

Bluetooth Terminology (1)

- **Bluetooth or Bluetooth Classic (BT) has had several specification iterations, managed by BT SIG group**
 - V1.2 Max data rate 1Mb/s
 - V2.0 + EDR : Basic Rate (BR) 1Mb/s and Enhanced Data Rate (EDR) 3Mb/s
 - V3.0 + HS : BR, EDR and High Speed mode where BT uses Wifi radio for high speed data (24Mb/s)
- **Starting with V4.0, Bluetooth Low Energy (BLE) has been introduced**
 - V4.0 : Dual mode (BT classic and BLE) or Single mode (BT classic or BLE)
 - V4.1 same as V4.0 but with some feature additions for BLE
 - V4.2 same as V4.1 but with some feature additions for BLE
- **Bluetooth Classic is used for Data streaming applications. High data rate, long connection times. BT has much higher power consumption than BLE**
- **BLE is used for low power applications that periodically need small data packet transfer; optimized for battery operated devices with long battery life**

Bluetooth Smart = BLE

Bluetooth Smart Ready = BT Classic (BR, EDR, HS) + BLE

Bluetooth Terminology (2)

- **BLE V4.0**

- First BLE features specification
- New protocols, ATT, GATT, GAP to enable low power consumption while still able to connect, transmit/receive data and disconnect in 3ms

- **BLE V4.1**

- Feature additions to V4.0
- Simultaneous Master and Slave operation, enables mesh networking functionality

- **BLE V4.2**

- Feature additions to V4.1
- Enhanced Privacy and Security
- Data throughput increase up to 2.5x through packet capacity increase
- IPv6 / 6LoWPAN support; internet access through Bluetooth Smart Internet Gateway

BTLC1000, SAMB01 : BLE V4.1

BLE Mesh SW stack (schedule TBD)

BLE V4.2 SOC planned for 2016

IPV6 feature of V4.2 can be added to BTLC1000 and SAMB01 through software upgrade (schedule TBD)

WILC3000 = Bluetooth Smart Ready
BGN WIFI + Dual Mode BT V4.0
(BR/EDR + BLE)

WINC3400 = Bluetooth Smart
BGN WIFI + BLE V4.0