

VxBlock 1000 Converged Infrastructure

Foundation for Mission-Critical Cloud

VxBlock 1000



Simplify IT with a turnkey system for workload consolidation

VxBlock is the proven leader in converged infrastructure, providing enterprises worldwide the amazing simplicity of a turnkey engineered system experience that allows them to focus on innovating rather than spending time on maintenance.

The VxBlock System 1000 combines industry-leading technologies – including powerful Dell EMC storage and data protection options, Cisco UCS blade and rack servers, Cisco LAN and SAN networking, and VMware virtualization and cloud management – into one fully integrated system. It leverages its deep VMware integration to simplify automation of everything from daily infrastructure provisioning tasks to lifecycle management with VMware Cloud Foundation.

Why is that important? VxBlock 1000 takes the complexities out of component integration. It simplifies upgrades and daily operations, comes with converged management and a simplified path to a cloud operating model. All with single-call support.

VxBlock business outcomes really shine with critical business applications like SAP, Oracle, Microsoft SQL, VDI and AI/ML where “good enough” will not get the job done. With VxBlock, you can rely on the rich data services, high availability and data efficiency absolutely required to keep your business up, running and protected at any scale.

Delivering real business results

Enterprises using Dell EMC VxBlock Systems report significantly better business outcomes, including more efficient IT operations, dramatically less unplanned downtime, and much faster upgrades and patches than with a DIY approach.

ESSENTIALS

- **Modernize IT, simplify operations and lower risk** – with a proven, engineered turnkey system
- **Optimize and protect critical business workloads and data** – for applications based on SAP, Oracle, SQL, VDI, AI/ML and more
- **Enable hybrid cloud for business agility and IT economy** – with cloud-enabled infrastructure and VMware integration



Delivering Real Business Results

“Installing the converged VxBlock System allowed us to take a 10-year step forward in technology with a single purchase. By using the VxBlock System to transform our data center, we now have the ability to deploy solutions in hours as opposed to weeks.”

— Ryan Deppe, Network Operations Supervisor, Cianbro Corporation

“With VxBlock 1000, we get one source of support and always know we’re running the latest gold-standard code stack. Dell Technologies removes so much of the time and risk of managing IT. We love it.”

— Darell Schueneman, Team Lead, Cloud Operations, Plex Systems

“The VxBlock has enabled us to make tremendous positive changes. Our users are thrilled with the IT team’s responsiveness and with the accelerated application performance. It’s also changed the relationship between IT and the college. Business units now engage us to consult early in their decision process. We’ve become an integral partner in college business.”

— Mark Wiseley, Senior Director of IT, Palmer College

“We’re now 100 percent responsive to the business.”






— Michael Tomkins, Chief Technology Officer, Fox Sports Australia

VxBlock 1000 Overview

VxBlock 1000 redefines the converged infrastructure market, enabling you to free up resources, focus on innovation and accelerate IT transformation. Traditional converged infrastructure systems often require you to choose different systems for different applications’ performance, capacity and data services needs. VxBlock 1000 breaks those boundaries by offering a converged system designed for all workloads in the modern data center with:

- **A perpetual architecture** to ensure that your system is able to support next-generation technologies to address extreme performance and scalability requirements.
- Unprecedented **choice** to mix, share and adapt pools of market-leading storage, data protection and compute resources for all workloads to maximize performance and utilization.
- **Converged management** and **automation** through Dell EMC CloudIQ analytics and an extensive library of complimentary engineered workflows based on VMware vRealize Orchestrator (vRO).
- **Simplified lifecycle management** with a turnkey infrastructure that is created, managed, supported and sustained as one.

Turnkey Engineered System Experience

 Engineered	Engineered according to your needs
 Manufactured	Built in ISO-certified factory
 Managed	Centralized management
 Supported	Single call support
 Sustained	Ongoing certified code upgrades

In 2009, the first converged infrastructure (known then as Vblock System) came to market. Dell Technologies continues to innovate in the CI market with the current-generation VxBlock System, the VxBlock 1000. The VxBlock 1000 is not a reference architecture and it’s not a bill-of-materials (BOM); it’s a fully integrated system that brings together leading technologies, including

- Dell EMC PowerStore, PowerMax, Unity XT, XtremIO and PowerScale/Isilon storage options that you can mix and match
- Dell EMC PowerProtect, Avamar, Data Domain, NetWorker, RecoverPoint and VPLEX protection options
- Cisco UCS B-Series and C-Series server options
- Cisco Nexus LAN and MDS SAN switches
- VMware (including VMware Cloud Foundation, vRealize, vSphere, NSX-T and vCenter)

Unprecedented Storage Choice



PowerStore

Data-centric, intelligent and adaptable storage for traditional and modern workloads



Unity XT

Midrange unified all-flash storage with proven reliability



PowerMax

Mission critical AFA with NVMe best performance, lowest latency



XtremIO

Performance, in-line all the time and data reduction



PowerScale

Unstructured data with linear scalability

Using the Logical Configuration Survey (LCS) to customize integration and deployment options, all system elements are pre-integrated, pre-configured, and then tested and validated before shipping. Turnkey integration allows you to operate and manage your system as a single engineered product, rather than as individual, siloed components. Ongoing, component-level testing and qualification result in a drastically simplified update process.

Converged Management and Automation

VxBlock provides a single unified interface and access point for converged infrastructure operations. It dramatically simplifies daily administration by providing enhanced system-level awareness, automation and analytics. This includes Dell EMC CloudIQ and an extensive library of complimentary engineered workflows (based on VMware vRealize Orchestrator) that automate daily operational tasks such as infrastructure provisioning and snapshot management.

Integrated Data Protection

Dell EMC Data Protection for Converged Infrastructure simplifies backup, recovery and failover of your VxBlock 1000. Dell Technologies offers the most advanced data deduplication, replication and data protection technologies for achieving your Recover Point Objective (RPO) and Recover Time Objective (RTO) requirements.

Simplified Lifecycle Management

Ongoing lifecycle management, including interoperability test, security / patch management and component updates, is one of the cornerstones of VxBlock. Dell Technologies has invested thousands of hours in testing, validation and certification so you don't have to. This simplicity now extends to hybrid cloud operations—with support for VMware Cloud Foundation on VxBlock.

Support and Services

Dell Technologies delivers fully integrated, 24/7 support with a single call. There's never finger-pointing between vendors, and you can always rely on our fully cross-trained team for a fast resolution to any problem.

Our portfolio of services (including deployment services, migration services and residency services) accelerates speed of deployment and integration into your IT environment and minimizes downtime by ensuring your software and hardware remains up to date throughout the product lifecycle.

VxBlock 1000 Support Specification Summary

Component	Details
<p>COMPUTE (Note: mixing blade servers and rack servers in one system is supported)</p>	<p>Chassis: Cisco UCS 5108 Cisco UCS B-Series blade servers: B200 M6, B200 M5, B480 M5 Cisco UCS C-Series rack servers: C220 M6, C240 M6, C220 M5, C240 M5, C480 M5 Cisco Fabric Extenders (FEX) and IOM: Nexus 2348UPQ, UCS 2204XP, UCS 2208XP, UCS 2304XP, UCS 2408 Cisco Fabric Interconnect (FI): Cisco UCS 64108, 6454, 6332-16UP Cisco UCS Virtual Interface Card (VIC): 1340, 1380, 1385, 1387, 1440, 1480, 1455, 1457, 1495, 1497</p>
<p>MAXIMUM NUMBER OF SERVERS PER SYSTEM</p>	<p>Cisco chassis: 88 Cisco blade servers: up to 616 Cisco rack mount servers: up to 1,120</p>
<p>NETWORKING</p>	<p>LAN: Cisco Nexus 9336C-FX2 SAN: Cisco MDS 9148T, 9396T, 9148S, 9396S, 9706, 9710 Management connectivity: Cisco Nexus 31108TC-V, 93108TC-FX3P, 9336C-FX2, 92348GC-X</p>
<p>STORAGE (Note: mixing multiple storage types in one system is supported)</p>	<p>Dell EMC Storage</p> <p>PowerStore 500, 1000T, 3000T, 5000T, 7000T, 9000T Unity XT 380/380F, 480/480F, 680/680F, 880/880F PowerMax 2000, 8000 VMAX All Flash 250F, 950F XtremIO X2-S, X2-R PowerScale All Flash, Hybrid and Archival F200, F600, F800, F810, F900, H600, H5600, H500, H400, H700, H7000, A200, A2000, A300, A3000</p>
<p>VIRTUALIZATION AND CLOUD MANAGEMENT</p>	<p>VMware: vSphere Enterprise Plus (includes VDS), NSX-T, ESXi, vCenter Server; VMware Cloud Foundation Note: Bare metal deployments are also supported</p>
<p>DATA PROTECTION</p>	<p>Integrated Backup, Integrated Replication, Integrated Business Continuity Dell EMC: Avamar, NetWorker, Data Protection Search, Data Protection Advisor, Data Protection Central, CloudBoost, RecoverPoint and RP4VM, Data Domain, PowerProtect DD, PowerProtect DD Virtual Edition, PowerProtect Data Manager, Cloud Disaster Recovery, Cyber Recovery, VPLEX VMware: Site Recovery Manager</p>
<p>SYSTEM MANAGEMENT</p>	<p>Compute: AMP Central for single-system management includes 2 to 16 C220 M5/M6 servers and a Dell EMC Unity XT 380 storage array AMP Central for multi-system management includes 4 to 16 C220 M5/M6 servers and a Dell EMC Unity XT 380 storage array AMP Central vSAN management configurations (VCF and non-VCF) include 4 to 16 C220 M5/M6 vSAN Ready Nodes Software: Converged Management System (CMS) with CloudIQ management dashboard for VxBlock operations, VxBlock Workflow Automation; Unisphere; InsightIQ (Isilon); Secure Remote Services (SRS); Cisco UCS Manager; and Dell EMC PowerPath</p>
<p>CABINET</p>	<p>Intelligent Physical Cabinet Solution from Dell Technologies</p>