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PRESENTATION

Operator

Good day, ladies and gentlemen, and welcome to the Adesto Technologies Third Quarter 2018 Financial Results Conference Call and Webcast. (Operator Instructions) As a reminder, this conference call is being recorded. I would now like to turn the conference over to Mr. Joel Achramowicz. Sir, you may begin.

Joel Achramowicz

Thank you, Lisa. Good afternoon, and welcome to Adesto Technologies Third Quarter 2018 Earnings Conference Call. I'm Joel Achramowicz, Managing Director of Shelton Group, Adesto's Investor Relations firm. Joining me today are Narbeh Derhacobian, Adesto's President and CEO; as well as Ron Shelton, Chief Financial Officer.

Before I turn the call over to Narbeh, I'd like to remind our listeners that during the course of this conference call, the company will provide financial guidance, projections, comments and other forward-looking statements regarding future market developments, the future financial performance of the company, new products or other matters.

These statements are subject to the risks and uncertainties that we will discuss in detail in our documents filed with the SEC, specifically, the final prospectus related to our initial public offering, our 10-K and our most recent 10-Q, which identify important risk factors that could cause actual results to differ materially from those contained in the forward-looking statements.

Also, the company's press release and management statements during this conference call will include discussions of certain non-GAAP financial measures. These financial measures and related GAAP to non-GAAP reconciliations are provided in the company's press release and related current report on Form 8-K, which can be found at the Investor Relations section of Adesto's website at www.adestotech.com.

For those of you unable to listen to the entire call at this time, a recording will be available via webcast on the company's website.

And now, it's my pleasure to turn the call over to Adesto's President and CEO, Narbeh Derhacobian. Narbeh?

Narbeh Derhacobian *Adesto Technologies Corporation - Co-Founder, President, CEO & Director*

Thank you, Joel, and welcome to everyone joining us today. I'm pleased to report another quarter of solid execution by the team, achieving our sixth consecutive quarter of more than 30% year-over-year growth. Revenue in the quarter increased to $21.9 million and included $1.9 million of contribution from our Echelon acquisition, which we closed on September 14. Excluding Echelon, which is now part of Adesto's embedded systems division, revenue increased 32% year-over-year and 10% sequentially. As we indicated in our last call, we had expected gross margins to improve in Q3 and we saw a 270 basis points sequential improvement.

Third quarter revenue breakdown for the combined company by verticals consisted of approximately 44% from the industrial market, 37% from the consumer market and 14% from communications market and the remaining 5% are from computing, medical and automotive. We expect the contribution from the industrial vertical to start trending over 50% of the revenues starting in Q4 with our four -- first full quarter of contribution from our embedded systems division.

During the quarter, we continued to make good progress across our memory product division with another solid quarter of design wins. Our year-to-date total design wins count almost equals the total count for all of 2017, further adding to the momentum we've been gaining over the past few years. Notable design wins included a leading sports watch manufacturer for 2 of its separate watch models, electronic price tags for retail application and a major application in vehicle telematics and fleet management based on 3G GPRS network, which was our largest win in the quarter. We also continued to secure new wins in our stronghold of utility metering across multiple customers.

In the last earnings call, we had reported that we had seen customer pushouts of the DataFlash-L product shipment for the smart-home applications. Our belief was that the customer pushout that started in Q2 would roll into the third quarter, which held true. The good news is that we are seeing in Q4 that DataFlash-L orders are resuming their ramp, and we are forecasting approximately 50% more units to be shipped sequentially in Q4 over Q3. This indicates that the growth is returning across multiple customers in the smart-home market as we exit the year.

Last quarter, we reported that we had good results from early silicon on our higher-density Fusion devices, the 32-megabit and the 16-megabit versions. Throughout the third quarter, our validation of our first silicon went better than expected, so we began the process of sampling this product to select customers in the current quarter with a more formal rollout expected early next year. The early applications for this product include Bluetooth low-energy reference designs similar to first Fusion applications 3 or 4 years ago, and a communications module in metering application. If you recall, we introduced the first Fusion family which was 4-megabit and smaller in density in 2013 and growth started 1 year later with early Bluetooth low-energy applications. We then started to see the market shifting to higher densities and began migrating the family to 16- and 32-megabit. We expect that these extended densities will also be successful in driving our future growth as its lower-density siblings did few years ago. Moreover, our 16- and 32-megabit Fusion memories have been designed and manufactured on a 65 nanometer process, which should give us the good cost structures and improved margins.

Regarding EcoXiP, our high-performance execute-in-place memory, we had a record number of request for samples for our 32-megabit and 128-megabit devices in the quarter. We saw more sampling activity by end customers in Q3 alone than the prior 2 quarters combined. This is primarily related to 3 reasons. First, we are seeing that more customers are recognizing that IoT applications require edge computing, which is what EcoXiP was designed to do very well. Second, our efforts in terms of development boards and tool sets to support the sales teams are beginning to bear fruit. Finally, the availability of the 128-megabit version of EcoXiP samples, which I announced last quarter, in addition to our 32-megabit version, is covering more applications and opportunities. In particular, 2 customers are at advanced stages of evaluation and sampling. One is developing a platform for voice-activated IoT device platforms and other is a leading fitness tracker.

Additionally, this quarter we published a white paper jointly with NXP, which is available on NXP's website, promoting the benefits of using EcoXiP with NXP's MX RT crossover microcontrollers. We are expecting customer engagements to continue to grow and lead to multiple design wins and revenue in the second half of 2019. Additionally, we will be rolling out a 64-megabit version of EcoXiP in the first half of next year and plan to complete our density portfolio for this product family, which should increase the opportunity pipeline further.

We started the MavriqCM sampling in Q1 of this year, as we talked about it before, with a selected group of camera module makers. In Q2, we rolled out MavriqCM to more camera module makers and successfully completed qualification with several others. We also reported that we are working with module makers to secure design wins with their OEM customers. Since this last update, we have made more progress towards that end and we believe our first design win for MavriqCM is imminent. And we still expect to exit the year with our first design win, less than a year since we started sampling the product to the market.

As I mentioned in the past, our Tier 1 OEM strategy with our Standard Serial Flash products continues to drive significant volume opportunities. We expect to see a continual ramp with our major customer in 2019, with increasing engagements expanding in breadth to include our more value-added products. We believe that due to the higher gross margin profile of our non-memory product as well as product mix expectations for our memory business itself, the overall company gross margins should continue its upward trend as indicated by our Q3 results and the guidance for Q4.

Now I'd like to provide an update on our ASIC and IP division, formerly known as S3 Semiconductors. The third quarter represented our first full quarter for reporting purposes since acquiring the company on May 9. At the time of the acquisition of S3 Semiconductors, we indicated that our broad sales channel would provide a vehicle to expand the opportunity pipeline for this division. Over the past several months, we have been actively engaged with targeted memory customers to explore ASIC opportunities across the industrial and communications markets. As a result, we have almost doubled the ASIC pipeline for the division, including 2 large opportunities in the metering market where Adesto has been strong historically, as well as 1 large new opportunity with a satellite communications company in North America. Now, under Adesto, we are seeing new and existing S3 Semiconductors customers more assured of the high-quality and reliable supplier for ASIC chips and are therefore, willing to explore expanded engagements more readily.

In terms of existing ASIC projects, we received functional silicon back for one of our ASIC projects and delivered to our customer on time. This customer designed solutions in the last March to residential and industrial broadband access with several Tier 1 service providers as both partners and investors. This customer will be targeting markets where fiber is too costly and copper is too slow. We're expecting a significant ramp of actual units sales in late -- in 2019. The second major highlight for the Q -- for Q3 in this division was a significant progress on the qualification of an ASIC for one of our satellite communications customers. We expect the qualifications for these projects to be completed in the current quarter and expect unit ramp late next year.

These 2 examples of ASIC's projects highlight what we have alluded in the past to the tremendous opportunity of our ASIC business. As ASIC's projects are completed and first silicon is delivered to the customer, the customer goes through its own qualification cycle and subsequent production ramp. As more and more ASIC projects enter this phase, it creates a powerful revenue layering effect for Adesto. Most of our current ASIC projects that are nearing completions are expected to go in production in the second half of next year and into 2020. As new ASIC projects enter the design pipeline, they offer the opportunity to incrementally add to the recurring unit revenue base. It's also important to note that the average gross margin for the ASIC business is typically over 50%.

Finally, I'd like to say a few words about our recently closed acquisition of Echelon, which is now called Adesto's Embedded Systems Division. Although still early in the process, the integration of Echelon into Adesto is progressing well and as planned. As a reminder, Echelon is a pioneer in the development of open standard networking platforms for connecting, monitoring and controlling devices in commercial and industrial applications. Our products are well entrenched with leading industrial Tier 1 customers and have long life cycles. The revenue from our Embedded Systems Division consists of approximately 90% that are tied to chips and modules for connectivity and control, with the remaining 10% coming from software development kits, network management tools, services and provisioning tools. Similar to our memory business, there is no customer concentration within our embedded systems group as 20 customers represent approximately 50% of the revenue and over 500 customers make up the rest. The largest customer is about 9% of the revenue. Almost all of the revenue base is classified as serving the industrial market. This includes applications such as building automation, industrial and commercial, retail and industrial automation, entertainment venues and energy management.

In terms of growth drivers within our embedded systems division, one exciting development that I can discuss at this time is the forthcoming launch of our new IoT SmartServer, which we expect to be released in the market in the first half of next year.

The SmartServer IoT is an extensible and open multi-protocol IoT gateway for industrial building automation, energy management, commercial and lighting applications. It provides out-of-the-box access to industrial devices using field protocols including LAN, BACnet and Modbus. SmartServer IoT provides management monitoring, control services of smart devices, enabling the intelligent use of data. This product is targeted to be used to connect the operational legacy technology networks such as LAN and BACnet running on wired networks to the newer wireless networks such as Wi-Fi, ZigBee and Bluetooth. The product comes with systems management control software and offers performance advantages and rich application features to our large installed base.

On the operational front, we expect to achieve more than 50% of the planned $6 million to $8 million of annualized cost synergies from Echelon by end of the fourth quarter as indicated before, with the remaining amount to be spread over the first 3 quarters of 2019. We have also begun to align our sales channel to ensure that we can start benefiting from cross-selling opportunities across the vast customer base.

Also as part of these integration activities, we mentioned in our prior communications that we are exploring several strategic alternatives for the Echelon's Lighting Solutions business, in order to better align the core Echelon business with Adesto's long-term focus. The Lighting Solutions business is not core to Adesto's long-term plans. Along these lines, there are several avenues to pursue that are actively under consideration now and it is our goal to enter 2019 solely focused on the core embedded business.

Over this past 2 quarters, we have executed on our strategic vision of expanding Adesto's future opportunity by a significant step function. The 2 recently completed acquisitions provide Adesto with the following: First, larger market opportunity by expanding our footprint beyond memory; second, more differentiated and higher gross margin solutions leading to a stronger financial profile and improved profitability; third, strengthening and further diversifying our customer base with well over 50% of the revenue from the stable long product life cycle industrial markets; fourth, opportunity to accelerate growth within and across business units by cross-selling and bundling; fifth, bringing under one roof, technical assets to design, deliver and differentiated solutions for IoT markets across multiple verticals.

Adesto is not the same company today that we were a year ago or even 6 months ago. Adesto is now a multidimensional IoT semiconductor and embedded systems provider with a broad portfolio of products and a deep set of design competencies from chips to systems to software, focused solely on IoT markets across multiple verticals. We are now able to deliver the essential building blocks that allows seamless access to data and control of things in an increasingly connected world. Entering 2019, we believe we are in a stronger position as a company. We are clearly very excited about the opportunities that lie ahead for us as we build a more resilient and profitable enterprise for our shareholders in the years to come.

With that, I will now turn the call over to Ron to review the third quarter financial results and our fourth quarter guidance before opening the call to your questions. Ron?

Ronald K. Shelton ***Adesto Technologies Corporation - CFO & Secretary***

Thanks, Narbeh, and good afternoon, everybody. Q3 was another good quarter of execution for the company. Revenue in the third quarter was $21.9 million including $1.9 million in revenue contribution from Echelon, and that's compared to total revenue of $15.2 million in the third quarter of 2017, and $18.2 million last quarter. Excluding the Echelon revenue, revenue grew 30% year-over-year and 10% sequentially.

From a demand standpoint in memory business, we're seeing strong momentum in our end markets. First, our POS revenue in Q3 was at its highest level than at any point during the previous 8 quarters, increasing more than 20% on a sequential basis which indicates stronger end market demand for our products. We also entered the fourth quarter with backlog that's consistent with historical levels and backlog today is at a higher level than it has at the same point of the quarter in the preceding 3 quarters.

Now let's turn to gross margins. GAAP gross margin in the third quarter was 43.7% and non-GAAP gross margin was 45.7%. This compares to non-GAAP gross margins of 49.2% in the third quarter of 2017 and 43% in the previous quarter. We previously indicated that gross margins would expand on a sequential basis due to improved product mix and initial contributions from our acquisitions and that's exactly what's happening this quarter as we realized a sequential increase of 270 basis points. As we go into the fourth quarter and look into 2019, we expect that margins will continue to increase.

GAAP operating expenses in the third quarter were $17 million compared to $8.3 million in the year ago quarter, and $11.7 million last quarter. On a non-GAAP basis, operating expenses in the third quarter of 2018 were $10.2 million compared to $6.9 million in the third quarter of 2017, and $8.3 million in the prior quarter. Excluding the Echelon-related expenses during the quarter, non-GAAP operating expenses were in line with our previous guidance of $9.4 million.

Adjustments to GAAP results in the third quarter included stock-based comp of $0.9 million, acquisition-related expenses of $5.9 million and a step up in inventory valuation related to the Echelon acquisition of $371,000, which was included in cost of sales.

Net interest expense and other income was $1 million, and we had a tax benefit for the quarter of less than $100,000. For the quarter, our diluted share count was 28.2 million shares. GAAP net loss for the third quarter of 2018 was $8.5 million or a loss of $0.30 per share. And non-GAAP net loss was $1.2 million or a loss of $0.04 per share.

Turning to the balance sheet, we ended the quarter with cash and investments of $14.5 million. Net accounts receivable was $19.5 million. And after adjusting for Echelon accounts receivable of $4.7 million, DSOs were 49 days. Net inventory increased to $17.5 million, which includes $5 million of inventory associated with the Echelon acquisition. Net of the Echelon inventory, we saw a small increase in inventory levels of approximately $900,000 that's due primarily to the impact of a last time biomaterials manufacturer using a process node that is being discontinued. Our targeted inventory turns are a minimum of 4x, and we expect to reach those levels again in 2019.

Adjusted EBITDA for the third quarter of 2018 was a positive $0.5 million. That represents our sixth consecutive quarter of positive adjusted EBITDA and total debt was $35 million. Capital expenditures were $0.5 million for the quarter and depreciation and amortization was $0.6 million.

Before providing guidance, I'd like to make a couple of comments with regard to tariffs. In terms of our potential exposure, it's primarily limited to products that came to us as part of the Echelon acquisition, some of which are subject to tariffs. That said, we anticipate a minimal impact of less than $100,000 of tariff-related costs during the next fiscal quarters, the vast majority of which we believe can be passed through to our customers. At the same time, we've been proactively evaluating what changes to the supply chain could help to minimize any future potential exposure. We'll continue to monitor such developments. But at this point, we don't believe tariffs will materially impact our business.

Now let me turn to our guidance for the fourth quarter of 2018. Taking into account a full quarter of results for Echelon, revenue is expected to increase to a range between $27 million and $30 million, representing approximately a 76% increase year-over-year at the midpoint. GAAP gross margin for the fourth quarter is expected to range between 41% and 44% and non-GAAP gross margin between 47% and 50%. GAAP operating expenses are expected to range between $15.8 million and $17.8 million and non-GAAP operating expenses between $13 million and $15 million. Stock-based comp in the fourth quarter will be approximately $1 million. Amortization of intangible assets will be approximately $1.8 million, and depreciation and amortization will be approximately $0.6 million. Interest expense is expected to be approximately $1.4 million in the fourth quarter, and weighted average shares outstanding are anticipated to be approximately $29.5 million for the quarter.

With that, we'll open the call to questions.

QUESTIONS AND ANSWERS

Operator

(Operator Instructions) First question is coming from Karl Ackerman of Cowen and Company.

Karl Fredrick Ackerman ***Cowen and Company, LLC, Research Division - Director & Senior Research Analyst***

Two questions please. The first question, looking at your guidance on gross margin, if my math is right, it would seem to suggest you assume your core memory business should generate low 40s gross margin. So how do I reconcile that in the context of your prepared comments that suggest the overhang from DataFlash-L products has gone away? And as we look out into 2019, how should we also think about the margin trajectory of your core memory business as memory pricing has softened quite a bit since the last time you reported?

Ronald K. Shelton ***Adesto Technologies Corporation - CFO & Secretary***

Karl, it's Ron. Thanks for the question. So a couple of comments. I think it's -- if we go back to the last quarter, we talked about gross margins in the memory business being in the low-40s and impacted by what you referenced, DataFlash-L and so on. I think those margins are expanding right now. We haven't gotten in the breaking down, kind of, the margins by business unit. I think it's safe to say that the ASIC business and the embedded business, their gross margins will be north of 50% -- low north of 50% and the memory margins would be in the 40s. I think on a blended basis, look, we're targeting 50% over time and we've been consistent in that. And with respect to pricing, again, I think you have to look at the different segments of the memory business here. If you looked at kind of the nonstandard products, pricing is relatively stable and margins are stable. But I think on the standard products, for us, it's simply a question of what that mix looks like going forward. And Narbeh and we've been consistent in talking about using Standard Serial Flash products as an entry point in different customers and we have 1 major customer that looks to be ramping on some of those products. So I think, at the end of the day, we're looking at, as a long-term model, margins that are around 50% or north of 50% for the combined businesses.

Karl Fredrick Ackerman ***Cowen and Company, LLC, Research Division - Director & Senior Research Analyst***

Got it. That's very helpful. I guess, one more question, if I may. I wanted to circle back to your prepared comments that suggest you may have an imminent design win with your Mavriq product offering. Any thoughts there on when that revenue could approach, say, I don't know, 10% of your total sales?

Narbeh Derhacobian ***Adesto Technologies Corporation - Co-Founder, President, CEO & Director***

Yes. So if you remember, we talked about the camera module itself, the opportunities that we have. When we were a memory -- just a 1 dimensional memory company only, right? And at that stage, we indicated that by 2020 there's likelihood we would hit meeting 10% of our overall memory revenue if we grow that. But now, of course, it's a different company with different avenues for revenue generation from the systems to the ASICs as well. So I don't anticipate that Mavriq itself is going to have the percent of the overall revenue as we expected when we were only a memory company. Having said that, this is one of those markets where the unit numbers is very high, ASPs are relatively low and again, we talked about the gross margins for the 64k version to be at the low end and the 128k version to be at the higher end. It could be multi tens, if not tens, hundreds of millions of unit opportunity that we are pursuing. This is the first design win. If we are able to actually get the design win, which I indicated is imminent in Q4, it's a big step because it's always the first one is the most difficult one. Having said that, we introduced the part in the first part of this year and our goal is to be able to do that in less than a year. So if we do that, I think the opportunity opens up for us with other module markets. But I'd like to put, again, things in perspective that just from a sheer ASP perspective and the volatility of that market compared to the rest of our business, with the ASICs and the embedded systems, Mavriq now will look a little bit different in terms of how it makes up in terms of revenue generation as well as contribution to the profit.

Operator

The next question comes from Rajvindra Gill of Needham & Company.

Rajvindra S. Gill ***Needham & Company, LLC, Research Division - Senior Analyst of Microcontrollers, Analog & Mixed Signal, Consumer IC & Multi-Market***

Ron, on the guidance you talked about full quarter of Echelon. So just wanted to see if you could quantify that amount? Also how much contribution are you expecting for S3 in Q4, so we can get a sense of what the core business growth rate is going to be in Q4?

Ronald K. Shelton ***Adesto Technologies Corporation - CFO & Secretary***

Yes. Raji, it's Ron. Yes, thanks for the question. I think what we don't want to do is necessarily get that granular with revenue contribution. I think for -- from the date of acquisition to the end of the quarter, Echelon last quarter did $1.9 billion. So the other 2 businesses did roughly $20 million, right, which was midpoint of our guidance for last quarter. Echelon historically has done on the $7.5 million range of revenue. And we've indicated kind of low single digit growth there. So I think -- and this quarter is no different. So that's kind of where I would think about how to build your model in that business.

Rajvindra S. Gill ***Needham & Company, LLC, Research Division - Senior Analyst of Microcontrollers, Analog & Mixed Signal, Consumer IC & Multi-Market***

Okay. And so with respect to the DataFlash-L product coming back online related to connected home, can you talk about the order rates resuming? When do you think it will get back to kind of a full ramp in terms of that particular product line? Any kind of thoughts on the connected home ramping in Q4?

Narbeh Derhacobian ***Adesto Technologies Corporation - Co-Founder, President, CEO & Director***

Yes, Raji. Yes, so as I -- if you remember, when we talked about DataFlash-L, we always said that -- we said that in Q4, we started to see the ramp of the product Q4 of last year into Q1 and then started to slow down in Q2 and Q3, again, continued to be relatively flat, if not a little bit slower. And then we talked about we engaged the customers on this, trying to understand if there's an issue with the market in general, which it wasn't. We alluded to that we suspect there could be some other products in the channel by other suppliers that's being led -- bleeded out, which we still suspect is the case. So what we said is we started to see orders coming in -- so all I can say is that I'm looking at forecast. We have the parts, the design wins are there, we added some more design wins in DataFlash-L in the current quarter, so that, that market is there. But when I'm looking at the forecast, I think Q4 forecast is 50% over Q3 sequentially. And if I look at the forecast further out, we continue to see that ramping forward. So all I can say is that the -- how we anticipated that business, how excited we were about that business a year ago, is still there. And really this was a pushout for us, not necessarily the market because of some other supplier's inventory that resulted for Adesto to for couple of quarters to slow down in that.

Rajvindra S. Gill ***Needham & Company, LLC, Research Division - Senior Analyst of Microcontrollers, Analog & Mixed Signal, Consumer IC & Multi-Market***

Okay, got it. And last question on the S3, the ASIC development. Can you talk about the penetration of those products in the marketplace? Kind of what does Adesto bring to the table to try to leverage its core expertise in low-power memory distribution channel? How does that positively impact those new ASICs that are being developed and kind of pushed into the marketplace?

Narbeh Derhacobian ***Adesto Technologies Corporation - Co-Founder, President, CEO & Director***

Yes. So to first order, the benefit we're seeing for the ASIC business is that in the past, they were engaged -- you see, from their design capability, especially in RF and mixed signal and satellite communication markets and just communication markets in general, they're very well known. So -- and to a point where other ASIC companies used to contract out their designs to the -- to our team in the past. And then they would then manage the chipsets to the end customer. So when S3 semi was a standalone company, they didn't have a history of supplying products, a reliable supplier of products to the end market. To first order, what we've done is we've come in and basically assured their customers that last year we shipped over -- close to 200 million units to our end customer. So we have the manufacturing and supply chain muscle to be able to deliver these ASICs to them. With the design capability that ASIC -- our ASIC division brings to the table, it kind of completes the picture. So we are able to see that we are actually increasing the pipeline and increasing the probability of closing this actual ASIC engagement with their end customers as I -- so that's the first order. Second order effect is that we opened up in a targeted way some of our channel, we have a relationship with our metering customers, for example, that goes back for many, many years. So we opened up that channel. We went in and started to bid for ASIC -- look for and bid for ASIC opportunities that in the past would have gone to other suppliers. And that's what I meant where their pipeline is now actually close to double of what they were without Adesto as a parent company. And these are -- as you know, these are engagements that are -- the customer pays for the ASIC development and then at the end buys chips from us. So there's a -- from a visibility perspective and engagement perspective, we are very much involved with the customer and there's a lot of visibility into the end market. And as I said in my remarks, what did we do as more of these ASIC chips are actually delivered to the customers and they going through their final stages of production and ramp, it'll create a layering effect of revenue that would be sort of recurring revenue for the company as our team has moved on to work on other ASIC projects.

Operator

The next question is coming from Mike Walkley of Canaccord.

Nobuyuki Nemoto ***Canaccord Genuity Limited, Research Division - Associate***

This is Anthony on for Mike. It's just been a couple of months post close. But any indication of successful cross-selling top line synergies from Echelon with your industrials customer base. In terms of post merger, sale force integration, can you talk a little bit about the go-to-market strategy? And if the respective sales teams are trained to sell the new kind of pro forma offering?

Narbeh Derhacobian ***Adesto Technologies Corporation - Co-Founder, President, CEO & Director***

Yes. So the first thing that's happened, Mike, is we've aligned and created incentive packages for the -- our global sales team, jointly all the 3 different divisions together to be able to identify opportunities and a -- sort of a process that will bring in the different business units within the customer to try to close the sale. So that's done. The other thing we've done is we've rolled out the ASIC group to our rep network over the summer, because the deal was closed in May, in early May, so we had the opportunity to do that. We are now rolling the embedded systems solutions, formerly known as Echelon, into our network as well. The first proof point for us is actually next week. Electronica, which has been in Europe, which is a big show that we've always attended as a memory company in the past has been very successful with our industrial customers in Europe especially. This is the first time we have the 3 companies jointly presenting the solutions of Adesto under one roof with a new logo and a new look and feel and all the marketing folks are there meeting customers. In terms of seeing traction and actual revenue, you won't see that in Q4 or I would even say, in the first half of this year. Because, look, these are mostly industrial customers. These are that the -- from design win to actual ramp up revenue, it takes time. What we do see, as I indicated, is that the engagements which we would call the pipeline, essentially, will increase significantly especially for the ASIC business. And also to some degree on our memory and ASIC business within the Adesto -- sorry, the embedded systems industrial customer base. So that's the first step of increasing the pipeline opportunities which has occurred already or is occurring now.

Nobuyuki Nemoto ***Canaccord Genuity Limited, Research Division - Associate***

Got it. Great. And then on the guide, what's driving -- it's increased from, I think, the previously indicated 65% on the top line. And then the margin range topping out now at the previously indicated 50%. What is driving those 2 guides?

Ronald K. Shelton ***Adesto Technologies Corporation - CFO & Secretary***

Well, I think on -- well, on the top line guide, I'm not -- although we're going back to some previous guidance where we referenced 65%. I think, again, the guide is -- there's nothing driving it specifically. I mean, we're looking at the businesses, both the memory business and the ASIC business and embedded business is new and it's rolling into the profile. So I think what we've done is when you think about our guide and given a range of 27% to 30%, we've moved it up on the higher end. With respect to margins, 47% to 50%. I think part of that is just as we bring in the embedded business on and work through cost synergies and the ASIC business has been fully integrated for a quarter, you'll see those margins expand and they expanded last quarter, they're going to expand this quarter. And as we look out over our long-term model, we think it'll continue to expand off this quarter.

Operator

The next question comes from Aman Gulani of FBR.

Aman Raj Gulani ***B. Riley FBR, Inc., Research Division - Associate Analyst***

So I guess, just looking at the core memory business, are you able to sort of maybe give us a breakout of what your sales were for DataFlash-L and then Standard Serial Flash and then Fusion flash?

Ronald K. Shelton ***Adesto Technologies Corporation - CFO & Secretary***

Yes, Aman, it's Ron. We didn't always -- or we've historically not gotten that granular in terms of looking at individual products like that. I think, in general, if we step back and what we tried communicating in the comments was, look, it was a pause in the memory business last quarter when we referenced DataFlash-L. We tried to give some indication of what we're seeing in the end markets, right? I mean, when we look at POS, which is sell-through at the distributor to our end customers, it was up 20% sequentially. And it's at its highest level than it's been in the last 2 years, so that's one good data point. I think the second is, when -- literally when I look at backlog today, it's higher than at this same point in any quarter over the last year or so. So I think the end markets and the activity we're seeing in the memory business is very strong. With regards to DataFlash-L and Standard Serial Flash and those type of things. Now historically DataFlash has been, yes, 65%, 70% of the revenue. It trended towards that this quarter. But again, I think, as we go forward and we talk about Tier 1 designs and maybe a Standard Serial Flash product ramping into production next year, that mix good change, right? But I think, fundamentally, it's -- as we look at the memory business today, it's doing what we said it would. We said it would bounce back this quarter and we're seeing a lot of strength, if you will, in the end markets.

Aman Raj Gulani ***B. Riley FBR, Inc., Research Division - Associate Analyst***

Got it. That's helpful. And then -- so just -- I'm not sure if you gave it in your prepared remarks, but are you able to provide what the S3 revenue contribution was for the third quarter?

Ronald K. Shelton ***Adesto Technologies Corporation - CFO & Secretary***

Yes. We didn't give it. I think, again, what we guided at the end of last quarter for the memory ASIC business together was $19 million to $21 million and both of those businesses were kind of at the midpoint of our guidance. So that's kind of where it was. So we -- if you go back last quarter, the ASIC business we had was about $2 million, I think, for 1.5 quarters. So that kind of gives you sense for where that business is right now.

Aman Raj Gulani ***B. Riley FBR, Inc., Research Division - Associate Analyst***

Got it. And I think Narbeh was saying that the lighting business, you were looking at strategic options for that. So that's a thing that sort of -- you'll sort of figure out by the end of the year?

Narbeh Derhacobian ***Adesto Technologies Corporation - Co-Founder, President, CEO & Director***

Well, it's more than figure out. Our expectation is that we'll exit the year -- we'll actually enter 2019 fully focused on the part of the business that is -- which is core to us, which is the embedded business. So to the extent that whatever we're looking at in the lighting solutions business, there are currently active options that we're pursuing.

Operator

The next question comes from Suji Desilva of Roth Capital.

Sujeeva Desilva ***Roth Capital Partners, LLC, Research Division - Senior Research Analyst***

So I get the sense of the OpEx that you have, synergies remaining for Echelon for the next 3 quarters. But what's the trend, I guess, underlying or incorporating that going forward from here on from the fourth quarter guidance?

Ronald K. Shelton ***Adesto Technologies Corporation - CFO & Secretary***

Yes. So if you think about, Suji, last quarter we guided again without Echelon. We said the guide for non-GAAP OpEx was roughly $9.2 million to $9.4 million in that range and we came in at $9.4 million this quarter. So when we think about kind of the midpoint of guide this year, this quarter it's about $14 million, right, in the midpoint of the guide. So that kind of -- that delta kind of gives you a sense for where we think the Echelon spend is. And that will go down, again, good to kind of the normal run rate within the next couple of quarters after this one. So I would expect by mid-next year, we'll be at that run rate where we talked about cost synergies of $6 million to $8 million.

Sujeeva Desilva ***Roth Capital Partners, LLC, Research Division - Senior Research Analyst***

Okay, great. And then maybe for Narbeh. You talked about bringing in higher density products, both in Fusion and EcoXiP. What does that do to your addressable market versus the low density products you've had in those product categories to date?

Narbeh Derhacobian ***Adesto Technologies Corporation - Co-Founder, President, CEO & Director***

Yes. If you -- yes, so when we started the Fusion family years ago, it was when we started leading the energy market just beginning to take off, and our lead customer there was Qualcomm. But what we saw -- and at that time, the amount of code that was needed for Bluetooth low-energy applications was such that it warranted low density, 4-megabit and lower. So we rolled that family out in that 4Mb to 0.5Mb range and it was at some point one of our fastest growing family -- it was our fastest growing revenue generation. Then 1.5 years ago, so we started to see that the same market with same end customers beginning to shift to higher content in terms of the Bluetooth low-energy markets. So we said, okay, now it's time to rollout the higher density version, which is 32- and 16-megabit and that's what we did. But we, of course, sported to a much lower cost on 65 nanometer node. So my expectation is that if you look at the growth pattern for that, it would be on the gadgets that are being developed now for Bluetooth low-energy markets that will require higher code content whether it's needed to support more connectivity protocols or more coded barriers just to run the edge device. And yes, we have mid -- as I indicated, we have 2 opportunities, 1 is an existing old Fusion customer from lower density that's migrating out. And then the other 1 is in -- actually in the metering market which is an existing customer but first time switching over to Fusion, not as a DataFlash replacement but as another connectivity module they're putting on the meter platform itself.

Operator

(Operator Instructions) The next question is coming from Gus Richard of Northland.

Auguste Philip Richard ***Northland Capital Markets, Research Division - MD & Senior Research Analyst***

Quickly, seasonality of the new company, what does that look like?

Ronald K. Shelton ***Adesto Technologies Corporation - CFO & Secretary***

Yes, Gus, it's Ron. So again, with layering in the ASIC business and the embedded business, the majority of our overall business is industrial-based. Industrial tends to have less seasonality as you know than a consumer-oriented business. So I'm not expecting right now that in Q1, we would see a dip in revenue.

Auguste Philip Richard ***Northland Capital Markets, Research Division - MD & Senior Research Analyst***

Got it. And then what's your expectation on turns in the quarter. How much of a quarter do you go into typically with backlog?

Ronald K. Shelton ***Adesto Technologies Corporation - CFO & Secretary***

Yes. You know, for us, it's generally in kind of the 40% -- 50% range. I think the ordering flow of our customers is generally muffed and DSO is 30 days. I mean, it's just -- we're not quoting lead times of 6 or 9 months or anything like that. So -- and again, when I look at backlog today we're 5 weeks into the quarter, it's at its highest levels ever. So I think order flows is pretty healthy, bookings are healthy, book-to-bill is healthy. So it's -- we feel pretty good about the memory business right now.

Auguste Philip Richard ***Northland Capital Markets, Research Division - MD & Senior Research Analyst***

Got it. And then as you look at -- you're working with a Tier 1 customer, and you're selling them serial flash and the hope is to convert them to more proprietary products. When might you expect the first designs from the Tier 1? And a similar question on the Mavriq, when would you expect -- if you've got a design this quarter, when would that go into production?

Narbeh Derhacobian ***Adesto Technologies Corporation - Co-Founder, President, CEO & Director***

Yes. On a more difficult question is on the Tier 1 because we know it's a large company and sometimes we are not very much privy to the exact timing of their new project. We know 2 things there, is that their engineers are now sampling multiple of our proprietary products. So we don't call that a design win yet. So obviously, we know there is interest, that they found something of value, whether it's power performance or what not that they're looking into. On -- with that customer on the Standard Serial Flash, yes, we are engaged in, as I indicated, we're going to enter 2019, we're seeing -- if I look at the forecast, that they're increasing -- our share of that opportunity is increasing. So that's what I alluded to in my remarks. In terms of the MavriqCM. As I indicated, I hoped I'd come here and announce the design win. I checked just before entering the meeting where we are and are facing a scrutiny that they in final stages of signature look with the end customer. So that's why I said, it's imminent. In general, what we've seen in that market is from design win to production is typically going to be less than 6 months for them in that market. Yes.

Operator

Ladies and gentlemen, at this time this concludes the Q&A session. I would now like to turn the call back over to Mr. Narbeh Derhacobian.

Narbeh Derhacobian ***Adesto Technologies Corporation - Co-Founder, President, CEO & Director***

Thank you. Thank you for participating on the call today. Before closing the call, I want to mention that we'll be in New York next week for the Roth Technology Corporate Access Day on Wednesday 14. Then we'll be in Chicago on November 29 for the Benchmark Micro Discovery Conference. And in L.A. on December 4 for the LD Micro Conference. Finally, we're planning to attend the Needham Growth Conference in New York, as we always do, after the 1st of the new year. Now following that, we are planning our first Analyst Day, currently scheduled for February 21 in New York. We will be providing more details in the coming months with respect to that event, which I think is going to be very exciting to roll the new Adesto with the 3 different divisions under 1 roof and we call it Adesto 2.0 internally. So please contact the Shelton Group if you'd like to meet with us at any of these events. And thanks, again, for joining us. And we look forward to providing further updates next quarter. Operator, you may now disconnect.

Operator

Thank you. Ladies and gentlemen, thanks for participating in today's conference. This concludes today's program. You may all disconnect. Everyone, have a great evening.