

Gain Enterprise-Grade VDI for Your Small-to-Medium Business

With FlexPod Express and AMD EPYC® 7003 Series Processors

The pandemic has changed the very nature of work. Most employees are in the office only part time, if it all. Even as offices are opening back up, the majority of staff are now wanting to remain working from home or with a more flexible work environment. Many small- to medium-size companies have decided to save

FlexPod Express for your virtual desktop infrastructure

- Innovative platform that powers your desktops and applications
- Delivers proven value with greater consolidation
- Trusted worldwide for reliability, scale, security features, and performance

on office costs and move to an all-remote-staff model. This has prompted IT organizations to support remote desktop and application services with a fast and consistent user experience, no matter where employees are working. Now it the time to rethink your virtual desktop and application deployments and costs.

Imagine having the density and performance you need to consolidate virtual desktop infrastructure and lower your desktop TCO while boosting performance to deliver an excellent remote working environment. FlexPod® Express with Cisco UCS® C225 M6 and C245 M6 Rack Servers with AMD EPYC™ processors and NetApp® storage can make this a reality.

Keeping Up the Pace

There are many very good reasons to move to a virtual desktop infrastructure:

- Recent industry studies list the top reason companies move to virtual desktops is to protect important data.
- Pure cloud-based models for virtual desktops can grow, easily resulting in budget-breaking expenses.
- It is now possible to deliver a consistent user experience with cost-effective, on-premises infrastructure.
- Centralizing desktop and application deployment and management can simplify virtual desktop infrastructure deployment.
- You can choose converged infrastructure solutions that deliver the capability to scale your infrastructure easily.

What makes FlexPod solutions different?

We've taken a number of steps to help ensure that our approach delivers value. This solution offers:

- Support for compute-intensive apps and databases
- Proven performance
- Reduced risk with prevalidated designs
- Long-term value with fewer components, greater return on investment (ROI), and lower total cost of ownership (TCO)
- Continued FlexPod integration of the latest innovative technologies, including 100 percent NVMe storage, a 100-Gbps unified fabric, data fabric, hybrid cloud, and all-flash storage
- Industry-leading hybrid-cloud data services that enables parallel deployment in all the major cloud providers

- Deploying new, energy-efficient infrastructure can help organizations achieve sustainability goals.

FlexPod Express enables all of these goals and Cisco® Validated Designs for 500 and 1000 desktops makes deploying these configurations like following a recipe.

Robust Security

The last couple of years brought home the importance of security. FlexPod Express with M6-generation Cisco UCS C-Series Rack Servers benefit from the advanced security features built into AMD EPYC processors. AMD Infinity Guard¹ security features are “hardened at the core.” AMD Secure Encrypted Virtualization encrypts each virtual machine with a unique key that only the CPU knows, helping make multitenant environments even more secure. With secure multitenancy and virtual interfaces that are harder to hack, and fast snapshot-based backup capabilities, you can have confidence that your data will be available when you need it.

Cost-Effective Hybrid Cloud Support

While implementing your entire virtual desktop and application environment in the cloud may be cost prohibitive, we provide

the ability to easily move development, user acceptance testing and quality assurance to the cloud and back again for fast turnaround when updating your desktop and application environments. Now you can use the cloud in the most beneficial and cost-effective way.

Powering and securing data and applications shouldn't be hard or cost a fortune.

Increase Employee Productivity

VDI users fall into three general use cases that help with sizing and performance calculations:

- **Task users**, such as call center workers
- **Knowledge workers**, such as professional or office workers
- **Power users**, such as architects, engineers, and animators who use very intensive graphical applications that normally require a GPU

1. AMD Infinity Guard features vary by AMD EPYC™ Processor generations. Infinity Guard security features must be enabled by server OEMs and/or cloud service providers to operate. Check with your OEM or provider to confirm support of these features. Learn more about Infinity Guard at <https://www.amd.com/en/technologies/infinity-guard>. GD-183

Performance for Every User

FlexPod Express for Up to 500 Remote Users

- 2 Cisco UCS C225 M6 Rack Servers, each with two 24-core AMD EPYC 7413 processors at 2.65 MHz and 1024 GB of memory
- NetApp EF300 all-flash array
- 1 year Cisco Intersight Essentials
- 1 year SupportNet 24x7x4

FlexPod Express For Up to 1000 Remote Users

- 3 Cisco UCS 225 M6 Rack Servers, each with two 24-core AMD EPYC 7413 processors at 2.65 MHz and 1024 GB of memory
- NetApp AFF A250 All-Flash Storage Array
- 1 year Cisco Intersight Essentials
- 1 year SupportNet 24x7x4

GPU Expansion

If your requirements for GPU acceleration demand more powerful GPUs, the Cisco UCS C245 M6 Rack Server can be substituted to gain more PCIe capacity

Proven Performance

We tested the Cisco UCS C245 M6 using the Login VSI knowledge worker profile to simulate virtual desktop users running Microsoft Windows 10 and Citrix Virtual Apps and Desktops. These workloads represent the most commonly used personas and delivery mechanisms for knowledge workers.

We also ran Login VSI in test mode on Microsoft Windows Server 2019 Remote Desktop Session Host (RDSH) with Citrix Virtual Apps and Desktops to determine the maximum supported number of task worker sessions. The results of both tests demonstrate the power, performance, and value of FlexPod Express powered by AMD EPYC processors.

In addition, if your organization runs complex graphical applications now, or plan to in the future, we have shared and individual GPU support.



Simplified Management

A unified, secure SaaS platform comprising modular services that bridge applications with infrastructure, the Cisco Intersight™ platform provides correlated visibility and management across bare-metal servers, hypervisors, and application components, helping you transform to reach the scale and velocity your stakeholders demand. Intersight helps your teams securely collaborate and work smarter and faster together, within and across domains, by automating lifecycle workflows and enabling consistency and governance with extensible, open capabilities that natively integrate with third-party platforms and tools.

Solution Compatibility	VMware vSphere	Citrix Hypervisor	Microsoft Hyper-V
Citrix DaaS	✓	✓	✓
VMware Horizon	✓		

FlexPod Express

The combination of Cisco UCS C225 M6 or C245 M6 Rack Servers with NetApp EF300 or A250 storage has all the value-added capabilities you have come to expect from FlexPod. The 2RU Cisco UCS C245 M6 used in all of the measurements discussed in this paper is well suited for a wide range of storage- and I/O-intensive applications, such as virtual desktops and applications.

Optimized to deliver uncompromising I/O capacity whether one or two CPUs are installed, the [Cisco UCS C225 M6](#)



Learn More

- flexpod.com
- netapp.com/flexpod
- cisco.com/go/flexpod

is one of the most versatile in the industry. This high density, 1RU, 2-socket rack server supports a range of workloads.

Based on [NetApp Data ONTAP™ data management software](#), these systems enable end-to-end solutions to integrate tightly with applications and databases for seamless operations. You can use:

- [NetApp EF300 NVMe solution](#) delivers affordable performance and 367 TB of raw capacity
- [NetApp AFF A250](#) delivers data at flash speeds at an affordable price.

Innovation You Can Trust

In the face of a changing IT landscape, FlexPod can help you accelerate your desktops and applications without disruption, improve data center economics, and build infrastructure that will serve you well into the future with confidence.

Agile And Efficient: How FlexPod Drives Datacenter Modernization



65%
more time spent on innovation and new projects



43%
fewer staff needed to manage



32%
faster software installation and management



23%
savings on cloud computing



34%
reduction in data center floor space



28%
savings on services, outsourcing, and consulting



29%
less time spent on monitoring, troubleshooting, and remediation



24%
CapEx reduction for both hardware and software



23%
savings on annual maintenance fees



29%
savings on power and cooling

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