

**Transcript of
Odyssey Semiconductor Technologies (OTCQB: ODII)
Fourth Quarter and Full Year 2021 Earnings Call
February 10, 2022**

Company Participants

Rick Brown - Co-founder, Interim CEO, CTO, and Board Member

John Edmunds – Chairman of the Board

Jeff Christensen – Investor Relations

Presentation

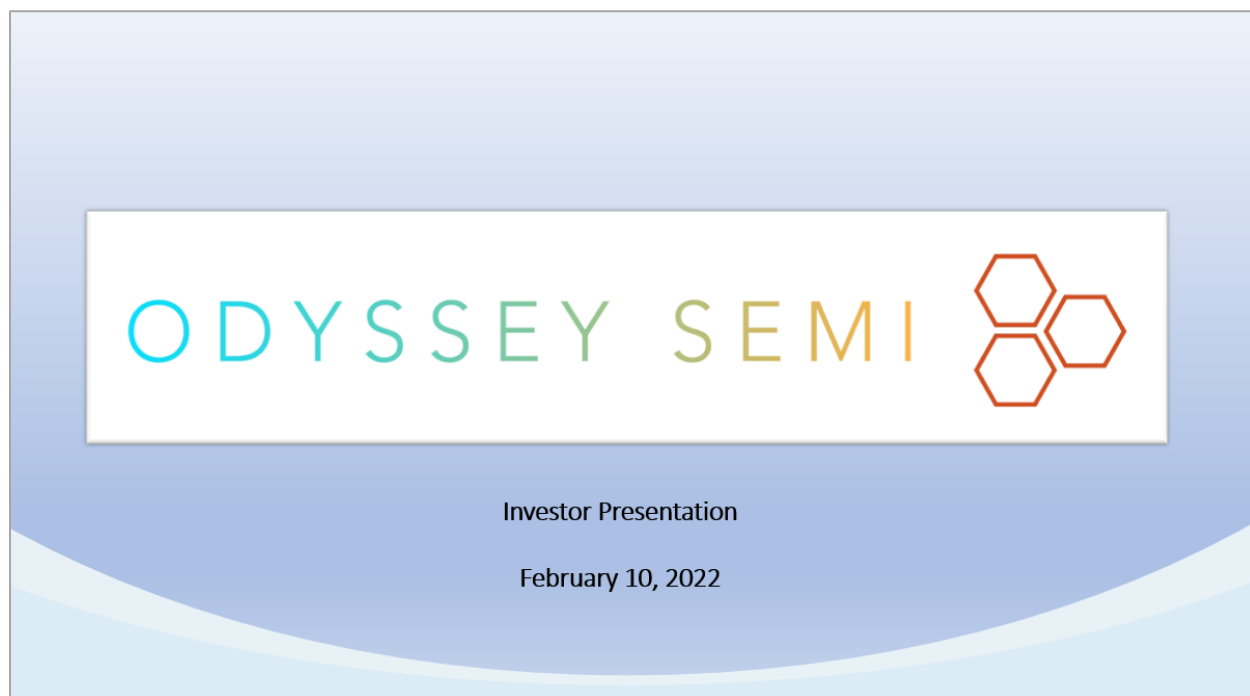
Operator

Good day, ladies and gentlemen, and welcome to the Odyssey Semiconductor Fourth Quarter and Full Year 2021 Earnings Call. [Operator Instructions] As a reminder, this event is being recorded.

I would now like to turn the conference over to Mr. Jeff Christensen, Investor Relations. Please go ahead.

Jeff Christensen – Investor Relations

Slide 1



Thank you, operator. Joining me today are Rick Brown, Co-Founder, Interim CEO, CTO and Board member; and John Edmunds, Chairman of the Board. Earlier today, we issued a press release

announcing our results for the fourth quarter. We'll start today's call with prepared remarks from Rick and John before moving into Q&A.

During our prepared remarks, we will refer to slides that are available for viewing in the webcast and posted in the Investor Relations section of our website at odysseysemi.com under Events subheading. We hope these slides will serve as a framework for management's prepared remarks, reinforce key takeaways and provide additional transparency and insight into our business strategy and objectives.

Slide 2

“Safe Harbor” Statement

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The information contained in this presentation includes some statements that are not purely historical and that are “forward-looking statements” within the meaning of the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. Such forward-looking statements include, but are not limited to, statements regarding the Company’s and its management’s expectations, hopes, beliefs, intentions or strategies regarding the future, including the Company’s financial condition and results of operations. In addition, any statements that refer to projections, forecasts or other characterizations of future events or circumstances, including any underlying assumptions, are forward-looking statements. The words “anticipates,” “believes,” “continue,” “could,” “estimates,” “expects,” “intends,” “may,” “might,” “plans,” “possible,” “potential,” “predicts,” “projects,” “seeks,” “should,” “will,” “would” and similar expressions, or the negatives of such terms, may identify forward-looking statements, but the absence of these words does not mean that a statement is not forward-looking. The term “Company” in this presentation includes Odyssey Semiconductor Technologies, Inc. and its wholly-owned JR21, LLC subsidiary.

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Moving to Slide 2. Some statements made today are forward-looking. Forward-looking statements are subject to risks, uncertainties and other factors that may cause actual results to differ materially from those contemplated by these statements. Additional information regarding these factors can be found in our annual, quarterly and other reports filed with the SEC.

I will now turn the call over to John Edmunds, Chairman of the Board.

Slide 3

Odyssey Semiconductor (OTCQB: ODII) at a Glance

Company Overview

- Odyssey Semiconductor is a development stage company focused on fabricating vertical GaN power devices based on its proprietary technology
- Our power devices target the following markets:
 - High voltage industrial motors
 - Solar Power Inverters
 - Electric vehicles
 - Other
- Vertical GaN based power devices set to disrupt the SiC power device market based on its ability to:
 - Operate at higher switching speed
 - Provide lower losses
 - Reduce size and weight of power conversion modules

Odyssey Fabrication Facility in Ithaca, NY



- Founded in 2019
- Seasoned team
- Only US based GaN foundry – Ithaca
- CY2021 revenue of ~\$750,000
- 1 AARPA Grant \$1.5M - 2017
- Reverse IPO 2 Rounds of Financing
 - August 2019 - \$2.9M @ \$1.50
 - March 2021 - \$5M @ \$4.00
- Shares outstanding at 2/4/22 - 12.7Msh

John Edmunds – Chairman of the Board

Thanks, Jeff. Turning to Slide 3, you'll see Odyssey at a glance, we're a small semiconductor facility. We actually have a foundry. We were kind of spawned out of the Cornell, Ithaca foundry, our school of engineering and foundry there. The -- one of the founders is the professor of Cornell and Rick, who's on the call with me today, was one of the students at one time. So -- and we're using a foundry or facility that belonged to BinOptics at one time, and we've converted and made use of that for producing GaN material.

So we're -- it's very interesting, one of the few GaN foundries in the country right now. And we're focused on GaN for high-power switching technology. So we're not competitive necessarily with the Navitas or a GaN Systems. We're actually complementary to them. They're mostly focused on lower-power chargers and switching, and we're actually focused on 1,200 volts and above sort of categories. So this will be important to next-generation battery packs for electric cars as well as solar power inverters and high-voltage industrial motors going forward.

You can see that we were a product of a reverse IPO a couple of years ago. We've had 2 rounds of private placements and -- for financing: one in August of 29 at \$2.9 million and one last year in March of 21 for \$5 million. We've just filed an S-1 today to prepare to raise additional money and also the focus and couple that with uplisting on Nasdaq to become a full-fledged company trading on Nasdaq. So we have a lot of activity going on right now. We're a small group, but very seasoned engineering organization, and we're doing something that's very unique in the market that we think will be disruptive when we get there.

Slide 4

Key Messages

- **New Disruptive High-Voltage Power Switching Devices with Strong Intellectual Property**
 - Vertical GaN will provide significant benefits over silicon carbide and lateral GaN
 - Odyssey's proprietary vertical GaN-based device technology enables dramatic efficiency increases over competition for applications up to 10 kV
 - Odyssey is focused on proprietary medium and high voltage GaN power switching devices
- **Rapid Growth in High Voltage – Strong Market Demand**
 - TAM: \$2.5B by 2025, 30% CAGR)
- **Seasoned GaN Team & III-V Semiconductor Fab**
 - CEO search expected completion in 1H 2022. Then plan to quickly add a few additional resources to add depth in marketing, manufacturing, and finance to scale Odyssey from R&D focused to capabilities as an operating company
- **Near to Medium Term Growth Strategies**
 - Sample product to customers in Q1 2022
 - Build a business in high voltage electric motors
 - More efficient solar power inverters
 - Get established in electric vehicle supply chains
- **Longer Term Growth Strategies**
 - Enable on-the-go charging for electric transportation
- **Emerging from Development Stage**
 - Announced on February 10, 2022 the company will be applying to have its common stock uplisted to Nasdaq Capital Market and will be filing in a few days a Form S-1 related to public offering of its securities to raise the capital needed to meet the Nasdaq Listing requirements and other capital needs

Odyssey is pioneering vertical GaN development.
GaN will drive replacement of silicon and silicon carbide in high voltage, high performance power applications.

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So on Slide 4, you'll see the key message then is this new disruptive high-voltage capability, this vertical GaN capability as opposed to lateral or horizontal GaN that you might see from Navitas or GaN Systems. Our vertical GaN is actually enabling us to scale to higher voltages, and in so doing, really be in a position to compete with a costlier silicon carbide technology. And we'll go through more of that today with you and some of the challenges that we think are facing silicon carbide that present opportunities for us.

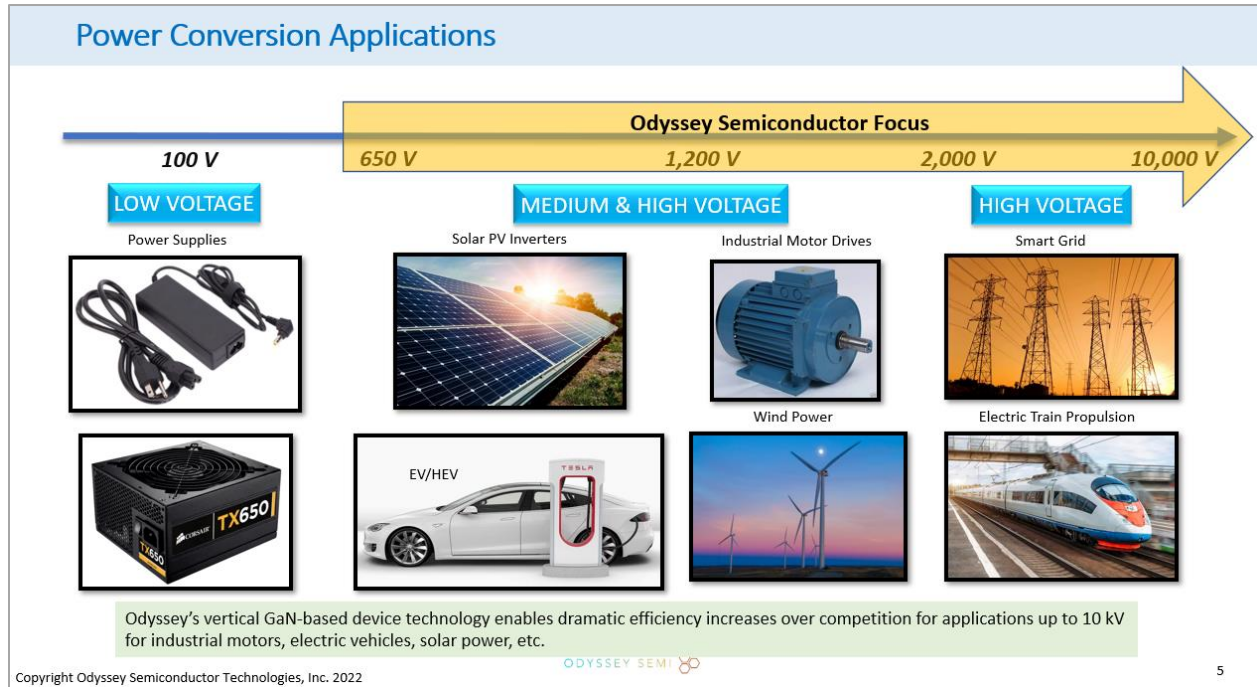
This is a rapidly growing market. So we think it's as big as the low-voltage side, and the high-voltage side will be in the same range of about \$2.5 billion or so by '25. Again, we have a seasoned team that's working in this area. Small organization, only 15 people or so. And -- but we think we're well positioned with the technology to leverage it now. And we're going to be bringing in new sales and marketing, a new CEO, an orientation toward now selling the product that we're just about finished with developing.

So our near-term strategy is to be able to sample product. We think we should be able to do that by the end of the quarter here, maybe as early as next week based on material that's in flight in the fab right now. And we have additional new raw material ready to launch another flight and have that back within 3 weeks or so of finishing the flight that's in production right now. So that's why we're fairly confident we can get this out by the end of the quarter. And we can go into that in more depth if people want to.

Our longer-term growth strategy is just to bring this technology to market and try to display silicon carbide in a lot of different areas in high voltage. We think there's significant advantages to using GaN technology that primarily focus on being more power-efficient and being able to be used in a smaller form factor and be more cost-efficient overall for the people who choose to deploy with GaN.

On the next slide, I think I'll turn it over to Rick here and have him take you through Slide 5 on power conversion applications and -- from there. Rick?

Slide 5



Rick Brown - Co-founder, Interim CEO, CTO, and Board Member




Okay. Thanks, John. Hello, everyone. So recently, there's been a lot of excitement and enthusiasm for GaN among public and private companies. Most of these efforts, like John has said, kind of are focused on the market served by transistors with breakdown voltages below 650 volts. And that's due to kind of a limitation of the type of GaN transistor being used by those companies. It's mostly aimed at recharging devices for laptops, cellphones, and it does reach into some higher-power applications such as -- there's some potential with current generations of electric vehicles. But going forward, those applications require breakdown voltages greater than 650 volts. And that's where Odyssey is focused. Our technology isn't limited below 650 volts. It can go all the way to 10,000 volts. It's a very scalable technology.

So we kind of -- we believe that we can offer a reliable solution and provide for greater power efficiency at lower cost both in terms of the chip and the surrounding platform. We've basically developed this unique way of doping gallium nitride, and we demonstrated both vertically conducting the junctions and transistors utilizing this technology. Our first product is targeted at 1,200 volts. There's currently no gallium nitride-switching transistors with breakdown voltages above 1,000. So we're targeting 1,200 volts and beyond just to -- we feel that's a space not being addressed with gallium nitride at the moment, and our technology is scalable easily to that voltage and above. So that's where we are trying to introduce our first products, which would be more for industrial motor drives, high-powered solar inverters, and eventually, smart grid and other higher-power applications where the breakdown voltage required is much higher than 650 volts.

Slide 6

Near to Medium Term Opportunities

Odyssey is focused on three markets: industrial motors, solar power, and electric vehicle recharging

<u>High Voltage Industrial Motors</u>	<u>Solar Power Inverters</u>	<u>Electric Vehicles</u>
<p>~45% of world's energy is consumed turning a motor which is a \$100M market today growing at 6% CAGR</p>	<p>Decrease losses from tying in solar power generation to the electric grid – a \$170M+ market today growing at 17% CA</p>	<p>Decrease losses in power converters and power inverters while reducing the size and weight of these modules which is a \$450M mkt today w/CAGR of 38%</p>
		

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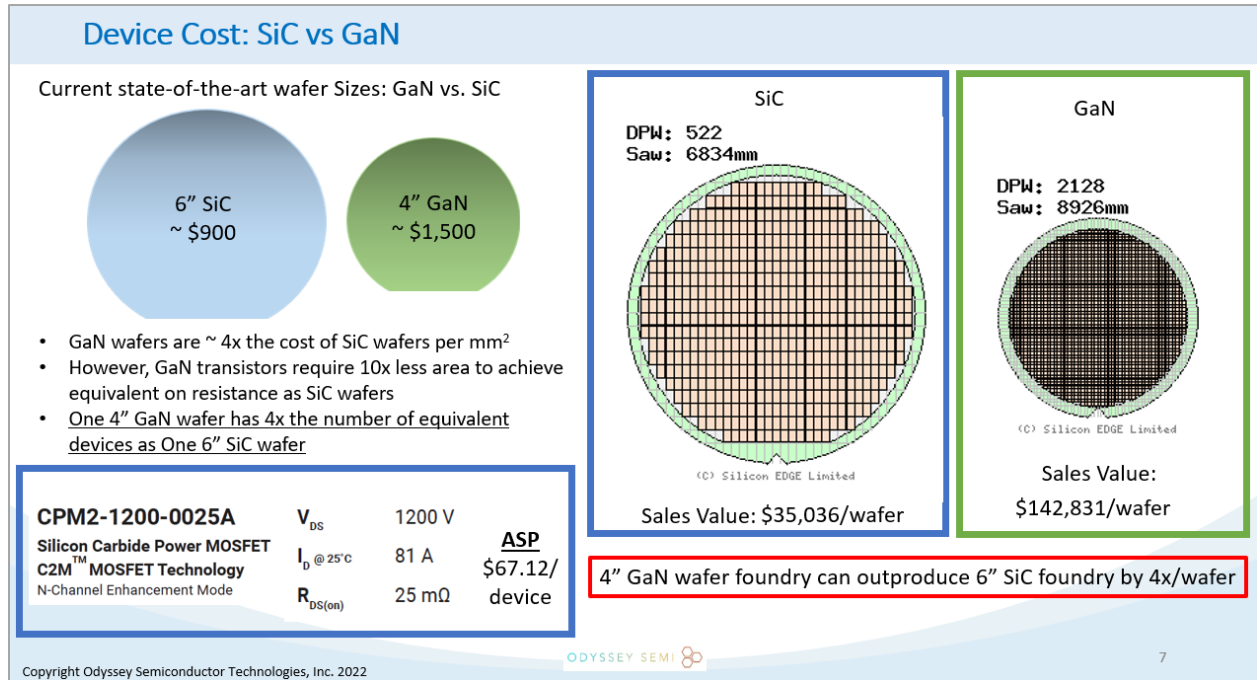
So if you want to turn to Slide 6. Like I said, some of our first things that we want to apply our devices to are high-voltage industrial motors. I always feel like it's kind of an interesting fact that around 45% of the world's energy -- electricity produced goes towards spinning a motor. So there's a huge opportunity there with a lot of growth. But we also hope to provide solutions for solar power inverters. That's a large growing market. And also, I feel like the kind of the most exciting application here is to provide value to the electric vehicle and electric vehicle charging equipment manufacturers by supplying what we feel is going to be a good alternative for silicon carbide power transistors that are used in these systems. The electric vehicle segment will present the strongest growth rate for us with a CAGR of 38%.

Longer term, we're looking to enable things like on-the-go charging. There will be probably a lot of on-the-go charging applications out there. One of them will be a special lane on the highway that allows vehicles to recharge without stopping. There's already some driverless trucks making nonstop coast to coast -- not already, but we're seeing proposals for driverless trucks making nonstop coast-to-coast trips. You've seen an announcement for this in Detroit a couple of weeks ago. You can also already see people testing this. Like there's an example of an application on German freeways where they use kind of like a trolley-like connection to a cable overhead to recharge cars over a small distance of the highway.

And there's companies with giant warehouses and distribution centers are -- that use robots for everything from cleaning floors, stocking inventory. But these things need to stop and recharge and by charging them on-the-go, a reduced fleet should accomplish -- give better results. So what -- the GaN parts will enable or doing that wirelessly. So as opposed to the example I kind of explained being in use in Germany, the energy could be transmitted to the vehicle from a system underneath the road

wirelessly. And to do that, very high-voltage and very high-frequency capable transistors are needed to drive those systems.

Slide 7

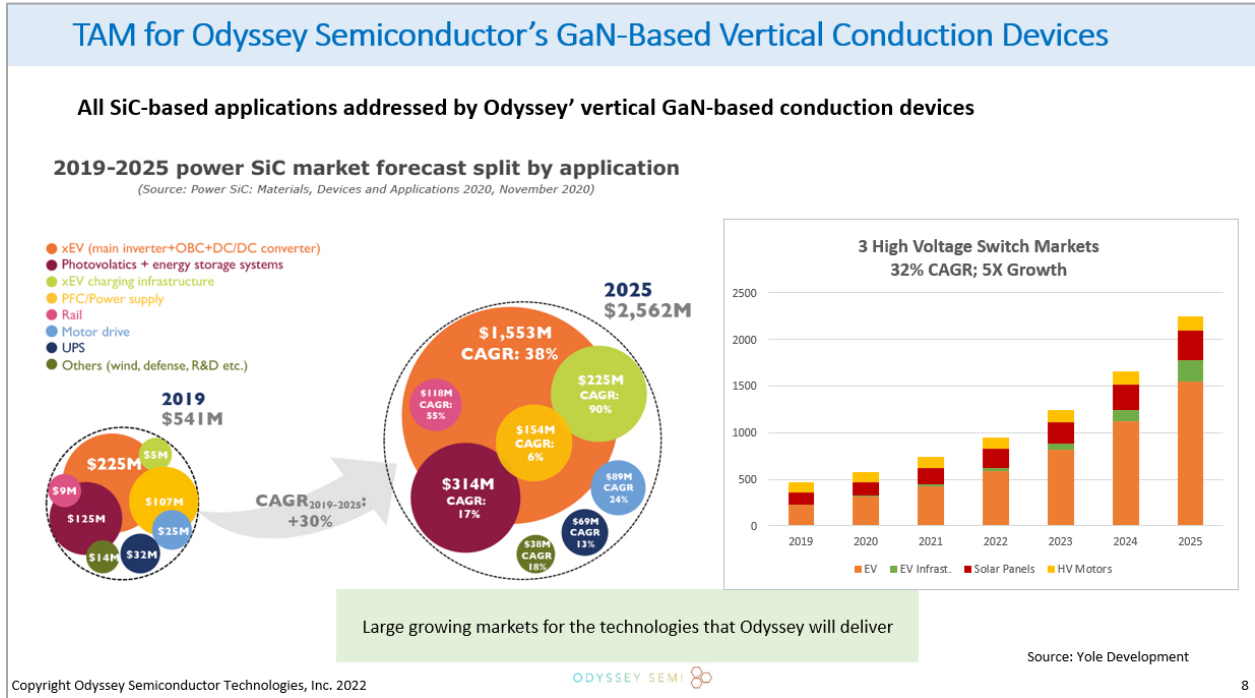


Let's go to Slide 7. This is sort of a cost comparison of silicon carbide devices, which are kind of the -- these are the incumbent high-performance transistors for above 1,000-volt applications and picked the size, that was an 80-amp transistor rated for 1,200-volt breakdown, and the current sizing is representative of what might be found in a large industrial motor or an electric vehicle application. So you can see that 6-inch wafers, they're the current standard for silicon carbide devices, they're about \$900 a wafer. GaN is about \$1,500 a wafer. So GaN is about 4x the cost of silicon carbide per unit area. But gallium nitride transistors require 10x less area to achieve the same current-handling capability or on-resistance as a silicon carbide will.

And you see the comparison here, a 6-inch wafer of these devices would hold about 522 transistors at this size, but a 4-inch gallium nitride wafer, which is the current state-of-the-art for gallium nitride that's available in any kind of commercially viable number, that will hold about a little over 2,000 devices at the same size. So kind of the takeaway here is that, though GaN right now is at a 4-inch wafer size versus 6-inch silicon carbide, there's talking of moving silicon carbide to 8-inch in the -- sometime in the future. A 4-inch GaN wafer foundry can outproduce a 6-inch silicon carbide foundry by about 4x per wafer as far as how many devices can come out. So it's actually quite -- it's quite attractive to build these devices on the current 4-inch gallium nitride that's become available.

And with that, I'll kind of turn that back to John to go to Slide 8. John?

Slide 8



John Edmunds – Chairman of the Board

So on Slide 8, you'll see the market size. This is for displacing silicon carbide materials. So we're using a silicon carbide forecast that's put together by Yole Development, which is a French company, I believe. And it's commonly used in the silicon carbide market. And this gives you an idea of the growth expected in that market through 2025. And the key focuses being electric vehicles, solar, and you'll see other motor drives a little bit down the list. But those are the key markets that we think we have an early opportunity to go play in and enjoy a lot of growth potential.

And as Rick showed you earlier, there's a tremendous cost advantage that we think is available in GaN.

Slide 9

Key Takeaways from Yole: Development 2020 Power SiC report

- **Upgrade to 800V battery vehicles represent a significant market opportunity for SiC** owing to its interesting performance/cost ratio compared to Si IGBT.
 - The volume use of a higher cost SiC component is **dependent both on a significant reduction of cost** coupled with a lower battery size & cost savings enabled by using SiC. For the main inverter, this is where **vertical GaN has an opening to more effectively seize this opportunity**. The main inverter market is the driving volume in the overall SiC-based EV/HEV market (see next slide)
- To increase EV driving range (>400km) – need more efficient and higher power density main inverter. This may also drive people to think about multiple Inverters (1 per axle) or in wheel motors.
- SiC is already used in On Board Chargers – OBCs, and is expected to be widely used in the coming years.
- **GaN could reduce cost significantly**. GaN could enter in at least one premium car's OBC starting in 2021. As Battery packs move up from 400 to 800V – the need for a vertical GaN device for OBC rather than a Horizontal GaN comes into play.
- **“All most all OEM and Tier I EV Mfg keep an eye on/develop GaN for next generation EV systems... Thus the competition between SiC and GaN is extremely important to watch”**

Odyssey is pioneering vertical GaN development.
GaN will drive replacement of silicon and silicon carbide in high voltage, high performance power applications.

So if you look through the rest of the Yole report on Slide 9, we pulled together some takeaways that comes with their power silicon carbide report. One of those is that this opportunity to upgrade to 800-volt batteries in electrical vehicles is a tremendous opportunity for silicon carbide to come into this game. It's already used by Tesla, and I think the -- some of Tesla's vehicles. And it's kind of in this fight with a silicon-based solution, which is this silicon IGBT.

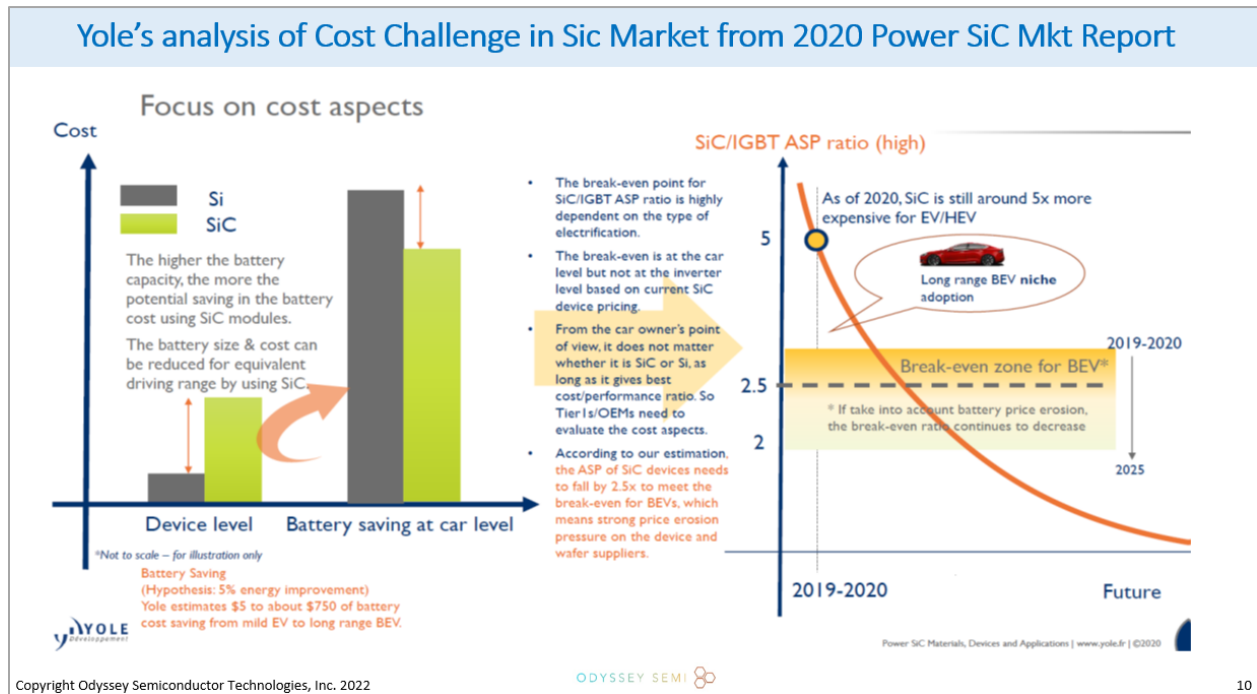
And one of the conclusions was that silicon carbide could come in and take the volume in this market, but it's going to either reduce its cost significantly and come down by 2.5x, which would be like a 60% reduction. So earlier, I think you saw the wafer that Rick was showing you, might have a sales value today of \$35,000 a wafer where the equivalent GaN wafer would have a sales value of \$142,000 at today's pricing. If you reduce that by 60% for GaN, that would let you have a \$57,000 sales value for a cost of a GaN part that would GaN wafer that was \$1,500. So a tremendous still amount of gross margin opportunity in GaN that would begin to evaporate if the silicon carbide had to come down from a \$900 wafer, let's say, down to a \$350 sort of cost.

And they can do some of that with scaling, but they won't really see that as early as people might want to let you believe like 8-inch wafers might be 9% of the volume by the time we get to '25. It's still -- it will still be a relatively new technology. So the main battleground for them is in the 6-inch area.

Also, main -- the main inverter going into electric vehicles is an opportunity -- where GaN has an opportunity to drive volume. In those inverters used in electric vehicles, people are talking about wanting to increase the distance, the driving range that somebody can use to something greater than 400 kilometers. And the way to do that would be to add additional inverters. In fact, the idea would be to have one per axle. So that's even that much more geometric volume growth that could come if the market swings in that direction.

In addition, there's another opportunity in onboard chargers, which is kind of a separate device in the vehicle. And silicon carbide looks at that as an opportunity as well. But GaN, even the 650-volt guys, have gotten into that market. And so it's being recognized in the Yole report as offering a significantly reduced cost relative to silicon carbide. And then they point out that people should really watch this competition between silicon carbide and GaN in the coming years very closely because there's a lot of opportunity there.

Slide 10



And so if you turn to Slide 10, you'll see I borrowed this chart from the Yole report. This just shows you graphically where -- on the right-hand side, they're showing how much the cost has to come down to 2.5x to try to get into this break-even zone where people will actually choose to use silicon carbide in volume. And then part of that equation is silicon carbide offers more power efficiency, so you might also get a savings in a lower-cost battery and in a smaller battery so that, that efficiency drives some cost savings in that direction as well.

But guess what, GaN provides both of those things in greater abundance than silicon carbide, more -- even more power efficiency than silicon carbide can provide and is much more flexible -- going to be much more flexible in terms of cost moving forward. So we think it's a great opportunity for us, and we want to get in and exploit this as quickly as we can. Obviously, you have to have a part before you can talk people into testing that technology and getting use -- making use of it.


And again, we're fairly close. We've run voltage through at a given level before -- in the manufacturing process before power enhances -- another step enhances the power capability. And that's why we're fairly confident with this latest flight coming through the lab that -- either this one will succeed or the

next one will succeed, and we'll be off to the races. And we'll certainly send a press release out when we have -- when we've reset juncture.

Slide 11

Customer Update—Vertical GaN

- 1. European Tier 1 Auto and EV Company**
 - Mutual NDA signed
 - Have had 2 discussions with them so far
 - They have shared their requirements for devices
 - Very encouraged by our results so far
- 2. Tier I US EV Company**
 - Mutual NDA send to us (we've signed; they have not)
 - Will see us when we are ready with >1 kV devices
- 3. Tier 1 European Module Subassembly Maker Also has large Industrial Division**
 - Very Interested will take unpackaged parts to test
 - Has GAN manufacturing capability for devices and modules
- 4. Tier 1 in their Mkt - US High Large Voltage Motor Mfg Co.**
 - Will re-engage with technical team when we can sample
 - Have continued to give updates to CEO, both technical and business

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On Slide 11, you'll see some of the interest we've seen already. This is unsolicited really, people calling into us because they heard we were developing in this area. So we've had a Tier 1 European electric vehicle maker, a Tier 1 U.S. company call in, one of the European subassembly guys called in. And we also have interest from a large voltage motor company, who also was an investor in the first private offering with the company. So they're all anxious to sample and willing to take parts and die form and package them themselves, and they're willing to help us in that area as well. So the opportunity is all out there. We just need to be able to put a part in people's hands here.

Slide 12

Expected Timelines for Power Products

2021 - Accomplishments

- Vertically conducting GaN transistor and p-n diode without regrowth demonstrated
- Processing refinements to freeze transistor process

2022

- Provide customers with engineering samples of first vertical GaN product in Q1 – additional time has enabled a better design and an existing product with greater potential range
- Initiate Odyssey qualifications for Joint Electron Device Engineering Council (“JEDEC”) standards
- Ship first vertical GaN-based conduction product to customers for qualification and production
- Provide customers with engineering samples of second generation product

2023

- Expand the production of the first product
- Qualify and begin shipping second product

If you look on Slide 12, we've kind of reordered the timeline for us to recognize the fact that we're -- we'll be delivering samples in the first part of '22 here. And then we want to initiate qualifications. We're already working on the JEDEC standards and being able to do that as we move through the year and just get into qualification with customers, it might take us, I think, in high-speed motors is probably the nearest-term opportunity for us to develop revenue. And then electric vehicles are probably the farther south because it just takes a long time to get qualified in electric vehicles.

So that might still be a couple of years out for us, but we could get into qualification this year and potentially start to drive some revenue in electric motors next year, and then somewhere in between will be solar panels. And this is where we want to bring new CEO on board that has a sales and marketing background in this power semiconductor market, knows the customer set and can instantly take the product we have and go impress these existing customers with a new opportunity.

And we have several candidates. We have a recruiting firm On Partners that we've hired. Tim Conti is doing a search for us. And we're looking for someone in the Eastern United States and -- that would make an easy move to Ithaca or be able to commute into Ithaca pretty regularly. And then we're also executing on the uplift process and the offering to give us more resources to continue to invest in this market.

Slide 13

	<u>Other Pub</u> <u>GAN Co.</u>	<u>Odyssey</u>
<u>Objective</u>	Displace Silicon Power Switches <600V	Displace Silicon Carbide Power Switches >600V-4,000V
Invested Capital prior to SPAC	\$ 102M	\$ 9M
Years Invested	7	5
People on Board	150	13
Operating Loss in Q3	\$ 6.5M	\$0.5M
Size of Available Mkt	\$ 2.5B	\$ 2.6B
Mkt CAP	\$ 1.5B	??

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On Slide 13, again, you'll see a lot of people or investors will be curious and I often get -- which is great for me, I often get some of the marketing material from Navitas or GaN Systems passed over. And so I took one of them. This is another public GaN company. And when I show you the market cap down below, I think it's actually closer to \$1.4 billion right now, but you'll probably recognize that company. But just to give you a profile of them. They had about 100 -- a little over \$100 million invested prior to them going public on a SPAC. That took them about 7 years. We've only really invested \$9 million in this company so far. So in that sense, we're probably undercapitalized. We don't need to invest a lot more, but we are going to need to add to the R&D capabilities, some sales and marketing and some G&A to scale to be a fully listed Nasdaq company.

Again, I don't expect it to be a lot of people but -- and we'll keep it down into low double digits here. But that's what we're looking at in comparison to our competitors. And in that sense, we've gotten to have a product relatively inexpensively, and we want to turn around and try to exploit that and leverage that in the market now.

Slide 14

Financials

- Revenues of \$748,948 in 2021
 - Odyssey's revenue was generated from foundry service business being done for other companies: design, develop, manufacture, and test complex equipment, and provide engineering and technical services. It is not GaN product revenue.
- Diligently managing its cash, the cash balance is \$2.6 million on December 31, 2021
- Cash used in operation was ~\$208,000 per month in 2021
 - We plan to build the foundry service business
 - Plan to hire our permanent CEO and then quickly add a few additional resources to add depth to marketing, manufacturing, and finance to scale Odyssey from R&D focused to capabilities of a fully listed operating company

On Slide 14, you'll just see a quick summary of our financials. We have generated about \$750,000 in revenues this year from providing foundry services. That's down a little bit from 2020. And I think we did about \$1.4 million in 2020. COVID has slowed us down a little bit here, but we do have kind of renewed vigor in that team's looking -- going out to look for new opportunities. We have some that are in process, and we have more that we think we can bring in. And again, I think once we have a new CEO and driving and helping the market in this area, we can also bring more services through the foundry itself.

We're also diligent in managing the cash flow. We're down to about \$2.6 million in total cash. We still are burning about \$600,000 a quarter. If you look at EBITDA, we also invested a little about \$150,000 on a deposit for some new equipment that's in prepaids right now. And so if you look at \$600,000 a quarter, it's -- the cash per quarter, that is about \$600,000 -- or about \$200,000 a month.

Slide 15

Odyssey Investment Highlights

- **New Disruptive High-Voltage Power Switching Devices with Strong Intellectual Property**
 - Vertical GaN will provide significant benefits over silicon carbide and lateral GaN
 - Odyssey's proprietary vertical GaN-based device technology enables dramatic efficiency increases over competition for applications up to 10 kV
 - Odyssey is focused on proprietary medium and high voltage GaN power switching devices
- **Rapid Growth in High Voltage Market – Strong Demand**
 - TAM: \$2.5B by 2025, 30% CAGR
- **Seasoned GaN Team & III-V Semiconductor Fab**
- **Near to Medium Term Growth Strategies; Long Growth Runway**

If we turn to Slide 15. Again, I think we're feeling as if there's strong market demand here overall for a new disruptive technology and that we have a seasoned team from a development point of view to go chase that. We have near-term growth strategies, and we have a longer growth runway that we can put to work here as soon as we can gain some traction with customers.

So with that, I'll open it up. And Jeff, let's see if there's any questions.

Appendix

Prototype Development Progress

- Odyssey conceived its current device design in the summer of 2021
 - Current design has many improvements over original implementation of the vertical GaN transistor
 - Lower gate leakage
 - Lower on-resistance
 - Much wider processing window
- Batches of new raw materials can take up to three months to obtain
- Rapid prototyping process runs have been completed, on average, every 2 weeks since mid-2021
 - Batches of new raw materials can take up to three months to obtain
- The only important device parameter left to achieve is breakdown voltage >1000 V
 - Several experiments are in progress and being completed every 2 weeks
 - Odyssey expects the confluence of all the important device parameters to occur sometime in this quarter

Odyssey GaN Processing Technologies Featured in Recent Articles

- *Gearing Up For Next-Gen Power Semis* in Semiconductor Engineering.
- *Going Vertical With GaN Devices* in Semiconductor Engineering.
- *Gallium Nitride Isn't New, But Its Latest Use is of Great Interest in Electric-Car Land* in Motortrend.

Those articles can be accessed on the Odyssey website at <https://www.odysseysemi.com/investors/news-events>

Question and Answer

Operator

[Operator Instructions] And your first question will come from Andrew Brenner with National Alliance Securities.

Andrew Brenner, National Alliance Securities

Nice presentation, but it looks like you really need cash. Are you thinking about doing an offering in the near term to just get you over the next year or so?

John Edmunds – Chairman of the Board

Well, we did file an S-1 today. So we are -- we will need cash probably by the fall some time. But we're okay for right now, but we do want to get into that cycle. And so as part of that, we also want to raise enough capital to qualify to up-list within Nasdaq and move off of being an OTC stock.

So we have an underwritten offering that we're putting together with a brokerage called Maxim. And so the Maxim Group is going to help us with that, and that's all will be in the S-1. We put out a separate press release about that today, but that -- you'll also be able to see the S-1 shortly being filed. And we're also applying with Nasdaq. We're using that initial filing to begin the process of applying with Nasdaq and FINRA to uplist. And that process itself may take 8 to 10 weeks is what I'm told. That would be a good result. It can take longer, but we don't think we're that complicated, and we think we can kind of get through in that time frame. And that will be plenty -- within plenty of time for us to raise more cash.

Operator

I would now like to hand the Q&A session over to Mr. Jeff Christensen to read questions submitted through the webcast. Please go ahead, sir.

Jeff Christensen – Investor Relations

Thanks, Chuck. We do have some questions that were submitted into the chat. And first question is for John, what will be the expected capital raise amount, the number of shares and the timing?

John Edmunds – Chairman of the Board

So if you look at the Nasdaq requirement, we need to have about \$15 million in free floating capital. So that's capital float. So that's without freely traded capital, so that's without insiders. And that's probably roughly 1/3 of our existing market cap, and then we'd have to add to that.

So if you go through the math of that, we'd have to add probably around \$5 million to \$6 million. It's really going to be a function of what's happening with the stock price overall when we do get to the offering and the pricing and there's -- like I say, there's probably a couple of months before that, and there should be some significant good news coming in that time frame. So we'll see.

Fundamentally, I think if we're in the range of \$7 million to \$9 million, that will also meet the company's corporate needs in terms of \$7 million to \$9 million. And again, it's just going to be a function of the pricing when we actually get to the offering itself.

Jeff Christensen – Investor Relations

Thank you. And a question related to capital that was asked on the chat is, to reduce capital needs, will you seek partnership opportunities for the development of your prototype?

John Edmunds – Chairman of the Board

We don't need to right now. We're pretty much through -- we're almost at the point of having the prototype. I think -- and we have a foundry that's big enough to drive like one electric vehicle maker, for instance. And then even one would probably want more than we have available, but we could get started with them. So I think that's where the issue comes into how would we build more manufacturing capacity when we get there. And we have time before that happens in terms of that sort of demand being put on the company. And at that stage, we might look for a partnership that could enable that.

The CHIPS Act coming through Congress right now is also a source of potential funding for that sort of activity. So that would -- might be another way that we could invest in building more capacity, or even better, acquiring someone else's fab that's underutilized or not being used today. So there's different paths we can go down, and we'll be exploring those. But the first thing we need to do is get our prototype in the hands of customers and create that customer demand. And then I think we'll have a lot more opportunity for partnering.

Jeff Christensen – Investor Relations

Thank you. The next question is for Rick is, why is the development of the GaN power device taking a while?

Rick Brown - Co-founder, Interim CEO, CTO, and Board Member

Yes. I can answer that. It's just as a guide, maybe people could turn to the first line of the appendix. So the current device design is -- it's a little different than what we originally had conceived when we started the effort. The current design is a little different, but it has a lot of improvements over the original. We have lower gate leakage, lower on-resistance, and it has actually a much wider processing window.

And the development is kind of -- there's like kind of two elements to the development of this. We'll -- we have epi, which is the gallium nitride layers grown on top of gallium nitride wafers. And that is not something we do in-house. We get that from -- there's a couple of different vendors who supply that for us. And that takes a few months to obtain that. But when we do obtain a batch of that, we use those wafers in the epi on them in this kind of rapid prototyping process that we have, where we can kind of turn around prototype devices off of those wafers about every 2 weeks.

And we've been doing that since mid-2021, which is when we got some good sort of -- that's when we got some good experiments that showed that, hey, this new structure is actually a lot better than what

we were originally trying to develop. So we put a lot of effort into that. And basically, every 2 weeks, we've been able to turn around new batch of devices, but we've had to change the epi a couple of times. And there's -- that part of it isn't as quick as the 2 weeks that it takes 2 to 3 months to get new epi. So there's a little bit of delay in there.

But even with those delays, working on non-ideal epi, we are able to home in the device processing parameters to optimize as best as we can. And we kind of recently got our -- what we feel is the real target epitaxial structure from our growth partner, the crystal growth partner. And right now, we've got a couple of iterations and progress that we feel pretty confident about returning some good results that we're targeting. Right now, pretty much the only parameter left to hit in addition to the on-resistance, low gate leakage, there's various other target device parameters, but we need to achieve the breakdown voltage is greater than 1,000 volts. And that's the last thing we're kind of tuning in with the process. And we kind of expect this all to come together sometime this quarter. And like John was saying, we have people kind of hungry to get their hands on this. So we're working at that as quickly as we can so as to not disappoint. But that's to provide a little more color as to why it takes so long, I hope that helps.

Jeff Christensen – Investor Relations

Great. That was -- Rick, thanks a lot. [Operator Instructions] Another question that came in via the chat - regarding patents is, any comments about patents and whether you have a moat?

Rick Brown - Co-founder, Interim CEO, CTO, and Board Member

I think that ...

John Edmunds – Chairman of the Board

Yes. we ...

No, go ahead.

Rick Brown - Co-founder, Interim CEO, CTO, and Board Member

So yes, we've been working very diligently to kind of shore up -- kind of protect ourselves with a moat here of patents. One of our Board members, Richard Ogawa, is an expert in dealing with patents, writing patents. And he's worked very hard with myself and the other founder, Dick Shealy, to really make sure that we have this well protected. And we continue to write patents, expanding on the patents that we have that we feel are important to protect kind of what we view as the trajectory that this technology is going to take.

John Edmunds – Chairman of the Board

I was going to add that, Richard Ogawa is actually pretty well known in the patent world. He used to work for a firm in San Francisco by the name of Townsend & Townsend. He was a Partner there. And he has both a solid understanding -- he worked in the semiconductor industry before he went to law

school, so he has a pretty solid understanding of the technology and the process. And he's worked for years as a patent litigator. So he's kind of the highest form of the species.

And he's our -- I worked with Richard at Inphi, where -- I think I was there 13 years, and Richard was there about 8 of those. So that's why we're pretty confident in the positions that we're taking in protecting the technology, and we're continuing to make sure those patent applications and the novelties get documented and filed. In fact, I've had one patent issue already, I believe. And another -- we've been told another's approved. It just hasn't quite come out yet.

Go ahead. Jeff?

Jeff Christensen – Investor Relations

Okay. Thanks to both of you. Our next question is about the CEO search. John, you made some comments about it. You mentioned you're looking for sales and marketing expertise of the new CEO. Any other comments about the skill sets that you want?

John Edmunds – Chairman of the Board

No, I don't think we're hard and fast in particular. We do want somebody out of the industry. I think that's something we've been lacking, and so somebody who can come in and plug and play with our technology right away, knows exactly who the customers are and where to go, where to take the technology. We want somebody who's got passion for the business. And it's a start-up, so it's a small number of people. I often tell people look at the fingers at the end of your hand. So there's the only 10 you got, so make them count. And in a start-up world, you have to be willing to roll your shirt sleeves up and go make things happen.

And I think finding the right chemistry here for Rick and Dick and as the founders of the company, is going to be critical to the process as well. But this is not -- sales and marketing is not their end of the stick. They're very good on the R&D side, but what we need is somebody to come in and help us lead that dimension of our business. And that's what we're hoping to bring in as well as somebody -- if they have experience as a general manager and managing development as well, that would be helpful but not necessary. And there's a lot of other things they could have and there's a lot of other things we have enough talent in the company to come teach them, but that's the primary talent that we're looking to add -- that we're looking for somebody to bring to the table.

Jeff Christensen – Investor Relations

Well, thank you. It looks like we're out of time. Rick, do you have any closing remarks?

Rick Brown - Co-founder, Interim CEO, CTO, and Board Member

Yes. Basically, I'd just like to thank everyone for hearing us out today. And I hope that we -- hope you can sense our confidence and excitement coming through as we focus on getting this over the -- what we feel as the last technological hurdle, and hopefully, getting this out into the world. And we look forward to the next update call like this. Then thank you.

John Edmunds – Chairman of the Board

Thanks, everybody. Yes.

Operator

Thank you. This concludes today's conference. All parties may disconnect, and have a great day.