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AEIS - Q3 2019 Advanced Energy Industries Inc Earnings Call

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PRESENTATION

Operator

Ladies and gentlemen, thank you for standing by and welcome to the Third Quarter 2019 Advanced Energy Industries Earnings Conference Call. (Operator Instructions)

I would now like to hand the conference over to your speaker today, Edwin Mok, Vice President, Strategic Marketing and Investor Relations. Please go ahead, sir.

Yeuk-Fai Mok - *Advanced Energy Industries, Inc. - VP of Strategic Marketing & IR*

Thank you, operator. Good morning, everyone. Welcome to Advanced Energy's Third Quarter 2019 Earnings Conference Call. With me today are Yuval Wasserman, our President and CEO; Paul Oldham, our Executive Vice President and CFO; and Brian Smith, our Director of Investor Relations. If you have not seen our earnings press release, you can find it on our website at ir.advanced-energy.com. There, you will also find a slide presentation to follow along our discussion today.

Let me remind you that today's call contains forward-looking statements, which are subject to risks and uncertainties that could cause actual results to differ materially and are not guarantees for future performance. Information concerning these risks and uncertainties is in our filings with the SEC. All forward-looking statements are based on management's estimates, projections and assumption as of today, November 12, 2019, and the company assumes no obligation to update them. Long-term targets and aspirational goals presented today should not be interpreted in any respect as guidance.

Today's call also includes Advanced Energy's non-GAAP financial measures. An explanation of these measures as well as reconciliations between GAAP and non-GAAP measures are contained in our press release and our presentation.

Before I pass the call to Yuval, I'd like to go over 2 housekeeping items. First, AE will be hosting our Analyst Day on Monday, December 16 in New York City. We welcome all of you to join us at this event where you will learn more about our market opportunities, our strategies to outgrow our markets and to [accelerate] earnings growth, and additional details on Artesyn. Additionally, with the acquisition of Artesyn Embedded Power, we have reclassified our revenue breakdown into 4 market verticals, which better reflects the broadened exposure of our business. Our comments today will reflect this change. Detail on these market verticals can be found in today's third quarter 2019 10-Q filing. In today's earnings press release, you can also find the reconciliations of our historical data between the old and the new market verticals.



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With that, let me pass the call to our President and CEO, Yuval Wasserman. Yuval?

Yuval Wasserman - *Advanced Energy Industries, Inc. - President, CEO & Director*

Thank you, Edwin. Good morning, everyone, and thank you for joining us on this call. Advanced Energy delivered strong financial results in the third quarter, with our organic revenue and earning exceeding the high-end of our guidance ranges. Despite the challenging macroeconomic environment, we saw improved market conditions for semiconductor equipment, the successful ramp of several new designs we previously secured, introduction of new innovative technologies and strong operational execution by our team.

Lastly, we closed the acquisition of Artesyn Embedded Power ahead of schedule, which computed additional revenue and earnings and accelerates our growth as a premier provider of power electronic solutions.

Let me start with Artesyn. The acquisition closed on September 10 and contributed \$41 million in revenue and \$0.07 per share in non-GAAP earnings accretion to Q3 results. We are pleased to welcome the Artesyn employees into the AE family. We have begun executing on integration plan starting on day 1, and it is progressing well. We are building an integrated functional organization to enable efficiencies and increased focus on the application spaces we serve. The advantages of our combined company, both on the top and bottom lines, are significant. We are extremely excited about the opportunities for the combined company to create a platform for accelerated growth in both revenues and earnings as we execute our integration strategy.

Turning now to our markets and performance in the third quarter. In semiconductor equipment, investments in both foundry/logic and equipment spending out of China increased in Q3. Demand for our products strengthened over the course of the quarter and, coupled with new designs contributing incremental revenues, our semi products sales surpassed our original outlook. As expected, semi service revenues was down modestly from Q2 due to low fab utilization in some regions, partially offset by good execution by our service team to grow higher-value programs.

As we look forward to the fourth quarter, we see continued strength in foundry/logic and a pickup in memory spending as well as an end to the OEM inventory drawdown. As a result, we expect organic semi revenue in the second half of 2019 to grow versus the first half, with semi product revenue growing at high teens and service revenue remaining flat half over half. As a company dedicated to customer success through technical excellence, we are very pleased to have received a supplier excellence award this quarter from Lam Research. This award recognize our highly collaborative engagement with our customers as we deliver innovative solutions and industry-leading performance in quality and service.

Through this semi downturn, our OEM customers have accelerated the roadmaps for developing next-generation processing equipment that comes with higher content and more complex power requirements. Advanced Energy is meeting these challenges with winning power solutions.

During the third quarter, we shipped multiple RF, DC, RPS and high voltage products into development programs across various next-generation devices, processes and technologies. We secured new design wins for processing advanced carbon-based films, gained position for new types of memory devices at 2 leading OEMs and won multiple advanced packaging applications. In addition, we have seen increased market adoption of our remote plasma sources, which we believe delivered substantially better performance, quality and total cost of ownership than incumbent solutions. We believe RPS offers new growth opportunities for AE in advanced applications for service modification, radical chemistry-based processes and soft etch. Beyond these wins, we continue to see growing demand for our RF delivery systems. Our differentiating RF matching technologies are gaining adoption by key customers for next-generation plasma processes, replacing competitors' simple RF matches and enabling AE to gain share in this market. At one of our leading customers, sales of our most advanced RF matching network, the Navigator II, are on track to grow in 2019 faster than the overall market for plasma processing equipment.

With a robust technology roadmap that will continue to set the standard for RF matches, we are confident our share will continue to grow as the industry moves forward on the technology curve.

On October 22, we launched PowerInsight, an industry-first big data analytics solution for power delivery systems. PowerInsight transform data captured from our products into actionable intelligence, driving advanced diagnostics and predictive analytics for process-power applications and equipment. This new product offering is already installed across several customers and has demonstrated material improvement to our customer's

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costs, yield and process performance. We believe this could be another game-changing technology from a company that had led the industry in power conversion innovation for nearly 4 decades.

Turning to our industrial and medical markets. Overall revenue grew on a combined basis, both sequentially and year-over-year, with a few weeks of Artesyn revenue offsetting expected weakness in organic AE applications. Excluding Artesyn, industrial and medical revenue met our target in the third quarter with continuing macro weakness out of China in the lengthy period of manufacturing contraction in Europe. In addition, we saw weak demand throughout the quarter in automotive and industrial applications and increased price pressure in the solar market, resulting in push out of sale manufacturing investments. Despite this macro backdrop, our team executed well in targeting new design wins and in preparing for the ramp of several new wins in the fourth quarter.

In the flat panel display market, we secured a large multiyear design win for OLED applications and continue to see growing opportunities for AE as the industry transitions into next-generation display technologies. In the area of automotive emission measurement and testing equipment, we won several designs expanding our global presence in this regulatory driven market.

In medical imaging and diagnostic market, our portfolio of high and low voltage power supplies continues to gain momentum. We project organic industrial revenue to improve sequentially in the fourth quarter, driven mainly by early ramp of the these design wins, but at a lower level than the first half due to macro weakness and push out of several projects into 2020.

Artesyn contributed incremental revenue to our industrial and medical markets in the short time we owned the business in Q3. Revenues in this market were particularly strong during this initial period, benefiting from a major motor drive design win and solid performance in the medical technology market. Looking forward, we anticipate our total sales into the industrial and medical market to represent our second largest revenue stream.

With the Artesyn acquisition, Advanced Energy entered 2 very large new markets, data center computing and telecom and networking. The data center computing market is starting to recover after a period of an inventory digestion. In addition, several new design wins at major hyperscale and enterprise customers are expected to contribute solid revenue growth in the fourth quarter. As a result, we anticipate fourth quarter revenue in data center computing to surpass last year's run rate. With Artesyn's telecommunication products, 5G has also become an important secular growth driver for Advanced Energy. Our prior suppliers are designed into many types of equipments supporting 5G, including next-generation base stations, backhaul networks in the cloud and edge computing infrastructure. While 5G has remained a small contributor to our revenue in the telecom and networking markets so far, we are well positioned with design wins across multiple 5G platforms at infrastructure equipment suppliers. However, with near-term reduction of telecom investment partially due to trade dispute, we expect revenues in telecom and networking to fall below the historical run rate in the fourth quarter before recovering in 2020.

In summary, I'm excited leading the new Advanced Energy on the path of becoming a top-tier industrial technology company with accelerated earnings growth. Our technologies are gaining momentum in our markets, and we continue to introduce game-changing innovation in RF power delivery, RF matching, remote plasma sources and now data applications with PowerInsight. Looking forward, we are encouraged that some of our key markets, such as semiconductor and data center computing, have started to recover, although visibility about level and duration of the recovery remains limited.

Finally, as we welcome Artesyn to the AE family and integrate our organizations, I am confident we will unlock new revenue and profit growth opportunities.

I would like to thank our customers, shareholders, partners and our valued employees for your support. I look forward to seeing many of you in the upcoming quarter, especially at our upcoming analyst event scheduled for December 16 in New York City.

With that, let me turn the call over to Paul.

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Paul R. Oldham - *Advanced Energy Industries, Inc. - Executive VP & CFO*

Thank you, Yuval, and good morning, everyone. Before I begin, let me remind you of what Edwin stated at the outset. Starting from this quarter, we have reclassified our revenue breakdown into 4 market verticals. As part of this change, we have included service revenues within their respective markets, consistent with the majority of our peers and customers. In addition, we have updated Artesyn's pro forma 2018 revenue based on these market classifications. You will find supplementary tables of historical and third quarter data in the earnings slide deck. Also as Yuval mentioned, going forward, we expect to run the company in an integrated functional structure in order to drive efficiencies and synergies, but we will provide organic and inorganic results for comparative purposes in the interim period.

Turning now to the results for the quarter. Total revenue for the quarter was \$175.1 million, up 30% from last quarter and up 1% from a year ago. On an organic basis, revenue of \$134.2 million was above the high end of our guidance range. The addition of Artesyn added \$40.9 million in the 20 days we owned the business.

Looking at sales by market, semiconductor equipment revenue was \$96.4 million, up 7% from last quarter and down 20% year-over-year. Semi product sales grew 9% sequentially in the third quarter, and we're ahead of our target, driven by strengthening foundry/logic investments and incremental contributions from our prior design wins.

Looking into Q4, we expect our total semi revenue to grow in the low- to mid-teens sequentially, supported by strong foundry/logic, early signs of NAND spending, OEM inventories' bottoming and incremental revenues from our design wins.

Revenues from industrial and medical markets were \$55.2 million, an increase of 23% from the second quarter and up 4% from last year. On an organic basis, revenues came in at \$38.7 million, down 13% sequentially and in line with our expectations. Macro headwinds and delayed timing of projects were the primary drivers of the sequential decline, with major solar projects being pushed out over the next several quarters. Despite the pushouts, we continue to anticipate our organic industrial revenues to improve sequentially in the fourth quarter as we deliver products to several new design wins.

Artesyn products added \$16.4 million of sales in the industrial and medical markets in Q3. Data center computing revenue was \$13.5 million and telecom and networking revenue was \$10 million. Our team did a great job closing the quarter with strong shipments. However, with just 20 days of reported Artesyn revenues, I caution you not to over-extrapolate revenues in these markets for your forward-looking models.

Going into Q4, we anticipate demand from the data center computing market to strengthen, driven by several new programs at hyperscale and enterprise computing customers. On the other hand, sales into telecom and networking in Q4 are expected to be lower than historical levels due to near-term delays in telco investments. As additional information, our total service revenue in Q3 was down 5.7% sequentially and 4.4% year-over-year as expected. You can find this information on the face of the P&L.

Excluding the divestiture of our U.S.-based central inverter business in May, service was down 3.6% sequentially and flat year-over-year. Lower fab utilization impacted demand for used equipment and retrofits in the quarter. But longer term, we remain confident our organic service business will continue to grow at greater than 10% cumulative growth rate.

Gross margin for the quarter was 42%, cost of sales included approximately \$1.5 million of acquisition-related costs and \$1.3 million of start-up facility costs related to our new Malaysia factory. We are making good progress on the build out and have started builds of financial products.

On a non-GAAP basis, gross margin was 43.6%. Organic margins improved sequentially due to lower fixed cost, improved efficiency and mix. As expected, the Artesyn products lowered total gross margins this quarter by approximately 500 basis points, but added over \$10 million of non-GAAP gross profit.

Looking to Q4 with the full quarter of Artesyn revenue, we expect adjusted gross margins to be in the 34% to 36% range. GAAP operating expenses in Q3 came in at \$64.1 million, including \$6.4 million of acquisition-related costs, \$3 million of intangibles amortization, \$840,000 of stock compensation and \$375,000 of transition and restructuring costs. Excluding those items, non-GAAP operating expenses came in at \$53.5 million, which included \$7.5 million of non-GAAP expense from Artesyn. Our team executed well, controlling cost during this downturn and allowing us to achieve organic

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spending at the low end of our target while allocating more investment into R&D to fund new critical product and technology development for next-generation semiconductor technologies.

Looking forward, we expect adjusted operating expenses in the fourth quarter to be between \$75 million and \$78 million. GAAP operating margin for the quarter was 5.4%, non-GAAP operating margin was 13.1%.

During the quarter, we paid \$700,000 of debt financing for the Artesyn acquisition and made our first principle payment of \$4.4 million. Going forward, we would expect quarterly net interest expense of between \$1.3 million to \$1.5 million, reflecting both the debt and interest income on our cash balances.

In Q3, we recorded GAAP tax expense of \$3.5 million or 32.5%, higher than normal due to the nondeductibility of certain transaction costs and a decision to change our election to permanently reinvest earnings in certain international locations. Our non-GAAP tax expense was \$3.4 million or 14%. Looking forward, we expect our GAAP and non-GAAP tax rate to be in the range of 17% to 18% with the addition of Artesyn.

On a GAAP basis, earnings per diluted share from continuing operations were \$0.19 compared to earnings of \$0.61 last quarter and \$0.90 last year. Last quarter's results were boosted by the onetime gain from the sale of the inverter service business and favorable discrete tax items.

Non-GAAP EPS for the quarter was \$0.54, above the high end of our guidance due to the revenue upside, good execution on our cost improvement and the addition of Artesyn. This compares to \$0.45 in the prior quarter and \$1.05 a year ago. Including the interest expense of financing, Artesyn added \$0.07 to our per share earnings. Again, due to the short period we owned Artesyn in Q3, I caution investors and analysts not over-extrapolate this profit contribution.

Turning now to the balance sheet. Operating cash flow from continuing operations was \$10.5 million. We ended the quarter with cash and marketable securities of \$341 million and total debt of \$343 million, leaving us with essentially 0 net debt. At the end of Q3, Artesyn added approximately \$121 million, including acquired cash to our net working capital. On an organic basis, net working capital was down slightly from Q2. Receivables increased slightly and DSO rose by 1 day to 63. Inventory increased by \$6 million to support early Q4 shipments and turns were 2.8x. Payables increased by nearly \$8 million due to timing of receipts and payments.

Capital expenditures for the quarter were \$8.9 million and depreciation was \$3.9 million. The higher capital spending was primarily related to the new manufacturing facility in Malaysia and some added capacity to support hyperscale design wins. During the quarter, we did not repurchase any shares.

Now let me turn to guidance. For the fourth quarter, we expect revenues to be \$310 million, plus or minus \$15 million, with low- to mid-teens growth in semiconductor, organic growth in industrial and medical and the addition of Artesyn products. We estimate Q4 non-GAAP earnings at \$0.68, plus or minus \$0.12 per share. We expect Artesyn products to represent just over half of our guided Q4 revenue and to be accretive to non-GAAP earnings.

In conclusion, our semiconductor market is coming out of the downturn and demand for our products across our markets is strengthening as multiple new programs ramp in the near term. We are pleased with our initial progress in planning and executing the integration of the combined companies. With a more diversified revenue stream, positive contribution from Artesyn products and anticipated synergies, we continue to believe that this acquisition strengthens our position as a pure-play powerhouse and sets the foundation for accelerated earnings growth over time.

With that, we will open the call to your questions. Operator?



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QUESTIONS AND ANSWERS

Operator

(Operator Instructions) Our first question comes from Tom Diffely with D.A. Davidson.

Thomas Robert Diffely - *D.A. Davidson & Co., Research Division - MD & Senior Research Analyst*

Quick question on the comments you made about the OEMs' ending of your inventory ramp down. How big an impact was the inventory at OEMs during the quarter versus your expectations?

Paul R. Oldham - *Advanced Energy Industries, Inc. - Executive VP & CFO*

Yes. Tom, I think it's a little hard to articulate because it's kind of a blend, right? I mean it's not a cliff, but as we -- in general, as we try to observe what's happening with our customers' inventory, it seems like we're seeing a pretty tight connection between what we're seeing in the market trends and in our results. So when we look through by customer, our sense is the drawdown is largely completed.

Yuval Wasserman - *Advanced Energy Industries, Inc. - President, CEO & Director*

And it wasn't done at the same time, Tom. I mean, different customers had different timing of the drawdown.

Paul R. Oldham - *Advanced Energy Industries, Inc. - Executive VP & CFO*

That's right.

Thomas Robert Diffely - *D.A. Davidson & Co., Research Division - MD & Senior Research Analyst*

Okay. Great. And then, Paul, a question on the guidance you just gave. Initially, you had \$0.07 impact from the acquisition in the quarter. I think we were expecting something in the lines of \$0.07 to \$0.10 a quarter for the next few quarters. Is that where we are as far as impacts from the Artesyn acquisition? Or there are some near-term items that make the earnings contribution different than that?

Paul R. Oldham - *Advanced Energy Industries, Inc. - Executive VP & CFO*

Well, as it relates to the results, as I mentioned on the prepared remarks, be careful about extrapolating the results. You got a few weeks of revenues, which are typically at the end of the quarter disproportionate to the expenses, so it's very good results in that regard. You have a little bit of better mix, and you have some purchase accounting things that flow through there. So for this short period, those are very good earnings. But if you look at our guidance and you look at total, what we basically believe is that Artesyn's going to start right about what we -- where we thought when we announced the acquisition, where they would sort of run in the mid-single digits of operating income and gross margins in the low- to mid-20s.

So I'd say it's right on track to what we expected if you looked at our full quarter. And there's going to be a little noise at the beginning, as you can imagine, so it could be plus or minus that bit. But I think you can kind of get a sense for the contribution if you use, in general, the basic guidance we said when we did the acquisition. No change from that from what we've seen.

Yuval Wasserman - *Advanced Energy Industries, Inc. - President, CEO & Director*

And Tom, the starting point that we announced when we talk about this acquisition, it's basically in line with the presentation we gave everybody about this business. And you look at that in the starting point for integration process.

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Paul R. Oldham - *Advanced Energy Industries, Inc. - Executive VP & CFO*

That's right.

Thomas Robert Diffely - *D.A. Davidson & Co., Research Division - MD & Senior Research Analyst*

Okay. That sounds good. And then also [from a] bigger picture point of view, a lot of companies are starting to see the beginnings of a NAND recovery. Is there any way to I guess not quantify it, but determine whether or not this is the beginning of something larger or if it's just a (inaudible) business in the interim? Or how do you view the pickup in NAND business that we're seeing?

Yuval Wasserman - *Advanced Energy Industries, Inc. - President, CEO & Director*

The way we look at that, Tom, is investment cycle. We don't have visibility beyond this quarter or maybe the next one. The other thing that we know from the industry, a lot of this investment is added capacity to existing lines or existing fabs. These are not greenfield fabs investment that we saw in 7 -- in 19 -- 2017. And for that reason, we look at that as investment cycle. And yes, it started with foundry/logic and now we see the investment cycle setting in the memory, in NAND.

Thomas Robert Diffely - *D.A. Davidson & Co., Research Division - MD & Senior Research Analyst*

Okay. Finally, Paul, when you look at the Artesyn business, is there any particular seasonality that you see there?

Paul R. Oldham - *Advanced Energy Industries, Inc. - Executive VP & CFO*

Typically, the fourth quarter is a stronger quarter on balance than the other quarters. Otherwise, it's a broader business, and it can be -- there are big projects for sure, so it can bounce around a little bit quarter-to-quarter based on the major projects that are happening. But in general, the fourth quarter is a little bit stronger quarter.

Operator

Our next question comes from Krish Sankar with Cowen and Company.

Krish Sankar - *Cowen and Company, LLC, Research Division - MD & Senior Research Analyst*

I had a couple of them. First one, Yuval, on the NAND recovery that you are seeing, kind of curious, do you, from your vantage point, are most of the power supplies being purchased by your customers, is it for 96 layer or 128th layer at this point?

Yuval Wasserman - *Advanced Energy Industries, Inc. - President, CEO & Director*

I can't comment on that, Krish. I think it's a combination, but I cannot give you a specific delineation how much is each.

Krish Sankar - *Cowen and Company, LLC, Research Division - MD & Senior Research Analyst*

Got it. No worries. Is there -- from your vantage point, can you know the difference between -- is this a inventory replenishment, or is this a more cyclical recovery buy? Do you have any insight into that, especially on the NAND side?

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Yuval Wasserman - *Advanced Energy Industries, Inc. - President, CEO & Director*

No, we don't.

Krish Sankar - *Cowen and Company, LLC, Research Division - MD & Senior Research Analyst*

Got it, got it. No worries. And then a question for Paul. Paul, thanks for the color on the Q4 guidance. You said the lower half of revenues is going to come from Artesyn in Q4. Is this fair to assume if we take that as the baseline, the December quarter Artesyn revenue, will the out quarter revenues in 2020 be determined basically by data center and telecom? Or should we think this run rate of revenue is a good assumption to use for 2020?

Paul R. Oldham - *Advanced Energy Industries, Inc. - Executive VP & CFO*

Well, I think -- first, I'm not sure if I heard you correctly, but we said in our prepared remarks that Artesyn was a little more than 50% of the total, and I also mentioned that the fourth quarter tends to be a little stronger quarter than the others. So I wouldn't quite take the fourth quarter and just multiply it by 4. It will bounce around a little bit by quarter. But within that, the trends that we talked about on the call, I think, are the important ones and that is that we could see a little strengthening in data center over the course of the year, based on the market and some wins that we've had. That telecom and networking will be a little weaker because of the tariffs and the external markets that we're seeing. And I -- the industrial and medical is kind of a steady grower, although there is some project timing that will be in there. And I think if you look at our other markets, then the important thing is when we look at semi, going into next quarter, we continue to see solid growth there in the low- to mid-teens overall.

Krish Sankar - *Cowen and Company, LLC, Research Division - MD & Senior Research Analyst*

Got it. That's very helpful. And then a final question, either for Yuval or Paul, on the reclassification. The semi equipment revenue was \$96.4 million in September and basically, in this point, I'm just kind of curious, if you look at calendar '20 or -- for you guys on that segment, how is it compared to calendar -- or calendar '19 compared to calendar '18? How much down is it on a year-over-year basis on the new reclassifications?

Paul R. Oldham - *Advanced Energy Industries, Inc. - Executive VP & CFO*

Yes. If you look at the quarter, you can see that we're down about 20% year-on-year for the fourth quarter. And then we provided some breakout, Krish, in our -- in the -- in our presentation that actually gives you, by quarter, the numbers going back to 2018. So you can take a look at that, and it's all right there.

Operator

Our next question comes from Amanda Scarnati with Citi.

Amanda Marie Scarnati - *Citigroup Inc, Research Division - Semiconductor Consumable Analyst*

Can you just go back to talk a little bit about the run rate in data center and telecom? Yuval, you mentioned that 4Q data center should surpass last year's run rate, whereas 4Q telecom should be below the historical run rate before potentially recovering. Could you just talk about what those run rates look like in the fourth quarter? I know you said it's sort of seasonally strong, but any way you can sort of help us understand and quantify that for our model?

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Yuval Wasserman - *Advanced Energy Industries, Inc. - President, CEO & Director*

I'm not sure I can quantify, but I can give you a little of background. On the data centers hyperscale, what we saw -- there was a wave of investments in 2018, and since then we were through a period of digestion. And this is right now coming to an end, and we see a recovery in data center hyperscale with new waves of investment, and that is accelerated by some really important design wins we had in hyperscale, right? And that, basically, will influence the results of Q4 this year. I'm not sure if we broke it down in terms of the historical run rate, but we may have in the [Q] -- do you have that, Paul?

Paul R. Oldham - *Advanced Energy Industries, Inc. - Executive VP & CFO*

Yes. If you look, Amanda, in the, again, the supplemental information on Page 8, we did break down, for the full year, the split between the different markets. And I think you can use that as kind of a stake in the ground. If you look at that, there's a pie chart, last year, about 40% of the business on -- the new classification business, our basis was data center. About 33% was telecom and networking, and industrial and medical was about 25%.

Yuval Wasserman - *Advanced Energy Industries, Inc. - President, CEO & Director*

Yes.

Paul R. Oldham - *Advanced Energy Industries, Inc. - Executive VP & CFO*

And then there's semis like nominal, a couple of percent. That's (inaudible)

Yuval Wasserman - *Advanced Energy Industries, Inc. - President, CEO & Director*

That's our transfer for Artesyn, 2018.

Paul R. Oldham - *Advanced Energy Industries, Inc. - Executive VP & CFO*

That's right. But if you use that and combine it with the color, you get a rough size of what's happening in the market.

Yuval Wasserman - *Advanced Energy Industries, Inc. - President, CEO & Director*

But the important thing, Amanda, is data center hyperscale is recovering, went through digestion after the investments in 2018, and in conjunction with some really important design wins in hyperscale we had, we see a fairly strong recovery in Q4.

Amanda Marie Scarnati - *Citigroup Inc, Research Division - Semiconductor Consumable Analyst*

And then on the 5G side, can you just talk about your growth opportunity in 5G relative to what Artesyn had in 4G? And what the expectations are for that revenue growth? I think you said it's nominal for 5G at this point.

Yuval Wasserman - *Advanced Energy Industries, Inc. - President, CEO & Director*

Yes. That's a great question. And if you look at what's happening right now, we are at the beginning of the investment in 5G infrastructure. And this is basically the base stations' investment. There is still investment in 4G and slow emerging investment in 5G. It's very different from the hype we see around the handheld devices. There is a lot of investment right now related to smartphones that are 5G capable that drives demand in the



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semiconductor chip industry. The investment in the infrastructure of 5G is different. We are just at the beginning, it's a slow ramp, and because of some of the trade wars and macroeconomical pressures or headwinds, we saw some pushouts in this area as well and that's why we even made the comment that the 5G is not going to recover as strong as people believe initially as a whole 5G industry. So we need to look differently at handheld devices able 5G versus the infrastructure.

Amanda Marie Scarnati - Citigroup Inc, Research Division - Semiconductor Consumable Analyst

Great. And then the last question I have is on TSMC. Obviously, TSMC increased their CapEx budget quite substantially and that seems to be reflected in your results and your guidance on the semiconductor side of the business. How much of this do you think is more of a pull forward in terms of what their expectations are in technology nodes? Or is this sort of a new normal, do you think?

Yuval Wasserman - Advanced Energy Industries, Inc. - President, CEO & Director

I think it's a combination of both, and if you look at TSMC, they got a 2020 CapEx flat, right? So we look at the bad, it's basically a combination of both.

Operator

And the next question comes from Pavel Molchanov with Raymond James.

Pavel S. Molchanov - Raymond James & Associates, Inc., Research Division - Energy Analyst

First, just a quick one on the balance sheet. You've almost precisely matched your debt balance versus your cash balance and obviously, that is pretty cheap these days, but I imagine there are still some costs to carry on that. So I'm curious why not use some of that cash to repay half, 2/3 of the acquisition loan?

Paul R. Oldham - Advanced Energy Industries, Inc. - Executive VP & CFO

That's a good question, Pavel. I think we've stated from a capital allocation perspective, as we go forward, our first priority would be to -- would be for debt reduction. The pace of that, we'll manage as we go forward, and recall that is a pretty low cost to debt at LIBOR plus 75 basis points. So that's what we will focus on. We'd like to get a couple of quarters under our belt here and be prudent. But directionally, you're right, we will be bringing the debt levels down. We'd like to see the gross debt sort of more in the 1.5x EBITDA, which we're a little higher than that now. So we'll work towards that as we run the business for a few quarters and get through some of the integration and other activities that we're working on.

Pavel S. Molchanov - Raymond James & Associates, Inc., Research Division - Energy Analyst

Okay. In thinking about the macro headwinds, seems like everybody in the industrial landscape is talking about that. So U.S., China is pretty clear, but I know you guys also have a historically sizable footprint in Europe and so I thought I would ask if the kind of the Brexit and the uncertainty over the EU, maybe the elections there, et cetera, is that also one of the issues you guys are dealing with?

Yuval Wasserman - Advanced Energy Industries, Inc. - President, CEO & Director

I don't think so, Pavel. I think some of the headwinds we see on our side has to do with the automotive industry, for example, that right now see some headwinds; and general industrial applications, some of them related to just manufacturing investment. And if you look at the global manufacturing equipment and infrastructure investments, it's in decline. And that's not only in Europe. That's -- we see that across the board.



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Operator

(Operator Instructions) Our next question comes from Mehdi Hosseini with SIG.

Mehdi Hosseini - *Susquehanna Financial Group, LLLP, Research Division - Senior Analyst*

Just have one short follow-up for the team. I'm just trying to better understand how you're going to manage inventory for a new set of customers like data centers, and how you're going to be able to forecast that? I find the semi cap end market quite different than some of the new markets that have -- that is not part of your business and I want to understand working capital management and how you're able to provide guide, given the lack of experience when it comes to like data centers?

Yuval Wasserman - *Advanced Energy Industries, Inc. - President, CEO & Director*

So let me talk about the go-to-market strategy or what you perceive as lack of experience. We acquired Artesyn. That came with a very strong and capable management team. People that had been in the industry for more than 20 years; each of the executives more than 20, 25 years; people that have been in the industry for this long time, engaged with customers, engaged with partners, engaged with distribution channel. There is serious depth of knowledge and experience in the company relative to the data center hyperscale. Regarding the inventory, I'm not sure about the question was, but I'll ask maybe Paul to answer.

Paul R. Oldham - *Advanced Energy Industries, Inc. - Executive VP & CFO*

Yes. So it's a good question, Mehdi, and one of the things that we're doing, as you see, is that we are breaking out the revenues by market because you're right, the market trends are different depending on the various markets that we sell our power supplies into. And in conjunction with that, we'll give color directionally and we'll obviously give results within those markets, so that you can see that. But within each of those markets, we have products and we have the manufacturing strategies that sell those products, and we'll manage it just like our other -- all the other products that we have. There is a process for that, that looks at customer demand and assesses what the impact of new products will be and projects what we'll build and what inventory therefore that we'll need. It'll be a very common process and common practices across that. One thing I will note is that Artesyn does tend to have -- run a higher backlog (inaudible) products in those markets than we typically do in semi, where it's more of a just in time or a pull basis. So that does give a little more visibility in those markets.

Mehdi Hosseini - *Susquehanna Financial Group, LLLP, Research Division - Senior Analyst*

The higher backlog is very helpful. Just want to go back to Yuval's comment. The entire data center end market is fairly new, and I think over the past 5, 6 years, it has become more impactful on the supply and demand for components and other products, and they're increasingly pushing down inventory to their suppliers and making them to hold inventory for them as they adopt the consumption model. And I just -- perhaps a better question for you is, are you also, given the depth of the experience within Artesyn, are you seeing these kind of trend where data center customers wanting you to hold more inventory as they change their business model to one that is more consumption-driven?

Yuval Wasserman - *Advanced Energy Industries, Inc. - President, CEO & Director*

No. We don't see that. Look -- again, Artesyn has been active in this business for many years, has a deep intimate relationship with customers, with distributed engineering centers very close to where the customers operate. And the reason we got all the recent very important design wins with the hyperscale customers has to do with following: very high efficiency rate of conversion. As you know, Mehdi, higher efficiency means lower thermal and lower cost of cooling water or cooling processes in data centers. Form factor with high power density that allows them to fit right in the size of the customer's rack, right? And extremely responsive and capable engineering team that is able to turn on a dime and work with the customers on next-generation devices.



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The footprint of the company right now, with factories in multiple places around Asia, allows the company to choose where to manufacture the capacity that is required by the customers. And that gives -- that flexibility gives some of the customers the comfort level they can choose which country to buy the product from. So this agility, flexibility, continuity of business and very competitive products when it comes to power density, power conversion and the responsiveness are the main reason we continue to win those important design wins.

Operator

Our next question comes from Quinn Bolton with Needham & Company.

Yu Shi - *Needham & Company, LLC, Research Division - Associate*

This is Charles Shi on behalf of Quinn. So first off, congratulations on the strong results. I have 2-part question on your new product lines, including RPS, I mean maybe a little bit on RF match, but [maybe] this question has been answered in the past. So first in the long term, how should I think about this [TAM] expansion brought by you guys entering RPS and RF match? And if I remember correctly, the TAM of RF and DC generator was about \$1 billion per year based on 2018 numbers and then I have second part I'll ask later.

Yuval Wasserman - *Advanced Energy Industries, Inc. - President, CEO & Director*

So just a comment, we are not entering into the RF match business. We have been in the RF match business for decades, and we are the market leader in RF matching. The important comment about RF matching is that it has become more and more critical technology and enabling technology, especially as you go into more complex action to position applications. AE's match technology is extremely sophisticated and very advanced to the point that we enable a lot of our customers to perform the processes that they need to perform for these advanced application.

That's the reason we saw a surge in our revenue above the market growth, driven by significant increase in our RF match business last quarter and going forward. On the RPS side, you're right. The RPS is a business that Advanced Energy did not served for years due to IP limitations and contractual limitations we had with competitors. However, the market right now is hungry for enabling, capable, quality supplier for remote plasma source products. We believe that we have not only the product performance and the capability, but also the quality and the reliability and the service capabilities to support the customers globally. We have seen tremendous increase in the number of units that go into new customer programs and tools for remote plasma source applications from Advanced Energy.

So our remote plasma source product is very capable, very competitive, and coming from a very low market share, we view that opportunity as a growth opportunity for Advanced Energy. We will expand more on that strategy during the Analyst Day.

Yu Shi - *Needham & Company, LLC, Research Division - Associate*

Great. So maybe a follow-up is really -- relatively shorter-term. In terms of RPS, how should I think about the revenue ramp? I understand from design win to really meaningful revenue contribution, it may take a little bit long time, and how should I think about that? And specifically on Q4, do you see meaningful contribution from your RPS, new products?

Yuval Wasserman - *Advanced Energy Industries, Inc. - President, CEO & Director*

We see growth in Q4 coming from our RPS product. We are not at the stage right now that we are willing to disclose it. But we will -- we expect to see growth coming from RPS.

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Operator

I'm not showing any further questions at this time. I would now like to turn the call back over to Yuval Wasserman for any further remarks.

Yuval Wasserman - *Advanced Energy Industries, Inc. - President, CEO & Director*

Thanks for joining us today. We appreciate your time here with us. This is exciting time at Advanced Energy as we are embarked on a new company with tremendous opportunity for growth, both in revenue and earnings. We're excited about the integration process, we have started the process, it's going well. And we look forward to see many of you at our Analyst Day in New York.

Thank you very much.

Operator

Ladies and gentlemen, this concludes today's conference call. Thank you for participating.

You may now disconnect.

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