**7-1 Project Submission**

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This report has been created to compare and contrast three microcontrollers from three different manufacturers. I will be comparing Texas Instruments CC3220S SimpleLink Wi-Fi, Microchip SAM-IoT WG Development Board, and Freedom Development Platform for Kinetis.

TI’s CC3220S SimpleLink Wi-Fi is the most robust and has the widest range of abilities. The unit comes with a wide set of security features such as device identity, separate execution environments, secure sockets, network security, and software IP protection. This board comes with multiple LED’s, two mechanical buttons plus an additional reset button, light sensor, and temperature sensor. It comes standard with 256KB of RAM and external serial flash. The current cost of this board is roughly $50.

Microchip SAM-IoT WG Development Board also comes with a Wi-Fi module. This module does not come with the wide set of security features like CC3220S does, but depending on the needs of the board, this would be sufficient. This board also comes with multiple LED’s, two mechanical buttons, light sensor, and temperature sensor. This unit has 256 KB flash memory and 32 KB of SRAM. Current cost of this board it $45.

Freedom Development Platform for Kinetis does not have a built in wireless module like the other two but does support add-on modules. This unit does not have a wide set of security features like CC3220S. This unit comes standard with 6-axis digital accelerometer and magnetometer, a tri-colored LED, two user push buttons, and microSD slot. This unit currently costs a little over $50.

After reviewing the preceding information, I would suggest the Texas Instruments CC3220S SimpleLink Wi-Fi for the client. This unit not only covers all needs for the project but exceeds the needs allowing for expansion if needed. It is the most secure of the three while maintaining an affordable board. Also, the memory is sufficient for the needs.