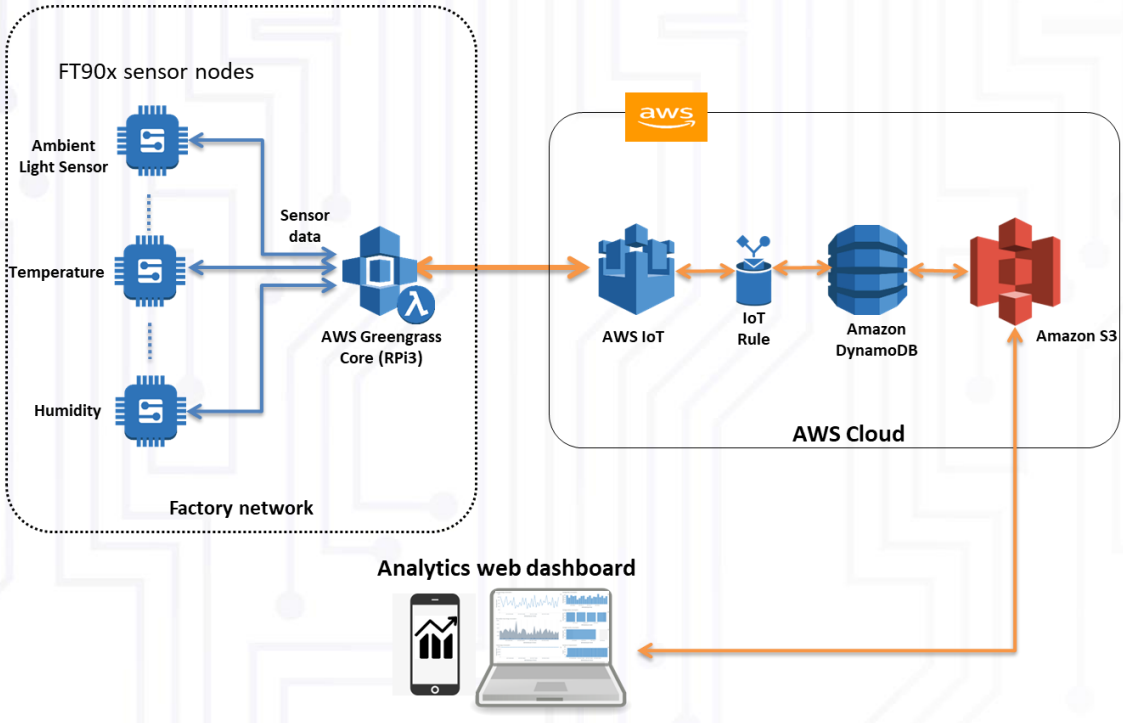
FT900 AWS IoT Demo

This demo showcases the FT900 acting as a node in an Amazon Web Services (AWS) IoT network. It highlights the features of the FT900 that are well matched with IoT requirements. AWS IoT SDK requires a capable MCU to execute FreeRTOS, Lightweight TCP/IP (lwIP), mbed Transport Layer Security (mbed TLS), RSA and DSA encryption protocols. The FT900 supports the full AWS IoT SDK. The Ethernet MAC module on the FT900 provides wired privacy in network communications and the 100MHz of computing power of the FT900 is more than sufficient to run FreeRTOS, lwIP, and mbedTLS. Peripheral IO such as I2C, SPI, ADC/DAC and UART enable the FT900 to be connected to a wide variety of sensors. In this demo, an AWS IoT SDK has been ported and executes on the FT900 processor. Each FT900 node connects to a temperature sensor, ambient light sensor and humidity sensor. The sensor data is exchanged securely with the AWS Greengrass.

AWS Greengrass provides cloud-based management of the FT900 nodes, MQTT broker for publish/subscribe messages from the nodes and local Lambda functions that can be triggered by events from the FT900 nodes. The local Lambda may also be triggered by messages from the cloud and other sources. The sensor data from the nodes are aggregated and forwarded to the AWS IoT broker in the cloud. Data that arrives at the broker are stored into the DynamoDB directly by an IoT rule. Another Lambda that runs on the AWS S3 server is triggered each time a record is written into the DynamoDB and the Lambda updates a chart to show the temperature, humidity and light variation where the node has been positioned. This information may then be viewed over a browser on a desktop or smartphone. Google Cloud IoT and Microsoft Azure IoT integration is available for FT900. Contact Bridgetek for more information.



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For more details on the FT900 series and this demo, please visit www.brtchip.com or contact Bridgetek local technical support: "brtchip.com/contact-us"