## **Industrials Conference**

March 12-14, 2024 | 383 Madison Avenue, New York, NY



## TTM Technologies, Inc.

TTM Technologies, Inc. presentation delivered at the 2024 J.P. Morgan Industrials Conference on Tuesday, March 12, 2024 at 11:30 AM

**Seth Seifman:** Good morning, everyone. Welcome back to the Aerospace and Defense track at the 2024 J.P. Morgan Industrials Conference. I'm Seth Seifman, the US Aerospace and Defense equity analyst.

We are very glad and grateful to have with us TTM Technologies. We have Tom Edman, the CEO, and we have Sameer Desai from Investor Relations. Tom is going to kick it off and tell us about the company for a little while, and then we'll open it up for Q&A. Tom, thanks for being here, and over to you.

Tom Edman: Great. Thank you, Seth. Good morning, everybody.

I'll give you a little bit of an update on TTM Technologies today, and I'll just jump right into it here. Forward-looking statements -- let's see if I can get that to work. OK.

TTM Technologies, we are a supplier of electronic components, sub-assemblies, and mission systems into both the commercial world and defense. Defense, a little, slightly less than 50 percent of our business. You can see some of the end markets.

Other end markets mentioned here, data center and semiconductor, networking, telecom, aerospace and defense, capital equipment, semiconductor capital equipment and medical area, and then automotive technologies.

We have about 16,000 employees and 24 facilities around the world, and about \$2.2 billion last year in revenue.

A little bit about the history of TTM.

We started out as a printed circuit board manufacturer, built the company first in defense with the acquisition of the Tyco Printed Circuit Board Group. We built an Asian presence with the acquisition of Meadville, and then we consolidated our position in the industrial and aerospace

and defense side in North America with the acquisition of Viasystems, as well as building our position in Asia.

At that point, we started to look really beyond the printed circuit board at how we could build more content into what we were supplying into our defense customers.

We did that with the acquisition of Anaren, adding RF microwave and microelectronics capability, and then with the acquisition of Telephonics most recently, adding radar-related mission systems and some communication mission systems capability as well.

In the meantime, we also divested some of the businesses that were more seasonal in nature, including our mobility business and some of our commercial assembly businesses that were located in China.

We've been constantly working on our portfolio of businesses, adding engineering content, and it's really...This strategy is shown here, if you focus in on the middle box. We've been investing in engineering and technology solutions, really building that capability out for our defense customers, resulting in high value-added partnerships with our customers.

We are selling directly into the engineering side of our customers, building product to specification, and backing it up with our own build-to-print capabilities for our engineering content.

That's been the direction that we've taken the company. That's brought better stability to our performance and differentiated capability as a company.

I'm going to talk to you today about three strategic areas. One is diversification. We'll hit also how we are differentiated, and then some of the financial capabilities and the discipline around our financials.

Starting with diversification and focusing on the diverse set of end markets that we service, of course, I wanted to start out with aerospace and defense. We're looking again, if you look at the third column or fourth column here, you can see a CAGR figure.

This is a long-term CAGR figure coming predominantly from Prismark, which is a component market forecaster. You can see our view for 2024. What we're seeing is that we will be growing above that level. In terms of how we're positioned for this year, we already have about 72 percent of our shippable backlog booked.

It really, for us in aerospace and defense, is about execution, cadence of improvement, which we have been seeing through the course of last year as we work through supply chain bottlenecks, in particular.

As you can imagine, where you see those bottlenecks is really as you add additional content. It's more in our mission systems area -- our higher level assembly capabilities -- where we've seen those bottlenecks. We've worked through those.

We're now more than halfway through the process of working through bottlenecks, which have limited revenue, and are continuing to see an improved situation with our supply chain.

To show you a picture of our aerospace and defense business, we have a program backlog right now of about \$1.33 billion, again, sustaining and giving us a nice outlook in terms of stability in our market.

Key defense program alignment, we're on over 200 programs overall in defense, but with a specific engineered product focus, particularly in the radar area.

From a revenue standpoint, again, you can see how we built the company, starting with a printed circuit board and assembly position, adding in that microelectronics and RF microwave capability, and then on top of that, the mission systems capability.

We've continued to build this portfolio. Over 50 percent of our revenue now comes from non-PCB areas of the business, reflecting that additional content that we provide to our customers.

From a mix standpoint, about 88 percent defense, 7 percent space, and that certainly is growing. Commercial aerospace also has been rebounding. That's about 5 percent of our defense revenues.

If you look at top OEM customers -- this won't surprise you in terms of the list -- the major OEMs, we're involved with all of them.

In terms of critical programs, if you sort of start at the center here, mission systems, radar, and communications concentrated on helicopter platforms for us. If you then start to go around the outside of the circle, you start to see where radar figures in.

For example, the LTAMDS, a ground-based radar system, we would be involved there on printed circuit boards, microelectronics, and RF microwaves, so tremendous content on those radar platforms. F-35 would be a similar situation.

Large ground-based radar like the SPY-7, ship-based like SPY-6, these are all critical radar programs.

If you come down to the Stryker-type program, some of the missile-related programs we're involved in tend to be more of a printed circuit board content for us, but again, differentiated capabilities, usually RF-type capabilities in the printed circuit board side.

We are seeing expansion opportunities, particularly in LEO commercial space applications, concentrated around printed circuit boards there, as well as what we do with greater content on defense-related space projects.

We do support over 200 critical programs and are involved in key franchise programs for the major OEMs. That's aerospace and defense.

Let me just touch on the commercial sector. Again, focused on megatrends here, primarily for us, a printed circuit board business with a smaller RF component position, driven by, of course, Internet of Things, developments in generative AI -- I'll get into how that impacts us -- and then some of the other developments around factory automation.

If you look at the automobile, we're involved in ADAS or radar systems, particularly on the automobile.

Major megatrends driving the growth that we see on our commercial business, and specifically, as you go through the end markets here, I'll just go down in order, starting with automotive.

Approximately 16 percent of our revenue in 2023. Where we really focus is on ADAS, as I mentioned, radar requirements for printed circuit boards there, and thick copper-type requirements for electric vehicle applications.

If you think about the focus area and how to characterize this, what we look at is the electronics content in terms of printed circuit board content in an average vehicle. That has moved from about \$70, where we were in 2017, to over \$110, where we are today, and heading up towards what's projected to be about \$120, \$125 by 2025.

It's that PCB content, reflective of additional electronics content, that is really driving this market for us. We do expect to be below the three to five percent forecast in 2024, primarily as customers deal with inventory, and as we see a major change occurring in the China market, in particular, for the global OEMs.

We are selling to global tier ones, and their largest customers are the western world OEMs, so big changes going on there. We expect, again, to be below.

Data center computing, different story, about 14 percent of 2023 revenue. We saw a weakness in the beginning of the year in 2023, tremendous strength as we came through the year.

If you look at how this breaks down, about 75 percent of this business is data center for us. About 25 percent is in the computing area, which really is semiconductor, test, and burn-in board area for us. That 75 percent, greater than half of that, is right now tying to generative AI and the server content required for generative AI.

That's where we're seeing very strong demand, and we are expecting, in data center computing, to be above the four to seven percent growth rate. Certainly, we've been in the double digits, high double digit area, if you look at the last several quarters year on year.

Medical industrial instrumentation, about 17 percent of our business. It's forecast to grow 2-4 percent, we're projecting, in line in 2024. Here, this is a tremendous spread of customers and a broad end market for us.

We differentiate ourselves with our capability in terms of footprint, and I'll show you that later, but again, a strong position for TTM in this market.

Finally, networking, which is really networking and telecom, about eight percent of our business.

Our customers right now -- primarily enterprise networking customers dealing with inventory situations -- probably will last at least through the first half of this year, and then we should start seeing real demand in the back half of the year.

Let me talk about differentiation next.

First of all, if you look at the spread of capabilities -- and particularly on the aerospace and

defense side -- ranging from the printed circuit board to RF components to microelectronics and subsystems, and then into the mission system area, very focused on radar and communications there.

It's a fantastic spread of technologies. It takes us into the engineering corridors of our customers, and that's where the conversations happen. Really important to us there.

Commercial, printed circuit boards and RF component area. We will move in areas as we see clear differentiation opportunities.

This is really about engagement, both on the commercial and the aerospace and defense side. Successful customer engagement starts with the engineering and the engineering capabilities, both field application engineering, in the case of commercial, as well as design engineering and product engineering capabilities for us on the defense side.

That allows us to move early on into longer cycle opportunities with critical programs in defense, critical programs, as well, on the commercial side in automotive networking data center.

We are also differentiated in terms of our footprint. If you look at our footprint capabilities, North America, we have a number of facilities. Many of these are defense focused. You can see highlighted, San Jose, Toronto -- that's our RF component facility in Syracuse -- and Logan, Utah, as being our commercial facilities in North America.

They do the prototyping work, early engineering work for customers, for programs that are then generally moved to Asia as they hit volume. Our volume capabilities have been focused on China-related capabilities with our facilities there.

Now we are investing in a Malaysia facility as well. That's shown here.

This is our Penang facility. It's about an 800,000 square foot single-floor facility, heavily automated. We'll be bringing in somewhere around 1,000 employees into this facility, with about half being in the technical area.

The productivity anticipated to be about 150 percent of what we do in China, with that emphasis on automation, and then a solar rooftop installation, as well as a state-of-the-art treatment facility tied right directly to what we're doing in that facility in Penang.

We do have a phase two that we are planning as well, which will add additional 25 percent capacity. You can think about this as roughly a \$200 million facility with phase one, adding in an additional 25 percent as we move into phase two, which would be next year.

We are ramping this facility. Right now, we are in the early stages of ramp. All the equipment's in place. We're in production, but it's primarily production of sample volumes, with a goal of reaching breakeven around Q4 of this year, and then continuing the ramp next year.

This gives us a facility for our customers as they look at supply chain resiliency requirements for critical programs, primarily related to data center and in that medical industrial automation area.

We also have on the books and are in the early stages of a facility plan for Syracuse, New York. This facility will be a defense facility. The facility is responding to a need from our customer base for another advancement in printed circuit board capabilities.

This is around what we call ultra-high density interconnect requirements. Really the way to think about that is, as in commercial, design rules are shifting in defense with an accent on speed, the space -- the accommodation of more components in a smaller space -- and then lightweight requirements as well.

As we look at those requirements, as the design rules have shifted with our customers, there is a need for this kind of advanced capability in the United States. We are working right now with our major customers and with the federal government around the final capital plan for this facility.

It will be sized to be in excess of 160,000 square feet in size, with a total investment requirement of slightly more than \$100 million in terms of facility capital requirements. Again, how that capital is broken down, we're still working through. The plan is to break ground in the spring of this year and have the facility up and running by late 2025. That's our goal.

It will be immediately adjacent to our Syracuse microelectronics and RF microwave facility. We can add additional content to the boards by basically crossing the parking lot to the other facility, so really a campus concept for us as we go forward in our Syracuse operation.

Finally, on the discipline side. We have been focused on the right kind of revenue capabilities.

You can see in 2020, we divested of our mobility business and a portion of our commercial EMS business. That did bring revenues down, but also what it delivered for us is consistency in

operating margins and a baseline that we could start to build from in terms of operating margin performance.

We're still looking to do better here, and you can see that outlined. As we now have emerged from the pandemic, as our business has stabilized, as we've worked through supply chain challenges, our goal is to grow revenues in that mid single-digit area.

As we do that, to move that operating margin up a couple of points, to 11-13 percent adjusted EBITDA margin of 15-17 percent.

Our CapEx, 4-5 percent of revenue. That's our traditional level. Right now, with the Penang investment and with the Syracuse expansion, for a couple of years here, we'll be above that level as we manage our cash, but these are critical investments we're making in the business.

Cash flow from operations, greater than 10 percent of revenue. ROIC 13-15 percent as our goal. How do we get there on the operating margin side?

First and foremost, last year, we announced the closure of three facilities. Two of those were in California, one was in Hong Kong. Those facilities are now closed.

Those facilities where the biggest issue we had was that we just didn't have the critical mass in terms of size and engineering capability in those facilities. We are transferring that business to larger facilities inside the TTM footprint. With that, we're looking for about a one percent gain in our operating margin.

Cost recoveries has been critical. We've been adjusting prices on our long-term agreements as they've come up for renewal with customers. We're almost through that period at this point. We've only got a couple of contracts left.

Again, looking at a box, we can start to check here in terms of where our pricing is set, and the adjustments we needed to take to account for inflation.

Incremental revenue. Again, that's that addition that we need as we build our revenue base. The Penang plant, as we ramp through the course of this year and then really ramp into next year, adding to that margin.

Finally, delivering the final portion of our Telephonics synergy, that gets us within that range. That

is the goal for the company as we go forward for the next several years.

We are delivering on cash flow. You can see again, that target of 10 percent. We've gone over that. We are working our way back again to that 10 percent level. Free cash flow affected, of course, by the CapEx, but also solid. You can see the CapEx figure that I mentioned here.

Capital structure is solid. You can see the tenor stretches out to 2028 and 2029 on our loans, predominantly for term loan B, but also a high-yield bond base, so if you look at secured versus unsecured, well-positioned in terms of secured debt.

We have also hedged against the fluctuating interest rates, so really effectively fixing 70 percent of our term loan.

Solid balance sheet position. We are in the market buying back stock, as well. We have an approved stock repurchase plan. That's part of our structure as well.

If you look at our capital allocation strategy, of course investing in differentiation, as I highlighted, critical to us as a company. That will be an ongoing emphasis.

Repaying debt. We've done well on this. We are below our target of two times net debt, and have served our debt investors well. Then the return of capital to shareholders. We do have a \$100 million stock buyback program authorized. We did purchase 1.8 million shares in 2023.

Again, depending on M&A, where we end up on the M&A strategy, we do continue, or we will intend to continue that balance sheet strategy.

That's the capital allocation strategy for the company.

Going forward, just to highlight some of the major points I made, continuing to focus on markets with the right growth characteristics and megatrends, the investment in differentiation.

As we look at our M&A strategy, that will be targeted at continuing that tier two, tier three capability on the defense side related to microelectronics, related to RF microwave as a business, investing in that engineering capability.

Finally, continuing to manage our business financially well, being strong balance sheet stewards financially, and then continue to invest in our businesses properly.

That's a quick summary of TTM, and with that, we can go to questions.

Seth: Excellent. Thanks, thanks very much.

Maybe I'll start off with a couple, and we can open up to the audience as well.

I guess, Tom, in the defense area, when you think about growth over time, what's the signal that you get from the defense department in terms of what they want to invest?

You talked about the Syracuse facility being focused more on defense and still kind of finalizing what the capital investment is going to look like. I assume there's maybe potential for some support from DOD.

We saw the budget yesterday. There was talk about microelectronics capacity being a priority. How do you think about partnering with the department going forward and what they're looking for from you?

**Tom:** Thank you. Yeah, absolutely. I think certainly there's a backdrop of some political turbulence as it relates to spending in the budget situation. If you look at where the defense department is really focused, industrial capability, absolutely critical.

When you start to look at industrial capability, microelectronics is one of the areas of focus, so as we look, as we discuss our projects with the Pentagon, really, investment in R&D, very important.

Industrial capability that largely has moved out to Asia, bringing that capability back into the U.S., absolutely important. A critical foundation for the kind of sensor requirements, radar requirements, and microelectronic requirements writ large that the defense department prioritizes for the future.

Glad to see that statement on microelectronics. I think that certainly that's the nature of the conversations we have, and look, our intention is to invest. We will continue to invest in that capability.

We consider ourselves rather unique in terms of, particularly, our understanding of printed circuit boards, the technology trends, where they are on the commercial side of the business, and our ability to bring that back into defense.

We intend to provide that kind of capability to our customers here to really enable them, to enable our customers to make the critical technology transitions that are envisioned, so a good spot.

**Seth:** When you think about defense, to what extent is scale a challenge? By that, I mean that the end market opportunity relative to some of the commercial end markets is much smaller, and yet, to be able to produce at a high level requires...it doesn't require less investment just because the end market is smaller.

How do you think about kind of squaring that circle, and to what degree? Is that where the customer -- the ultimate customer being government -- can kind of come into help?

Ted: Yeah. It's a great question.

We are first and foremost focused on defense and what the defense requirements are.

With the visibility we have in the critical programs, we're certainly able to do the right kind of planning, to size the facility, to bring in the capability required in the facility.

At the same time, when we think about defense requirements, you really have to start to think -- at least we think a little bit more broadly -- than traditional defense.

As we look at, for example, commercial satellite needs, there are programs inside of commercial satellite production that are going to need to be produced certainly outside of China and in many cases within the U.S. There's a portion of that opportunity that's available to us.

As we start to look at critical data center infrastructure requirements, again, we have what I would call traditionally commercial customers, who have a high level of interest in some of the programs and some of the capability that we're bringing into the U.S.

While, as we look at our business plans, we're building these on our defense customers -- traditional defense -- there's an opportunity that's broader than that that we also believe these facilities will service.

You're absolutely right that having the right level of critical mass is really important.

As we looked at our plans for expansion, one of the biggest reasons we landed on Syracuse is

that we already had strong engineering capability resident in Syracuse, both on our RF commercial and RF component side as well as in defense, and that capability then feeding into what we believe we can do on the printed circuit board side.

The critical mass piece really important here, where we have limited technical resources. You need to concentrate those resources and you need to then come to market quickly to meet critical needs.

Again, these transitions are happening fast, and they're happening really fast from a defense standpoint in terms of repositioning and changes in design requirements.

We need to be capable of reacting there, and I think, again, TTM, that's in our blood. It's what we do as a company, and the commercial side of our business is react quickly, understand capability, and move it where it's needed. We're really counting on that going forward. Long answer, but...

**Seth:** No. It was a good one.

Let me open it up to the audience. I've got some more questions as well, but I'll give a chance if there are any questions in the audience? OK.

This might not be the swiftest question on my part, but I'll throw it out there just to make sure that people understand.

The fact that you talk about doing work in the defense market, it's obviously a key market for the company and a key growth opportunity as well. At the same time, you have this commercial business with capacity in China. There's an ability to continue to do both of those without any conflict?

Tom: [laughs]

**Tom:** Yes. This won't surprise you, but originally, when we actually acquired Meadville, we operated for a period of time under an SSA, so we had a special security agreement with the defense department. In the context of that agreement, we built up not just software-related firewalls, we have...

We actually are untethered. There is not a tie between our defense business and our commercial business, and in fact, we have different domains as well from an email standpoint. It's very

visible, that separation.

There is learning that we can do, and there's learning that we gain from our commercial side of the business into defense, but that's a one-way track, if you will, in terms of learning and how we are able to absorb understanding of what's happening there in technology.

But, yeah, very distinct separation in our businesses, and with that, yes, we can manage it and have been able to manage it, again, while responding to our commercial customer needs for supply chain resiliency, as well. That separation for us, very, very clear.

**Seth:** Maybe just a last one. You talked about some potential for M&A. When you look at that, do you think about becoming more vertically integrated? Do you think about your competitors? What are the kind of capabilities that you would potentially look to add through M&A if the right opportunities were to come along?

**Tom:** Yeah. Our investments will really be in that, predominantly tier three and tier two if it ties into tier three. What does that mean?

It's really we're looking at fundamental microelectronics, RF capabilities. We have the subassembly capabilities that we need for microelectronics. We may add to those if it comes with an acquisition opportunity, but it's not the primary focus.

For the same reason, our tier one capabilities, the mission systems capabilities, they inform us, but we're going to remain very focused in that area as it ties to fundamental abilities, capabilities of the company around RF particularly.

That's why you see us with the Telephonics acquisition, focused on the next generation of AESA radar for helicopter, maritime, and helicopter platforms, and then the navigation and communication requirements there.

It's a narrow focus. We can support that business well with our capabilities, but our growth opportunities and the focus in M&A is really going to be on, again, building that foundation and that tier three-type capability as it relates to RF and microelectronics.

**Seth:** Excellent. Very good. Our time is up, so Tom and Sameer, I want to thank you for being here, and thanks for telling us about TTM.

And thanks very much, everyone.		
Tom: Thank you very much.		
[applause]		



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