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# **EDITED TRANSCRIPT**

ADI - Q1 2017 Analog Devices Inc Earnings Call

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### **OVERVIEW:**

Co. reported 1Q17 revenues of \$984m and non-GAAP diluted EPS of \$0.94. Expects 2Q17 revenues to be \$870-950m and non-GAAP diluted EPS (based on these estimates and excluding any special items) to be \$0.74-0.86.



#### CORPORATE PARTICIPANTS

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### **PRESENTATION**

# Operator

Good morning and welcome to the Analog Devices' first-quarter FY17 earnings conference call, which is being audio webcast via telephone and over the web. I'd like to now introduce your host for today's call, Mr. Ali Husain, Treasurer and Director of Investor Relations. Sir, the floor is yours.

Ali Husain - Analog Devices, Inc. - Treasurer and Director of IR

Great. Thanks, Jennifer. Good morning, everybody. Thanks for joining the Analog Devices first-quarter 2017 earnings conference call. You can find our press release, relating financial schedules, and the CFO commentary at investor.analog.com. With me on today's call are ADI's CEO, Vincent Roche; and ADI's CFO, Dave Zinsner.



Before we start, let's get through some disclosures. Please note the information we're about to discuss, including our objectives, outlook, and the proposed acquisition of Linear Technology Corporation, includes forward-looking statements. Actual results may differ materially from these forward-looking statements as a result of various factors, including those discussed in our earnings release and our most recent 10-Q. These forward-looking statements reflect our opinions as of the date of this call and we undertake no obligation to update these forward-looking statements in light of new information or future events.

With the exception of revenue, our commentary about ADI's first-quarter financial results will exclude special items, which in the aggregate totaled \$85 million for the first quarter. When comparing our first-quarter results to our historical performance, special items are also excluded from the prior-quarter and year-over-year results, and reconciliations of these non-GAAP financial measures to their most directly comparable GAAP financial measures are included in schedules E and F in today's earnings release, which we have posted at investor analog.com.

With that, let's get started and I'll turn the call over to Vince.

Vincent Roche - Analog Devices, Inc. - President and CEO

Thanks very much, Ali, and good morning everyone.

By any measure, our January quarter results were stellar. Revenue of \$984 million was well above the high end of our guidance, growing 28% over the prior year, and we had broad strength across all our markets. And we expanded operating margins over 700 basis points from the prior year to 35% of sales. Earnings per share of \$0.94 was up 68% from the prior year and \$0.16 better than the high end of our guidance. Importantly, we have generated \$1.2 billion in free cash flow over the past 12 months. This was a terrific start to the fiscal year and we continue to see momentum in our business and in our customer engagements. Our R&D efforts are squarely focused on the most exciting trends in the industrial, automotive, communications infrastructure, healthcare, and consumer markets.

I'd like to give you just a few examples of where ADI's technology is making a real difference. In the area of data converters, which are in many ways the backbone of our mixed-signal franchise, for example, where we're the market leader, we've once again established new performance benchmarks with our next generation of high-speed ADCs and DACs that exploit 28-nanometer CMOS technology, combined with proprietary architectures and algorithms. By providing 4-times improvement in critical high-dynamic range parameters, these converter platforms are enabling the next wave of gigahertz bandwidth, software-defined systems for 4G and 5G communications for test equipment, and also in several aerospace and defense applications. It's the radio or radar equivalent of going from watching television using the old bunny ears to watching high definition TV. We can now give our customers the ability to see things that they did not know were even there, and this is a real game changer.

In addition, our previously introduced high-speed signal processing platforms achieved record revenue based on our integrated transceiver platforms, which help our communications infrastructure customers and beyond efficiently address the challenges of accelerating global data consumption. These solutions are equally well suited to, and are increasingly finding their way into, a diversity of applications in the industrial instrumentation, aerospace and defense, and indeed, the automotive markets.

In factory automation, our software-configurable input/output solutions are enabling our customers to create flexible and agile platforms that can be readily expanded and reconfigured to support more sensing and control channels on automated factory floors. In addition, in motor control and robotics applications, our measurement control and isolation products are driving improvements in motor efficiency precision and reliability, while maintaining the highest levels of safety and industrial robustness.

ADI's healthcare solutions span both B2B and consumer applications. On the B2B side, we're enabling higher channel counts and throughputs in high-performance imaging systems that lower our customers' overall cost per channel. Both importantly drive higher ADI content per system. On the consumer side of healthcare, our vital-signs monitoring technologies is enabling highly accurate and ultra low-power measurements of critical health parameters, improving personal wellness and overall quality of life for the end consumer. Healthcare for ADI is now a high-growth business, with its annualized growth rate running in the double digits.



In automotive, our 77 gigahertz RF CMOS radar solution offers a robust platform for ADAS and autonomous driving, giving customers the ability to capture objects earlier, more reliably, and with greater precision and over much longer distances. Our investments in cost-effective, high-performing silicon-based LIDAR solutions are turbocharging our efforts in this area.

These are the types of innovations that ADI bring to the market to better serve our customers' needs; and our industry and the market is taking notice indeed. In recognition of our overall innovation efforts, ADI received the 2017 IEEE innovation award, and was once again selected by Thomson Reuters as one of the 100 most innovative companies in the world. It has been said that innovation distinguishes between a leader and a follower and ADI is very much at the cutting edge of innovation. This value forms the bedrock of our Company's culture and belief system and is shared equally by Linear Technology.

With that, let me give you a brief update on the status of the proposed acquisition of LTC. Thus far, we have received six out of seven regulatory approvals needed to close the transaction, and our integration planning teams have been hard at work to combine the best of both ADI and Linear Tech in order to present one face to the customer on day one. I also am delighted that Bob Swanson, the founder and Executive Chairman of Linear Tech plans to join ADI's Board after the deal closes. We're all very excited about the combination of ADI and Linear Tech, which we believe will create an analog industry powerhouse that will accelerate innovation and revenue growth opportunities in our core markets of industrial, automotive, and communications infrastructure markets, which indeed are the most lucrative markets in our industry. The transaction's expected to be highly accretive to ADI's non-GAAP earnings per share and free cash flow, and it makes ADI the number one or number two player in all the major analog product categories, enabling us to solve our customers' analog system problems from end to end.

Overall, this was a remarkable quarter across multiple dimensions, and we see the momentum continuing into the second quarter. With that, I'd like to turn the call over to Ali for some more details on our performance by end market in the quarter just passed.

Ali Husain - Analog Devices, Inc. - Treasurer and Director of IR

Thanks, Vince.

Just digging deeper into our results by end market, the industrial market was 41% of revenue. It increased 1% sequentially, which was really very strong, in what's typically a much seasonal and slower first quarter compared to the fourth. We didn't really see much of a slowdown over the holidays, and I'd say January order rates were also very strong. Within the industrial business, industrial instrumentation applications outperformed our expectations. I'll highlight the ATE market as one that was particularly strong. Also, the factory automation sector within industrial had a very good quarter. Compared to the prior year, the industrial market showed considerable strength. It grew 15%, and really was broad-based strength across all of the industrial sectors, so that's a very good result.

On the automotive side, the automotive market at 14% of sales was also better than seasonal. It decreased really only slightly from the prior quarter but grew very strong, 10% over the prior year, led by really content-rich applications such as infotainment, powertrain, and ADAS. On the communications infrastructure side, revenue there in that market was 18% of sales. Again, was also ahead of expectations, increased slightly sequentially, and was up 4% over the prior year, led by optical networking. The consumer market was 27% of sales in the first quarter. It decreased 8% sequentially, which was much better than seasonality, as we saw continued strength in portable consumer applications. Consumer more than doubled over the prior year in the first quarter.

With that, I'll turn it over to Dave for details of our financial performance in the first quarter and our guidance for next quarter. With the exception of revenue, Dave's comments on the P&L line items are on a non-GAAP basis. Dave, it's all yours.

Dave Zinsner - Analog Devices, Inc. - CFO

Thanks, Ali.



FY17 starts out on solid footing, with ADI delivering very strong revenue, profitability, earnings per share, and free cash flow. Revenue in the first quarter, as we mentioned, totaled \$984 million and diluted earnings per share was \$0.94. Gross margins at 66.1% were above our guidance on a better mix of business and higher revenues. Inventory on a dollars basis decreased \$11 million sequentially and days of inventory were within our model range at 101 days, down from 105 days in the prior quarter. Utilization rates in the first quarter were in the high 60%s and we're planning to increase utilization to the mid 70%s in the second quarter. Weeks of inventory in distribution were lean at approximately seven weeks, which was consistent with the prior quarter.

During the quarter we recorded a \$49 million restructuring charge, primarily related to a voluntary early retirement program for certain US employees. Excluding this and other special items, operating expenses increased 7% sequentially, with the entirety of the increase tied to our variable compensation program, which is based on year-over-year revenue growth and operating margin metrics. Nevertheless, operating margins at 35% of sales expanded over 700 basis points compared to the prior year on strong revenue growth and prudent expense management by the team.

Other expense in the first quarter was approximately \$26 million, the result of a partial quarter with the permanent financing related to the Linear Tech acquisition in place. We expect our net interest expense to be approximately \$30 million per quarter until we close the Linear Tech acquisition. Our first-quarter tax rate was approximately 8%, which we expect will be our tax rate until we close, again, on the acquisition. Excluding special items, diluted earnings per share increased 68% over the prior year to \$0.94, as I said.

The first quarter was also a strong free cash flow quarter. We generated \$286 million in free cash flow, which was an increase of 46% over the prior year; and over the past 12 months, ADI has grown free cash flow 20% to \$1.2 billion, or 34% of sales. Capital additions in the first quarter totaled \$28 million and we're planning for the capital additions in 2017 to be in the range of \$130 million to \$145 million. In line with our shareholder value creation strategy, our Board of Directors approved a 7% increase in the quarterly dividend to \$0.45 per share, which represents an annual dividend increase to \$1.80 per share.

Now turning to our outlook and expectation for the second quarter of 2017 which, with the exception of revenue expectations, is on a non-GAAP basis and excludes known special items that are outlined in today's release. After a record-setting first-quarter revenue performance which was also well above the high end of our guidance range, we're planning for the B2B markets of industrial, automotive, and communications infrastructure in the aggregate to grow in the mid to high digits sequentially in the second quarter, and to increase in the high single digits over the prior year. In consumer, we're expecting that normal seasonal patterns will prevail and that this business will likely decrease between 40% and 50% sequentially. Nevertheless, we expect consumer to be up significantly over the prior year in the second quarter.

In the aggregate, we're planning for revenue in the second quarter to be in the range of \$870 million to \$950 million, which at the midpoint represents year-over-year revenue growth of 17% and would represent the fourth consecutive quarter of year-on-year revenue growth. Gross margins are expected to increase to be between approximately 66.5% and approximately 67% on higher utilization rates and a more favorable mix. We estimate that operating expenses will be down approximately 3% to up approximately 1% sequentially in the second quarter. Based on these estimates and excluding any special items, diluted earnings per share are planned to be in the range of \$0.74 to \$0.86, which, at the midpoint would represent very strong year-over-year earnings-per-share growth of about 25%.

To wrap it up, the first quarter was a very good start to the year. We had a strong year-on-year revenue growth with quality earnings and cash generation, and we expect this momentum to continue into the second quarter. With that, we'll take any questions you have.

Ali Husain - Analog Devices, Inc. - Treasurer and Director of IR

Thank, Dave.

Just a reminder for folks on the line, please limit yourself to one question. If you have a follow-up question we ask that you requeue. We do this in the spirit of fairness so that everybody on the call gets to ask at least one of their questions.

Operator, it's all yours.



### QUESTIONS AND ANSWERS

#### Operator

(Operator Instructions)

Our first question comes from John Pitzer with Credit Suisse.

John Pitzer - Credit Suisse - Analyst

Good morning, guys. Thanks for letting me ask a question. Congratulations on the strong results.

Relative to your initial guidance, the big upside in the Jan quarter came out of consumer. Just kind of curious, what changed throughout the quarter? Was this really a better mix with your large consumer customer where that will give you larger or more content on a larger screen? As you think about the opportunity at that customer, how do we think about content going into the back half of this calendar year? Thank you.

### Dave Zinsner - Analog Devices, Inc. - CFO

Yes, I would say in general with the consumer customer, sometimes it's hard to totally predict kind of the weekly shipment level through the entire quarter and so we make an estimate based on what we think will turn through the quarter, plus what we come into the quarter with backlog. There's a varying degrees -- or varying scenarios, I would say, related to how that would go and This was obviously the most optimistic scenario, so it just turned out better. I would point out, though, that we didn't expect nearly the strength we saw in the B2B markets, either, and so they contributed to the upside as well. We're really happy that every end market did a bit better than expectations, so that was awesome.

### Vincent Roche - Analog Devices, Inc. - President and CEO

Just to add to what Dave has said there, John, we, as you know, have been working hard to diversify our position and decrease dependence on any single socket. We have more content in these applications today than we had this time last year. That certainly help as well. We've got more ASP per system and we continue on the track of diversifying to get more and more sockets in that area.

Ali Husain - Analog Devices, Inc. - Treasurer and Director of IR

All right, John, thanks for the question. Next caller, please.

#### Operator

Your next question comes from Tore Svanberg with Stifel.

Ali Husain - Analog Devices, Inc. - Treasurer and Director of IR

Tore?



Tore Svanberg - Stifel Nicolaus - Analyst

Yes. Congratulations on the strong results. It looks like you announced a new distribution agreement overnight. Could you maybe elaborate a little bit on that? Maybe this is an opportunity to just talk about the strategy in dispy going forward.

Vincent Roche - Analog Devices, Inc. - President and CEO

We've had a three-decade relationship with distribution, or maybe 25 years with the distribution channel in general, and what we're striving to do, Tore, fundamentally is we're trying to deepen the level of support and give better breadth of service for our customers. We have many tens of thousands of customers. The channel plays an important role, I think, in the broad breadth of logistics, services across the entire suite of customers and particularly with the smaller customers providing a lot of design service.

Basically, we've decided to simplify the structure to enable us to bring the level of support that we desire and we expect basically to be able to leverage the more focused channel team that we've got and essentially draw on a more comprehensive suite of, in a more focused way, end-to-end support services that could range from design, design help, also prototyping and, of course, logistic support over the long term. We're also -- we've been investing for all our customers, big and small, over the last several years by bringing on more direct resource and really understanding the role of the channel.

We're in a good place right now and of course when we combine with LTC, we will also have the opportunity to bring more field applications and sales resource to a broader breadth of customers. Overall it's about -- it's part of our fundamental strategy, which is about innovation, diversity and operational efficiency and the moves we're making here play to all three of those facets of our business model.

Ali Husain - Analog Devices, Inc. - Treasurer and Director of IR

Thanks, Tore.

Tore Svanberg - Stifel Nicolaus - Analyst

Very helpful, thank you.

Vincent Roche - Analog Devices, Inc. - President and CEO

Thanks, Tore.

Ali Husain - Analog Devices, Inc. - Treasurer and Director of IR

Next caller.

#### Operator

Your next question comes from Ambrish Srivastava with Bank of Montreal.

Ambrish Srivastava - BMO Capital Markets - Analyst

Thanks for the update on Linear, Vince. Dave, last quarter you had given us an update on the accretion and the tax rate. Now that you've spent quite a fair bit of time in rainy California, I was wondering, how we should think about the top line?



Where I was going with this was, at CES we had some early view on how a go-to-market would look like on a Board with Linear and with ADI in a (inaudible) example. Question is really when should we be expecting it to show up and in what end market should it show up first? Thank you.

#### Dave Zinsner - Analog Devices, Inc. - CFO

Well, I would say we get more and more enthusiastic about the opportunities for combining technologies of Linear and ADI every time we meet together as a team. We have kind of loosely built in some expectation that we will get several hundred million dollars worth of revenue synergies with the combined business.

Some of that will take some time. I think a lot of it's going to be in areas where the design cycles and the time to revenue is quite long, so it might be out in the 2024, 2025 time frame where you really start to see us hit our stride. But within the first few years, we'll start to hit and see some revenue synergies.

I would point out that's kind of similar to the path we're on right now with Hittite. We're starting to see it trickle in a little bit in the early stages. We certainly have seen it build up in the opportunity pipeline for the subsequent years here. We just get, I think, every time we meet, more optimistic about what we can do as a Company in terms of delivering technology.

### **Vincent Roche** - Analog Devices, Inc. - President and CEO

Most of the business of LT and ADI combined is targeted at the core markets of B2B, so we see opportunity. I think at CES you saw you how ADAS, for example, combines the power technology of LTC with the mixed-signal technology and RF technology of ADI. We have examples of that in the industrial automation, the instrumentation, the aerospace and defense, so basically everywhere we play, including communications infrastructure, where ADI is much stronger in the wireless side, LT is strong on the wired side.

There's good symbiosis between the companies, particularly in the B2B space. I think the first couple of years of the combination of ADI and LTC are really about how well together we take the pipeline of opportunity that's at unprecedented levels in terms of size at this point in time and convert that pipeline and service the heck out of our customers.

# Dave Zinsner - Analog Devices, Inc. - CFO

I'd also point out that just on the expense side, as we've had time to solidify the plans there, I think we feel very, very confident about our \$150 million expense synergy. Part of — I talked about this kind of restructuring charge we took this quarter related to this voluntary retirement, part of that is to kind of make some room as we integrate the Linear Tech people within the Company. In the 10-Q it talks about a \$28 million savings for just the salary and fringe related to those employees, but we find that there's some extraneous sit savings like travel and so forth that also are reduced.

I think we have made a pretty meaningful down payment on the \$150 million already in advance of even integrating it. Then of course, the public company expenses go you away pretty quickly, too, and that's \$20 million, \$25 million of expense. We are very confident now having worked on this and really penciled it out that the \$150 million is very achievable.

Ambrish Srivastava - BMO Capital Markets - Analyst

Thank you, guys. Good luck.

Ali Husain - Analog Devices, Inc. - Treasurer and Director of IR

Thanks, Ambrish. Next question.



#### Operator

Your next question comes from Craig Hettenbach with Morgan Stanley.

### Craig Hettenbach - Morgan Stanley - Analyst

Yes, thanks. Dave, you peaked my interest on the Hittite revenue synergy side. Can you give a little more detail or anecdotes in terms of the some of the things you're seeing from a design or revenue ramp perspective on Hittite?

#### Dave Zinsner - Analog Devices, Inc. - CFO

Vince will probably do a better job of this, but I would tell you that in areas like aerospace and defense, where they were particularly strong, we have pulled a lot of ADI content onto those systems and subsystems. That's been a big win for us. I think we did not appreciate how much opportunity we had in the aerospace and defense area until we really acquired Hittite and had that opportunity.

There's a lot of radar capability that's required for the automotive space and we're taking a lot of the capabilities we got from Hittite to be able to drive into that. The next generation, which we've talked about in the past, is 77 gigahertz for ADAS. I think a lot of the capability that we've pulled in from Hittite has helped in that regard.

Also, I think that Hittite really just didn't have an opportunity to really address the larger OEMs, given their size. Around the edges they might have won a little bit of business but they really weren't breaking into those OEMs in any meaningful way. That's all changed since they became part of ADI and these are \$10 million, \$20 million, \$30 million opportunities if you do them right. I think we estimate that we probably have filled in the pipeline to the tune of \$100 million of opportunities because of having the two entities combined that we would not have had otherwise.

# Vincent Roche - Analog Devices, Inc. - President and CEO

We were running, at the time of acquisition of Hittite, which was just about 2.5 years ago now, the revenue stream was roughly \$70 million a quarter, so we're running on a percentage basis a substantially higher level than that right now. I think to add to what has Dave has said, the conversation with our customers has changed over that period of time. I think Hittite and ADI have gone from being very potent component level suppliers to really now being able to architect our customer systems in these new, for example, digitally oriented beam steering systems for radar, for mobile communications infrastructure.

We're very much now working at the application level in rather than the component level out. I think it's been really a win-win and as our customers in the analog space in general are dealing with thinner and thinner levels of resource and capability in terms of engineering their analog solutions, we're very, very well positioned and Hittite's helped enormously on the RF and microwave side of things, and LT will help us on the analog system side with the power side of things, primarily. That's, I think, how to look at it.

Craig Hettenbach - Morgan Stanley - Analyst

Got it. Thanks.

Ali Husain - Analog Devices, Inc. - Treasurer and Director of IR

Thanks, Craig. Next question.



#### Operator

Your next question comes from Chris Danely with Citigroup.

### Chris Danely - Citigroup - Analyst

Thanks, guys. Considering the upside in the January quarter and then the guidance for the April quarter, what should we be thinking about conceptually for seasonal revenue growth in the July quarter? Then maybe give us your expectations, if only relative, for the four basic food groups of end markets for revenue growth this year.

### Dave Zinsner - Analog Devices, Inc. - CFO

Well, seasonally, usually sequentially the third quarter is up. You tend to see a stronger consumer environment and the rest of the markets either are up or flattish. Then the fourth quarter generally is sequentially up again pretty meaningfully because you really start to see the consumer hit.

I'd almost say in this case we love all our children equally. I think every end market has the opportunity to grow meaningfully from the prior year. We'll have to see how the rest of the year shakes out, but we start off in a great situation. Our expectations for the second quarter as we look at our backlog look really good. So this continues into the third and fourth quarter, I think every end market is going to do pretty well for us.

Ali Husain - Analog Devices, Inc. - Treasurer and Director of IR

All right. Thanks, Chris.

### Operator

Your next question comes from Amit Daryanani with RBC.

Amit Daryanani - RBC Capital Markets - Analyst

Thanks. Good morning, guys, and congrats on the quarter.

Vincent Roche - Analog Devices, Inc. - President and CEO

Thank you.

### Amit Daryanani - RBC Capital Markets - Analyst

Question on the consumer side. It's maybe better than your expectations. Can you talk about how do you think about the segment over the next 12 months in terms of portables versus the rest of the consumer opportunity you have? I think this gen with your largest customer you talked about picking up 30% more content. Do you think that's possible again as they go through a super cycle product for the next year or do you see actually with your largest customer to be more in sync with the unit trajectory they have?

### Vincent Roche - Analog Devices, Inc. - President and CEO

Our consumer business is really a tale of two stories. We have prosumer which is a more -- it's a business more akin to a B2B type dynamics. We have many customers, many, many, very high performance building blocks from DSP to mixed-signal in areas like audio and video signal processing.



We saw some downturn of that business over the last couple of years, but we kind of hit the bottom. We believe we're at an inflection point there. That's at least giving us stable. That's the bedrock of our consumer business in many ways. We're at an inflection there.

On the portable side of things, we're clearly in a much better position than we were a year ago. We're working hard, as I said earlier, to diversify, to get more sockets and things like the image processing control system, sensing in general and also we're engaging with many more customers than we did, I should say on a pretty constrained highly leveraged R&D budget.

So look, is it possible that we got another 30% increase? Of course it is. That's what we're working hard to do to make sure we grab all available high-quality sockets that our technology is well matched in.

### Operator

Your next question comes from Craig Ellis with B. Riley.

Craig Ellis - B. Riley & Co. - Analyst

Thanks for taking the question, guys, and congratulations on the strong results.

Vincent Roche - Analog Devices, Inc. - President and CEO

Thank you.

### Craig Ellis - B. Riley & Co. - Analyst

You're welcome. I wanted to follow up on a couple of the segment dynamics. First, just looking at industrial and communications, industrial looks like it's at record revenues, at least in my model, and it seems like there should still be some incremental strength that would come from areas like energy extraction, which I suspect may not be as strong as it's been in the past. On communications, the business has been fairly stable for the last four quarters. Is the strength that you're seeing now leading to a more material increase versus trailing fourth-quarter levels or are we really just seeing a seasonal bump and nothing more than that? Thank you.

### Dave Zinsner - Analog Devices, Inc. - CFO

Okay. Let me take a shot at it. I'm sure Vince will provide better color than I can give.

I would say you're right in that the industrial business did hit a record this quarter, which is interesting in the fact that it happened in a first quarter, which tends not to be the strongest industrial quarter for us. We'll likely hit an even bigger record next quarter in the second quarter since we expect it to be sequentially up. I think it had kind of a relatively pedestrian last year and maybe not as strong as we would have liked to see it. There was a few things on the macro side that impacted it. I think those have abated and when you look at every sub-category within the industrial space, all of them are showing good strength.

I think that while it's early and we're always cautious about this, it does look like it's moving into a period of time where we start to see some meaningful growth and quite honestly, we should. We've made a lot of investments in that market and there are a lot of opportunities to -- for analog content. I think we're starting to see the benefits of a lot of development over a lot of years.

On the communication side, that business had been up. It came back down quite a bit in the prior periods. It had somewhat stabilized in the back half of last year and we're in kind of what I think is a relatively stable period. Having said that, I do think there's a lot of opportunity in the com



infrastructure space for us. We have this new transceiver, integrated transceiver, that I think is doing quite well. I think we will see our performance in the wireless side be relatively better on the macro side than some of the competition.

On top of that, we think that this small-cell deployment that has been long advertised and late to the party seems to have really started to gain some momentum here and so we do expect to see some real traction in 2017 from that. Then lastly, an area that tends not to get as much focus is our wire line business. With this kind of 100G deployment, 100 gig deployments that are going on right now, we're benefiting from that and so our wire line business actually did particularly well this quarter and I think there's some expectation that the rest of the year it will do quite well.

I don't know exactly how the year will totally shake out yet. We always lack a bit of visibility out beyond the quarter. But I think the fact that it was pretty solid in the first quarter and we're expecting a reasonably good second quarter leads us to believe it will be a pretty good year for the comps business.

### Vincent Roche - Analog Devices, Inc. - President and CEO

Something we don't talk an awful lot about in our wired business as well is cable infrastructure and a lot of our new mixed-signal and data converter technologies are enabling the carriers there to realize 4K and 8K video and without our technology it isn't possible, and to be able to do it within constrained physical space as well as power budgets. That's an area that's doing very, very well for ADI in the signal path along with, as Dave said, in the optical control chain. I think our wired business is poised -- as long as the markets behave well, our wire line business is poised for, I think, very decent growth in the years ahead.

Ali Husain - Analog Devices, Inc. - Treasurer and Director of IR

Thanks, Craig. Next question.

### Operator

Your next question comes from David Wong with Wells Fargo.

### David Wong - Wells Fargo Securities, LLC - Analyst

Thanks very much. You mentioned you got six of the seven clearances you need for the Linear deal. Can you remind us which the six are and what the seventh is you're waiting on and an update of when you expect the deal to close?

#### Dave Zinsner - Analog Devices, Inc. - CFO

I'll butcher the six, so let me tell you the one we don't have. We certainly have the US. We have all the Europe ones. We have all of Asia except for one, which is China, so we're waiting for China to approve it.

I think it's well documented that, that's a long process, which is why we expected this thing to close around the end of April is because we knew that, that would be a long process. It's going very well. They do ask for a lot of information and we have to go back and pull stuff together and present it in a way that is in a format in which they want to he see it. We think it's going fine and we would expect to be -- that we are on schedule to close this by the end of April at this point.

David Wong - Wells Fargo Securities, LLC - Analyst

Great. Thanks.



Ali Husain - Analog Devices, Inc. - Treasurer and Director of IR

Thanks, David. Next question.

#### Operator

Your next question comes from Vivek Arya with Bank of America Merrill Lynch.

### Vivek Arya - BofA Merrill Lynch - Analyst

Congratulations on the great results. My question is on the automotive segment. It's very good to see the sales acceleration over the last couple of quarters despite I know in the past you've had headwinds in some products. But when I look at some of your analog here, say Texas Instruments, they you grew their auto business by 20% last year. My question is, when do think those legacy headwinds will start to abate and you can close the growth gap with some of your peer group?

#### Vincent Roche - Analog Devices, Inc. - President and CEO

We're better and better positioned with our customers and across the various applications, but just for the record, our infotainment business grew in double digits over the past year and as did much of our powertrain, battery control technologies as well. So some of our segments have performed well in the double-digit area. I think we've talked before very openly about the fact that we've withdrawn from parts of the MEMS-based safety market but we still have an important role to play, particularly with the very, very high-end inertial and gyro sensing technologies for active safety control.

Our ADAS technology continues -- the RF and microwave technology there continues to do very, very well. We're very excited by the 77 gig technology that we're bringing to market as well that we showcased a at CES. That's a whole new level of performance that we're bringing to market there with 77 gig.

So I think we're better and better positioned. We're doing a lot more business in Asia than we used to do and so that kind of evens out the distribution or the diversity of our business across the globe. Those are the facts and we continue to invest heavily in the space because we think it is a growth driver for many, many years to come for ADI.

### Dave Zinsner - Analog Devices, Inc. - CFO

I would tell you that Linear Tech's technology in the battery management system is quite good and they have seen growth probably in excess of 20%, probably, in certain years. So I think that we bring that into the fold, that certainly will help just organically drive the growth, but also we should get some pretty good synergies. Where they have good customer traction is in places where we don't and vice versa. I think we'll be able to pull each other into customers and engagements that we don't have today. It should be, I think, a really good growth driver for us going forward.

Ali Husain - Analog Devices, Inc. - Treasurer and Director of IR

Thanks, Vivek. Next question.

### Operator

Your next question comes from Ross Seymore with Deutsche Bank.



# Ross Seymore - Deutsche Bank - Analyst

Hi, guys. Thanks for letting me ask a question. Congrats on the results. I wanted to ask a question about gross margins. In the quarter in the guide and then also a little bit longer term, I was surprised in the January quarter that it was as strong as it was, given that the consumer side was so strong so I would have thought mix, all else being equal, would have been a little bit of a headwind.

The inverse, I thought, would have been true in the April quarter, where the combination of mix being a tailwind and you just said utilization was going to rise. I thought that might actually lead to a little more upside. That's kind of the near-term part of the question, if you could give details on that. Then the longer term one, if we just put Linear and ADI's gross margins together, talk about the deltas above and below that, synergy values, anything else you can capture that makes it more than just one plus one.

### Dave Zinsner - Analog Devices, Inc. - CFO

Okay. Let's start with this quarter. Well, I would say that if you remember through all of last year, 2016, we kept utilization relatively in check and really worked the inventories down, because we really wanted to get the days down below 110 days. We did achieve that by the end of the year.

Normally, coming into the first quarter we're not as well positioned in terms of inventory levels and so we end up having to bring utilization down pretty meaningfully in the first quarter and that didn't happen so that ended up kind of helping the gross margins. On top of that, the industrial business just did really well through the whole quarter and so there was really hardly any reason to crank down the fabs in any meaningful way.

The mix part, it actually did impact us a little but I would tell you that, that particular piece of business actually has pretty good gross margins, comparatively speaking relative to other consumer companies out there. It's not quite the headwind when we get it and it's not quite the tailwind when it goes away that you might expect. It might impact it 20 basis points or something.

For the second quarter, as you point out, we should have a little bit better mix and we are bringing up utilization, although kind of modestly. We'll probably be in kind of the mid-70%s. There's obviously -- if the mix goes where the consumer kind of comes down as meaningfully as I said, 40% to 50%, and we do get to the kind of mid-70%s kind of gross margins, it's possible that we would be at the really high end of that range. We'd be up to the 67% range.

That's obviously a scenario. I think we're just hedging ourselves a little bit just in case we can't quite crank the utilization up to those levels, because it does require us to -- while we have the equipped capacity, we still have to crank through the wafers and sometimes that takes a little while to get cranking.

Okay. Oh, on the longer term side. Yes, Ross, sorry about that. I think on a blended basis, we're kind of in the high 60%s gross margins just kind of out of the gate. Then about \$50 million of the near-term synergies that we're expecting will be in the gross margin line. We should expect to get into the 70% range pretty easily, I think, with the near-term synergies identified.

Honestly I think longer term we have the potential to get in the low 70%s for gross margins. We will get some -- we inherit some processes from Linear Technology that I think are quite strong. I think that will help out in the entire business. I think we will, over time, get more and more efficient in terms of our manufacturing spending and so I think that will be beneficial to the gross margin line as well.

And of course, I think as Vince has talked a lot about, we are really focused in this B2B space and just quite honestly those, because of the design cycles and the technology required to deliver what those customers want, it carries better gross margins. I think we will benefit from that as well. We're optimistic we can get the gross margins into the low 70%s.

Ali Husain - Analog Devices, Inc. - Treasurer and Director of IR

Thanks, Ross. Next question.



### Operator

Your next question comes from Harlan Sur with JPMorgan.

### Harlan Sur - JPMorgan - Analyst

Good morning and congratulations on the solid execution. On the aerospace and defense, obviously that drives very good diversification within your business. Fundamentals here appear to be fairly solid. I think there are some pretty large radar, some sat com programs that are firing both in defense and the commercial sectors. I know you guys talked a little about the synergies from Hittite, but just wondering in general, how is the AMD sub-segment tracking growth wise on a year-over-year basis relative to the 10% to 15% growth trend in the industrial segment now?

Dave Zinsner - Analog Devices, Inc. - CFO

I'll take the last question first. It's been growing obviously at a very healthy clip over the last year or two in kind of the high-single digits. I'd say in this quarter it was probably the mid- to high-single digits on a year-over-year basis. The rest of the question was what, exactly?

Harlan Sur - JPMorgan - Analyst

How do you guys see this business growing for the full year?

Dave Zinsner - Analog Devices, Inc. - CFO

Oh, for the full year this year?

Harlan Sur - JPMorgan - Analyst

Yes.

Dave Zinsner - Analog Devices, Inc. - CFO

Probably in that range. I think this is kind of a multiple of GDP kind of growth. It will be very correlated to how GDP grows, so probably mid- to high-single digits.

Harlan Sur - JPMorgan - Analyst

Great. Thanks a lot.

Dave Zinsner - Analog Devices, Inc. - CFO

Sure.

### Operator

Your next question comes from Blayne Curtis with Barclays.



### Blayne Curtis - Barclays Capital - Analyst

Hey, guys, thanks for taking my question and I'll echo the congrats on the results. Just wanted to follow up on a question, the B2B business is growing high-single digits. If you take out com it's more like double digits. You've seen a lot of your analog peers see similar. It's really a function of the kind of really no seasonality and then kind of growing off that base. Just curious your perspective on the broader markets here as you talk to customers. Why is this market tracking at these double digits and how do you see that affecting seasonality as you go through the year?

### Dave Zinsner - Analog Devices, Inc. - CFO

I'll talk macro and then I'm sure Vince talks to all these customers, so he can probably give you more specific color. I think last year it didn't grow that much. Part of it is just rebounding off of much slower environment in 2016. I don't think it's all together surprising that we would see it start to come back.

I would tell you, though, that I think we have earlier in the period in which people have been focusing on this, back in the 2009, maybe even 2008, before I even got here, time frame, we really did focus our R&D efforts largely in this space. I think we made it fairly public that we moved a lot of our consumer R&D into the B2B space to really focus on that market and particularly the industrial markets. Eventually all that development does translate into revenue as promised and so I think some of what you're seeing in the results this quarter is that. It's the opportunities starting to translate into revenue more than anything.

### Vincent Roche - Analog Devices, Inc. - President and CEO

Yes, also while America and Europe are very, very important, they're the bedrock, if you like, of our B2B business, we've been particularly pleased on the industrial side with the growth in our business in Asia as well over the last two or three quarters. It's broad based and strong on Europe and America but even stronger on a growth basis in Asia at this point in time.

# Dave Zinsner - Analog Devices, Inc. - CFO

The one thing that helps us get some confidence around this, I don't want to oversell it just yet, because one quarter doesn't make a pattern, but as you look out in terms of the inventory, particularly using disties as a proxy, it's actually fairly lean at seven weeks. In fact, we normally run seven and-a-half to eight weeks. For the last four or five quarters we've been down at the seven-week level and we haven't seen a build. That's good because that's getting consumed in various regions, particularly in Asia.

### Vincent Roche - Analog Devices, Inc. - President and CEO

Also if you look at the PMIs of the big CapEx spending economies, they've been strong and strengthening over the last several quarters, so that certainly helps the B2B business.

Dave Zinsner - Analog Devices, Inc. - CFO

Great, thanks, Blayne.

Ali Husain - Analog Devices, Inc. - Treasurer and Director of IR

Thanks. Next question.



### Operator

Your next question comes from William Stein with SunTrust.

William Stein - SunTrust Robinson Humphrey - Analyst

Great. Thanks for taking my questions and congrats, especially on the strength in industrial in the quarter.

Vincent Roche - Analog Devices, Inc. - President and CEO

Thank you.

### William Stein - SunTrust Robinson Humphrey - Analyst

I had a question about the Linear Tech pending acquisition and it relates to the biggest concern I hear from investors, which is that there's a view that there are significant cultural differences between the two companies. I'm wondering what you've learned as you've built the plan to integrate the two businesses about the differences and similarities culture-wise and what you see as the biggest risks and biggest opportunities now that you're presumably quite far along in that integration planning. Thank you.

### Vincent Roche - Analog Devices, Inc. - President and CEO

Yes, so a good question. I would say that something I'm very, very clear about is that what we stand for as companies around the notion that innovation drives business success, that we drive diversity. Diversity gives us tremendous resilience in the markets that we choose, lots of customers, lots of products, lots of different applications.

Also, we're companies that focus really on getting great free cash flows from our business through operational efficiency, good price management. Those things we share together. Those are kind of the core business values that underpin both companies.

I would say clearly there are differences in the way we achieve our goals in terms of the behaviors in the companies, the routines to get the results that we get. Our approach to trying to create something better than the sum of the parts really is to leverage the best of both cultures and that means basically pooling our business and operating processes together and we're working hard to figure out what is the best of both on the side of manufacturing, supply chain. Obviously, day one it's critical that we have a single voice to the customer, so we're working very, very hard on that.

Also from an ongoing technology and customer management, manufacturing standpoint, pooling our collective knowledge and wisdom where we're combining the leadership structures, we're going to start combining the organizations to enable us to achieve those goals. We're also looking for ways to get the blood of both companies flowing in each other's veins through cross-pollination, through physical co-location as best we can. I think what will be very, very clear is that our measurement and reward system will emphasize what we both care about, which is long-term profitable growth. That's essentially how we're approaching things and I would say I'm very impressed with how both companies are leaning into each other and how we're working to truly try to get the best of both.

### Dave Zinsner - Analog Devices, Inc. - CFO

If there's anything we're concerned about, which was one part of your question, I would say we were so enthusiastic about this on both sides and now we've got to wait for all this bureaucracy to take care of itself. We're a bit anxious to get going. It's just painful to wait as long as we've had to wait to get it done. I think as soon as it closes, we will be off to the races in terms of making the sum of the parts -- or making the combination more than the sum of the parts.



Ali Husain - Analog Devices, Inc. - Treasurer and Director of IR

All right. Well, thanks. Next question.

#### Operator

Your next question comes from Steve Smigie with Raymond James.

### Vince Celentano - Raymond James - Analyst

Thanks. This is Vince Celentano on for Steve. I had a question about your recently acquired LIDAR business. Maybe you could talk about how its current position stacks up against the competition and how big of a revenue opportunity you think this could be over the next few years.

# Vincent Roche - Analog Devices, Inc. - President and CEO

At an application level to be able to realize these future semi-autonomous and autonomous driving systems, you need lots of different types of eyes that are looking for the -- they're looking for the signal, so to speak. Today radar and cameras, the image processing from cameras, they're the important modalities, but LIDAR is becoming a very important modality. Today that's realized with mechanical systems, essentially.

Our approach is to -- so we acquired Vescent Photonics, which enables us to bring a more silicon-based technology to bear, which is fundamentally -- it's inherently more mechanically robust and enables us to apply a lot of signal processing to the core sensing and actuation technology to get the kind of resolution and the kind of reliability and performance that we need to get. I think it will be a very important part of the realization of these autonomous driving system. In fact, I believe that semiconductor process technologies will enable this type of technology to become more broadly deployed. That's, I think, the way to look at it.

Ali Husain - Analog Devices, Inc. - Treasurer and Director of IR

All right. Thanks. Next question.

#### Operator

Your next question comes from Cody Acree with Drexel Hamilton.

### Cody Acree - Drexel Hamilton - Analyst

Congratulations. Vince, maybe -- you talked about the underlying health of kind of he global GDP trends. I guess I'm just curious where you see yourself gaining share in some of the sub-applications in B2B versus that underlying market support.

### Vincent Roche - Analog Devices, Inc. - President and CEO

If you take core industrial, I mentioned the fact that we were very pleased with our performance in Asia. I think that's been the result of many, many, many years of customer engagement, good deployment of R&D and that's working well for us. I think a certain amount -- a rising tide will lift all boats, so a certain amount of what we're seeing is driven by what's happening in the macro economy. But another part of it is driven by was we are doing to position ourselves to take advantage of these markets as they strengthen.



I'm particularly pleased with industrial, particularly in the automation sector. Dave has talked about A&D and how important Hittite has been to that part of our story. Instrumentation ATE had a good quarter last one as well. We're well positioned with high margin, high value, high performance products in that area.

Automotive we've talked a lot about. The foundation of our B2B businesses is industrial and healthcare and both of those areas are performing well, driven by our innovation efforts, our customer engagement efforts and the cooperation of the markets.

### **Dave Zinsner** - Analog Devices, Inc. - CFO

I think there is a belief by us that the industrial markets are going through a change much like the automotive market has already experienced in this electrification of cars. There is more and more kind of sensor signal processing, these kind of IoT-like applications going into the industrial space. The unit volume of the end product, whatever that might be, a robotic system or whatever, may be still the same number of units but the amount of content, analog content and semiconductor content broadly within those systems is just increasing as they try to sense these things and in richer ways get better data out of them.

### **Vincent Roche** - Analog Devices, Inc. - President and CEO

To that point, our customers are becoming more and more and more software oriented and which opens up a tremendous opportunity for uses as a leader in the application of analog technology. The dependence on ADI is increasing where we are essentially, if you like, filling the vacuum for our customers and providing a lot of the analog engineering solutions to these customers. As they become more software oriented in areas like I mentioned during the prepared remarks, here, that we have solved a very, very important problem for our customers where we can take many, many different types of inputs and outputs across various standards, where we've been able to do a level of integration in these universal input/output systems which enable our customers to leverage their software across a bigger swath of analog input/output technology.

That's some of the stuff that's going on as we move towards smarter, more software-oriented machines and process automation and factory automation, for example.

### Cody Acree - Drexel Hamilton - Analyst

Thank you and congrats.

### Operator

Your next guestion comes from Romit Shah with Nomura.

### Romit Shah - Nomura Securities Co., Ltd. - Analyst

Yes, thank you. I had a question about the B2B outlook for the April quarter. I thought industrial is typically up 10%-plus in April and I think you guys have said that auto's not too dissimilar. So the fact that you're guiding B2B up mid- to high-single digits with all the momentum that you're seeing today would sort of suggest that you've got some room to do better. Am I mischaracterizing seasonality? Could you just talk about that a little bit? Thank you.



#### Dave Zinsner - Analog Devices, Inc. - CFO

Yes. It's more a function of when you have a really -- when you're coming off such strong numbers in the first quarter, you're probably not going to have quite the sequential improvement in the second quarter. I think it still drives year-over-year growth that's pretty meaningful. I don't think there's anything to read into that other than just the growth off of a very strong first quarter drives it to be a little bit lighter, I think, seasonally.

Vincent Roche - Analog Devices, Inc. - President and CEO

Remember, we're at record levels in our industrial business.

Romit Shah - Nomura Securities Co., Ltd. - Analyst

Right.

Ali Husain - Analog Devices, Inc. - Treasurer and Director of IR

Okay. Next question.

#### Operator

Your next question is from C.J. Muse with Evercore.

### C.J. Muse - Evercore ISI - Analyst

Yes, good morning. Thank you for fitting me in. I guess two quick questions. The first one, can you share on the OpEx side, you did a great job of managing OpEx in a flat revenue environment in FY16, curious now that revenues appear to be tracking low-double digits at least, how we should think about OpEx.

Secondly, now that businesses is tracking better, free cash flow is coming in stronger and before you talked about net leverage of 3.8 times at deal close. I would imagine that number would look better and would love to get an update from you on that. Thank you.

### Dave Zinsner - Analog Devices, Inc. - CFO

On the OpEx front, we're obviously going to lag the revenue growth, probably we're going to grow it at half the rate, maybe we do a little bit better. Of course, all this is prior to the Linear Tech integration and then we'll probably operate in a similar modality after that. As it relates to the net leverage, we'll probably be a little bit better coming in. Partially we also have accumulated a lot of cash in the last couple of quarters and we expect to have a pretty good quarter next quarter for cash flow, so I would suspect that we will come in a little bit under what we originally anticipated.

I think maybe more importantly is we think the free cash flow is going to be quite strong in this combined business going forward. I think we will end up seeing a little bit more rapid pay down of the debt than we originally anticipated. In that respect, we should see some benefit on the interest expense line over time and that certainly will benefit earnings as well.

Ali Husain - Analog Devices, Inc. - Treasurer and Director of IR

All right. Next question, thanks.



#### Operator

Your next question is from Chris Caso with CLSA.

### Chris Caso - CLSA - Analyst

Thank you. Good morning. Just to follow up on a question on industry conditions and obviously demand appears pretty favorable now and inventory's low. Do you see any evidence either within your own business or the industry of tightening supply conditions? Anything that you think would incentivize the customers and distributors to start bringing the inventory levels a bit higher here?

#### Dave Zinsner - Analog Devices, Inc. - CFO

I think when you look across the supply chain, as far as we can tell, when we look at our inventory levels in distribution, they're really at the low end of where we'd expect them to be. When you look at the lead times, we have a goal here of delivering product within four to six weeks and we're still delivering basically the entirety of our orders within that stated lead time. You always have little pockets here and there but I'd say overall things look pretty good. Next question.

#### Operator

Your next question comes from Stephen Chin with UBS.

### Stephen Chin - UBS - Analyst

Hi. Thanks for taking my question. I also had a follow-up on inventories. You guys mentioned the relatively lean level of seven weeks that the distribution channel's been running at. I was wondering for your direct customers' sales, which is I think about half of your business, can you talk about how the visibility on those inventory look?

Related to it, going back to the distribution channel, I think traditionally people look at disty channel inventory as a good real-time or lead indicator of how the overall cycle is doing and further downstream. Just with the better kind of just-in-time manufacturing methods in ERP systems, do you guys still think that a lower kind of in-line inventory levels in the disty channel is still a good sort of a lead indicator?

### Dave Zinsner - Analog Devices, Inc. - CFO

The answer to the second is yes, it's a decent indicator, although at the end of the day it's the customer's inventory level of the distributors that really matters. We don't have tons of visibility into that. We look at the same data you do, which is what they report in terms of their overall inventory levels, which includes our products but also includes a whole bunch of other suppliers into those customers and they look in the range of pretty healthy levels.

So I think that at least as we see it today, there doesn't seem to be anything that would lead you to believe there's an inventory issue out there. I think really how we do and you how probably the industry does is more based on how the macro does and how the GDP, world GDP does over the course of the next few years. I'd say that's a bigger determinant of how things go.

Ali Husain - Analog Devices, Inc. - Treasurer and Director of IR

All right. Next question, please.



### Operator

Your next question comes from Harsh Kumar with Stephens.

### Richard Sewell - Stephens Inc. - Analyst

This is Richard in for Harsh. Just wanted to touch on the small-cell commentary you had. I know that this has been kind of a well advertised but continues to kind of get pushed out. What's giving you confidence that this is picking up? What are you hearing from customers? How does your content look compared to your traditional wireless infrastructure market?

#### Dave Zinsner - Analog Devices, Inc. - CFO

Well, we're getting orders, so that's how we know that it's -- the small cell is starting to deploy. It's more than just commentary. This is actually we're getting physical orders and forecasts. I think we feel pretty confident, unless some end demand perturbation or something like that.

The content is good. It's reasonably similar to what we see on the macro side on a per-radio basis. The difference is that a macro base station could have 16, 24 channels and there's only one channel, usually, for one small cell. The ideas there is there will be a whole lot more of them deployed in a given region or given area and that's where we make it up in volume.

### Vincent Roche - Analog Devices, Inc. - President and CEO

Yes. I'd say the ramp-up of small cell is really beginning to happen now but I think it will hit a different pace over the next year, two years. It will be a bigger factor in two or three years time, but our business is still pretty much dominated by macro cell right now. But as Dave said, the channel ASP, the per channel ASP, is about the same whether it's a small cell or macro cell.

### Dave Zinsner - Analog Devices, Inc. - CFO

I'd just add, as Vince mentioned in the prepared remarks, we did have a record quarter this quarter in our software-defined integrated transceiver platforms and actually a lot of that's was driven by these small-cell deployments that are taking place, I'd say particularly in China right now.

### Ali Husain - Analog Devices, Inc. - Treasurer and Director of IR

Looks like we've got one more caller then we'll close it down.

## Operator

Our final question comes from Tore Svanberg with Stifel.

### **Tore Svanberg** - Stifel Nicolaus - Analyst

Thank you. I just had one last follow-up. This is on automotive. Instead of looking a at sort of the relative growth rates the last year, is there a way for you to talk about dollar content, especially with the Linear acquisition? What I'm trying to get is perhaps maybe now the content is sort of in the \$10s but then with all these new technologies you'll eventually be in the \$100s?



Vincent Roche - Analog Devices, Inc. - President and CEO

Well, the LT -- again, look, we have a huge range of ASPs per car, given the type of technology we deploy and how much of it gets deployed per car. LT, so we have -- ADI's business is spread across basically gas-driven cars, combustion engines as well as EV and hybrid. LT's is largely electric and hybrid. It gives us greater diversity, but it depends very much on the type of car, the brand of car. It's very, very hard to put a number on it, Tore, but certainly we get more diversification and more ASP on average virtually in every car we supply technology to.

Dave Zinsner - Analog Devices, Inc. - CFO

I would say, we did a quick back of the napkin on it. I think on a low end we would get somewhere in the \$55 range per car and on the high end we could do as well as \$500. But if we add Linear to the mix, they should add about \$100 worth of content, at least from a [sam] perspective. Obviously, we don't win all that business at every car. It's quite strong.

Ali Husain - Analog Devices, Inc. - Treasurer and Director of IR

Great. All right, Tore --

Tore Svanberg - Stifel Nicolaus - Analyst

That's very helpful. Thank you.

Ali Husain - Analog Devices, Inc. - Treasurer and Director of IR

All right. For sure. Okay. Great call, great quarter. Hopefully we'll talk to you guys on the road. That was definitely our last question. Thanks for joining the call this morning and we'll talk to you again soon.

Vincent Roche - Analog Devices, Inc. - President and CEO

Thank you.

### Operator

This concludes today's Analog Devices conference call. You may now disconnect.

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