Module Series

IEEE 802.11ah wireless module

ITM-6100M

- Single Chip Wi-Fi HaLow Transceiver
- Single-stream max data rate of 32.5 Mbps
- Radio supporting worldwide Sub-1 GHz frequency bands
- 802.11ah OFDM PHY supporting future WFA HaLow certification
- 802.11ah MAC supporting future WFA HaLow certification

- Support for SPI mode operation
- On-chip 8dBm output power, with option to use external PA or FEM
- Option to use an external LNA or FEM
- AES encryption engine
- WPA3 including protected management frames (PMF)
- Opportunistic Wireless Encryption (OWE)

ITM-6100M provides a complete Wi-Fi HaLow connectivity solution. The ITM-6100M module includes Radio, PHY, and MAC sections designed in compliance with the IEEE 802.11ah standard, supporting data rates up to 32.5 Mbps. The standard provides for operation in the sub-1 GHz license exempt RF bands . The Radio in the ITM-6100M supports programmable operation in these bands, worldwide, between 850MHz and 950MHz. The ITM-6100M has been designed for a simplified Wi-Fi HaLow connection to an external host for applications in which a customer wants to merely replace their prior RF technology with a Wi-Fi HaLow connection. The RF receiver features a high linearity LNA, making the use of external filters unnecessary in many applications. Security features required for Wi-Fi HaLow product certifications are supported by ITM-6100M.

General Specification	
CPU	Single Chip Wi-Fi HaLow Transceiver
Wifi Standard	802.11ah
I/O Interface	SDIO
Function	Wi-Fi HaLow(sub-1 GHz)
Antenna_Type	External Antenna
Tx Power at Antenna	802.11ah: 27dBm(max)
Rx Sensitivity	802.11ah: -105dBm (BPSK(BW):1MHz) 802.11ah: -103dBm (QPSK(BW):1MHz) 802.11ah: -97dBm (16QAM(BW):1MHz)
Security	WPA3
Dimension	14mm(L)*18mm(W)*1.5(H) mm
Power Consumption	3.0VDC~3.6VDC