

REPORT REPRINT

Vertiv adds ready-made products to its datacenter tailoring business

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The global datacenter equipment maker has a new line of pre-engineered PFM datacenter systems designed for ease and speed of ordering. The move comes at a time when the interest in prefabricated datacenters is heightened as operators scramble to keep pace with technology and business demands.

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Global datacenter equipment maker Vertiv has launched a new line of pre-engineered prefabricated modular (PFM) datacenter systems for ease and speed of ordering. The move comes at a time when the interest in prefabricated datacenter systems is heightened as operators of datacenters scramble to keep pace with technology and business demands. The new products complement Vertiv's existing bespoke PFM systems business that has become one of its strategic areas of investment since the company was taken private in 2016.

THE 451 TAKE

The dynamics of the PFM datacenter marketplace can, from a certain angle, be characterized by the conflict between the economic advantages of more standardization and the need for customization to win projects. Vertiv, which has so far sided with bespoke engineering, added standard PFM products in response to this underlying tension in a bid to engage a wider spectrum of buyers. The move will not only add net new revenue to the company's top line, but will likely help Vertiv steer its product development toward a balance between these opposing market forces.

CONTEXT

Vertiv, formerly Emerson Network Power, is one of the largest vendors in the datacenter technologies segment, only behind rival Schneider Electric. 451 Research estimates Vertiv's revenue for 2018 to be in the region of \$3.6-3.8bn. It leads the market for datacenter critical cooling, and is also very strong in electrical equipment and datacenter services. It has about 19,500 employees (slightly down from 21,000 or so a year ago), a large installed customer base globally, several strong brands, 30 manufacturing facilities worldwide and entrenched supply-chain partners. Historically, about 60% of its business has been from datacenters, with telecommunications and industrial markets contributing about 20% each.

The company's headquarters are in Columbus, Ohio, and its owner is private-equity firm Platinum Equity, which acquired Vertiv from Emerson Electric in an all-cash transaction valued at \$4bn in late 2016. At Vertiv's helm is CEO Rob Johnson, formerly with Kleiner Perkins Caufield & Byers. Johnson also led APC, which Vertiv competitor Schneider Electric acquired for \$6.1bn in 2006."

Under private ownership Vertiv has restructured to become leaner and nimbler via improved engineering and marketing coordination between regions – and to improve margins via manufacturing efficiencies that had been trailing behind those of some rivals. The company has also responded to the ongoing shift in datacenter capacity from enterprise-owned facilities to multi-tenant sites and cloud sites, also demonstrated by acquisitions of power distribution maker Geist and custom cooling specialist Energy Labs at the beginning of 2018. Platinum sold the automatic transfer switch unit ASCO, a highly profitable but niche specialty of electrical engineering that the new owners viewed as peripheral to the company's success, to Schneider, partly to finance investments in core areas.

FASTER AND FOR LESS

Since its full-scale entry into the market for PFM datacenter systems in 2010, Vertiv has established itself as a major vendor of bespoke facilities across a wide range of geographies and use cases that span from small critical power systems to turn-key enterprise-class datacenters in desert climates to full-custom hyperscale sites.

For prefabrication of datacenters and datacenter subsystems, Vertiv's global center is in Zagreb, Croatia, where more than 80 engineers work on various aspects of PFM facilities. The manufacturing plant is on the outskirts of the city. From this location, Vertiv serves most of its PFM datacenter projects in Europe, the Middle East and Africa. Vertiv also manufactures in the United States and added Thailand to its PFM datacenter factory footprint in the second half of 2018.

With the introduction of more standardized PFM datacenter systems, Vertiv reinvigorates its SmartMod brand, which the company has already used for various prefabricated facility offerings from micro datacenter and telecom enclosures to general prefabricated datacenter systems. Rather than browsing a library of reference designs from past engineering efforts, Vertiv now gives potential customers a set of easy-to-understand product configuration options for which it can offer quick price quotes and estimated delivery times. The company aims to attract a wider customer base it hasn't been able to engage in the past with its bespoke engineering approach to PFM facilities.

The standard SmartMod-branded PFM products are all-in-one datacenters in a custom enclosure: IT cabinets, power distribution and uninterruptible power supplies (UPS) with batteries, direct expansion cooling and the like are all included, bar a generator. Vertiv primarily targets micro- and small-capacity requirements with the standardized configuration options to reduce project overhead from engineering and construction management fees while speeding up installation by months. The new SmartMod products range from 40kW to 90kW and 12 cabinets in one enclosure and to 180kW with two conjoined enclosures. The new products are already available in EMEA and will launch in North America in the first half of 2019. There are no current public plans on when the new products will be available to Asia-Pacific or Latin American buyers.

Vertiv also added a set of electrical rooms in a bid to win over service providers that want to streamline their datacenter construction and refurbishment projects without having to commit to a complete overhaul to their design and build practices. 451 Research expects overall demand for PFM datacenter systems to grow strongly in 2019 and 2020, in large part due to interest in PFM power units. Global factory revenue from PFM datacenter systems is set to surpass \$4bn in revenue by 2020, according to our study *Global Prefabricated Modular Datacenter Forecast 2017-2021: Picking Up Speed*.

The power systems, called Power Modules, come in two major versions. Operators of small and mid-sized sites might find the Power Module 400/600 series interesting for its modular UPS that scales in 120kW or 200kW increments up to 600kW in a single system enclosure. The system is hot-scalable, meaning it can be scaled up internally or can scale out with additional modules in support of larger loads or added resilience. It can also be configured to offer N+1 or 2N capacity redundancy from a single module, making it suitable for small sites too. For larger facilities Vertiv offers the Power Module 1000/1200, which is monolithic and offers scalability and redundancy via additional modules in 1 or 1.2MW chunks. All Power Modules have their own cooling, fire suppression, switchboard and can house enough batteries to hold the full load for up to five minutes.

While the new SmartMods and Power Modules are fully engineered for manufacturing and installation, they will likely serve as a starting point for many engagements that will end up being semi-custom engineering efforts even if not fully bespoke. Vertiv will likely expand its portfolio of standardized products in order to attract an even wider audience in the future, such as contiguous multi-module designs and skidded systems.

COMPETITION

Chief rival Schneider Electric and other strong competitors such as Eaton, ABB and Siemens are also aggressively targeting major datacenter projects. Their focus is often not just on operational agility but also innovation and delivery at scale. In hyperscale datacenter deals, suppliers' margins can be relatively low, requiring high order volumes to achieve profitability – a challenging balancing act for most players. Huawei is also applying increasing pressure in some markets to gain share in some key areas such as telecommunications, industrial and government bodies, where Vertiv has traditionally had strong positions.

The market for PFM datacenters is heavily contested by dozens of vendors, including not just heavyweights, but also many small and mid-sized manufacturers, many of which are independent integrators of third-party equipment. UK-based BladeRoom is a cooling specialist PFM vendor that focuses on extreme energy efficiency via free-air cooling. Flexenclosure is a Sweden-based independent integrator with proven project delivery, including in sub-Saharan Africa, Asia-Pacific and Latin America. There is a much longer list of challengers for edge-type deployments.

Australian Datapod traditionally comes from serving the IT requirements of the mining industry and has built out a capability to install PFM facilities globally. In the large and hyperscale segments, Project Frog, in partnership with civil engineering giant AECOM, is another contender for design wins. Vertiv also competes with independent prefab electrical systems integrators and contractors, such as Cupertino Electric and PCX.

SWOT ANALYSIS

STRENGTHS

Compared with most of its competition, Vertiv has a large installed base, a broad product portfolio and global reach, as well as strong product brand recognition for some major product lines in a risk-averse market. It's also in a strong financial position.

WEAKNESSES

Vertiv has relatively been less strong in marketing its products, technologies and services than others. Investments in software and distributed control have yet to be fully aligned with its equipment and services offerings. Product and monetization strategy for edge and next-generation cooling, including direct liquid, remains unclear.

OPPORTUNITIES

Multi-megawatt colocation and hyperscale sites offer ample opportunities to land large wins. On the other end of the scale, demand for smaller edge datacenters is expected to balloon as the number of connected machines grows in many vertical industries.

THREATS

Vertiv is exposed to the shrinking enterprise datacenter segment, which is still a major part of its revenue. Telecom and industrial expenditures are also muted in some areas due to cost pressures.