Technical Article

Keep the Data Processing

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When you are responsible for protecting people, it's good to keep critical data processing securely where decisions need to be made. The cloud is a wonderful place to manage long-term analytics and insights, but it's not the best place to locate critical alarms or alerts where people and equipment hang in the balance.

The rapid growth of the Internet of Things (IoT) and cloud-based processing has brought great value to many industries, but it is not without some limitations. These issues are especially acute for industries that require real-time processing like patient care, mechanical plant predictive maintenance, industrial Internet of Things (IIoT) and in-cabin automotive applications. By bridging RFMicron's Smart Passive Sensors™ to the cloud and using BeagleBone Black based on the Sitara™AM3358 processor, RFMicron's new Hermes™ Smart Edge IoT development platform enables critical data to be available immediately and ensure there is not a delay when key decisions need to be made.

The Hermes platform is a unique, modular and scalable platform that reads the Smart Passive Sensors and performs critical processing; makes decisions and takes actions that are needed locally; and sends aggregated data to the cloud for longer term analytics. The platform incorporates an industry-standard Beaglebone Linux processor at its heart. This decouples the application and processing software from the specific hardware options and makes scaling processor power up or down a manageable task.

RFMicron selected BeagleBone as the processing module due to the interfaces. The platform allowed RFMicron to quickly put together an evaluation platform with multiple interfaces (CAN, UARTs, I2C, SPI, Ethernet, Wi-Fi® (through USB), ZigBee®), advanced operating system (Linux Debian) and user friendly GUI (capacitive 7" touchscreen).

Key product features of the Hermes platform are:

- Provide RF reader capability for RFMicron's wireless, battery-free smart passive sensors.
- Modular design with multiple communication technologies including Ethernet, Wi-Fi, ZigBee, KNX, CAN, SPI, and UART.
- Scalable processing. By using a standard, Linux-based Beaglebone module, developers can scale processing capabilities up and down based on the need of a particular application.

To learn more about BeagleBone Black, AM3358 processors and Hermes visit the below links:

- Learn more about BeagleBone Black
- Learn more about AM3358 processors
- Order AM3358 processors now

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