Module Series

IEEE 802.11ah Wi-Fi Solution + MCU SoC

ITM-6292N

- IEEE 802.11ah Wi-Fi HaLow Compliant SoC
- Fully Integrated on-chip 11ah modem, RF transceiver, dual Cortex processors, and memory
- Support for Hosted, Hostless and Standalone operation
- Supports 1/2/4 MHz bandwidth
- Up to 15 Mbps data rate

- AES-CCMP security
- Dedicated SPI and UART interface for host
- Various peripheral interfaces for sensor device
- Manufacturing tools for configuration and test
- Diagnostic test tools for indoor and outdoor test
- Software development kit and sample applications

ITM-6292N is industry's system on a chip (SoC) that is compliant with the IEEE 802.11ah standard. Operating in the Sub 1GHz license-exempt band, it offers a much greater range over 2.4GHz and 5GHz technologies. 1/2/4MHz channel widths with optional short guard interval (SGI) yield 150 Kbps to 15 Mbps PHY throughput which can support low-rate sensor to high-rate surveillance camera application. The protocol's power-saving mechanisms like a longer sleep time greatly reduces power consumption and hence increase battery life.

The self-contained IEEE 802.11ah Wi-Fi networking capabilities with fully integrated radio transceiver of ITM-6292N offers the ideal solution to add Wi-Fi connectivity to IoT products. It minimizes the PCB size, requires minimal external circuitries, and enables fast time-to-market.

General Specification	
CPU	ARM Cortex-M3 for Application ARM Cortex-M0 for WLAN Mailbox for communication
Memory	32KB Boot ROM for M0 32KB Boot ROM for M3 752KB System SRAM XIP with cache (2 ways, 32KB)
Communication Peripherals	GPIO x 54 SPI x 4 UART x 4 I2C x 4 9-bit ADC x 4
RF Transceiver	Single-ended RF ports Frequency band: 750 to 950MHz Linear TX output power: 0dBm TX gain range: 30dB RX noise figure: <4dB Max. input level: -10dBm 10bits ADC and DAC