

The DISCOVERY 645 is a Bluetooth™ Class 2 (2.5mW maximum) device, which receives and transmits in the frequency range of 2.402-2.480GHz. It is a spread spectrum (frequency hopping) headset; 79 channels, 1MHz Bandwidth, frequency hops at 1600 hops/second per the Bluetooth standard. The DISCOVERY 645 communicates with other Bluetooth products using a Time division duplex scheme that alternates transmission and receive functions, and thus uses the same omni directional antenna to transmit and receive at different times.

The CSR Single chip Bluetooth system (BC03 MM) is provided its clock input from a 16MHz crystal oscillator.

Battery charging is managed separately using a Linear Technology LTC4054X, which regulates the charger input voltage and provides a constant current (50mA) and then a constant voltage charge for the 60mAHr Lithium Polymer battery.

A separate DC/DC switching converter, the XCS921 manufactured by Torex, converts the Lithium Ion battery voltage (4.2 to 3.4 volts) down to 1.8V for the BC03MM device.

A Digital Signal Processor, internal to the BC03MM, is used in conjunction with CSR's CVC™ algorithms to provide enhanced audio performance.

The headset can communicate with other Bluetooth™ products that support the Headset and Handsfree Profiles. See the user guide for basic operation of the products.