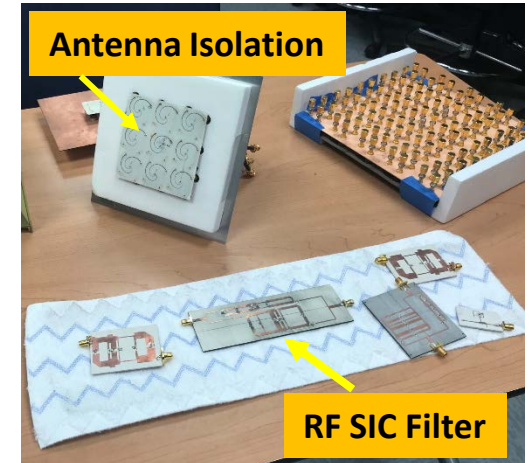
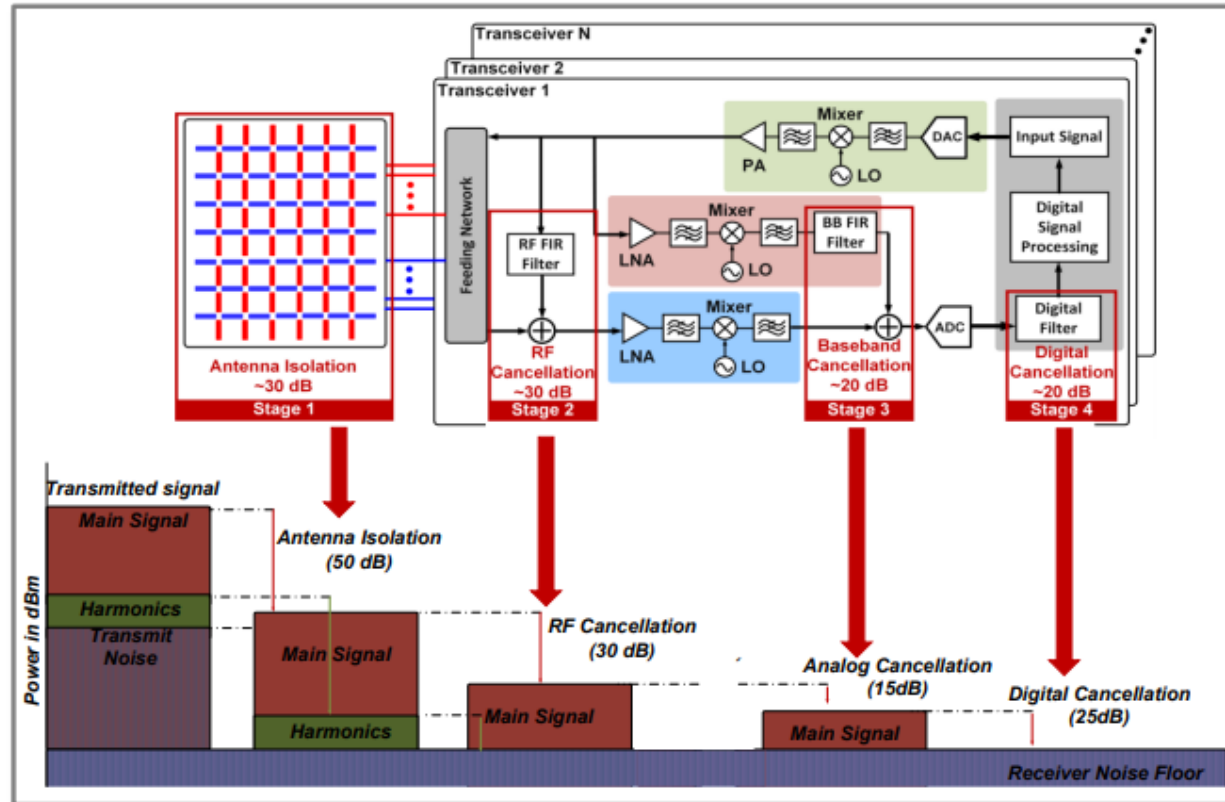


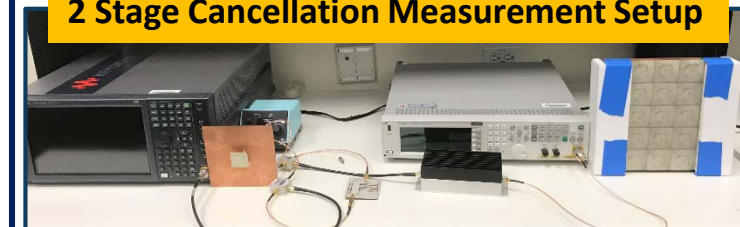
UWB Self-Interference Cancellation for STAR

In-Band Full Duplex Communication requires:

- Isolating Tx/Rx antennas
- RF/Analog filtering to reduce Tx signal and harmonics
- Digital signal processing to filter out multipath signals



2 Stage Cancellation Measurement Setup



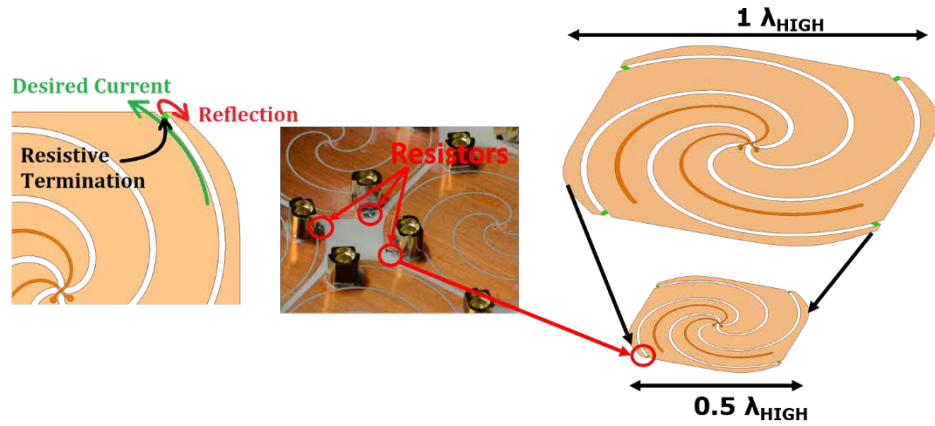
4 Stages of Cancellation:

1. Antenna Isolation (30-50dB)
2. RF Cancellation (30dB)
3. Analog Filtering (15dB)
4. Digital Signal Processing (25dB)

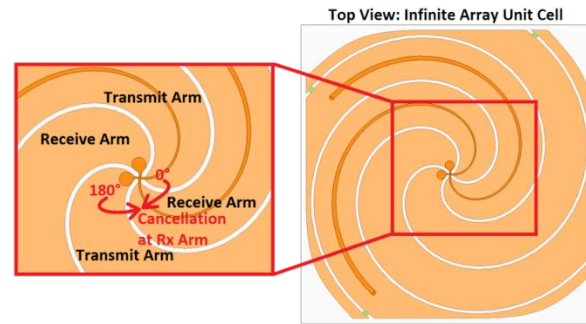
Goal : Attain >100dB of self-interference cancellation across wide bandwidth

Wideband High Isolation with Four-Arm Spiral

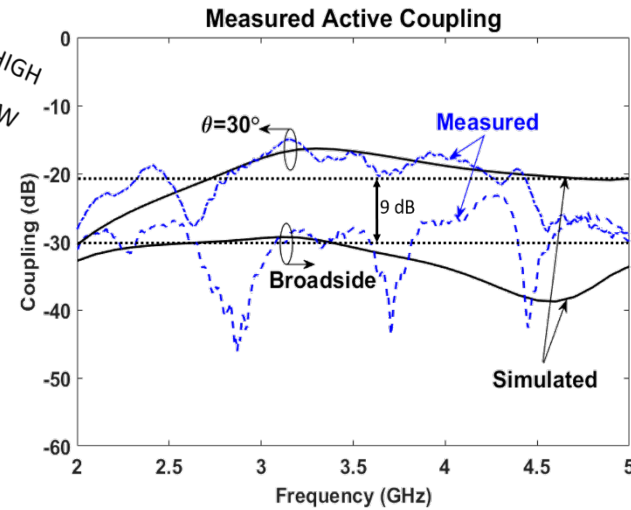
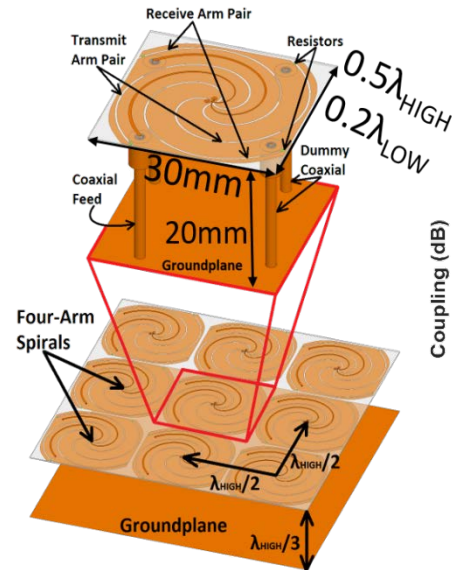
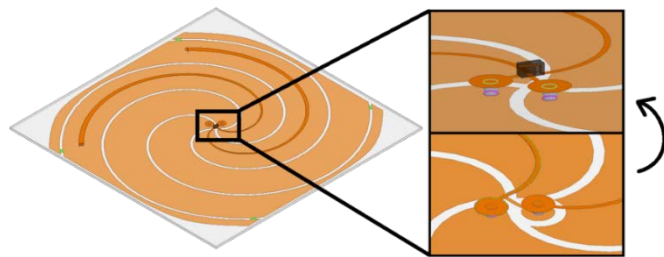
Challenge 1: Size Reduction



Challenge 2: Symmetry



Challenge 3: Balun Phase



High Isolation Spiral Antennas for STAR

