Quanta’s Server Business: Can They Scale Beyond Hyperscale?

Increasing competition in hyperscale and an immature channel model could threaten Quanta’s growth potential in servers

Executive Summary

Large-scale social media, cloud, and search engine providers have become increasingly focused on optimizing the capital expenditures for their datacenters. While these hyperscale customers have historically relied on leading global OEMs (Dell, HP, IBM/Lenovo) for their server infrastructure, the largest of these customers—web giants like Google, Facebook, and Amazon—have "eliminated the middleman". They now specify and buy servers directly from the Taiwanese companies (ODMs) who design and manufacture the servers on the OEMs’ behalf.

Quanta was one of the first ODMs approached by Google, Facebook, and others to be a direct supplier of servers. Quanta quickly recognized the business opportunity in a direct server sales model, and they have shifted their strategy away from OEM designs to focus on these direct engagements. Quanta has expanded their Cloud Computing Business Unit (CCBU) in charge of custom designs for hyperscale. They also launched a US subsidiary (Quanta QCT) in 2012 to provide off-the-shelf datacenter solutions for enterprise, service provider, and government customers. Quanta’s direct sales to datacenter customers is now estimated to represent around 85% of their overall server business, and they have gained significant market share over the last several years.

Quanta’s strong share position, server manufacturing/supply chain expertise, and deep partnership with Intel allow them to be well positioned to maintain or grow share in hyperscale. However, hyperscale customers are not loyal to their supplier base, and many strong competitors are aggressively targeting this space. Quanta must invest in creating intellectual property (IP) and leading edge technologies, and they must develop expertise in hyperscale software workloads to protect their current position.

To achieve continued growth in servers, Quanta must target the cloud service providers and enterprise buyers that do not have the scale to warrant custom server designs. Quanta’s limited product portfolio, immature channel, limited service infrastructure, and horizontal hardware-centric focus will limit their ability to compete against the global OEMs in these markets. Quanta should leverage their existing partnerships and create new relationships to target cloud service provider and enterprise customers. They should find the pockets of these markets where global OEM brand value is not important, and Quanta should establish leadership in offering hyperscale-inspired innovations that meet these customers' needs.
Quanta’s History in Servers: Transition from ODM to Direct Model
Over a decade ago, Quanta began designing and manufacturing servers as an ODM for the global server vendors like Dell, HP, and IBM/Lenovo. Quanta quickly became a top server ODM and established a strong reputation for quality, design, and manufacturing.

About six years ago, Quanta began competing with their OEM customers by engaging directly with the large hyperscale datacenter customers. Quanta developed the Cloud Computing Business Unit (CCBU) to provide custom designs for hyperscale. Large customer wins include Facebook, Rackspace, Amazon, Korea Telecom, and others who are not public. In May 2012, Quanta expanded their server strategy with the launch of a US subsidiary, Quanta QCT. Quanta QCT provides off-the-shelf datacenter solutions for enterprise datacenter customers, service providers, and government institutions.

Quanta shipped 1.2 million servers in 2012, up 19 percent from the previous year. While currently not tracked individually by Gartner or IDC, Quanta is estimated to have double-digit server unit share quickly approaching IBM's/Lenovo’s current position of 3rd place. Quanta’s share and shipments grew in 2013, and direct sales to datacenters make up around 85% of their business.

Quanta Server SWOT Analysis
To understand holistically how the company is positioned in the market, it is important to look at the strengths, weaknesses, opportunities, and threats of Quanta’s current business.

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Strengths
The following help to give Quanta strength in the market:

- **Strong reputation in hyperscale:** As the first ODM to sell directly to large datacenters, Quanta has developed a position of leadership. One example of this was Facebook’s decision several years ago to choose Quanta as a major server provider for their innovative Prineville, Oregon datacenter. Dell DCS was previously Facebook’s preferred supplier.

- **Server design and manufacturing expertise:** Quanta has made significant investments over the last decade in leading edge facilities and built strong server technical teams. When compared to other ODMs who are developing direct models, Quanta’s share leadership position and notable customer wins indicate they are ahead of their competitors in their ability to compete directly with the OEMs.

- **Deep partnership with Intel for hyperscale:** We believe Quanta is Intel’s unofficial preferred partner when it comes to hyperscale design and go-to-market. Quanta is generally first to market with new Intel technologies and often Intel’s lead partner at industry events, indicating “preferred” status.

- **Product portfolio breadth:** Quanta QCT claims to be “the only company that delivers all of the major components of the datacenter value chain: server, storage, and networking equipment design and manufacturing capability in a single, proven resource”.

- **Cost structure and supply chain:** Quanta has years of experience sourcing components for both OEMs and large datacenter customers. Their increasing server volumes allow them to achieve economies of scale that result in low cost structures and aggressive pricing models. By “cutting out the middle man” (i.e., OEMs) and selling directly to hyperscale customers, Quanta is willing and able to take slim margins to undercut the OEMs on price.

Weaknesses
Along with those strengths come a set of weaknesses that may limit Quanta’s growth in the server space:

- **Product portfolio depth:** While claiming a broad portfolio across the datacenter value chain, Quanta has limited offerings in each category and does not provide the full suite of products that enterprise customers expect. As an example, they do not currently have a “converged infrastructure” solution that ties their server, storage, and networking products together; this is a requirement that top server vendors have positioned as table stakes for enterprise IT.

- **Channel partner program in its infancy:** Quanta launched a channel partner program with the development of Quanta QCT in 2012. However, this program is still a requirement that top server vendors have positioned as table stakes for enterprise IT.

- **Lacks strong worldwide service and support channels:** Quanta has expanded their presence with sales offices in each major region, but Quanta does not have the global service and support infrastructure that enterprise and cloud service provider customers require. While customers like Google will
accept a “lights-out” datacenter approach (where failed servers are just disposed of) most customers will not. For deployments beyond the US and China, Quanta has significant shortcomings in both deployment and support capabilities with a particular weakness in EMEA.

- **Hardware-centric**: Quanta’s horizontal, modular approach to datacenter products cannot compete long term with the global server providers who are now specializing in vertically integrated solutions. Dell, HP, IBM/Lenovo, and others have developed solutions stacks internally and with partners in areas such as cloud infrastructure, big data, and datacenter virtualization. Quanta does not have the firmware or software applications expertise to provide these types of workload optimized solutions for hyperscale, cloud, or enterprise. In addition, Quanta lacks the deep professional services capabilities that are an integral part of the enterprise solution offerings for Dell, HP, IBM/Lenovo, Oracle, and Cisco.

- **No enterprise class systems management capability**: Enterprise customers require advanced system management solutions to monitor, track, and control their datacenter infrastructure. Quanta is dependent on Intel’s systems management infrastructure and has relied upon their customers for all of their systems management tools. Quanta lacks the hardware and software expertise to provide a differentiated solution that can compete with custom software and ASICs such as HP iLO or Dell DRAC. In expanding their market beyond a handful of hyperscale customers, Quanta will need to do more than simply expose a suite of IPMI (Intelligent Platform Management Interface) commands.

- **No independent architecture R&D, minimal IP**: Quanta is playing the role Dell played for Intel in the 1990s: great at selling and fulfilling products largely based on Intel R&D. Their current “better together” solution story is solely based on Intel infrastructure and does not yet comprehend emerging, non-Intel innovations from other technology providers. Also, Quanta does not have a significant amount of unique in-house IP which could limit their stickiness and value versus the larger OEMs.

**Opportunities**

Quanta should take advantage of several opportunities to grow their share in servers:

- **Market growth in cloud**: The cloud computing server market continues to experience double-digit annual growth rates. Quanta’s current customer base—the web giants and large-scale cloud providers—puts them in a strong position to ride this growth curve. Quanta must focus on protecting their position with existing customers and targeting like-minded cloud providers who are looking to scale. Based on the growth potential and greenfield opportunities in cloud, Quanta should focus their market expansion efforts on large and mid-sized cloud service providers as a priority ahead of expansion into enterprise.

- **Leverage Open Compute**: Quanta was one of the lead partners to work with Facebook on the development of the Open Compute Project (OCP) and is now an official OCP solution provider. If OCP can deliver on the promise to create hardware standards leveraged across a wide-base of customers, this could help Quanta’s penetration into the large and mid-sized cloud service provider market.
However, since OCP has not yet seen broad adoption beyond a few large customers, Quanta should avoid being positioned as “OCP-centric”. Quanta should continue to market their more general purpose platforms heavily alongside their OCP-compliant products.

- **Microsoft partnership:** Quanta worked closely with Microsoft to develop a Microsoft Cloud Fast Track solution in 2012. Since Microsoft continues to dominate the enterprise server market, Quanta should work to leverage this and other Microsoft programs to gain traction in Azure implementations.

- **Develop server software and SDN expertise:** Enterprise and cloud datacenters are now looking for vertically integrated solutions that are optimized for their specific workloads. Quanta should develop the expertise to consult with their customers on specific software stacks and software defined networking solutions. A natural starting point would be a solution set optimized for an OpenStack-based cloud infrastructure. To compete in enterprise, Quanta should invest resources to develop differentiated rack-level server systems management capability.

- **Partnerships with VAR/Resellers for complete solutions:** Quanta has developed over 40 partnerships with distributors and regional server vendors with their channel program launched in 2012 with Quanta QCT. In addition to strengthening their relationship with these partners, Quanta should target key partnerships with leading enterprise-focused VARs/Resellers that currently develop solutions for global vendors and jointly develop workload-targeted offerings.

- **Demonstrate real value of “better together” solutions approach:** Quanta touts their server, storage and networking breadth as a key advantage. To leverage this product portfolio effectively, Quanta must provide tangible examples in both cloud and enterprise for why these products are "better together" than point solutions from multiple vendors. Quanta must also develop unique innovations in their portfolio that go beyond the standard Intel offerings.

**Threats**
Quanta faces some significant threats to their current and future position in the server market:

- **Top 3 global server vendors still preferred in enterprise:** Despite continued strong growth of the hyperscale segment, enterprise and SMB still remain the bulk of the server market the next 3 years, and these customers often have strong customer loyalty to the leading OEMs (Dell, HP, IBM/Lenovo). In general, many enterprise IT buyers are risk averse and have come to rely on the long term support contracts, local service/sales channels, and ease of use they experience with the products and services from their global vendors of choice.

- **Other ODMs with direct selling models:** While Quanta was the first ODM to embrace the direct sales model, other ODMs like Wiwynn, Mitac and Supermicro have developed direct sales models and are becoming increasingly competitive. While there have been no notable public wins from these vendors to date, we
have heard from large datacenter customers that these ODMs are providing competitive responses for large RFPs.

- **Hyperscale business focus leads to inconsistent financial results:** Hyperscale customers are not brand sensitive and have limited vendor loyalty. They continuously evaluate the best solutions that optimize the capital expenditures for their ever-changing application environments. ODMs and OEMs alike are very aggressive in going after every hyperscale RFP. Quanta lacks the stickiness of specific IP, technology, services, or software. In addition to their fickle behavior, hyperscale customers have lumpy buying patterns. Based on these two factors, Quanta’s large focus in hyperscale could lead to inconsistent financial results from quarter to quarter.

- **Exclusive technology partnership with Intel may limit innovation and differentiation:** Quanta could miss the boat on leading datacenter technology trends such as ARM-based servers, GPU-compute, DSPs, and FPGAs with their Intel-centric strategy. Even if Quanta has exclusive access for some period of time to new Intel technologies, the market settles on Intel’s feature set. With a lack of internal architecture R&D, it will be difficult for Quanta to differentiate. In this case, dependency on Intel R&D isn’t so far from being dependent on Market Development Funds (MDF), and it’s a hard business addiction to break.

- **Lenovo’s low cost model:** Lenovo provides scale-out solutions in China, but not around the world. As Lenovo has shown in phones, tablets, and PCs, if they want to achieve a low cost model, they can do it, even if it means opening up their own China server factory. Politically, it would be better for Intel if Lenovo gets business over Quanta as Dell, HP, or IBM/Lenovo would no longer be able to cry foul about Intel enabling an ODM versus an OEM.

- **OEM litigation:** There have been no lawsuits to date between Dell, HP, IBM/Lenovo, and Quanta. If the large OEMs believe that Quanta has infringed on their IP, we expect the large OEMs to take legal actions to “protect their IP”.

**Has Quanta’s Server Business Hit Its Peak?**

Quanta’s tremendous success with hyperscale datacenter customers makes them the one to beat by competing server vendors. This space is becoming more and more crowded with an increasing number of ODMs developing direct channels and OEMs doubling down on their efforts to regain lost share. The scale-out market is growing while the enterprise market is flat to shrinking. But Quanta cannot get too comfortable with their leadership position as each and every hyperscale RFP is aggressively pursued by all of the primary contenders. Hyperscale customers’ desire for choice and low cost mean they never show significant favoritism to any one vendor.

The market beyond hyperscale, namely cloud service providers and enterprise buyers who buy off-the-shelf hardware, has much different needs than Quanta’s current customer base. A successful vendor supplying datacenter solutions to these markets must have an entirely different design, support, and go-to-market model than is used to service hyperscale customers. While core enterprise datacenter continues to make up the majority of total sales volume and margin, the market growth rate is flat to declining.
The large global vendors continue to be preferred and are strongly protecting their positions. However, the cloud service provider market continues to grow and these customers may be more open to new vendors.

**Call to Action for Quanta: Growing Share in Hyperscale and Beyond**

Hyperscale customers require hardware vendors with leading edge innovation, a strong understanding of the entire vertical solution stack, and supply chain expertise that results in aggressive cost structures. With increasing competition from other ODMs and OEMs’ hyperscale focused business units, Quanta must stay ahead of the curve on innovation. They should invest in leading edge technologies such as workload accelerators (e.g., GPU-compute DSPs, FPGAs, flash storage, network interconnects) and prove the value of these technologies in hyperscale environments. To truly differentiate, Quanta must understand their customers’ specific needs better than anyone else and develop software and BIOS optimization expertise to provide workload-tuned, vertically-integrated solutions. Quanta should consider M&A as a way to acquire both new technology and R&D capability.

To achieve continued growth in servers, Quanta must target cloud service providers and enterprise customers that do not have the scale to warrant custom server designs. A successful server vendor targeting these markets must have an entirely different design, packaging, distribution, service, and support model than is required for hyperscale. While many of these buyers have a general preference to global OEMs, there are pockets of these segments, particularly in cloud, where brand value is not as important. Quanta’s expertise in hyperscale can be leveraged for the more sophisticated cloud service provider and enterprise buyers who find value in leveraging these innovations for their mainstream workloads. Investment in the development of OpenStack-optimized cloud infrastructure solutions would be a strong starting point to gain traction in these markets. To reach and service these buyers effectively, Quanta must invest in their global service and support infrastructure, and they must develop relationships with trusted VARs and channel partners.

All of the required investments in IP, partnerships, R&D, service, support, and go-to-market channels will put stress on Quanta’s current margin model and cost leadership pricing approach. Quanta must consider the return on investment that each of these changes require and adjust their margin structure and pricing strategy to ensure profitable growth.
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