

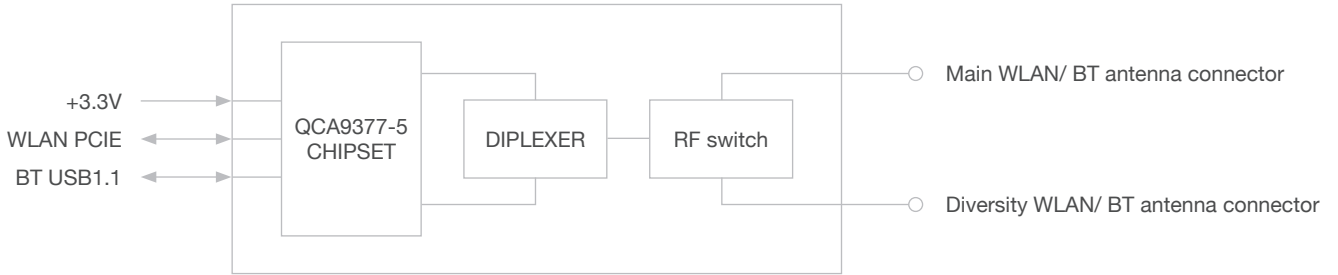
BLACK bean is a Wi-Fi 5 (IEEE 802.11b/g/n/a/ac Wave2) dual-band wireless LAN and Bluetooth 5.0 PCIe M.2 card optimized for small size and low power consumption. The card is based on a Qualcomm QCA9377-5 chipset which has an integrated dual-band (2.4 and 5 GHz) 1x1 Wi-Fi 5 radio (supporting MU-MIMO) and Bluetooth® 5.0 transceivers combined in to a very small form factor (30 x 16.5mm). The radio supports advanced power saving techniques. Bluetooth supports both Class1 and Class2 transmissions. Advanced coexistence mechanisms allow it to work seamlessly with Wi-Fi ensuring good transmission quality and high performance. BLACK bean drivers are available for Linux, Windows 10 and Android operating systems.

Quick specs

- Wi-Fi 5 (802.11a/b/g/n/ac), 2.4 and 5 GHz, 1x1 SISO, 433 Mbps data rate, up to 20 dBm output power
- 20/40/80 MHz channel size support
- MU-MIMO
- Bluetooth v5.0, BLE, ANT+ and backwards compatibility with BT v1.x and BT v2.x + enhanced data rate
- Connector: Murata HSC type P/N MM4829-2702RB, compatible with I-PEX MHF4 P/N 20449-001E
- Linux, Windows and Android drivers available
- Based on QCA9377-5 chipset
- Commercial temperature range 0 to +70 C°
- Very small form factor (30 by 16.5 mm)
- M.2 16530 A+E key WIFI/ BT card
- Available interfaces - Bluetooth USB1.1, WLAN PCIE

1. Block diagram

FIGURE 1-1. BLACK BEAN MODULE BLOCK DIAGRAM



2. Module pinout and Pin description

FIGURE 2-1. BLACK BEAN PIN OUT, TOP SIDE

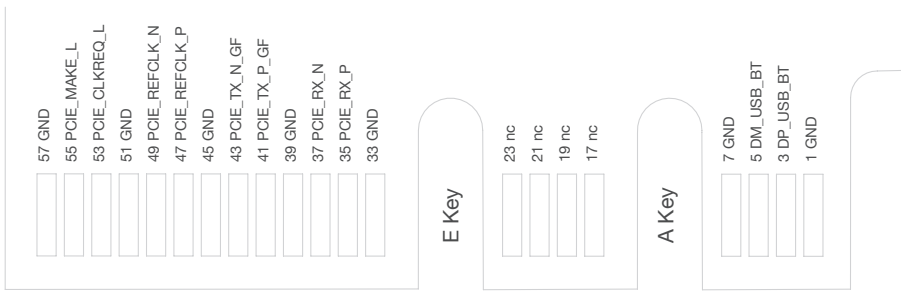


FIGURE 2-2. BLACK BEAN PIN OUT, BOTTOM SIDE

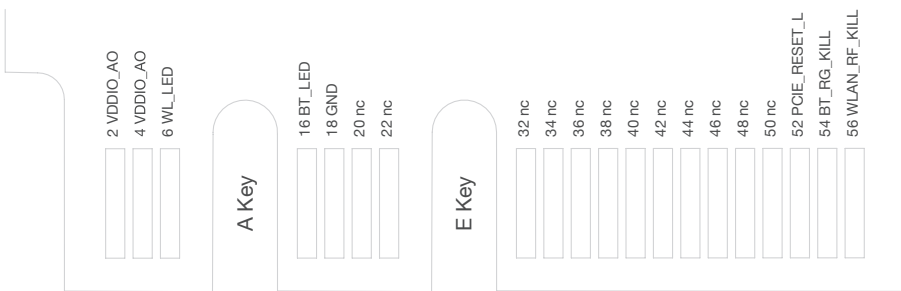
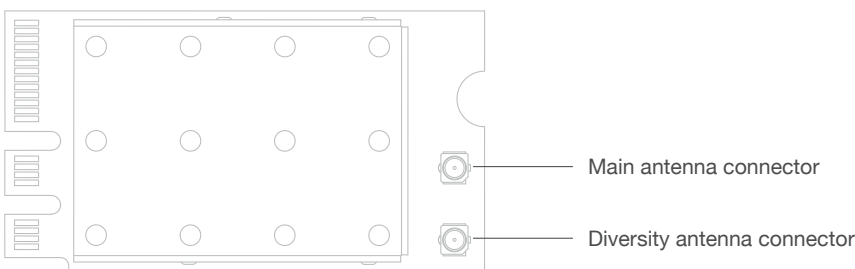
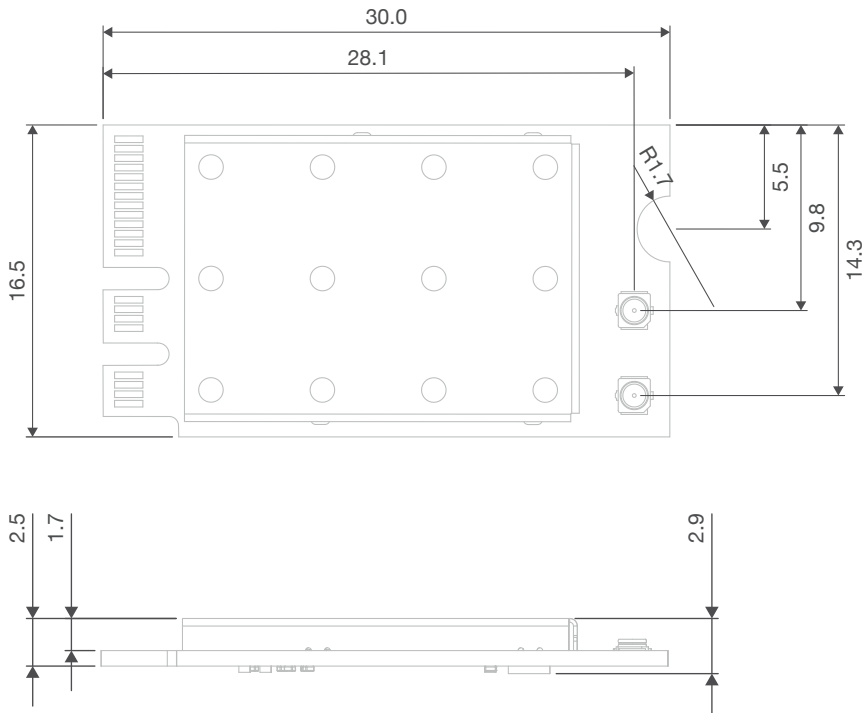


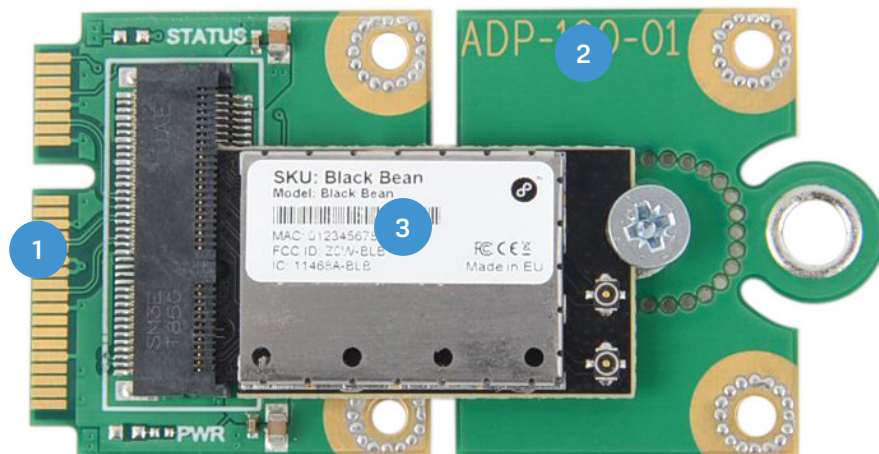
FIGURE 2-3. BLACK BEAN WLAN/BT OUT



3. Mechanical characteristics



4. Development kit



- 1 - PCIe mini interface
- 2 - M.2 to PCIe mini adapter
- 3 - BLACK bean card