1. Introduction

AVR is a family of microprocessors originally developed by Atmel and later acquired by Microchip Technology. It is based on a modified Harvard architecture, 8-bit RISC single-chip microprocessor. The AVR is one of the first microprocessor families to use on-chip flash memory, for program storage, as opposed to a programmable ROM, EPROM or EEPROM used by other microcontrollers. Microprocessors of this family are used in many applications as complete embedded systems. They are exploited as educational embedded devices and became famous due to their widespread use in many open hardware development boards of the Arduino series. Microchip Studio (or Atmel® Studio 7) is an Integrated Development Platform (IDP) for creating applications with AVR and SAM microcontrollers (MCUs).

The platform offers an easy-to-use environment for drafting, editing and build and debug applications written in C/C++ and/or se Assembly. It also provides the ability to import Arduino designs as C/C++ projects and supports 500+ AVR and SAM devices. Finally, Microchip Studio includes a huge source code library with 1600+ application examples. For more information visit Microchip's website, which details all of Studio's features.

2. The AVR-IoT Wx Development Board

The AVR-IoT Wx Development Board is a flexible and easily scalable platform for creating and developing applications. It is based on the AVR microcontroller architecture using Wi-Fi technology. Briefly, a corresponding application developed on this system consists of three main blocks:

1. ATmega4808 Microcontroller.

2. ATECC608A Secure Element.

3. ATWINC1510 Wi-Fi Controller Module.

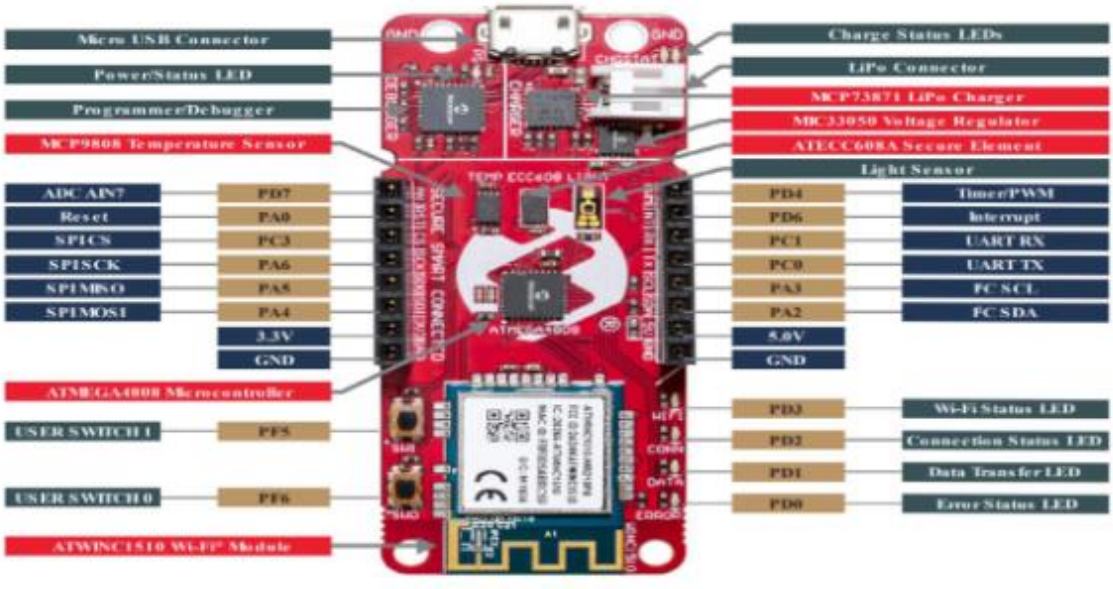

Figure 1: AVR Development Board