



BLUETOOTH® HIGH SPEED - V3.0 + HS



Bluetooth high speed wireless technology is the newest enhancement of the Bluetooth core specification. This is Bluetooth technology...faster.

Consumers will benefit from two key features of this specification enhancement. Unicast Connectionless Data lowers latency—providing faster, more reliable experiences—while Enhanced Power Control ensures more limited dropouts, a key benefit for headset users.



Bluetooth High Speed Technology - V3.0 + HS

The V3.0 + HS specification enables the use of the 802.11 radio to provide greater data rate capabilities while maintaining the familiar, easy-to-use classic Bluetooth interface. With V3.0, high speed no longer requires an established network architecture.

V3.0 is paving the way for new use cases and the expansion of existing product tiers. Consumers will benefit from two key features of this specification enhancement. Unicast Connectionless Data lowers latency—providing faster, more reliable experiences—while Enhanced Power Control ensures more limited dropouts, a key benefit for headset users.

For manufacturers and integrators, the enhancements of V3.0 can improve the quality of products while at the same time reducing costs. By leveraging the strengths of the 802.11 radio without the need for a full system integration or redesign, this new specification expands future build opportunities and reduces manufacturing costs. And, with the addition of the Generic Test Methodology, testing is now standardized and automated which means testing faster, better testing and faster time to market.

TECHNICAL SPECIFICATION	BLUETOOTH V2.1 + EDR	BLUETOOTH V3.0 + HS
Radio frequency	2.4 GHz	2.4 GHz and 5 GHz
Distance/Range	10 meters	10 meters
Over the air data rate	1-3 Mbps	up to 54 Mbps
Application throughput	0.7-2.1 Mbps	up to 24 Mbps
Nodes/Active slaves	7 / 16,777,184	Same as 2.1 + EDR
Security	64b/128b and application layer user defined	128b AES
Robustness	Adaptive fast frequency hopping, FEC, fast ACK	CSMA/CA with collision detection, ARQ, FEC, CRC
Latency (from a non connected state) Total time to send data (det.battery life)	100ms	Same as 2.1 + EDR with AMP Less than 2.1 + EDR with UCD
Government regulation	Worldwide	Same as 2.1 + EDR
Certification body	Bluetooth SIG	Same as 2.1 + EDR
Voice capable	Yes	Same as 2.1 + EDR
Network topology	Scatternet	Same as 2.1 + EDR
Power consumption	1 as the reference	< 1
Service discovery	Yes	Same as 2.1 + EDR
Profile concept	Yes	Same as 2.1 + EDR
Primary use cases	Mobile phones, gaming, headsets, stereo audio streaming, automotive, PCs, etc.	Same as 2.1 + EDR plus bulk data transfer, synchronization and video streaming