Femtocells: 2012 Volumes Flat; Growth Likely in 2013 and Beyond

ABI Research's latest forecasts for Enterprise and Consumer Femtocells, also referred to as Indoor Small Cells, estimate largely flat volume shipments in 2012 relative to 2011. The shipments in 2012 are expected to contain 2.44 million units, similar to the 2.47 million units shipped in 2011. In total, ABI Research estimates 5.3 million units will be deployed by end 2012.

"We believe there is a large inventory of femtocells sitting with operators right now with operators having a slow burn rate, which has led to limited fresh orders in the first half of 2012," says Aditya Kaul, practice director at ABI Research. "Silicon component suppliers have suggested that 1Q 2012 shipments were down 30% to 40% compared to 1Q 2011."

Some of the slack in volumes can also be attributed to attention shifting from indoor femtocells to outdoor metrocells. Also, the recent consolidation in the market including Mindspeed's acquisition of picoChip and Huawei's exit from the femtocell market suggest that the indoor small cell market has been under some strain.

In spite of lackluster volume shipments of residential and enterprise femtocells plaguing the indoor small cell market in 2011 and 2012, ABI Research forecasts that growth is likely to pick up from 2013 onwards. Some of this growth stems from a refresh of inventory levels, with operators like AT&T, Vodafone, Telefonica, Softbank and Sprint being at the forefront of driving shipments in both enterprise and residential settings.

The recently concluded Small Cell World Summit in London also provided some encouraging signs. Vodafone's Femtoplug announcement, which is sourced directly from French ODM, SagemCom, and is expected to be driven by Vodafone's Connected Home division, suggests some level of maturity in value chain dynamics and operator go to market strategies.

The Enterprise and Consumer femtocell market will grow at a CAGR of 63% to reach almost 28 million units in 2017 for revenue of $3.4 billion. Consumer femtocells are the largest class of femtocells representing a 68% share of units in 2012 and 70% in 2017.

—ABI Research
abiresearch.com

Defense Industry Platforms, Capabilities Continue to Evolve

The Strategy Analytics Advanced Defense Systems (ADS) service report, "Defense Electronics Industry Review: May 2012," provides a review of significant defense industry news, including product announcements, milestones, contract activity and defense industry financial performance. The move towards next generation systems will be underpinned by new (semiconductor) technologies while the US Navy is already looking ahead to the 2030s for a new fighter.

Even though the JSF has yet to make its operational debut, the US Navy is already putting forth a Request for Information (RfI) for a new fighter, which would be available in the 2030s as a replacement for the Boeing F/A-18E/F Super Hornet and EA-18G Growler, and could be either manned or unmanned. In the short term, unmanned platforms remain in focus, centered on the announced Northrop Grumman deal for NATO's Alliance Ground Surveillance (AGS) system, which includes five Block 40 Global Hawk UAS.

"New technologies will underpin these new platforms and the capabilities that they bring," noted Asif Anwar, Director of the ADS service at Strategy Analytics. "For example, the Block 40 UAS platforms for the AGS program will utilize the Multi-Platform Radar Technology Insertion Program (MP-RTIP) ground surveillance radar sensor which uses active electronically scanned array (AESA) technology using compound semiconductors, like gallium arsenide (GaAs)."

Other examples include the Next Generation Jammer (NGJ) electronic warfare program, which is providing opportunities for companies such as ITT Exelis, and will reportedly use AESA technology based around gallium nitride (GaN) semiconductors. Finally, Cassidian is using GaN technology for the electronic components that will be used for the German Armed Forces' new software-defined radio communications system, KommSysBw.

Eric Higham, ADS Service Director North America, added, "There is also continued activity around laser weapons. Northrop Grumman is testing products and the US Office of Naval Research (ONR) is looking to develop another laser prototype."

—Strategy Analytics
strategyanalytics.com

Radio Components for Cellular Terminals Set to Reach $30 Billion in 2016

The market for RF and associated radio components in cellphones and other cellular terminals will grow to more than $30 billion in 2016, as detailed in the Strategy Analytics RF & Wireless Components (RFWC) report, "Cellular Radio Components Will Reach $30 Billion 2016 Driven by Basebands, PAs, FEMs in Multiband 3G / 4G Devices". This EXCEL-based report covers the historical and projected market for radio components in cellular terminals in detail including basebands, transceivers, PAs and filters, in dollar and unit terms.

According to Christopher Taylor, Director, Strategy Analytics RF & Wireless Components, "The advent of phones with four or more W-CDMA and LTE bands has opened up the market to multimode, multiband PAs (MM-MB PAs), accompanied by more complex front-end modules containing filters, antenna switches and duplexers, for example in the form of ASMs (antenna switch modules), SFMs (switch filter modules) and ADMs (antenna duplexer modules). Drain modulation ICs, which can improve the efficiency of a PA tasked with covering more bands or modes, will also make inroads, especially in multimode, multiband LTE smartphones. Based on regional bands, partitioning trends and the number of expected cellular terminals shipped, we expect the market for RF components alone, excluding RF transceivers and basebands, to grow an average 9 percent per year to more than $5 billion in 2016."

The 24 page report covers LNAs / LNA-filters, PAs, transceivers, basebands, baseband-transceiver SoCs, stand-alone RF switches, ASM / SFMs, ADMs, PA drain modulation ICs, SAW / BAW filters and duplexers in dollar and unit terms, with a detailed forecast through 2016 by major air interface (GSM / GPRS / EDGE, W-CDMA, LTE, CDMA, other). The report also provides the estimated total number of cellular terminals that will ship per year, courtesy of the Strategy Analytics Wireless Practice, including legal handsets, cellular PC data devices, cellular M2M and grey market terminals.

—Strategy Analytics
strategyanalytics.com

Bluetooth, ZigBee on Collision Course

Bluetooth Smart and ZigBee will compete in a number of new and emerging markets that require low power wireless connections and interoperability with other devices. Key battlegrounds include connected home devices (remote controls, TVs, STBs, etc.) and wireless sensors (medical, health, sports, home automation, etc.).

When analyzing these markets holistically there will be competition between Bluetooth Smart and ZigBee but when delving deeper into the markets it is clear that there are specific sections that will be more suited to one technology or the other. "The remote control market is one which highlights a need for both technologies, here they each have their own niches that they will be most successful in." said Peter Cooney, ABI Research practice director, "For simple point-to-point control, Bluetooth Smart is the obvious choice due to its massive ecosystem of interoperable devices, but for more complex systems with high node counts then ZigBee/RF4CE is expected to be more successful as Bluetooth has a limited node count in practice".

Both technologies are expected to see rapid growth from 2013 onwards, with Bluetooth Smart enabled device shipments reaching over 1 billion annual shipments by 2016, far exceeding those for ZigBee. The success of Bluetooth Smart will be largely driven by the substantial ecosystem of Bluetooth Smart Ready devices such as smartphones, TVs, laptops, etc. Whilst lower, ZigBee devices shipments will be significant, reaching over 350 million by 2016.

The growth of both the Bluetooth Smart and ZigBee markets will bring many rewards to those suppliers that enter the market early and successfully dominate it. To date, most suppliers have chosen to target only one of these two markets. CSR and Nordic Semiconductor are among those that are pursuing the Bluetooth Smart market. Freescale Semiconductor and GreenPeak Technologies are targeting the ZigBee market. "Texas Instruments is the one supplier that stands out from the crowd and is seen as the company with the greatest potential to gain from growth in the Bluetooth Smart and ZigBee markets," added Cooney, "it is the only company to have developed ICs for both markets, as well as ANT and proprietary RF products, which puts it in an enviable position".

—ABI Research
abiresearch.com

In-Vehicle NAV Sales to Soar

Major technology companies, such as Apple, Google, and Microsoft, are beginning to battle for share of the in-vehicle navigation market, according to the Strategy Analytics report, "Automotive and Portable Navigation: Market Drivers and Forecasts 2011 -2019." This may spell trouble for traditional tier one navigation manufacturers, like Continental, Denso, Harman, as well as Garmin and TomTom.

"The recent Apple announcement regarding its automotive OEM partnerships and the expansion of Apple's mapping efforts could significantly change the in-vehicle navigation market. Previously major technology companies largely wrote off automotive markets. However, with a growing emphasis on creating a unified experience across all screens (PC, handset, TV, and in-dash display), the automotive screen is becoming an essential additional battle to win," said John Canali, Senior Analyst at Strategy Analytics.

Richard Robinson, Director of Automotive and Multimedia Communications at Strategy Analytics, added, "Competing against these new players will be difficult for incumbent suppliers of navigation systems because the new players are so well capitalized and can devote far more to research and development. Incumbent players need to reevaluate their role to demonstrate their worth in the supply chain, while OEMs must weigh what strategic alliances will provide the most benefit to consumers."

—Strategy Analytics
strategyanalytics.com