

**Operator**

---

Ladies and gentlemen, good afternoon. At this time, I'd like to welcome everyone to QuickLogic Corporation's Second Quarter 2017 Earnings Results Conference Call. Today's conference call is being recorded. I would like to turn the call over to the company's Investor Relations representative Ms. Kirsten Chapman of LHA. Ms. Chapman, please go ahead.

**Kirsten Chapman - LHA**

---

Thank you, operator. Welcome, everyone, and thank you for joining us today for QuickLogic's Second Quarter 2017 Results Conference Call. With us today are Brian Faith, President and Chief Executive Officer, and Dr. Sue Cheung, Chief Financial Officer and VP of Finance.

Before we begin, I will read a short safe harbor statement. Some of the comments QuickLogic makes today are forward-looking statements that involve risks and uncertainties, including but not limited to stated expectations relating to revenue from new and mature products, statements pertaining to QuickLogic's future stock performance, design activity and its ability to convert new design opportunities into production shipments; timing and market acceptance of its customers' products; our future evaluation systems; broadening our ecosystem partners, expected results and financial expectations for revenue, gross margin, operating expenses, profitability and cash. These statements should be considered in conjunction with the cautionary warnings that appear in QuickLogic's SEC filings. For additional information, please refer to the company's SEC filings posted on its website. Investors are cautioned that all forward-looking statements in this call involve risks and uncertainties and that future events may differ materially from the statements made. These forward-looking statements are made as of today, the day of the conference call, and management undertakes no obligation to revise or publicly release any revisions of the forward-looking statements in light of any new information or future events.

The conference call is open to all and is being webcast live. We will start today's call with the company's strategic update from QuickLogic CEO Brian Faith. Then CFO Sue Cheung will provide financial results and guidance. Brian will deliver closing remarks and open the call to questions.

At this time, it is my pleasure to turn the call over to Brian Faith, President and CEO. Please go ahead, Brian.

**Brian Faith** – President and CEO

---

Thank you, Kirsten, and thank you all for joining our Q2 2017 conference call.

We have made significant progress since our last conference call. This includes an increase in the quantity of new engagements, notable improvements in the efficiency of our engagement process, and the number of engagements we have converted to design wins. We have also received anticipated production start dates for a number of these design wins and late-stage engagements.

With this momentum, we are well positioned to initiate sustainable growth starting with Q4 2017 and achieve our target operating model in 2018. However, key designs that we anticipated fueling our targeted 50% growth this year have been shifted one to two quarters forward and that has lowered our outlook for Q3 and Q4 2017.

While reducing our outlook for 2017 is clearly disappointing, our growth drivers are intact and our design win momentum has improved significantly during the last quarter. I think this momentum will continue to build and look forward to sharing with you today why I'm more optimistic than ever in the future of QuickLogic and why I believe so strongly we are well positioned to deliver sustainable revenue growth beginning next quarter.

**Let's start today with an update on our embedded FPGA IP business:**

To briefly recap, our IP business model has two licensing elements. The first element involves licensing semiconductor foundry partners to manufacture ICs that include our IP. The second element involves licensing semiconductor companies and OEMs that design the ICs incorporating our IP. In the case of semiconductor companies and OEMs, licenses are negotiated for each specific IC that includes our IP.

In addition to the license fee, semiconductor companies and OEMs will also pay a royalty for each IC that is shipped to end customers, or in the case of OEMs, used internally. Due to the long development cycles common for semiconductor devices, I think it's reasonable to model royalties will begin about 12 to 24 months after a license agreement is signed.

So far, we have licensed two semiconductor foundries. Last year, we announced a license agreement with GLOBALFOUNDRIES covering its 65nm, 40nm and upcoming 22nm FDX nodes. Prior to this agreement, we qualified our eFPGA IP on GLOBALFOUNDRIES' 65nm and 40nm nodes. We anticipate the test chip for the new 22nm node will be taped out in Q4 2017 and qualified in Q1 2018.

Earlier this year, we announced a second semiconductor foundry manufacturing license agreement, which we can now say is with SMIC, for its 40nm process node. We successfully taped out the test chip on schedule in Q2 and are targeting completion of our test chip qualification with SMIC later this quarter.

In June, we announced that Bernie Rosenthal joined our advisory board. Bernie was a co-founder of Tensilica, which was a high-profile semiconductor IP company prior to its acquisition by Cadence in 2013. Bernie was the architect of Tensilica's business model and led negotiations for over \$80 million in license contracts with top-tier semiconductor companies and OEMs.

Bernie is supporting us as we refine our IP business model and enabling us to leverage his portfolio of high level industry contacts. In conjunction with our new eFPGA support center in Taiwan, this is helping us drive a very efficient engagement process with our targeted partners and customers.

We have ongoing engagements with a number of leading semiconductor companies and believe we will sign license agreements with at least one, and possibly several of these companies later this year.

As you may recall from past presentations, license fees are typically paid up front. This means license revenue will flow upon payment to our balance sheet and cash flow statement. However, for our income statement, revenue is amortized ratably across the term of the license and recognized over time. Due to the fact this amortization schedule can vary considerably from deal to deal, we are not yet in a position to forecast when the license revenue we expect to invoice during Q4 will be recognized on our income statement.

**Now, let's move to Sensor Processing:**

We are seeing some distinct improvements in the outlook and use cases that are very favorable for QuickLogic:

A recent market report by Daniel Associates predicts the discrete sensor hub market will be roughly 680 million units in 2018, growing to over 1.5 billion units in 2022. Roughly only a third of this volume is in the consumer market, with the remaining volume spanning multiple markets across automotive, industrial, healthcare, telecommunications and others. We have taken steps during the last year that I believe will significantly improve our ability to address the breadth of these markets during the next year.

In many of these non-smartphone applications, our unique multi-core EOS™ S3 platform provides customers with a very attractive value proposition that not only minimizes power consumption and enables new features, it also enables designers to reduce the number of ICs needed to support the design goals, and more recently in some cases, helping our customers shorten their new product development process.

Because of this compelling value proposition, our average selling prices, or ASPs, for EOS S3 is trending about 50% higher than we anticipated it would earlier this year. When coupling higher ASPs with the increased forecast for unit volume and broader market adoption of discrete sensor processing ICs, we believe the dollar value of our Served Available Market is significantly larger than what we envisioned it was as recently as six months ago.

**Now, let's move to wearable, hearable and IoT engagements:**

As I noted last quarter, the Tier One customer that is using our EOS™ S3 in its new wearable design decided to upgrade one of the sensors last quarter following initial field testing. I can't be more specific about the sensor upgrade other than assuring you it did not affect the use of our EOS S3 in any way, and that the primary goals of the rigorous testing are to optimize the design for data accuracy and battery life.

With the sensor change completed, we are currently working with the customer's manufacturing engineering group to prepare for the production launch while additional field testing continues. The continued field testing and extreme focus on optimizing this design for data accuracy and battery life could lead to further delays, so we are not including any revenue from this design in our Q3 guidance. We have built up an inventory of EOS S3 to handle any upsides to this current outlook.

In parallel with the ongoing efforts to bring its first EOS S3 design to production, this customer has recently made wearables and hearables a long-term strategy, and with that, a strategic commitment to include always-on voice capability in future designs. We are working closely with this customer on two new high-volume consumer wearable and hearable opportunities that are targeted for mass production during mid-2018.

In February 2017, I noted that the unofficial theme for the Consumer Electronics Show in Las Vegas was "voice is the next interface." Since then virtually every wearable, hearable and IoT opportunity we've encountered incorporates always-on voice capability. We expect this

trend to accelerate as use of cloud-based digital assistants like “OK Google”, Siri and Alexa become more prevalent; particularly in large markets outside the U.S. Our recent design wins with Qiwo and our collaboration with AISpeech to enable its digital assistant on the new Qiwo hearable designs are just two examples of how we are leveraging this trend.

Since our EOS S3 SoC is the only multi-core MCU-based device in the market today that includes hardware-integrated Low Power Sound Detection (LPSD) technology, we can enable always-on voice applications at substantially lower power consumption than any of our competitors.

This advantage, and the almost universal focus to include always-on voice in new wearable, hearable and IoT designs, benefits us in many ways.

- It has led to a meaningful increase in the quantity and quality of new engagements
- It enables customers initially attracted to EOS S3 for its unique ultra-low-power voice capabilities to reduce cost and further lower the power consumption for their new products by integrating other system functions into the multi-core architecture and embedded FPGA resources uniquely native to EOS S3.
- It has led a number of customers to select EOS S3 for their targeted wearable, hearable and voice-enabled IoT applications more quickly than we have seen previously, and with that, shorten the engagement process.

Due to the recent acceleration of the engagement process, and resulting design win activity, we expect several wearable and hearable designs will move into production during Q4. Our recent announcements regarding the Qiwo and Janyun design wins are two examples of this improved efficiency.

Qiwo and Janyun are Chinese ODMs, which means they develop products that they subsequently manufacture for OEMs under private label agreements. With this business model, ODMs leverage a single platform design across multiple OEM customers, and the more flexible the platform, the greater the volume potential.

Both companies' CEOs have stated an intention to use the EOS S3 SoC solution in current and future designs, and acknowledge the highly integrated solution provides not only an ultra-low-power and cost-effective solution for their designs, but also that the flexibility of the EOS S3 enables them to address multiple OEM use cases from a single platform. This ability to extend the leverage of a platform is a huge value proposition for ODMs.

There are some very noteworthy aspects to both of these design wins. In the Janyun wearable design virtually all of the resources of our EOS S3 are leveraged. This includes the use of

- The integrated ARM® Cortex M4F as the host processor;
- Our patent pending Flexible Fusion Engine, or FFE, for sensor processing;
- Our hardware-integrated version of Sensory's Low Power Sound Detection technology, or LPSD, and Sensory's TrulyHandsfree™ technology for voice recognition;
- And, our embedded FPGA technology as a display driver and GPS interface.



The EOS S3 SoC is the only single-chip solution in the market today that is capable of supporting these features and providing the flexibility required in this design.

Qiwo, which was founded as a joint venture with Qihoo 360 Technology, a large Chinese company that is traded on the New York Stock Exchange, selected our EOS S3 for a new hearable design that leverages AISpeech's digital assistant. AISpeech provides cloud-based voice-enabled AI assistance in the Chinese market similar to what Amazon does with Alexa in the U.S. market.

In the Qiwo design our EOS S3 is used as the host processor, and our hardware integrated LPSD enables ultra-low-power always listening technology to recognize the trigger word for the AISpeech digital assistant. The EOS S3 is the lowest power single chip solution in the market today that can support the needs of this application and we believe future designs will more fully utilize EOS S3 resources.

Based on what we've been told by Janyun and Qiwo, we anticipate production shipments to support initial OEM orders will start in Q4 2017, and they have also stated their intent to use our EOS S3 in future designs.

On our February conference call I mentioned several major app companies are in the process of expanding their business models through the development of new hardware products that are designed to leverage their already widely deployed software applications.

Our early involvement with major app companies as ecosystem partners has given us an inside track in this market, and so far, enabled us to win two designs that we believe will enter production during Q4 2017. One of these is for a wearable and the other is for a hearable device. We are optimistic that there will be a press release for at least one of these design wins later in Q3.

In addition to these design wins, we are engaged with one of China's largest ODMs for a new hearable design. If we're successful, I believe the design will move into mass production during the first half of 2018 and broaden our channel into large OEMs targeting the rapidly emerging hearable market.

We are also beginning to see strong interest from voice-enabled IoT OEMs for smart home products. If we're successful, I believe these designs will also move into mass production during the first half of 2018.

We are still in the early engagement stages with the Tier One voice-enabled cloud-based IoT provider I mentioned last quarter. We have a very restrictive NDA with this company, so all I can say at this juncture is that we are making material progress in this engagement.

**Let's turn now to the smartphone market:**

We are getting very close to being able to classify the first of our ongoing smartphone engagements as a design win. If we are successful, we anticipate initiating shipments to support production during Q1 2018. This opportunity has shifted roughly two quarters from our original production timeline expectations.

While delays are frustrating, the good news is that the design has expanded from a simple sensor hub function to one that now includes a carrier-driven requirement for always-on voice as well. This means the design will leverage several elements of the EOS S3 silicon platform including ARM Cortex M4F MCU, LPSD, and FFE. This puts us in the lead position from a competitive standpoint since we are the only multi-core MCU-based solution in the market today that can address all of these in a single chip.

There are other smartphone engagements where OEMs are evaluating our recently announced "barge-in" feature. Barge-in leverages our hardware integrated LPSD for ultra-low-power always-on listening and our recently added acoustic echo cancellation technology.

Barge-in enables a variety of always on / always listening use cases. For example, with barge-in a smartphone can hear trigger words such as "OK Google", "Alexa" and voice commands like "Answer Call" when a smartphone is playing music or a ringtone. If we win these designs, we anticipate initiating shipments to support production during the first half of 2018.

In addition to the progress we've made in our IP and Sensor Processing Initiatives, we continue to win new Display Bridge and Connectivity designs.

These include a new educational tablet design win for our Display Bridge and a new IoT module that is using one of our connectivity solutions. We expect the tablet will move into production in Q4 and the IoT module will move into production during the first half of 2018.

While we are forecasting relatively flat revenue from Display Bridge and Connectivity for Q3, we are expecting a sequential increase in Q4. We believe this will be driven primarily by stronger seasonal demand for tablets and the new promotion from Motorola that is bundling its Moto Insta-share Pico Projector, which uses our Display Bridge solution, with purchases of Moto Z<sup>2</sup> phones and Moto Mods.

Before I turn over the call to Sue for her financial report, I want to take a couple minutes to provide a higher-level view of the trends that are driving customer interest today, and I believe will drive our long-term growth and profitability.

Prior to launching our Sensor Processing strategy QuickLogic was operating on the wrong side of Moore's Law. By that I mean we were integrated out of designs far too quickly.

Our Sensor Processing strategy puts us on the right side of Moore's Law – today, we are the integrator. Most of the designs we are winning are driven by the unique integration of our EOS S3 multi-core SoC that includes a hardware integrated version of Sensory's Low Power Sound Detector, our proprietary FFE technology, embedded FPGA and number of other

peripheral functions that don't make the headlines, but are valued by our customers. I can safely say we are the only semiconductor company in the world today that offers these technologies and capabilities in a single chip.

The challenge we faced a year ago is while we had the most advanced sensor processing SoC in the market, we didn't have the tools customers needed to efficiently complete designs. With these now in place we're seeing engagements move forward more efficiently and with less direct support from QuickLogic engineering. These tools have also helped customers more fully utilize EOS S3 resources, and that adds to the stickiness of our designs.

When coupled with the leverage we get from our expanding base of ecosystem partners, these tools are enabling us to convert engagements to design wins more quickly. We believe this will not only fuel our growth, but will also enable us to address a broader customer base.

A subtle, but important benefit of these design trends is that they have the potential to create a positive spiral of events for QuickLogic. As customers develop software to take advantage of the unique resources of our EOS S3 platform, the designs become very sticky. Perpetuating this trend is the fact the customers want to leverage their software investments by using EOS S3 in future designs. These trends also enable customers to shorten design cycles, lower the cost of new product development and bring new products to market more quickly.

In parallel with our efforts to build out the software and tool ecosystem for EOS S3, we launched our eFPGA strategy. This business model is also on the right side of Moore's Law.

Due to the tiny geometries used by leading fabricators today, our customers can include a small, but valuable amount of embedded FPGA in their ICs for only a few pennies of variable silicon cost.

At the bottom line, I share your frustration with the delayed schedules that cause us to reduce our expectations for 2017. However, our growth drivers are solidly intact and the overarching trends driving our business and our ability to win meaningful designs have improved. With that, I believe we are very well positioned to initiate sustainable new product revenue growth beginning in Q4 2017.

When I look beyond 2017, I believe we are uniquely positioned with the right solutions, ideal market trends and customer engagements to deliver our target operating model of greater than 50% revenue growth at a non-GAAP gross margin range of 45% to 50% in 2018, and as our revenue ramps, report a non-GAAP operating profit range of up to 10%.

Now, I will turn the call to Sue.

**Dr. Sue Cheung** – Chief Financial Officer and VP of Finance

---

Thank you, Brian. Good Afternoon and thanks to everyone for joining us today. Please note that we are reporting our non-GAAP results here. You may refer to the press release we issued today for a detailed reconciliation of our GAAP to non-GAAP results and other financial statements. We have also posted an updated financial table on our IR web page that provides current and historical non-GAAP data.

For the second quarter of 2017, total revenue was \$3.0 million, within our total revenue guidance range. Our new product revenue was \$1.5 million, and mature product revenue was \$1.5 million. New product revenue was at the lower end of the guidance range due to lower than anticipated shipments of display bridge and connectivity solutions. New product revenue contributed 49% of the total revenue, compared to 60% in Q1 2017 and 44% in Q2 2016.

Samsung accounted for 21% of total revenue during the second quarter, compared to 22% during the previous quarter. This reflects the seasonality of the consumer tablet market and the expanding customer base for our display bridge solutions.

Our Q2 2017 gross margin was 46%, compared to 44% in Q1 2017. The higher gross margin was driven by an increase in eFPGA license revenue recognized in the quarter, our product mix and a broader customer base for display bridge solutions.

Operating expenses for Q2 2017 totaled \$4.6 million, which was flat sequentially and 17% lower year-over-year. This reflects the cost reductions associated with the strategic realignment that we initiated in the 2<sup>nd</sup> half of 2016. Q2 2017 SG&A expenses were \$2.4 million due to our increased sensor processing-related sales and marketing efforts. Our Q2 2017 R&D expenses were \$2.2 million reflecting the shift in R&D resources to our India location.

The total for other income, expense and taxes in Q2 2017 was a charge of \$54 thousand. This resulted in a net loss of approximately \$3.3 million, or \$0.04 per share.

Net of fees associated with the equity offering that closed in April, our Q2 2017 cash usage was \$3.9 million. This was within our expectations.

We ended the quarter with a cash balance of \$22.2 million.

**Let's now turn to the third quarter 2017 outlook:**

Our revenue guidance for Q3 is approximately \$3.0 million, plus or minus 10%. The \$3.0 million in total revenue is expected to be comprised of approximately \$1.7 million of new product revenue and \$1.3 million of mature product revenue. Our lower expectation for mature products is due to a normal seasonal lull in Q3 for our European customers.

On a non-GAAP basis, we expect gross margin to be approximately 45% plus or minus 3 percent. As was the case in Q2, we expect our gross margin to benefit from recognized IP



license revenue, and a favorable mix of customers and products. This will be partially offset by lower mature product revenue and continued unfavorable absorption of manufacturing overhead.

We are currently forecasting non-GAAP operating expenses at approximately \$4.6 million, plus or minus \$300 thousand. We expect our non-GAAP R&D expenses to be approximately \$2.3 million and non-GAAP SG&A expenses to be approximately \$2.3 million.

We expect our other income, expense and taxes will be a charge of approximately \$60 thousand.

At the midpoint of our forecast, our non-GAAP loss is expected to be approximately \$3.2 million, or \$0.04 per share.

As was the case in prior quarters, the main difference between our GAAP to non-GAAP results is our stock-based compensation expense, which we expect to be approximately \$450 thousand for the 3<sup>rd</sup> quarter.

In Q3, we expect to use between \$3.0 million and \$3.5 million in cash. The forecasted cash usage will be primarily driven by working capital needs and capital expenditure associated with our eFPGA development effort.

As in prior quarters, our actual results may vary significantly due to things that are beyond our control, such as schedule variations from our customers. Schedule changes, and

projected production start dates, could push or pull shipments between Q3 and Q4 2017 and impact our actual results significantly.

With that, let me now turn the call back over to Brian for his closing remarks.

**Brian Faith** – President and CEO

---

Thank you, Sue.

With our new software evaluation and development tools in place we have accelerated and lowered the cost of our engagement process. This has also resulted in more efficient conversion from engagement to design win. We believe this will enable us to drive sustainable revenue growth beginning in Q4 and realize our growth and profitability targets in 2018.

Also driving this momentum is the fact a voice interface is rapidly becoming a "check box" requirement for new designs; particularly in wearable, hearable and IoT applications. As it stands today, our EOS S3 is the only MCU-based solution in the market that includes a hardware integrated Low Power Sound Detection, and with that, it consumes far less power than other MCU-based devices when used for voice detection and processing.

Some of the customers that were originally attracted to EOS S3 often select it as the host processor and are increasingly utilizing other platform resources too. In addition to increasing our number of engagements, in some cases with very large potential customers, these trends have also led to a meaningful increase in average selling prices.

In summary, we are uniquely positioned with the right solutions, ideal market trends and customer engagements. Our growth drivers are solidly intact and the overarching trends driving our business and our ability to win meaningful designs have improved for the long term. Between that, and the higher forecasts we're now seeing from research companies, I'm very optimistic we will begin delivering sustainable growth starting in Q4 2017.

One final note. We are participating in the upcoming events:

- Sue and I will be meeting investors in New York City and Boston on Sept 7<sup>th</sup> and 8<sup>th</sup>
- SMIC Technology Symposium in Shanghai on September 13<sup>th</sup>
- Design & Resource IP Conference in Shanghai on September 14<sup>th</sup>
- GLOBALFOUNDRIES Technology Conference in Santa Clara on September 20<sup>th</sup>, in Munich on October 13<sup>th</sup>, and in Shanghai on November 1<sup>st</sup>
- ARM TechCon in San Francisco between October 24<sup>th</sup> – 26<sup>th</sup>
- And, our CTO and SVP Engineering Dr. Tim Saxe will be speaking at the 15<sup>th</sup> International SoC Conference at UC Irvine October 18<sup>th</sup> and 19<sup>th</sup>

Thank you again for your participation today, and we look forward to updating you on our progress during our next quarterly conference call on November 8<sup>th</sup>.