1. ATmega4808 Product Page: *https://www.microchip.com/wwwproducts/en/ATMEGA4808*
2. ATWINC1510 Product Page: *https://www.microchip.com/wwwproducts/en/ATWINC1500*
3. ATECC608A Product Page: *https://www.microchip.com/wwwproducts/en/ATECC608A*
4. AVR-IoT WG Development Board Technical Summary: http://www.microchip.com/mymicrochip/filehandler.aspx?ddocname=en607550
5. AVR-IoT WG Development Board User Guide : http://www.microchip.com/mymicrochip/filehandler.aspx?ddocname=en607553
   AVR-IoT Development Board Schematics: http://ww1.microchip.com/downloads/en/DeviceDoc/AVR-IoT_WG_Schematics.pdf

# 6 Installing MPLAB® Code Configurator and the AVR-IoT Sensor Node Application Library

**To install the MPLAB® Code Configurator Plugin:**

1. In the MPLAB® X IDE click on **Tools → Plugin**
2. Click on **Available Plugins** tab
3. Check the box for the **MPLAB® Code Configurator**, and click on Install

**To install the AVR-IOT Sensor Node application library:**

1. Open the MPLAB Code Configurator page: https://www.microchip.com/mplab/mplab-code-configurator
2. Scroll to the bottom of the page and select the **Current Downloads** tabs
3. Download the AVR-IoTWG Sensor node application library (**avrIoT_v1.1.0.jar)**
4. In the MPLAB® X IDE click on **Tools → Options**
5. Click on **Plugins** tab
6. Click on **Install** Library
7. Browse to the location where you saved the **avrIoT_v1.1.0.jar**, select and click Open

# 7 Installing the AVR GCC compiler in MPLAB® X IDE

1 Open the MPLAB X Compilers page: https://www.microchip.com/mplab/avr-support/avr-and-arm-toolchains-c-compilers
2 Select the Downloads Tab and choose : **AVR 8-bit Toolchain v3.6.1**
3 In MPLAB® X IDE click on **Tools → Options → Embedded → Build Tools**
4 Under Toolchain **click on** Add
5 Navigate up to **../avr8-gnu-toolchain-win32_x86/bin → Open**
6 Version List should automatically point to AVR
7 Click **Ok**

# 8 Running the Example

1. Connect the AVR-IoT WG board to the computer using a standard micro-USB cable
2. Create a new project in MPLAB® X IDE

3. Select the nEDBG Tool. Device will be already identified as ATmega4808.
4. Open MCC by clicking **Tools→ Embedded→ MPLAB® Code Configurator** or **click on** the MCC icon 
5. In the Device Resources area click on **Internet Things→ Examples→ AVR-IoT WG Sensor Node**
6. Click **Generate** button
7. Build and program the AVR-IOT WG development board
8. Refer AVR-IOT WG User Guide for simple instructions to connect with the Google Cloud.

# 9 Known Issues

XC8 Compiler not supported

# 10 Frequently Asked Questions

For frequently asked questions, please refer to the FAQ section of the AVR-IOT WG development board User Guide

# 11 Supported Families

- megaAVR® 0-Series (ATMega4808, ATMega4809)

# 12 Customer Support

## 12.1 The Microchip Web Site

Microchip provides online support via our web site at http://www.microchip.com. This web site is used as a means to make files and information easily available to customers. Accessible by using your favorite Internet browser, the web site contains the following information:

- Product Support – Data sheets and errata, application notes and sample programs, design resources, user's guides and hardware support documents, latest software releases and archived software
- General Technical Support – Frequently Asked Questions (FAQs), technical support requests, online discussion groups/forums (http://forum.microchip.com), Microchip consultant program member listing
- Business of Microchip – Product selector and ordering guides, latest Microchip press releases, listing of seminars and events, listings of Microchip sales offices, distributors and factory representatives

## 12.2 Additional Support

Users of Microchip products can receive assistance through several channels:

- Distributor or Representative
- Local Sales Office
- Field Application Engineering (FAE)
- Technical Support

Customers should contact their distributor, representative or field application engineer (FAE) for support. Local sales offices are also available to help customers. A listing of sales offices and locations is available on our web site.
Technical support is available through the web site at: http://support.microchip.com