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Comparison Report

This project was built using the TI Simplelink CC3220S board which includes wifi capabilities while a very capable board we are going to compare a few other boards to decide what board is best suited for this application moving forward. I specifically researched architectures from Microchip and NXP (formerly Freescale) as potential candidates. From Microchip I chose the WFI32-IoT (EV36w50A) a wifi capable chip specifically for transmitting data to the cloud in smart home applications. From NXP I chose the AW-PU510 a board created in partnership with AzureWave, this board also has wifi capabilities and was designed specifically for smart home technologies.

All three boards come with UART compatibility however the Microchip comes with 3 UARTS opposed to 2 which both the TI and Freescale board come with. All boards also come with I2C and GPIO supporting the current software design. Next we will discuss memory the TI board comes with 1024kb of flash memory and up to 256kb of SRAM, The Microchip board has 32Mbit of flash memory while the Freescale board has 1GB ram and 4GB flash.

When comparing these boards and their capabilities I would suggest going with the TI CC3220S. The NXP board while capable of performing the tasks needed has been designed for other specific purposes, the board includes video processing unit and graphical processing units that simply aren’t needed for this application. The Microchip board on the other hand is a great candidate for this application and arguably a better fit. The reason I chose the TI board over the Microchip in this specific scenario comes down to cost and the Microchip board is twice the price of the TI board, while the TI board is more than capable of handling all the functionality of this project. The Microchip board is overkill and twice the price making it a poor candidate for this application when compared to the TI board.