



The IWR6843ISK-ODS includes on-board-etched short range antennas (approximately 12-15 meters for people detection) for the four receivers and three transmitters. Figure 3-16 shows the PCB antennas arrangement. This provides equal angular resolution both in Azimuth and Elevation directions with the help of 4 × 3 virtual antennas positions.

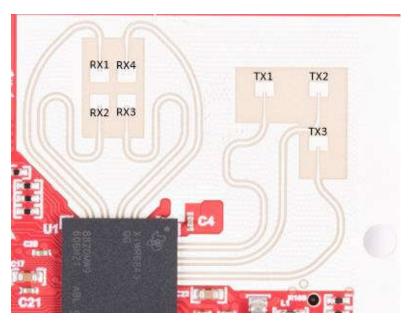
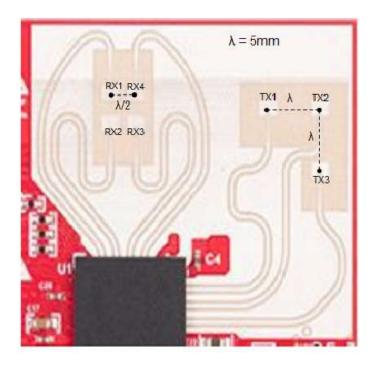
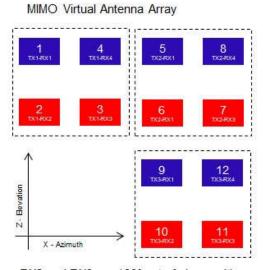


Figure 3-16. IWR6843ISK-ODS PCB Antenna





RX2 and RX3 are 180° out of phase with respect to RX1 and RX4. Because of this, a 180° phase inversion needs to be applied in software processing for the corresponding virtual RX channels (highlighted in Red)

Figure 3-17. IWR6843ISK-ODS antenna placement MIMO array



Figure 3-18 shows combined Antenna Radiation pattern in the Azimuth plane for all the transmitter and receiver pairs together (TX[1-3]-RX[1-4]).

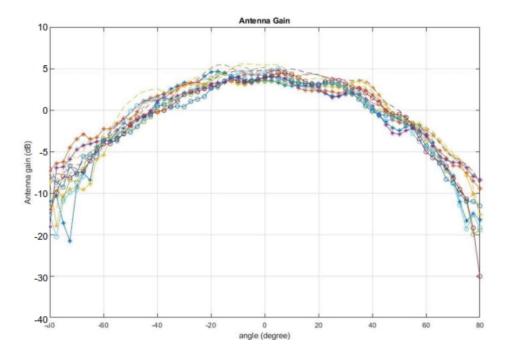


Figure 3-18. Measured Azimuthal Radiation Pattern for All Tx to Rx Pairs (All 12 Virtual Antenna Pairs Included)



Figure 3-19 shows the combined Antenna Radiation pattern in the Elevation plane for all the transmitter and receiver pairs together, TX[1-3]-RX[1-4].

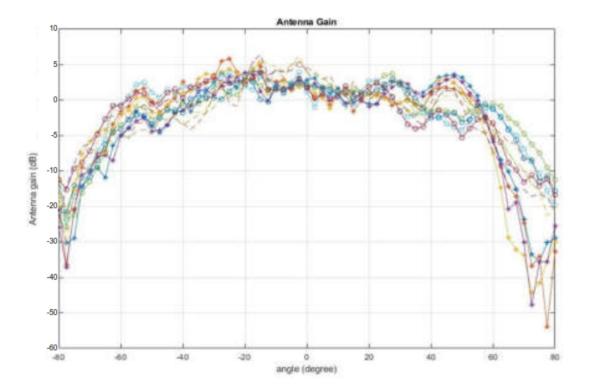


Figure 3-19. Measured Elevation Radiation Pattern for All Tx to Rx Pairs (All 12 Virtual Antenna Pairs Included)