

**eMemory Q4 2019 Results – Earnings Call Transcript**

**February 12th, 2020 16:00-17:00**

**Good afternoon, everyone.**

**We just released our January revenue a new high in term of USD. This confirmed our growth momentum resumed and a multi-year growth cycle has begun, driven by new applications, such as ISP, networking, multimedia and DRAM. Our existing DDI and PMIC business also show strong growth as higher ASP (OLED), increasing content (digital power) and market share gain.**

**In addition, we begin to design various security IPs based on our NeoPUF for the application in IoT, AI, autonomous driving, blockchain, and 5G, which will soon become our next growth engine.**

**Now, I will invite our President to report our operation results of Q4 and the outlook for the future. At the end, we will address the concern of the Coronavirus epidemic.**

-----

**Good afternoon. Thank you for attending eMemory's 2019 fourth quarter investor conference call. In today's presentation, I would like to report our operation results of Q4 and the full-year results of 2019, followed by the status update of our technologies and future outlook.**

**First, I would like to report our 2019 Q4 results.**

- 1) Our Q4 revenue was three hundred and sixty two million NT dollars (NT\$ 362mil), an increase of 7.5% sequentially and a decrease of 11% year-over-year.**
- 2) The operating expenses of Q4 was two hundred and two million NT dollars (NT\$202mil), up 2.5% sequentially, and down 9.1% year-over-year.**
- 3) Q4 operating income increased 14.6% sequentially, and decreased 13.4% year-over-year. The operating margin of Q4 was 44.1%, with EPS, 1.74 NT Dollars (NT\$ 1.74) and ROE at 30.2%.**

**The full year revenue of 2019 was 1.41 NT dollars (NT\$ 1.41 bil), a decline of 4.5% year- over-year. The operating expenses decreased 1.9%, while the operating margin decreased 1.5 percentage points. EPS decreased 10.2% to 7.30 NT dollars (NT\$ 7.30), and ROE down 0.7 percentage points to 31.6%.**

**In the following section, I will break down the revenue contribution by licensing and royalty.**

- 1) Licensing from Q4 accounted for 32% of the revenue, up 11.8% sequentially, but down 7% year-over-year.**
- 2) Royalty contributed 68% of the total revenue, increased 5.6% sequentially, but decreased 12.8% year-over-year.**
- 3) The full year revenue of 2019 declined 4.5% year-over-year, with both licensing and royalty decreasing 4.3% and 4.6% respectively.**

**If we breakdown revenue by technologies, the results are as follows:**

- 1) NeoBit was accounted for 27.5% of total licensing revenue of the quarter, decreased 12.1% compared to the previous quarter, but up 7.8% year-over-year. Its royalty, accounted for 67.6% of total royalty, decreased 6.8% sequentially, and 20.7% year-over-year.**
- 2) NeoFuse was accounted for 56.7% of total licensing revenue of the quarter, up 36.9% sequentially, and 9.4% year-over-year. Its royalty increased 49% sequentially, and 15.8% year-over-year because of increasing production from advanced node. The royalty of NeoFuse contributed 28.4% of total royalty.**
- 3) Our new technology, NeoPUF, has not contributed to royalty yet, but has contributed 3% of total licensing revenue. With the ongoing engagement with leading customers, we expect more significant contributions from NeoPUF this year.**
- 4) For NeoEE and NeoMTP, licensing revenue decreased 27.7% sequentially and 56.8% year-over-year. Royalty from MTP increased 28.4% sequentially, but decreased 17.6% year-over-year.**

**In the full year of 2019, NeoBit contributed 26.9% licensing and 75.4% royalty, and down 14.8% and 10% year-over-year. For NeoFuse, both licensing and royalty had an increase of 26.4% and 50.7% year-over-year. NeoEE and NeoMTP's licensing and royalty decreased 44.8% and 43.3%. This is because the focus of MTP is in the collaboration with leading customers for automotive applications and the engagement period is relatively long. In addition to that, our MTP team are working with partners on developing MRAM, ReRAM and AI memory.**

**If we breakdown royalty by 8-inch and 12-inch wafers,**

- 1) 8-inch wafers, which accounted for 70% of royalty, increased 10.4% sequentially, but decreased 9.3% year-over-year.**
- 2) Royalty for 12-inch wafers contributed 30% of royalty, decreased 4.2% sequentially and 20% year-over-year. The sequential decline is due to DDI customer' inventory adjustment.**
- 3) For the full year of 2019, the contribution of royalty from the 12-inch wafer was 30.7%, a decrease of 10.9% year-over-year. 8-inch wafer contributed to 69.3% of the royalty, down 1.5% year-over-year.**

**There were a total of 98 product tape-outs in Q4 last year. We will provide more information in the management report later today.**

**Next, I would like to address our future outlook.**

- 1) For licensing revenue, we expect NeoFuse and NeoPUF to continue growing due to increasing advanced technology platforms and more comprehensive PUF related IP portfolios.
- 2) For royalty revenues, royalty from DDI will increase due to higher penetration rate of OLED DDI by existing customers and new customers. PMIC will continue to grow as content increase in 5G and higher ASP as migrating into advanced process node. New applications like Multimedia related products (such as DTV, STB, surveillance, ISP) and DRAM will continue to grow our royalty revenue.

**For new application development:**

- 1) NeoPUF was designed into leading customers' products for IoT applications. PUFrt (the IP of NeoPUF-based root of trust) was adopted by customer for AI application already.
- 2) In addition to ISP, NeoFuse will also be used in CIS products to provide highly intelligent image recognition applications.
- 3) Security platform with ARM already has customer adoption.

**Contribution from the developments mentioned above will be seen this year.**

**For new technology developments:**

- 1) In addition to the 5nm technology platform, ReRAM, and ARM security IP cooperation which we mentioned in the previous quarter, we are developing 6nm and 5nm plus (N5P) technology with leading foundry partner.**
  
- 2) For security IP, after the completion of PUFtrng (NeoPUF-base random number generator) and PUFrt (NeoPUF-based root of trust), we are working with foundry partners to develop NeoPUF into embedded flash platform. In addition, NeoPUF-based IoT security solution, security elements and hardware security module IPs are under development.**
  
- 3) We are developing PUF-based hardware security open platform, by integrating OTP, PUF, security-function IPs, and encryption algorithm IPs to provide total security solutions for AIoT and 5G applications.**

**Lastly, regarding the New Coronavirus epidemic, we see very limited impact on daily operation.**

**All our employees are based in Taiwan, and our RD cooperation with customers are through conference call, not impacted by travel restriction.**

**This conclude my presentation. Thank you.**

-----  
**As a company with a wide range of technology platforms, we are confident that our continuous development of technology platforms and innovations in silicon IP will continue to bring more value to customers and industries. Particularly, in the 5G era, security becomes a must for many applications. We have expanded our OTP and PUF to create new security IPs for securing the AIoT devices, which will become our new growth curve. Thus, we are very confident about our long-term growth. Once again, thank you for supporting eMemory.**