eMemory Q1 2019 Results – Earnings Call Transcript May 10th, 2019 16:00-17:00

Good afternoon, everyone. Thank you all for attending eMemory's 2019 first quarter investor conference call. In today's presentation, we would like to report our operation results of 2019 Q1 and update the status of our technologies and outlook for 2019.

First, I would like to report our 2019 Q1 results. Our Q1 revenue was NT$395 mil, a decrease of 2.9% sequentially and an increase of 5.5% year over year. The operating expenses of Q1 was NT 201 mil, down 9.6% sequentially, and up 4% year over year.

As a result, Q1 operating income increased 5.3% sequentially, and increased 7% year over year. The operating margin of Q1 was 49.1%, with EPS, NT$ 2.39 and ROE at 38.9%.

In the following, I will breakdown the revenue contribution by licensing fee and royalty.
1) In Q1, 73% of revenue was from royalty and 27% from license fee.
2) Royalty was record high, up 2.6% sequentially, and increased 11.3% year over year.
3) License fee was down 15.2% sequentially, and 7.6% year over year. The decline of licensing revenue is mainly due to prolonged contract negotiations with some big customers and we expect revenue recognition in Q2 and second half of 2019.

If we breakdown revenue by technologies

For NeoBit, the license fee is down 33% compared to last quarter, and 45% year over year. The reason is because NeoBit technologies had been deployed to many process nodes among foundries, therefore, less contribution to technology license fee. In addition, we have already developed very large NeoBit IP library, resulting in the decrease of Non-recurring Engineering fee. As most new product tape outs are using existing IP, the usage fee of design licenses still grow continuously. NeoBit is a very strong cash cow for us as very few RD resources (cost) incurred, and still contributed 84% of royalty for the quarter, an increase of 15.4% sequentially, and 6.5% year over year.

For NeoFuse, which accounted for 60% of total license fee for the quarter, up 8% sequentially, and increased 24% year over year. This shows increasing adoptions of NeoFuse in advance nodes and will drive royalty growth in the future. Its royalty declined 43% sequentially, but up 161% year over year. This is mainly seasonal factor, as DDI related products always prebuilt in two quarters and rest for the others.

For NeoEE and NeoMTP, license fee decreased 35% sequentially and 19% year over year. The decline was primary due to more NeoMTP license contracts signed in last Q1 and Q4. These design projects are under development and will tape out soon. Their royalty revenue was up 8.2% sequentially but down 33.4% year over year. The decrease is due to one of our fingerprint customer's product transition.

If we breakdown royalty by 8-inch and 12-inch wafers:

1) Royalty from 12 inch wafer increased 8.3% sequentially, and 22% year over year.

2) 8-inch royalty remains flat sequentially and up 6.5% year over year.

Next, I would like to take the next few minutes to recap two important applications our IPs were designed into due to their significant addressable market.

The first is our NeoFuse to be used in DRAM to replace laser fuse for DRAM repair.

In the past, laser fuse has been used to connect the redundant memory array to replace the array with broken bits. There are several disadvantages using laser fuse.

1) After wafer level testing, DRAM wafers need to move to laser trimmer machine to operate the laser fuse.

2) After DRAM chip is packaged, no more laser trimming can be applied if there are more broken bits induced during packaging.

By using our NeoFuse, the above disadvantages can be resolved:

1) The NeoFuse can be directly activated to connect the redundancy memory array to replace array with broken bits during the wafer level testing.

2) After DRAM chip packaged, if there are still new broken bit induced during packaging processes, NeoFuse can be activated again to perform the array replacement functions.

So, by using NeoFuse to replace the traditional laser fuse, the benefits are;

1) Reducing the complexity of manufacturing flows.

2) Greatly reducing the manufacturing cost by

    a、 Simplifying the process flow

    b、 Eliminated the use of laser trimming machine

    c、 Improving higher yield by performing both repair at wafer level testing, final testing and system level.

We have already worked with two DRAM customers last year, and have request from another DRAM fab this year. As the business model we signed with customers is royalty based by wafer shipment, we expect DRAM will contribute our revenue significantly in the future. We believe our Neofuse is the most robust solution in the market and will promote our technology to worldwide DRAM companies.

The 2nd new applications is using NeoPUF on FPGA to protect the program which is used to configure the FPGA to perform certain ASIC functions.

When FPGA is activated, the program stored in the memory will be uploaded so that the gate arrays will base on the program to configure the ASIC function, which desired by the system. However, if this program is not protected well and be stolen by the hackers, the hackers could (1) change the design and create the back door for his convenience or even shut down the system, (2) the hacker can steal the program and copy it into the FPGA chip to sell the counterfeit products. Both events will cause the chip companies and their customers' very huge loss. Therefore, FPGA needs high level hardware security to protect its program. The

NeoPUF can play a role to generated unique ID or private key to encrypt the program code such that the hacker is not able to steal the original program code. We have several FPGA customers requesting such solution.

As we continue to penetrate to new applications by our core technologies, NeoBit, NeoFuse, NeoEE, NeoMTP, and NeoPUF, the following ICs have embedded our technologies: PMIC, LCD Driver, various sensors, RFID, OLED driver, network IC, DTV, STB, SSD controller, Bluetooth, TDDI, MCU, fingerprint sensors, smart meters, surveillance, DRAM, embedded Flash, and FPGA. In the future, we have planned to enter CPU, AP, GPU, and NAND Flash market to make our long term goal " eMemory embedded everywhere" come true.

With our persistent effort in investing innovation, we are recently developing a series of PUF-based hardware Security IPs to secure the connected world, which including Unique ID (PUF$_{UID}$), Ture Random Number Generator (PUF$_{TRNG}$), Key Encryption Key (PUF$_{KEK}$), Secure Storage (PUF$_{KST}$), Key Generator (PUF$_{keygen}$), Authentication (PUF$_{Authen}$), Digital Signature (PUF$_{sig}$), …These security IPs will add value to all the chip makers and system house to enable the security functions. Especially, our PUF true Random number generator, which is much lower cost with high speed, low power and very powerful function than traditional method. This is our mission to embedded our IP in every chip to secure the connected world.

Finally, I would like to give the outlook for 2019 and future prospect. As the 2nd quarter is traditional the bottom of the year because the royalty reflected the first quarter of foundry wafer shipment and lack of two semiannual foundry

payment (which report in Jan and July). We expect revenue to decline sequentially as usual, but grow year over year. We expect a strong 2nd half due to new products ramping up.

For license fee, Neofuse demand is very strong. We expect current contracts negotiations to be final to contribute license fee growth.

For royalty, 8 inch will grow as largest US customers are ramping up PMIC rapidly. Multiple new products in the pipeline for production this year will drive 12 inch royalty to grow further, ie. Bluetooth and TDDI in 55nm, OLED DDI in 40nm, Switch, DTV, STB, Surveillance and SSD controller in 28nm. Our DRAM customer will start production by the end of the year.

And for the new technology and IP development.
1) We continue to catch up the most advance process 7nm and 5nm, and engage 1st tier customers.
2) Co-work with IDM companies to develop the emerging memories MRAM and ReRAM for AI applications (AI memory).
3) Work with No.1 IP Company to embedded our NeoFuse and NeoPUF IP into their security processors.
4) Build PUF-based hardware security IP platform for smartphone, IoT, 5G, autonomous driving, AI and Fintech.

Thank you all for your attentions and patience. We eMemory will continue to drive the new innovation in security to create values from our core technology, and to create values for our customers and shareholders. Thank you.