

Market Briefing

2018 Semiconductor Equipment and Materials Market: Have we Reached an Inflection Point?



L. Chamness
Senior Market Analyst Manager
SEMI, Industry Research and Statistics, Milpitas,
United States



Abstract

Coming off of a record year in 2017, 2018 started out promising, with many analysts increasing their mid-year revenue projects over initial forecasts. However, concerns around inventory, memory pricing and trade tensions are starting to cloud the year's once optimistic outlook. This presentation will discuss the 2018 fab, equipment and materials markets and provide a forecast through 2019 for these markets.

Biography

Ms. Lara Chamness is a Senior Manager Market Analysis at SEMI® and is responsible for SEMI's data collection programs for equipment and materials. This includes leading interactions with SEMI's participating companies, partners and subscribers. Ms. Chamness has 18 years of industry experience and has BA/MS degrees in environmental sciences and a MBA degree from Santa Clara University.

Reaching next level of semiconductor manufacturing productivity in a digitalizing world



O. Burkacky
Partner
McKinsey & Company, Munich, Germany

McKinsey&Company

Abstract

- Advanced analytics and artificial intelligence methods make their way into more and more manufacturing environment
- Semiconductor manufacturing with its large available datapool is best predestined to benefit at scale
- In this briefing update I will give an overview on the most promising use cases and key lessons learned from various implementations

Biography

- Based in McKinsey & Company's Munich office since 2007
- He is part of Digital McKinsey
- He leads McKinsey's Embedded Software initiative and Software Service Line in Europe
- He is also a member of the Advanced Industries Practice, specifically automotive and semiconductor industry with focus on product development

5G - Who has the most to win (and lose)?



C. Troadec
Division Director
Yole Développement, Power & Wireless, LYON -
VILLEURBANNE, France



Abstract

5G will totally redefine how the radio frequency (RF) front-end interacts in-between the network and the modem. Indeed, new radio frequency bands, sub-6 GHz, and mm-wave (as defined in 3GPP release 15) pose big challenges for the industry. However, with these challenges comes opportunity to disrupt the market's leadership.

LTE evolution has led to complex architecture in today's mobile phones, mostly due to carrier aggregation. Meanwhile, RF's board area and available antenna space have been reduced, leading to a densification trend with more handset OEMs adopting power amplifier modules and implementing new technics, i.e. antenna-sharing between LTE and WiFi. In the low frequency band, the inclusion of the 600 MHz band (for which T-Mobile recently acquired licenses) will pose new challenges for low-band antenna design and antenna tuners.

5G will add even more complexity, with new radio bands released in ultra-high frequencies (N77, N78, N79). Band re-farming (early bands are N41, N71, N28, N66, with more to come) with dual connectivity will also contribute to increasing constraint for the front-end. More densification in front-end modules will be required to enable new band integration, which is the approach followed by Broadcom with its innovative mid/high band module.

On the sub-6 GHz side, the current front-end leaders (Broadcom, Qorvo, Skyworks, and Murata) have already begun adapting to these changes. Along with sub-6 GHz, the mm-wave front-end module will completely disrupt the front-end industry, representing a completely different technology mindset that could create a new path to high data-rate access.

In our presentation, we will define and analyze the RF Front-End ecosystem for cell phone. We will provide market and technology trends and illustrate who has the most to win (and lose) with 5G.

Biography

Claire Troadec is Director of the Power & Wireless division at Yole Développement, part of Yole Group of Companies. These activities are covering power electronics, batteries & energy management, compound semiconductors and emerging materials, RF devices and technologies.

Based on her valuable experience in the semiconductor industry, Claire is managing the expansion of the technical and market expertise of Power and Wireless team. Daily interactions with leading companies allow analysts to collect a large amount of data and cross their vision of market segments' evolution and technology breakthroughs.

Claire Troadec holds a Master's degree in Applied Physics specializing in Microelectronics from INSA (Rennes, France). She then joined NXP Semiconductors, and worked for 7 years as a complementary metal-on-silicon oxide semiconductor (CMOS) process integration engineer at the IMEC R&D facility. During this time, she oversaw the isolation and performance boosting of CMOS technology node devices from 90 nm down to 45 nm. She has authored or co-authored seven US patents and nine international publications in the semiconductor field and managed her own distribution company before joining Yole Développement in 2013.