



- The front-end end game: Last year we suggested that there would be consolidation in the frontend space, engineered by the active players – a result of Qualcomm's then announcement of RF 360, a completely integrated frontend solution on CMOS. Before the show, RFMD announced a bid for Triquint, attempting to grab one of the two main players in passive, frontend BAW filters (Avago being the other). We do not feel like this is the end of the match-making, possibly with Triquint, and certainly outside of this deal, with other players attempting to redefine their own positions. Bottom line, the front end active players are merging with the front-end passive players (and other active players) in an attempt to develop fully integrated FEM's to compete with Qualcomm.
- Infrastructure poised for growth: Almost every network equipment vendor we met with sounded optimistic about operator spending in the year ahead. With LTE rollouts continuing around the globe, and beginning in earnest in places like Europe, China, Africa and CALA, we believe this will be a solid year for infrastructure spend. Our checks indicate that spending will be significant across many operators in a number of geographies, as many understand the operational advantages of the all-IP architecture of LTE and feel confident enough about the macro environment to make the improvements. A few also noted decent recent 3G spending trends as developing markets increase spending in this more cost reduced (especially in handsets) technology.

We also have updates on the following companies and provide more detail in the body of the note:

Qualcomm: On the baseband side, Qualcomm continued to press its lead, with others making announcements but few showing signs that they would make real progress in terms of volumes this year. The company issued a bevy of press releases, one of which was the release of their Snapdragon 600 series, which we believe underscores Qualcomm's strategy to waterfall their technology, bringing LTE modem capabilities further down market and increasing the hurdle for other merchant vendors looking to make an inroad into the market. They also announced a frontend win with ZTE. The solution integrates the power amplifier, antenna switch and high band amplifier on one platform. While Qualcomm announced a design win, other frontend players were busy both making deals and displaying their wares.

Peregrine: Peregrine demoed their CMOS PA, and the results were impressive – the company was able to achieve 44% efficiency in LTE used alongside Nuijira's envelope tracking solution – being at least as good, if not better than the best GaAs competitor. With WCMDA, the solution achieves 48% efficiency without envelope tracking, in line with the best GaAs competitor. Many hardware vendors had been impressed with the demo results, and while RFMD has made inroads into Peregrine's territory recently, we believe that Peregrine should be able to secure design wins with this PA solution given its efficiency and size.

Audience: In our meeting with management, they sounded constructive about growth with Chinese-based OEMs and their traction in adjacent markets. They also sounded encouraged about their recent announcement around motion technology, called Motion Q technology, which enables activity navigation and gesture interpretation while consuming low energy (less than 5mW). The company feels that there are a number of use cases around the technology and while we tend to agree, we note that the technology is still in its early stages.