

Cloud Storage & Services with CASwell R-5211

High-performance, high-capacity
rackmount network server for multi-
purpose cloud application



The cloud is everywhere nowadays and more than just storage outsourcing. Companies and big enterprises are shifting the services they need or provide to cloud servers to save investing on owning hardware. This is made possible by "Network Function Virtualization Infrastructure" (NFVi), but the cloud solutions now have to provide more than just storage capacity when you want to run services in the cloud. CASwell and Intel offer network solutions with high performance and high capacity.

The Challenges

Having huge storage capacities and high-performance computing for your own company required big investments into your own data center or IT infrastructure in the past, but that's not always necessary anymore. Now you can outsource almost everything regarding computing services. You can rent cloud storage that can easily be scaled up if you need more capacity by just upgrading your contract. Software can run on a remote high-end server so there's always enough headroom for peak times instead of investing in your own expensive hardware that you won't need most of the time.

While these are all advantages for the ordering entities, at the same time they're challenges for the companies that offer cloud storage, software, platform or even infrastructure as a service (SaaS, PaaS and IaaS) as part of their own business model. Storage capacity is easy to upgrade by adding more or bigger drives or even scaling out to another network storage, but how about offering enough performance for even the most demanding customer without investing in another, much faster server? How to balance cost and requirements while also being able to offer new services or

more virtual machines in your network to your existing customers, without the need to acquire more hardware?



The Solution: CASwell R-5211

The CASwell R-5211 rackmount appliance as a verified Intel® Select Solution for NFVi offers not just big storage capacity with its 24 bays for 2.5-inch hard drives or solid state drives (SSD), but also a lot of computing power because of its two Intel® Xeon® Platinum 8176 processors with 56 cores combined plus Hyper-Threading for up to 112 threads at the same time. With 384 GByte DDR4-2666 main memory that can easily be expanded, two NVMe SSDs with 4 TByte each and two 25-Gbit Dual Port Intel® Ethernet Controller XXV710s, the R-5211 provides a lot of performance for many simultaneously running applications or virtual machines as part of the NFVi. This is supported by one Intel® QuickAssist Adapter 8960 (Intel® QAT) card to enhance the system with "Quick Assist Technology" to accelerate encrypted data traffic in a secure network, reduce overall data size and lower storage demands by speeding real-time compression while at the same time offloading the CPU of some of the processing workloads.



The included MicroSemi Adaptec 1100-24i 12G host bus adapter provides the bandwidth needed for 24 bays of 2.5-inch hard drives or SSDs. This allows the R-5211 to reach a storage capacity of almost 200 TByte when fully equipped with solid state drives at their biggest currently available size. An optional Trusted Platform Module (TPM) for encryption, authentication and digital rights management is also available for the R-5211.

While the CASwell R-5211 already features two 10-Gbit SFP+ and two 1-Gbit RJ45 Ethernet ports for high speed networking connectivity, it can still be expanded by PCI Express 3.0 network cards to

add more or even faster Ethernet connections. Two redundant power supplies make sure that the system keeps running even when one PSU should unexpectedly fail.

Conclusion

The CASwell R-5211 as an Intel Select Solution for NFVi is an ideal combination for providing both big cloud storage capacities and high-performance computing power at the same time while also being flexible enough for easy upgrading. It's a verified networking appliance for most industry sectors looking for storage in their demanding NFVi with many different service offerings and can be equipped according to almost every customer need and requirement.

Learn more

More information about the CASwell R-5211 and its verified Intel Select Solution offering can be found here: <https://www.cas-well.com/product-information/r-5211.html>

Information about the Intel Selection Solutions is available here: <http://www.intel.com/selectsolutions>

About CASwell

CASwell, Inc. was founded in 2007 by a group of engineers with a desire to create dynamic system solutions for embedded applications. While CASwell is a young company, it has proved itself to its customers with advanced technology, professional service and superior design and manufacturing capability by delivering a great portfolio of solutions based on Linux®. In 2014, the well-known IPC manufacturer Ennoconn Corporation (subsidiary of Foxconn Technology Group) decided to invest in CASwell, becoming the largest shareholder. CASwell has since become the subsidiary of Ennoconn, a member of Foxconn Technology Group. CASwell is dedicated to providing its customers with an unparalleled one-stop shopping experience for their network security and management needs. Find out more on the official website: <https://www.cas-well.com/>

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