



即时发布:

**MEMS:**

## 谁占据领先之位?

摘自: MEMS 行业状态报告, YoleDéveloppement, 2019

法国里昂 - 2019 年 6 月 10 日: 在过往的一年中, Broadcom 和 Robert Bosch (Bosch) 仍然领跑全球 MEMS 行业。几乎所有企业都呈现稳定的年增长 (2017 至 2018 年), 只是比上一年度 (2016 至 2017 年) 略弱。

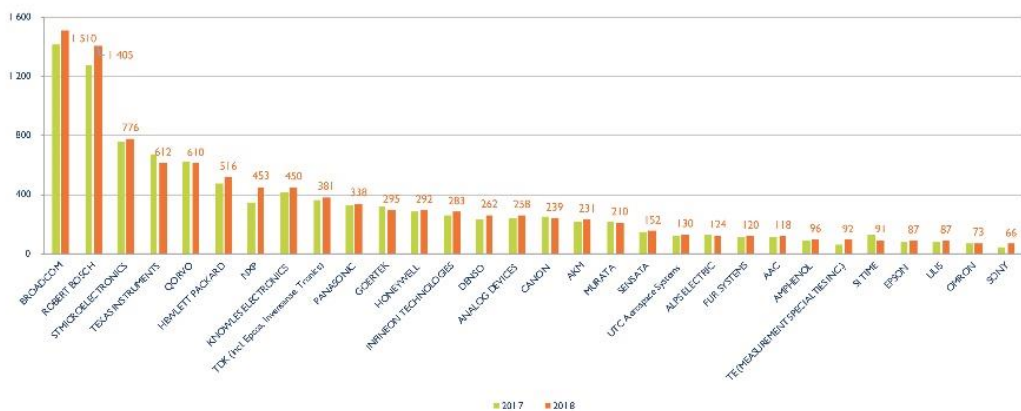
Yole Développement (Yole) 认为, 各大 MEMS 企业在 2018 年增长略低于预期的情况, 反映出对半导体行业正在进行温和的重新调整。但不要曲解这个结果, 事实上, 2018 年是半导体行业迄今为止发展最好的一年。只是 2017 至 2018 年的增长率约为 15%, 相对 2016 至 2017 近 21% 的增长率有所回落。这可能与 2018 年第四季度智能手机和汽车销售走弱 (包括终端产品和 MEMS)、导致库存积压有关。

市场研究和战略咨询公司 Yole 预计, 去库存将在 2019 年初 (第 1 - 2 季度) 逐渐结束, 随后 MEMS 将在今年剩余时间内出现温和的增长。

在过去的 20 多年中, Yole 的光子、传感和显示团队一直在关注 MEMS 行业发展。分析师每年都会提出全面的技术和市场分析, 重点关注 MEMS 的市场、技术创新和竞争格局等领域。Yole 于今

### 2018 Top MEMS manufacturers – In US\$ million

(Source: Status of the MEMS Industry report, Yole Développement, 2019)



日宣布了年度 30 大 MEMS 制造商排名，同时还展示了 MEMS 行业的发展现状。

在 2018 年，Broadcom 仍是 MEMS 的行业领军企业。去年的排名中，由于一份本应在 2017 年底发货的订单推迟到次年，导致 Yole 团队对其增长的估算高于实际表现。尽管 2018 年手机出货量放缓，但过滤器的数量上升，加之前端模块的价值上涨，推动 RF 实现持续增长。5G 问世将进一步助力这种繁荣态势。我们去年还预计另一家大型射频播放器 Qorvo 也会实现增长，但未能实现。Qorvo 将产品从 6 英寸转换到 8 英寸平台（可能导致生产延迟），尽管如此，收入仍然出现小幅下降。

**Yole 技术与市场分析师 Dimitrios Damianos 博士解释道：**“由于 Bosch 在消费和汽车市场的强势地位（播放器排名第一），该公司的收入增长超过 1 亿美元。

*每辆新车平均使用 5 个 Bosch MEMS 产品，同时世界上半的智能手机至少使用 1 个 Bosch MEMS 产品。”*

大多数公司都实现了稳定获利的增长，从较温和的 2% 涨幅到较好的 10-15%，但 NXP 和索尼的涨幅分别达到了 30% 和 40%：

- 佳能和惠普等喷墨头品牌的收入实现增长，但爱普生收入下滑。惠普过去几年在消费打印机市场的表现一直走下坡路，如今开始恢复元气。
- MEMS 麦克风巨头 Knowles 公司发展喜人，消费产品业务走高是原因之一，不仅限于智能手机，还包括耳机等产品等；但 Goertek 的表现走弱，全球手机销售疲软可能是原因所在。

AAC 也呈增长之势。

- 在微测辐射仪方面，FLIR 和 ULIS 受益于其多元应用的优势（最重要的是个人视觉系统、消防、无人机和传统的热成像、军事、监视）而实现逐年增长。

当索尼跻身排行之时（尽管处于末尾），Formfactor 已掉出排名之列。First Sensor 目前正在与 TE Connectivity 进行了高级收购谈判，以微弱劣势未能排入前 30 名之列。

**Yole 研究员 Eric Mounier 博士说：**

*“2017 年排名前 30 位 MEMS 播放器收益为 98.8 亿美元”。*

*“2018 年，这一总计数据已超过 103 亿美元，同比增长近 5%。”*

*MEMS 市场 2018 年的总收入额为 116 亿美元。这些入榜企业就占据了 90% 的比例”。*



**ABOUT THE REPORT:**

- [Status of the MEMS Industry](#)

*Megatrends are invigorating the MEMS industry.* - Produced by Yole Développement

**Companies cited in the report:**

AAC, AKM, ALPS Electric, Amphenol, ams, Analog Devices, Apple, Asia Pacific Microsystems, Boehringer Ingelheim microPARTS, Bosch, Broadcom, Canon, Colibrys, Cirrus Logic, DENSO, DRS, EPCOS, Epson, First Sensor Technology, FLIR Systems, FormFactor, Fujifilm Dimatix, GLOBALFOUNDRIES, Goertek, Hewlett Packard, Hitachi Automotive, Honeywell, IMT, Infineon Technologies, Kistler and more ...

**About the authors:**

- **Dimitrios Damianos**, PhD joined Yole Développement (Yole) as a Technology and Market Analyst and is working within the Photonics, Sensing & Display division. Dimitrios is daily working with his team to deliver valuable technology & market reports regarding the imaging industry including photonics & sensors.

After his research on theoretical and experimental quantum optics and laser light generation, Dimitrios pursued a Ph.D. in optical and electrical characterization of dielectric materials on silicon with applications in photovoltaics and image sensors, as well as SOI for microelectronics at Grenoble's university (France).

In addition, Dimitrios holds a MSc degree in Photonics from the University of Patras (Greece). He has also authored and co-authored several scientific papers in international peer-reviewed journals.

- With almost 20 years of experience in MEMS, Sensors and Photonics applications, markets, and technology analyses, **Eric Mounier**, PhD provides deep industry insight into current and future trends. As a Fellow Analyst, Technology & Market, MEMS & Photonics, in the Photonics, Sensing & Display division, he is a daily contributor to the development of MEMS and Photonics activities at Yole Développement (Yole), with a large collection of market and technology reports as well as multiple custom consulting projects: business strategy, identification of investments or acquisition targets, due diligences (buy/sell side), market and technology analysis, cost modelling, technology scouting, etc. Previously, Eric Mounier held R&D and Marketing positions at CEA Leti (France).

He has spoken in numerous international conferences and has authored or co-authored more than 100 papers. Eric has a Semiconductor Engineering Degree and a Ph.-D in Optoelectronics from the National Polytechnic Institute of Grenoble (France).

**ABOUT YOLE DEVELOPPEMENT**

Founded in 1998, Yole Développement has grown to become a group of companies providing marketing, technology and strategy consulting, media and corporate finance services, reverse engineering and reverse costing services and well as IP and patent analysis. With a strong focus on emerging applications using silicon and/or micro manufacturing, the Yole group of companies has expanded to include more than 80 collaborators worldwide covering MEMS and image sensors, Compound Semiconductors, RF Electronics, Solid-state lighting, Displays, software, Optoelectronics, Microfluidics & Medical, Advanced Packaging, Manufacturing, Nanomaterials, Power Electronics and Batteries & Energy Management. The “More than Moore” market research, technology and strategy consulting company Yole Développement, along with its partners System Plus Consulting, PISEO and KnowMade, support industrial companies, investors and R&D organizations worldwide to help them understand markets and follow technology trends to grow their business. For more information, visit [www.yole.fr](http://www.yole.fr) and follow Yole on [LinkedIn](#) and [Twitter](#).

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