BLUETOOTH® 4.1 FEATURES & TECHNICAL DESCRIPTIONS

Feature	Description
Engineered to work seamlessly with other wireless technologies	
Mobile Wireless Service Coexistence Signaling	Bluetooth and LTE radios can communicate in order to ensure that transmissions are coordinated and do not interfere with one another. This ensures compatibility in devices using both LTE and Bluetooth technology.
Train Nudging and Generalized Interlaced Scanning	Ensures specific LTE bands in Europe (band 7) as well as India and China (band 40) operate in conjunction with Bluetooth technology. Improves the success rate of device discovery and connection establishment in cases where slots are periodically not available.
Maintain connections with less frequent manual intervention	
Low Duty Cycle Directed Advertising	Enables a developer to increase the interval between connection advertisements from a Bluetooth Smart device to a Bluetooth Smart Ready device.
Exchange data more efficiently	
L2CAP Connection Oriented Channels	Provides core support for a more efficient bulk/block data transfer with minimum overhead between two Bluetooth low energy devices. Enables multiplexing allowing multiple functions at the same time.
Support multiple roles simultaneously	
Dual Mode Topology	Enables a dual mode (BR/EDR-Low Energy) device such as a smartphone to act as a Bluetooth Smart Ready Hub and Bluetooth Smart peripheral at the same time. The device can then communicate with Bluetooth Smart peripherals on one side and another Bluetooth Smart Ready hub device on the other side.
Link Layer Topology	Manages the connections between the devices used in a Dual Mode Topology implementation (see Dual Mode Topology description).
Lays the groundwork for IP-based connections	
L2CAP Dedicated Channels	Foundational capability that will enable IPv6 devices to setup a dedicated channel for communication in the future. This is a key step for ensuring future Bluetooth enabled products are an integral part the Internet of Things (IoT).

BLUETOOTH® 4.1 FEATURES & TECHNICAL DESCRIPTION

Feature	Description
Additional Features	
802.11n PAL	Enhances Bluetooth High Speed technology by adding support for 802.11n MAC/PHY through an update of the protocol adaptation layer.
Audio Architecture Improvements for WBS	Enables the Wide Band Speech (WBS) codec to be added to the silicon, which is more efficient than a codec in software.
BR/EDR Secure Connections	Upgrades encryption and key-establishment procedures for BR/EDR implementations to provide 128-bit AES encryption strength, using only FIPS-approved algorithms.
Fast Data Advertising Interval	Removes conflict for device in Undirected Connectable Mode or in the Limited/General Discoverable Mode and sending connectable undirected advertising events.
Limited Discovery Time	Increases the maximum time a device can continue advertising when in the limited discoverable mode from 30.72 seconds to 180 seconds. The time interval is configurable by the OEM.
Connectionless Slave Broadcast—3D Glasses Feature	Allows rapid synchronization of an unlimited number of listening devices (3D Glasses) and does not burden the broadcaster (3D TV/Monitor).
Triggered Clock Capture—3D Glasses Feature	Allows a Bluetooth controller to capture the value of the Bluetooth clock and phase at a timing instant defined by an external event.
Unencrypted UCD—3D Glasses Feature	Assigns the UUID for the 3D Synchronization Profile. Unicast data from one to many.