

Cisco UCS E-Series Servers

Product Overview

Cisco Unified Computing System™ (Cisco UCS®) E-Series Servers bring data center-class, virtualization-ready blade servers to the branch office. Cisco UCS E-Series Servers are high-density, single-socket blade servers designed to balance simplicity, performance, and application density while operating in an energy-efficient environment. These powerful, small form-factor (SFF), x86 64-bit blade servers are housed within Cisco Integrated Services Routers Generation 2 (ISR G2) and Cisco 4451-X ISR networking platforms and are designed to host essential infrastructure services and mission-critical business applications in the lean branch office (Figure 1).

Cisco UCS E-Series Servers deliver next-generation Intel® Xeon® processor E5-2400 and E3-1100 product family technology in combination with integrated remote lights-out management in a blade server form factor. These powerful processors deliver multiple cores and threads in a reduced-power envelope, providing improved performance and better energy efficiency than preceding models, making them an excellent platform for introducing virtualization into the branch office. The innovative, zero-footprint form factor of the Cisco UCS E-Series Servers in conjunction with the Intel Xeon processor E5-2400 and E3-1100 product families offer significantly lower total cost of ownership (TCO), increased business agility, and greater reliability when compared to standalone rack-mount and tower servers.

Figure 1: Cisco UCS E-Series Servers with Cisco ISR 4451-X





Applications

Cisco UCS E-Series Servers provide excellent performance and value for workloads including the following:

- Core Microsoft Windows services: Microsoft Active Directory Domain Services (AD DS), Microsoft Windows print services, Dynamic Host Configuration Protocol (DHCP) server services, Domain Name System (DNS) server services, file services, and others
- Mission-critical business applications: Point-of-sale (POS) systems, bank teller in-office control points (IOCPs), electronic-medical-record (EMR) systems, inventory management systems, and others
- Client-management services: Configuration and operations management, monitoring services, update and patching services, backup and recovery services, terminal server gateways, and others
- Other remote and branch-office applications

Features and Benefits

The Cisco UCS E-Series Servers extend the Cisco UCS product portfolio to meet the needs of customers who want to deploy a virtualization-ready computing infrastructure in a branch-office environment while maintaining a lean branch-office architecture. By adding virtualization to the servers, organizations can deploy new services incrementally on a schedule that best meets the organization's timing and budget while avoiding service-call costs for onsite visits to deploy new hardware or software. Cisco UCS E-Series Servers can improve operation efficiency in the branch office and offer the flexibility to address changing business needs through:

- Reduced operation burden: Through consolidated, wire-free infrastructure, Cisco UCS E-Series Servers reduce operation burden and make addition of new services and infrastructure quick and easy.
- Simplified system maintenance: Cisco UCS E-Series Blade Servers accelerate and simplify physical server provisioning and simplify system maintenance.
- Enhanced server management: Built-in lights-out server management through Cisco® Integrated Management Controller (IMC) runs on the same dedicated baseboard management controller (BMC) hardware found in all Cisco UCS products. This feature provides standalone management consistency with Cisco UCS C-Series Rack Servers for both local and remote server monitoring and configuration management.
- Increased physical security: Cisco UCS E-Series Servers provide better physical security. With no external network cables or physical keyboard, video, mouse (KVM) required, the Cisco UCS E-Series blades can be easily secured in a wiring closet or other secure location without compromising manageability, which is difficult to do with traditional tower and rack-mount servers.
- Decreased footprint: Cisco UCS E-Series blade servers include multicore x86 64-bit Intel Xeon processors that provide customers with the capability to reduce the branch-office server footprint by incorporating high-performance, power-optimized blade servers directly into Cisco ISR G2 branch-office routers. All are integrated and housed in a single Cisco ISR G2 chassis, delivering an excellent all-in-one platform for the lean branch office.

The servers are available in two form factors: a single-wide blade and a double-wide blade. The single-wide blade includes a four-core Intel Xeon processor E3-1100 and occupies a single service-module slot in the Cisco ISR G2 and Cisco 4451-X platforms. The double-wide blade occupies two service-module slots side by side and includes a four-, six-, or eight-core Intel Xeon processor E5-2400 with more RAM and storage capacity than the single-wide module. The four- and six-core Cisco UCS M1 double-wide blade also has a PCI Express (PCIe) card option for expanding external network and storage I/O.

Table 1 summarizes the features and benefits of the Cisco UCS E-Series Servers.

Table 1: Features and Benefits

Feature	Benefit
Integrated networking	2 internal Gigabit Ethernet interfaces
Virtualization optimization	Intel Xeon processor E3-1100 and E5-2400 product families using Intel Hyper-Threading Technology and Intel Virtualization Technology (VT-x)
4- or 6-core Intel Xeon processors	Energy-efficient, high-performance processors, providing increased performance in a compact form factor
Hot-swappable SAS drives, SAS self-encrypting drives (SEDs), and SATA solid-state drives (SSDs)	<ul style="list-style-type: none"> Up to 3 front-accessible, hot-swappable, internal 2.5-inch server-class SATA, SAS drives, SAS SEDs, or SAS SSDs Balanced performance and capacity to best meet application needs: <ul style="list-style-type: none"> SAS single-level cell (SLC) and enterprise multilevel cell (eMLC) SSDs 10,000-rpm SAS drives for high performance and value with SED option for security for data at rest
Hardware RAID 0, 1, and 5 support	<ul style="list-style-type: none"> Hardware RAID 0 and 1 support on single-wide blades and double-wide blades with the PCIe card option Hardware RAID 0, 1, and 5 support on double-wide blades without the PCIe card option LSI 2004 controller
Cisco IMC	<ul style="list-style-type: none"> Web user interface for server management, remote KVM, virtual media, and administration Virtual media support for remote CD and DVD drives and local Intelligent Platform Management Interface (IPMI) 2.0 support for out-of-band management through third-party enterprise management systems Command-line interface (CLI) for server management Integration with Cisco IOS® Software for optional management of the servers from within the router CLI and operating environment One 10/100BASE-T out-of-band management interface
PCIe card support for additional network and storage I/O	Additional I/O performance and flexibility with four 1 Gigabit Ethernet or one 10 Gigabit Ethernet and Fibre Channel over Ethernet (FCoE) options (available in double-wide blades only)
Integrated external Gigabit Ethernet ports	<ul style="list-style-type: none"> Single-wide blades: 1 external Gigabit Ethernet port Double-wide blades: 2 external Gigabit Ethernet ports
Front-panel connectors	Front-panel VGA, 2 USB, and serial console connectors

Platform Support and Compatibility

Unlike the previous generation of Cisco UCS Express modules, Cisco UCS E-Series Servers are designed to support multiple bare-metal operating systems and hypervisors, including:

- Operating systems
 - Microsoft Windows Server
 - Windows Server 2008 R2 Standard 64-bit
 - Windows Server 2008 R2 Enterprise 64-bit
 - Windows Server 2012 Standard 64-bit
 - Windows Server 2012 R2 Standard 64-bit
 - Red Hat Enterprise Linux (RHEL) Release 6.2 and later
 - SuSE Linux 11, Service Pack 2 and later
 - Oracle Enterprise Linux 6.0, Update 2 and later
- Hypervisors
 - Microsoft Hyper-V 2008 R2
 - VMware vSphere 5.0, Update 1, and Releases 5.1 and 5.5
 - Citrix XenServer Release 6.0

Product Specifications

Table 2 lists the specifications for the Cisco UCS E-Series M1 Servers.

Table 2: Product Specifications for Single-Wide and Double-Wide M1 Blades

Feature	Cisco UCS E140S M1 Software (Single-Wide Blade)	Cisco UCS E140D, E140DP, E160D, and E160DP M1 Software (Double-Wide Blades)
CPU	Intel Xeon processor E3-1105C (6-MB cache, 1.00 GHz, and 4 cores) for M1 models	<ul style="list-style-type: none"> • Intel Xeon processor E5-2418L (10-MB cache, 2.0 GHz, and 4 cores) • Intel Xeon processor E5-2428L (15-MB cache, 1.8 GHz, and 6 cores)
DRAM	8 GB (default: one 8-GB dual in-line memory module [DIMM]) and up to 16 GB (two 8-GB DIMMs)	8 GB (default) and up to 48 GB (three 16-GB DIMMs)
Hard-disk drive (HDD)	Up to 2: <ul style="list-style-type: none"> • 7200-rpm SATA: 1 TB • 10,000-rpm SAS: 900 GB • 10,000-rpm SAS SED: 600 GB • SAS SSD SLC: 200 GB • SAS SSD eMLC: 200 GB and 400 GB 	Up to 3 (Cisco UCS E140D or E160D) or 2 (Cisco UCS E140DP or E160DP): <ul style="list-style-type: none"> • 7200-rpm SATA: 1 TB • 10,000-rpm SAS: 900 GB • 10,000-rpm SAS SED: 600 GB • SAS SSD SLC: 200 GB • SAS SSD eMLC: 200 GB and 400 GB

Feature	Cisco UCS E140S M1 Software (Single-Wide Blade)	Cisco UCS E140D, E140DP, E160D, and E160DP M1 Software (Double-Wide Blades)
RAID options	<ul style="list-style-type: none"> • Hardware RAID 0 and 1 • LSI 2004 controller 	<ul style="list-style-type: none"> • Cisco UCS E140D and E160D: <ul style="list-style-type: none"> – Hardware RAID 0, 1, and 5 • Cisco UCS E140DP and E160DP: <ul style="list-style-type: none"> – Hardware RAID 0 and 1 – LSI 2004 controller
Network interface cards (NICs)	2 internal and 1 external Gigabit Ethernet ports	2 internal and 2 external Gigabit Ethernet ports
Supported Cisco ISRs	Cisco 2911, 2921, 2951, 3925, 3925E, 3945, 3945E and 4451-X	<ul style="list-style-type: none"> • Cisco UCS E140D and E140DP: Cisco 2921, 2951, 3925, 3925E, 3945, 3945E, and 4451-X ISR • Cisco UCS E160D and E160DP: Cisco 3925, 3925E, 3945, 3945E, and 4451-X ISR
PCIe	None	Cisco UCS E140DP and E160DP: Four 1 Gigabit Ethernet or one 10 Gigabit Ethernet and FCoE
Cisco UCS IMC	<ul style="list-style-type: none"> • Integrated Emulex Pilot-3 BMC • IPMI 2.0 compliant for management and control • One 10/100 Ethernet out-of-band management interface • CLI and WebGUI management tool for automated, lights-out management • KVM 	<ul style="list-style-type: none"> • Integrated Emulex Pilot-3 BMC • IPMI 2.0 compliant for management and control • One 10/100 Ethernet out-of-band management interface • CLI and WebGUI management tool for automated, lights-out management • KVM
Secure digital (SD) cards	2 SD cards: 1 for the Cisco UCS Cisco IMC and temporary storage of OS and hypervisor installation images, and 1 for a blank virtual drive on which you can install an OS or a hypervisor	2 SD cards: 1 for the Cisco UCS Cisco IMC and temporary storage of OS and hypervisor installation images, and 1 for a blank virtual drive on which you can install an OS or a hypervisor
Front-panel connectors	1 KVM console connector (supplies 1 VGA, 1 serial, and 2 USB connectors)	Front-panel VGA, 2 USB, and serial console connectors
Physical dimensions (H x W x D)	1.58 x 7.44 x 7.5 in. (4 x 18.9 x 19.1 cm)	1.58 x 16.23 x 7.5 in. (4 x 41.2 x 19.1 cm)
Maximum weight	2.5 lb (1.1 kg)	7 lb (3.2 kg)

Feature	Cisco UCS E140S M1 Software (Single-Wide Blade)	Cisco UCS E140D, E140DP, E160D, and E160DP M1 Software (Double-Wide Blades)
Temperature: Operating	According to operating requirements of deployable platform: <ul style="list-style-type: none"> • 32 to 104°F (0 to 40°C) normal 	According to operating requirements of deployable platform: <ul style="list-style-type: none"> • 32 to 104°F (0 to 40°C) normal
Temperature: Nonoperating	-4 to 149°F (-20 to 65°C)	-4 to 149°F (-20 to 65°C)
Humidity: Operating	According to operating requirements of deployable platform: <ul style="list-style-type: none"> • 10 to 85% operating 	According to operating requirements of deployable platform: <ul style="list-style-type: none"> • 10 to 85% operating
Humidity: Nonoperating	5 to 95%	5 to 95%
Altitude: Operating	104°F (40°C) at sea level to 10,000 ft (0 to 3,000m); maximum ambient temperature decreases by 1°C per 300m	104°F (40°C) at sea level to 10,000 ft (0 to 3,000m); maximum ambient temperature decreases by 1°C per 300m
Altitude: Nonoperating	15,000 ft (4600m)	15,000 ft (4600m)

Table 3 lists the specifications for the Cisco UCS E-Series M2 Servers.

Table 3: Product Specifications for Single-Wide and Double-Wide M2 Blades

Feature	Cisco UCS E140S M2 (Single-Wide Blade)	Cisco UCS E160D and E180D M2 (Double-Wide Blades)
CPU	Intel Xeon processor E3-1105C v2 (6-MB cache, 1.8 GHz, and 4 cores)	<ul style="list-style-type: none"> • Intel Xeon processor E5-2418Lv2 (10-MB cache, 2.0 GHz, and 6 cores) • Intel Xeon processor E5-2428Lv2 (15-MB cache, 1.8 GHz, and 8 cores)
DRAM	8 GB (default: one 8-GB DIMM) and up to 16 GB (two 8-GB DIMMs)	8 GB (default) and up to 48 GB (three 16-GB DIMMs)
HDD	Up to 2: <ul style="list-style-type: none"> • 7200-rpm SATA: 1 TB • 10,000-rpm SAS: 900 GB • 10,000-rpm SAS SED: 600 GB • SAS SSD SLC: 200 GB • SAS SSD eMLC: 200 GB and 400 GB 	Up to 3 (Cisco UCS E140D or E160D) or 2 (Cisco UCS E140DP or E160DP): <ul style="list-style-type: none"> • 7200-rpm SATA: 1 TB • 10,000-rpm SAS: 900 GB • 10,000-rpm SAS SED: 600 GB • SAS SSD SLC: 200 GB • SAS SSD eMLC: 200 GB and 400 GB
RAID options	<ul style="list-style-type: none"> • Hardware RAID 0 and 1 • LSI 2004 controller 	<ul style="list-style-type: none"> • Cisco UCS E160D M2 and E180D M2: Hardware RAID 0, 1, and 5 • LSI 2004 controller

Feature	Cisco UCS E140S M2 (Single-Wide Blade)	Cisco UCS E160D and E180D M2 (Double-Wide Blades)
NICs	2 internal and 1 external Gigabit Ethernet ports	2 internal and 2 external Gigabit Ethernet ports
Supported Cisco ISRs	Cisco 2911, 2921, 2951, 3925, 3925E, 3945, 3945E, and 4451-X ISR	<ul style="list-style-type: none"> • Cisco UCS E-160D M2: Cisco 2921, 2951, 3925, 3925E, 3945, 3945, and 4451-X ISR • Cisco UCS E-180D M2: Cisco 3925, 3925E, 3945, 3945E, and 4451-X ISR
PCIe	None	None
Cisco IMC	<ul style="list-style-type: none"> • Integrated Emulex Pilot-3 BMC • IPMI 2.0 compliant for management and control • One 10/100 Ethernet out-of-band management interface • CLI and WebGUI management tool for automated, lights-out management • KVM 	<ul style="list-style-type: none"> • Integrated Emulex Pilot-3 BMC • IPMI 2.0 compliant for management and control • One 10/100 Ethernet out-of-band management interface • CLI and WebGUI management tool for automated, lights-out management • KVM
SD cards	<ul style="list-style-type: none"> • 2 SD cards: 1 for the Cisco UCS • Cisco IMC and temporary storage of OS and hypervisor installation images, and 1 for a blank virtual drive on which you can install an OS or a hypervisor 	<ul style="list-style-type: none"> • 2 SD cards: 1 for the Cisco UCS • Cisco IMC and temporary storage of OS and hypervisor installation images, and 1 for a blank virtual drive on which you can install an OS or a hypervisor
Front-panel connectors	One KVM console connector (supplies 1 VGA, 1 serial, and 2 USB connectors)	Front-panel VGA, 2 USB, and serial console connectors
Physical dimensions (H x W x D)	1.58 x 7.44 x 7.5 in. (4 x 18.9 x 19.1 cm)	1.58 x 16.23 x 7.5 in. (4 x 41.2 x 19.1 cm)
Maximum weight	2.5 lb (1.1 kg)	7 lb (3.2 kg)
Temperature: Operating	According to operating requirements of deployable platform: 32 to 104°F (0 to 40°C) normal	According to operating requirements of deployable platform: 32 to 104°F (0 to 40°C) normal
Temperature: Nonoperating	-4 to 149°F (-20 to 65°C)	-4 to 149°F (-20 to 65°C)
Humidity: Operating	According to operating requirements of deployable platform: <ul style="list-style-type: none"> • 10 to 85% operating 	According to operating requirements of deployable platform: <ul style="list-style-type: none"> • 10 to 85% operating
Humidity: Nonoperating	5 to 95%	5 to 95%

Feature	Cisco UCS E140S M2 (Single-Wide Blade)	Cisco UCS E160D and E180D M2 (Double-Wide Blades)
Altitude: Operating	104°F (40°C) at sea level to 10,000 ft (0 to 3,000m); maximum ambient temperature decreases by 1°C per 300m	104°F (40°C) at sea level to 10,000 ft (0 to 3,000m); maximum ambient temperature decreases by 1°C per 300m
Altitude: Nonoperating	15,000 ft (4600m)	15,000 ft (4600m)

Product Specifications

Table 4 lists regulatory standards compliance information.

Table 4: Regulatory Standards Compliance: Safety and EMC

Specification	Description
Safety	<ul style="list-style-type: none"> • UL 60950-1 Second Edition • CAN/CSA-C22.2 No. 60950-1 • IEC 60950-1 Second Edition • EN 60950-1 Second Edition • AS/NZS 60950-1
EMC: Emissions	<ul style="list-style-type: none"> • 47CFR Part 15 (CFR 47) Class A • AS/NZS CISPR22 Class A • CISPR2 2 Class A • EN55022 Class A • ICES003 Class A • VCCI V-3 Class I • EN61000-3-2 • EN61000-3-3 • EN300386 Class A • CNS13438, Class A
EMC: Immunity	<ul style="list-style-type: none"> • EN55024 • CISPR24 • EN300386 • EN50082-1 Part 1 • EN 61000 6-1

System Requirements

Cisco IOS Software Release 15.2(4)M is required for Cisco 2911, 2921, 2951, 3925, 3925E, 3945, and 3945E ISR.

Cisco IOS XE Software Release 3.11 is required for Cisco 4451-X ISR.

Warranty Information

Cisco UCS-E Series Servers are covered by a 90-day warranty. Find warranty information on Cisco.com on the [Product Warranties](#) page.

Ordering Information

To place an order, visit the [Cisco Ordering homepage](#) and refer to Table 4. To download software, visit the [Cisco Software Center](#).

Table 5: Ordering Information

Part Number	Product Description
UCS-E140S-M1/K9	Cisco UCS E-Series Single-Wide Server Blades, Intel Xeon E3 1100 v1 Quad Core processor, 8GB RAM, 2 SD cards
UCS-E140D-M1/K9	Cisco UCS E-Series Double-Wide Server Blades, Intel Xeon E5-2400 Quad Core processor, 8GB RAM, 2 SD cards
UCS-E140DP-M1/K9	Cisco UCS E-Series Double-Wide Server Blades, Intel Xeon E5-2400 Quad Core processor, 8GB RAM, 2 SD cards, PCIe card
UCS-E160D-M1/K9	Cisco UCS E-Series Double-Wide Server Blades, Intel Xeon E5-2400 Six Core processor, 8GB RAM, 2 SD cards
UCS-E160DP-M1/K9	Cisco UCS E-Series Double-Wide Server Blades, Intel Xeon E5-2400 Six Core processor, 8GB RAM, 2 SD cards, PCIe card
UCS-E140S-M2/K9	Cisco UCS E-Series Single-Wide Server Blades, Intel Xeon E3 1100 v2 Quad Core processor, 8GB RAM, 2 SD cards
UCS-E160D-M2/K9	Cisco UCS E-Series Double-Wide Server Blades, Intel Xeon E5-2400 v2 Six Core processor, 8GB RAM, 2 SD cards
UCS-E180D-M2/K9	Cisco UCS E-Series Double-Wide Server Blades, Intel Xeon E5-2400 v2 Eight Core processor, 8GB RAM, 2 SD cards
E100S-MEM-UDIMM4G	4GB 1333MHz VLP UDIMM/PC3-10600 2R for SingleWide UCS-E
E100S-MEM-UDIMM4G=	4GB 1333MHz VLP UDIMM/PC3-10600 2R for SingleWide UCS-E, Spare
E100S-MEM-UDIMM8G	8GB 1333MHz VLP UDIMM/PC3-10600 2R for SingleWide UCS-E
E100S-MEM-UDIMM8G=	8GB 1333MHz VLP UDIMM/PC3-10600 2R for SingleWide UCS-E, Spare
E100S-HDD-SAS900G	900 GB, 10k RPM SAS hard disk drive for SingleWide UCS-E
E100S-HDD-SAS900G=	900 GB, 10k RPM SAS hard disk drive for SingleWide UCS-E, Spare
E100S-HDD-SSD200G	200 GB, SAS SLC SSD hard disk drive for SingleWide UCS-E
E100S-HDD-SSD200G=	200 GB, SAS SLC SSD hard disk drive for SingleWide UCS-E, Spare
E100S-SSD200-EMLC	200 GB, SAS eMLC SSD hard disk drive for SingleWide UCS-E
E100S-SSD200-EMLC=	200 GB, SAS eMLC SSD hard disk drive for SingleWide UCS-E, Spare
E100S-SSD400-EMLC	400 GB, SAS eMLC SSD hard disk drive for SingleWide UCS-E
E100S-SSD400-EMLC=	400 GB, SAS eMLC SSD hard disk drive for SingleWide UCS-E, Spare
E100S-HDD-SATA1T	1 TB, 7200 RPM SATA hard disk drive for SingleWide UCS-E
E100S-HDD-SATA1T=	1 TB, 7200 RPM SATA hard disk drive for SingleWide UCS-E, Spare

Part Number	Product Description
E100S-HDSASED600G	600 GB, SAS SED hard disk drive, for SingleWide UCS-E
E100S-HDSASED600G=	600 GB, SAS SED hard disk drive, for SingleWide UCS-E, Spare
E100D-MEM-RDIMM4G	4GB 1333MHz RDIMM/PC3-10600 2R for DoubleWide UCS-E
E100D-MEM-RDIMM4G=	4GB 1333MHz RDIMM/PC3-10600 2R for DoubleWide UCS-E, Spare
E100D-MEM-RDIMM8G	8GB 1333MHz RDIMM/PC3-10600 2R for DoubleWide UCS-E
E100D-MEM-RDIMM8G=	8GB 1333MHz RDIMM/PC3-10600 2R for DoubleWide UCS-E, Spare
E100D-MEM-RDIM16G	16GB 1333MHz RDIMM/PC3-10600 2R for DoubleWide UCS-E
E100D-MEM-RDIM16G=	16GB 1333MHz RDIMM/PC3-10600 2R for DoubleWide UCS-E, Spare
E100D-HDD-SAS900G	900 GB, 10k RPM SAS hard disk drive for DoubleWide UCS-E
E100D-HDD-SAS900G=	900 GB, 10k RPM SAS hard disk drive for DoubleWide UCS-E, Spare
E100D-HDD-SSD200G	200 GB, SAS SLC SSD hard disk drive for DoubleWide UCS-E
E100D-HDD-SSD200G=	200 GB, SAS SLC SSD hard disk drive for DoubleWide UCS-E, Spare
E100D-SSD200-EMLC	200 GB, SAS eMLC SSD hard disk drive for DblWide UCS-E
E100D-SSD200-EMLC=	200 GB, SAS eMLC SSD hard disk drive for DblWide UCS-E, Spare
E100D-SSD400-EMLC	400 GB, SAS eMLC SSD hard disk drive for DblWide UCS-E
E100D-SSD400-EMLC=	400 GB, SAS eMLC SSD hard disk drive for DblWide UCS-E, Spare
E100D-HDD-SATA1T	1 TB, 7200 RPM SATA hard disk drive for DoubleWide UCS-E
E100D-HDD-SATA1T=	1 TB, 7200 RPM SATA hard disk drive for DoubleWide UCS-E, Spare
E100D-HDSASED600G	600 GB, SAS SED hard disk drive for DoubleWide UCS-E
E100D-HDSASED600G=	600 GB, SAS SED hard disk drive for DoubleWide UCS-E, Spare

Cisco Services

Cisco UCS E-Series Servers hardware support is covered by the Cisco SMARTnet[®] contract for the router in which the module resides. Cisco SMARTnet technical support is available on a one-time or annual contract basis. Support options range from help-desk assistance to proactive, onsite consultation.

All support contracts include:

- Major Cisco IOS Software updates for protocol, security, bandwidth, and feature improvements
- Full access rights to Cisco.com technical libraries for technical assistance, electronic commerce, and product information
- Access to the industry's largest dedicated technical support staff 24 hours a day

For more information about Cisco services, refer to [Cisco Technical Support Services](#) or [Cisco Advanced Services](#).



Cisco and Partner Services for the Branch Office

Services from Cisco and our certified partners can help you transform the branch-office experience and accelerate business innovation and growth in Cisco Borderless Networks. Cisco has the depth and breadth of expertise to create a clear, replicable, optimized branch-office footprint across technologies. Planning and design services align technology with business goals and can increase the accuracy, speed, and efficiency of deployment. Technical services help improve operation efficiency, save money, and mitigate risk. Optimization services are designed to continuously improve performance and help your team succeed with new technologies. For more information, visit <http://www.cisco.com/go/services>.

For More Information

For more information about Cisco UCS E-Series Servers, visit <http://www.cisco.com/go/ucse/> or contact your local Cisco account representative.

For more information about Cisco products, contact:

- United States and Canada: 800 553 6387
- Europe: +32 2 778 4242
- Australia: +612 9935 4107
- Other: 408 526 7209

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