eMemory 3Q24 Earnings Call Q&A Transcript

November 8th, 2024, 16:00-17:00 Taiwan Time

Q&A Transcript

1. **You recently issued a press release announcing the collaboration with Siemens to launch an SRAM repair tool. Typically, your IP is utilized by foundries and applied to chip customers. Why was it necessary to partner with an EDA company for this release?**
   >> EDA companies offer Built-In Self-Test (BIST) functionality for SRAM blocks. Through our collaboration with EDA companies, we have developed OTP with an appropriate interface that integrates seamlessly into EDA tools, making OTP repair more user-friendly. With Siemens' BIST holding over 90% of the market share, our partnership with Siemens represents a powerful alliance.

2. **What factors have contributed to the ongoing growth of your operating profit margin? As you develop more IPs and licensing revenue increase each quarter, will there be a need to expand your R&D team?**
   >> Our business model is unique in that we license our technologies to foundries, making their process platforms also our technology platforms. Globally, 25 foundries have licensed our technology, and we have established a total of 600 process platforms (ranging from 0.35µm to 3nm), including OTP, PUF, MTP, EEPROM, Flash, and RRAM. Each year, we add 50 new process platforms worldwide, achieving over 600 tape outs annually. We collect royalties as these chips enter mass production.

   Because of our unique business model, over 80% of our revenue comes from royalties from accumulated products entering production and licensing from our existing library, which requires minimal R&D resources. This allows us to focus our research and development on creating new technologies and platforms. As we continue to:
   1) License more technologies to foundries,
   2) License more IPs to fabless companies,
   3) Innovate more application IPs,
   these efforts will drive sustained business and profit growth.

   In terms of talent, we can maintain our current headcount to support the expansion of existing foundry technologies. However, we still need new talent to develop IPs in areas like security systems, which require specific expertise. We hire a small group of innovative experts to develop these core technologies, rather than engage in design services. Even when we increase our headcount, we do so gradually, rather than through rapid expansion over a short period.

3. **Several ASIC companies in Taiwan have recently downgraded their revenue outlooks. Has eMemory's business been affected by the current economic environment? If not, what is the reason?**
   >> As mentioned earlier, we have a unique business model, deep technical expertise, extensive technology platform coverage, and IP applications that span nearly every chip domain. Furthermore, our IPs have a 100% retention rate, meaning that once customers adopt our technologies, they continue to use it across all subsequent product generations. We develop our technologies from the foundational transistor level, with patents protecting all IPs, making it impossible for competitors to replicate. In this field we hold a leading position and are well ahead of our competitors, which means we are not subject to price competition.

4. How do you maintain your leading position against competitors?

\>> As mentioned in the previous question, our competitive edge stems from collaborating with foundries to build our technology platforms and licensing our technology to fabless companies for use at these foundries. To stay ahead of our competitors, we must:

1) Continuously establish our technologies on the foundries' new process platforms,
2) Continuously develop the IPs that fabless companies need for each technology,
3) Continuously integrate new IPs to offer fabless customers better functionalities, such as security IPs, from Root of Trust to Security Processors.

Only through continuous innovation, widespread platform deployment, and accelerating progress can we maintain our leading position and prevent competitors from catching up.

5. Do you currently have any customers who have adopted your IP for SRAM repair?

\>> Three companies have already adopted our IP, and all are developing AI SoCs in advanced processes.

6. What's the current status of your collaboration with ARM? How will it impact your future operations? Has there been any business progress so far? Will it contribute to this and next year's licensing fees and royalties?

\>> Our collaboration with Arm mainly focuses on hardware security. In terms of PUF-based security, we have outlined a roadmap to continuously enhance security levels and introduce new functions, which are also needed in all of Arm's applications. In our partnership with Arm, we jointly promote IP to customers, license it to Arm or their customers on advanced process node platforms, conduct educational outreach together, and co-develop and integrate new IPs to meet higher security requirements. All these efforts are ongoing, and our licensing and royalties will increase as customers adopt our IPs in more products and enter mass production.

7. As of Q3, the cumulative revenue grew by 20.63% year-over-year. What IP licenses, end-product applications or process nodes have driven the growth in licensing revenue? What types of IP, chip applications, and process nodes were the main contributors to royalty revenue growth?

\>> Regarding licensing fees, MTP-related has shown the highest annual growth, with nearly 86% year-over-year growth. The increase was mainly driven by applications in DDR5 SPD/PMIC, 4-color ESL/ePaper, and System PMIC, primarily in mature process nodes. There are also several projects in advanced process nodes, which have a higher unit price and contribute significantly as well.

In terms of royalties, the 28/22nm nodes contributed the most, including applications like OLED DDI, TCON, ISP, Connectivity, and SSD controllers and more. With a wide range of applications and over 380 NTOs to date, we expect significant growth next year. Other 16/12/7/6nm applications, including security IPs, will also gradually enter production after tape out. Given the low base period, the growth rate and potential will be very significant in the future.

8. What is your outlook for next year's performance? What are the main drivers of growth?

\>> Regarding licensing fees, the progress in advanced processes will accelerate due to a broader range of product lines, more technology nodes, and more foundry process platforms available to customers, along with the ARM and Siemens collaboration platforms. As a result, both licensing fees and royalties will be much higher than before. We are very confident about future growth.

9. **Currently, the semiconductor industry is experiencing strong demand for advanced processes, while demand for mature processes is slowing down. Will this trend continue into next year? How will this impact your performance?**

>> In terms of licensing and royalties this year, we have seen year-over-year growth in NeoBit OTP and MTP, indicating that the demand for our products in mature process nodes remains strong. Although the utilization rates of some foundries in mature processes are not as high as before, the aggressive global expansion of capacity in mature processes means that overall demand in this area will continue to grow for us.

10. **We see that many high-demand chips in the market, such as CIS, ISP, OLED, TWS, WIFI, TCON, SSD Controller, High-Speed IC, PMIC, STB/DTV, RF, and Switch, are increasingly being developed using more advanced processes or FinFET technology. How will this trend affect company's business?**

>> These application ICs, driven by the demand for more functions, higher speed, lower power consumption, and reduced costs, will continue to move toward more advanced processes, and even FinFET process. This is a very favorable development for us because it means the IC chips will become larger, wafer consumption will increase, and both our IP and the unit price of foundry wafers will be higher in advanced processes. All these factors will drive continuous growth in our royalties and licensing fees.

11. **Since Caliptra is an open standard, who might play a role in enforcing its adoption? What are the key motivations for customers to implement it?**

>> The Caliptra standard primarily establishes security requirements for data centers, largely driven by cloud service providers (CSPs). CSPs offer data centers for data storage, analysis, and services such as AI model training and more. Customers using data center services want their data to be securely protected, analyzed, and deliver expected outcomes. For end devices to access cloud-based data centers, they must comply with Caliptra standards, which require a PUF for generating a unique ID, a TRNG for random number generation, and OTP for private key storage. Our PUFrt IP integrates all three (PUF, OTP, and TRNG) to create a root of trust, meeting the security needs of data center applications, with customer demand for PUFrt steadily increasing.

12. **According to Caliptra documentation, the goal is for confidential computing to first adopt Caliptra, with later plans to expand to all chip types. Is this a primarily datacenter-driven opportunity, or is it expected to extend significantly into edge AI applications as well?**

>> Caliptra's initial focus was indeed on datacenter applications. However, as AI processing shifts toward the edge, such as in IoT sensors, autonomous vehicles, and smart devices, the root of trust (RoT) becomes equally crucial. For edge AI, RoT enables secure authentication when devices communicate with datacenters, ensuring that only verified data and devices can interact with the central systems.

Establishing RoT at both datacenter and edge levels enhances security and integrity across the entire ecosystem, from data generation at the edge to cloud processing and storage. This approach strengthens overall network protection, making data transmission and processing more reliable and secure.

13. **Trump has just been elected as the US president and publicly stated that Taiwan's semiconductor industry should pay protection fees to the US. If import tariffs are imposed on the semiconductor chips produced in Taiwan, will this affect your company?**

>> We are an IP business, so we do not manufacture end-product chips. Instead, our model is based on collecting licensing fees and royalties from foundries and chip companies, which are not subject to tariffs. In addition, our IP is licensed to foundries globally, including US-based foundries such as Intel and GlobalFoundries, as well as other companies with facilities in the US. Thanks to our global platform coverage and diverse technology processes, we are less susceptible to political impacts.