

Benefits of Upgrading to the Cisco Catalyst 8000 Edge Platforms Family

Why upgrade

Deliver a Better Experience in SD-WAN with the Cisco Catalyst 8000 Edge Platforms Family

Cisco® Catalyst® 8000 Edge Platforms provide flexible, secure, and scalable SD-WAN.

Advanced features lead the industry in networking and security performance. A flexible interface provides more options and faster ports than competitive platforms, all in a cost-saving industrial design.

Enable the latest capabilities like Cloud OnRamp for IaaS and SaaS applications, multiGigabit 5G wireless SD-WAN links, and a Secure Access Service Edge (SASE) architecture.

Hardware-anchored authentication methods provide operational integrity and secures zero-touch provisioning across your entire network.

Transform your branch, core, campus and colocation facilities into a new WAN edge and improve your overall cloud experience.





Cisco Catalyst 8000: Software-Defined Networking and Security all in one

Table 1. Modular access edge platforms

Features	Features	Cisco vEdge 2000	Cisco ISR 4000*	Cisco Catalyst 8200	Cisco Catalyst 8300	Benefits
			*Excludes 4461			
Performance	Max SD-WAN Throughput (IMIX Packets)	2Gbps	1.4Gbps	1Gbps	5Gbps	Connect more devices, increase performance and improve the application experience.
	Max SD-WAN Tunnels	6000	4000	2500	6000	Connect more devices to cloud networks with greater tunnel capacity.
	Accelerated Crypto	✘	✘	✔	✔	Secure SD-WAN traffic with faster encryption performed at the silicon layer.
	Max DRAM	Up to 32GB	Up to 16GB	Up to 32GB	Up to 32GB	Greater memory capabilities deliver high performance and large-scale services, such as IPSEC, NAT, Zone-Based Firewall, and DPI. Along with capacity for multiple SD-WAN Security applications



Features	Features	Cisco vEdge 2000	Cisco ISR 4000*	Cisco Catalyst 8200	Cisco Catalyst 8300	Benefits
			*Excludes 4461			
	Digital Experience Monitoring via ThousandEyes	✗	Varies	✓	✓	Connect users to cloud applications over the internet with greater confidence thanks to accurate path and BGP visualization from ThousandEyes.
Security	Trust Anchor 2.0	✗	✗	✓	✓	Cisco Trust Ancor 2.0 immutable hardware-anchored security will secure your SD-WAN fabric with reliable device authenticity and integrity checks.
	Multilayer security	✗	✓	✓	✓	Protect your enterprise network with a full stack of security functions that include Cisco Umbrella®, Snort® IPS, Cisco Malware Defense, an Enterprise Firewall and more.
Design	On-Device RFID and QR codes	✗	✗	✓	✓	On-device RFID and QR codes make platform identification simple with improved inventory management.



Features	Features	Cisco vEdge 2000	Cisco ISR 4000*	Cisco Catalyst 8200	Cisco Catalyst 8300	Benefits
			*Excludes 4461			
	Improved air flow	✗	✗	✓	✓	Circular hex pattern for reduced electric cooling costs in stylish design, courtesy of Pininfarina.
	Compact design	✗	✗	✓	✗	Greatly improve flexibility with a sub-12-inch platform depth and connect SD-WAN almost anywhere.
	Rounded Edges	✗	✗	✓	✓	Provides for safe handling, storage and operation in tight spaces, all in a modern design.
Interface	Embedded port density	4	3	4	4	Greater connectivity and high-availability options for the branch.
	Pluggable Interface Module (PIM) support	✓	✗	✓	✓	Improved functionality with embedded support for the latest wireless technology including 5G.
	Multigigabit 5G Support	✗	✗	✓	✓	Multigigabit Sub 6Ghz and mmWave cellular edge routing support improves WAN edge cost, reliability and end-user experience.

Table 2. Aggregation edge platforms

Capabilities	Features	Cisco vEdge 5000	Cisco ASR 1000 Series	Cisco Catalyst 8500	Benefits
Performance	Max SD-WAN Throughput (IMIX Packets)	5Gbps	Up to 20Gbps (ASR1000 Fixed platforms) Up to 53 Gbps (ASR1000 Modular Platforms)	Up to 31.9Gbps	Connect more devices, increase performance and improve the application experience.
	Max SD-WAN Tunnels	6000	6000	8000	Connect more devices to cloud networks with greater tunnel capacity.
	Accelerated Crypto	✘	✔	✔	Secure SD-WAN traffic with faster encryption performed at the silicon layer.
	Max DRAM	Up to 8GB	Up to 32GB	Up to 64GB	Improve application performance with more memory and scalable infrastructure.
		40G/100G WAN	✘	✔	Aggregate more SD-WAN traffic with greater headend capabilities.

Capabilities	Features	Cisco vEdge 5000	Cisco ASR 1000 Series	Cisco Catalyst 8500	Benefits
Security	Trust Anchor 2.0	✘	✔	✔	Secure the SD-WAN fabric with reliable device authenticity and integrity checks, immutable hardware-anchored security, and customer verification capabilities.
	Multilayer security	✘	✔	✔	Protect your enterprise network with on-premise FW or cloud-based Umbrella SIG.
Design	On-Device RFID and QR codes	✘	✘	✔	On-device RFID and QR codes make platform identification simple with improved inventory management.
	Improved air flow	✘	✔	✔	Circular hex pattern for improved device cooling and reduced op-ex electricity costs.
	Compact design	1RU	1RU/2RU	1RU	Greatly improve flexibility with a 1RU form factor headend.
Interface flexibility	Built-in 1GE	✘ (PIM only)	✔	✔	Higher WAN port density allows for more connectivity options and better performance. Aggregate more traffic with higher speed ports.
	Built-in 10GE	✘ (PIM only)	✔	✔	Higher WAN port density allows for more connectivity options and better performance. Aggregate more traffic with higher speed ports.

Capabilities	Features	Cisco vEdge 5000	Cisco ASR 1000 Series	Cisco Catalyst 8500	Benefits
	Built-in 10GE	✗	✗	✓	Higher WAN port density allows for more connectivity options and better performance. Aggregate more traffic with higher speed ports.
	Built-in 40GE	✗	✗	✓	Higher WAN port density allows for more connectivity options and better performance. Aggregate more traffic with higher speed ports.

Table 3. Virtualization edge platforms

Capabilities	Features	Cisco ENCS 5100	Cisco Catalyst 8200 Series Edge uCPE	Benefits
Performance and Flexibility	Number of VMs/ VNFs	Up to 2	Up to 4	Scale performance with greater flexibility, more services, and support for a higher number of applications.
	Modularity	✗	✓	Greatly improved connectivity options by using a combination of one NIM and one PIM module.
	Accelerated Crypto	✗	✓	Secure SD-WAN traffic with faster encryption performed at the silicon layer.

Capabilities	Features	Cisco ENCS 5100	Cisco Catalyst 8200 Series Edge uCPE	Benefits
	DRAM (Default/Max)	16/32G	16/64G	2x memory resources provide scalable edge compute and consistent performance.
Security	Trust Anchor 2.0	✘	✔	Cisco Trust Ancor 2.0 immutable hardware-anchored security will secure your SD-WAN fabric with reliable device authenticity and integrity checks
	Multilayer security	✘	✔	Protect your enterprise network with a full stack of security functions that include Cisco Umbrella®, Snort® IPS, Cisco Malware Defense, an Enterprise Firewall and more.
Design	On-Device RFID and QR codes	✘	✔	On-device QR code improves asset management, making platform inventory fast and simple.
	Improved air flow	✘	✔	Pininfarina designed circular hex pattern for reduced electric cooling costs.
	Compact design	✔	✔	Reduce your branch footprint with this platform, which is less than 12" deep.

Capabilities	Features	Cisco ENCS 5100	Cisco Catalyst 8200 Series Edge uCPE	Benefits
Interface	Embedded port density	4	6	Greater connectivity and high-availability options for the branch.
	LTE/5G Support	✗	✓	Supports LTE PIM Modules, investment protection, expanded transformation, and added application reliability.
	Expandable Storage Options	✗	✓	Ample storage to support today's analytics and edge computing applications.

Table 4. Virtualization edge platforms

Capabilities	Features	Cisco vEdgeV	Cisco CSR 1000V	Cisco Catalyst 8000V	Benefits
Multicloud	Cloud OnRamp for IaaS	✓	✓	✗	Automates and seamlessly connects enterprise networks to the leading public clouds allowing SD-WAN policy to be extended into the cloud infrastructure.
	Cloud OnRamp for SaaS	✗	✓	✓	Uses real-time analytics to steer users over the best path for optimal site-to-application performance, supporting 14 popular SaaS applications like Microsoft 365.



Capabilities	Features	Cisco vEdgeV	Cisco CSR 1000V	Cisco Catalyst 8000V	Benefits
	Cloud OnRamp for Colocation	✗	✓	✓	Aggregates branch offices in key regional colocations and allows IT operators to securely deploy multicloud network services at the network edge for enhanced quality of service, simplified management, and increased security.
	Cloud Hub	✗	✗	✓	Interconnects branch sites, on-prem data centers, and the cloud using a cloud service provider's backbone as an underlay. Reduces provisioning from months to minutes with site-to-cloud network automation.
	Cloud Interconnect	✗	✓	✓	Uses a cloud agnostic backbone to connect site-to-site and site-to-multiple clouds and automates on-demand connectivity between multiple sites and to the world's leading cloud provider networks directly from your SD-WAN controller.

Additional resources

- [Catalyst 8000 Edge Platforms Family](#)
- [Cisco SD-WAN Cloud OnRamp](#)
- [Cisco SASE](#)
- [Cisco Catalyst SD-WAN](#)
- [Cisco SD-WAN Security](#)