With ever-increasing RF complexity, implementing advanced carrier aggregation (CA) consumes valuable resources and time. These challenges stem from a collision of differing carrier and consumer requirements. Qorvo offers the solutions needed to help handset OEMs minimize compliance risk and avoid delays to product launch.

**Year-Over-Year Carrier Aggregation Evolution**

RF front-end complexity is on the rise. Carriers are using CA and MIMO (multiple-in multiple-out) technologies to increase capacity and data downlink/uplink speeds.

**RF Front-End Insertion Loss vs. Antenna Power**

**Smartphone Features Impacting RF Challenges**

- Full screen
- Facial recognition covering antenna area
- Increases in carrier aggregation usage and bands
- MIMO requires 8-10 antennas, up from 2-3 a few years ago
- HPUE (high-power user equipment); i.e. ≥26dBm Pout
- Total radiated power customer specification increases
Qorvo helps you deliver the world’s most advanced mobile devices. The RF Fusion LTE portfolio contains multiple high-performance modules that deliver global CA band coverage in the industry’s smallest form factors.

- Solving advanced RF complexity
- Delivering flagship performance
- Enabling a small RF solution size
- Providing a complete, global CA platform
- Speeding an OEM’s time-to-market
- Addressing many sub-markets with a broad portfolio

2018 RF Fusion LTE Solution: S-PAD Evolution

**Carrier Aggregation PAMiDs**
- Improved Performance
- Increased Integration
- High Order CA, MIMO

**RF Fusion Roadmap**

- **2016**
  - LB/MB/HB

- **2017**
  - LB/MB/HB + LNAs & PC2

- **2018**
  - LB/HMB/UHB

- **2019**
  - LB/HMB/UHB + 5G NR

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