

UCS E-Series Server Blades								
	4461	4451	4431	4351	4331	4321	4221	
Modules	Minimum IOS XE / XE SD-WAN / vManage							Description
UCS-E180D-M2/K9	3.10 / 17.6 / 20.6		No	3.10 / 17.6 / 20.6	No	No	No	UCS-E, Double-wide, 8-core CPU, 2x8 Gb SD, 1x8 Gb RDIMM, 1-3 HDD
UCS-E160D-M1/K9	3.10 / 17.6 / 20.6		No	3.10 / 17.6 / 20.6	No	No	No	UCS-E, Double-wide, 6-core CPU, 2x8 Gb SD, 1x8 Gb RDIMM, 1-3 HDD. Note: Not available for the Cisco 2911 and 2901
UCS-E160D-M2/K9	3.10 / 17.6 / 20.6		No	3.10 / 17.6 / 20.6	No	No	No	UCS-E, Double-wide, 6-core CPU, 2x8 Gb SD, 1x8 Gb RDIMM, 1-3 HDD. Note: Not available for the Cisco 2911 and 2901
UCS-E160DP-M1/K9	3.10 / 17.6 / 20.6		No	3.10 / 17.6 / 20.6	No	No	No	UCS-E, Double-wide, 6-core CPU, 2x8GSD
UCS-E180D-M3/K9	3.10 / 17.6 / 20.6		No	3.10 / 17.6 / 20.6	No	No	No	UCS-E, Double-wide, 8-core CPU, 2x8 Gb SD, 1x8 Gb RDIMM, 1-3 HDD
UCS-E140D-M1/K9	3.10 / 17.6 / 20.6		No	3.10 / 17.6 / 20.6	No	No	No	UCS-E, Double-wide, 4-core CPU, 2x8 Gb SD, 1x8 Gb RDIMM, 1-3 HDD
UCS-E140DP-M1/K9	3.10 / 17.6 / 20.6		No	3.10 / 17.6 / 20.6	No	No	No	UCS-E, Double-wide, 4-core CPU, 2x8 Gb SD, 1x8 Gb RDIMM, 1-2 HDD, 1 PCIe
UCS-E160S-M3/K9	3.16.2 / 17.6 / 20.6		No	3.16.2 / 17.6 / 20.6		No	No	UCS-E, Single-wide, Intel Broadwell 6-core CPU, Up to 32 GB RAM, 1-2 HDD
UCS-E140S-M1/K9	3.10 / 17.6 / 20.6		No	3.10 / 17.6 / 20.6		No	No	UCS-E, Single-wide, 4-core CPU, 2x8G SD, 1x8GBUDIMM, 1-2 HDD
UCS-E140S-M2/K9	3.10 / 17.6 / 20.6		No	3.10 / 17.6 / 20.6		No	No	UCS E-Series, Single-wide, Intel® Xeon® E3 1100 v2 Quad core processor, 8 GB RAM, 2 SD cards
UCS-EN120S-M2/K9	3.10 / 17.6 / 20.6		No	3.10 / 17.6 / 20.6		No	No	UCS E-Series Network Compute Engine, 2-core CPU, 4-16 GB RAM, 1-2 HDD, 1-2 SD cards
UCS-EN140N-M2/K9	3.15.1 / 17.6 / 20.6		No	3.15.1 / 17.6 / 20.6		No	No	UCS E-Series Network Compute Engine, 4C, 4 - 8GB RAM, 1 HDD
Ethernet Switch								
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Modules	Minimum IOS XE / XE SD-WAN / vManage							Description
SM-X-16G4M2X	16.12.1 / 17.3 / 19.1	16.12.1 / 17.3 / 18.4	No	16.12.1 / 17.3 / 18.3	16.12.1 / 17.3 / 18.3	No	No	16-port 1G, 4-port 2.5 mGig & 2-port 10G SFP/SFP+
SM-X-40G8M2X	16.12.1 / 17.3 / 19.1	16.12.1 / 17.3 / 18.4	No	16.12.1 / 17.3 / 18.3	No	No	No	40-port 1G, 8-port 2.5 mGig & 2-port 10G SFP/SFP+
NIM-ES2-4	3.15 / 16.11 / 19.1	3.15 / 16.10 / 18.4		3.15 / 16.9 / 18.3	3.15 / 16.9 / 18.3	3.15 / 16.9 / 18.3	3.15 / 16.4.1 / 18.3	Cisco 4-Port Gigabit Ethernet Switch NIM
NIM-ES2-8	3.15 / 16.11 / 19.1	3.15 / 16.10 / 18.4		3.15 / 16.9 / 18.3			3.15 / 16.4.1 / 18.3	Cisco 8-Port Gigabit Ethernet Switch NIM
NIM-ES2-8-P	3.15 / 16.11 / 19.1	3.15 / 16.10 / 18.4		3.15 / 16.9 / 18.3			No	Cisco 8-Port Gigabit Ethernet Switch NIM with PoE Support
SM-X-ES3-16-P	3.10 /No /No		No	3.10 /No /No		No	No	16-port POE layer 2/3 EtherSwitch Service Module
SM-X-ES3-24-P	3.10 /No /No		No	3.10 /No /No		No	No	24-port POE layer 2/3 EtherSwitch Service Module
SM-X-ES3D-48-P	3.11 /No /No		No	3.11 /No /No	No	No	No	48-port POE layer 2/3 EtherSwitch Service Module
Ethernet Routed-Port								
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Modules	Minimum IOS XE / XE SD-WAN / vManage							Description
NIM-1GE-CU-SFP	3.15 / 16.11 / 19.1	3.15 / 16.10 / 18.4		3.15 / 16.9 / 18.3			3.15 / 16.9 / 18.3	1-port Gigabit Ethernet NIM, dual mode SFP or RJ45
NIM-2GE-CU-SFP	3.15 / 16.11 / 19.1	3.15 / 16.10 / 18.4		3.15 / 16.9 / 18.3			No	2-port Gigabit Ethernet NIM, dual mode SFP or RJ45
SM-X-6X1G	3.13.1 / 16.11 / 19.1	3.13.1 / 16.10 / 18.4	No	3.13.1 / 16.9 / 18.3		No	No	6-port Gigabit Ethernet SFP Module
SM-X-4X1G-1X10G	3.13.1 / 16.11 / 19.1	3.13.1 / 16.10 / 18.4	No	3.13.1 / 16.9 / 18.3		No	No	4-port Gigabit Ethernet OR 1-port 10 Gigabit Ethernet SFP Module
Wireless WAN (3G, 4G)								
	4461	4451	4431	4351	4331	4321	4221	
Modules	Minimum IOS XE / XE SD-WAN / vManage							Description
NIM-4G-LTE-GA	3.15.1 / No / No	3.15.1 / No / No		3.15.1 / No / No			16.4.1 / No / No	4G LTE NIM for Global (Europe, Australia & New Zealand)
NIM-4G-LTE-NA	3.15.1 / No / No	3.15.1 / No / No		3.15.1 / No / No			16.4.1 / No / No	4G LTE NIM for North America AT&T and Canada
NIM-4G-LTE-ST	3.15.1 / No / No	3.15.1 / No / No		3.15.1 / No / No			16.4.1 / No / No	4G LTE NIM for Sprint
NIM-4G-LTE-LA	16.3.2 / No / No	16.3.2 / No / No		16.3.2 / No / No			16.3.2 / No / No	4G LTE for Asia Pacific, Australia and Latam
NIM-LTEA-EA	16.3.2 / 16.11 / 19.1	16.3.2 / 16.10 / 18.3		16.3.2 / 16.9 / 18.3			16.3.2 / 16.9 / 18.3	LTE Advanced for Europe and North America
NIM-LTEA-LA	16.3.2 / 16.11 / 19.1	16.3.2 / 16.10 / 18.4		16.3.2 / 16.9 / 18.3			16.3.2 / 16.9 / 18.3	LTE Advanced for Asia Pacific, Australia and Latam
T1, E1, and G.703 Multiflex Trunk Voice and WAN Interface Cards								
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Modules	Minimum IOS XE / XE SD-WAN / vManage							Description
NIM-1MFT-T1/E1				3.10 / 17.3 / 20.3				1-port multiflex trunk voice/clear-channel data T1/E1 module
NIM-2MFT-T1/E1				3.10 / 17.3 / 20.3				2 port Multi-flex Trunk Voice/Clear-channel Data T1/E1 Module
NIM-4MFT-T1/E1				3.10 / 17.3 / 20.3			No	4 port Multi-flex Trunk Voice/Clear-channel Data T1/E1 Module
NIM-8MFT-T1/E1				3.10 / 17.3 / 20.3			No	8 port Multi-flex Trunk Voice/Clear-channel Data T1/E1 Module
Packet Voice Digital Signal Processor Modules 4								
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Modules	Minimum IOS XE / XE SD-WAN / vManage							Description
SM-X-PVDM-3000	3.16.1 / 17.3 / 20.3		No	No	No	No	No	3080-channel high-density voice DSP module
SM-X-PVDM-2000	3.16.1 / 17.3 / 20.3		No	No	No	No	No	2048-channel high-density voice DSP module
SM-X-PVDM-1000	3.16.1 / 17.3 / 20.3		No	3.16.1 / 17.3 / 20.3		No	No	1024-channel high-density voice DSP module
SM-X-PVDM-500	3.16.1 / 17.3 / 20.3		No	3.16.1 / 17.3 / 20.3		No	No	768-channel high-density voice DSP module
PVDM4-256				3.10 / 17.3 / 20.3			No	256-channel voice DSP module
PVDM4-128				3.10 / 17.3 / 20.3			No	128-channel voice DSP module
PVDM4-64				3.10 / 17.3 / 20.3			No	64-channel voice DSP module
PVDM4-32				3.10 / 17.3 / 20.3			No	32-channel voice DSP module
NIM-PVDM-256	3.16.1 / 17.3 / 20.3	No	No	No	No	No	No	256-channel density voice DSP module
NIM-PVDM-128	3.16.1 / 17.3 / 20.3	No	No	No	No	No	No	128-channel density voice DSP module
NIM-PVDM-64	3.16.1 / 17.3 / 20.3	No	No	No	No	No	No	64-channel density voice DSP module
NIM-PVDM-32	3.16.1 / 17.3 / 20.3	No	No	No	No	No	No	32-channel density voice DSP module
Voice Interface Cards								
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Modules	Minimum IOS XE / XE SD-WAN / vManage							Description
NIM-2FXS				3.16 / 17.2 / 20.1			No	2-port FXS NIM
NIM-4FXS				3.16 / 17.2 / 20.1			No	4-port FXS NIM
NIM-2FXO				3.16 / 17.2 / 20.1			No	2-port FXO NIM
NIM-4FXO				3.16 / 17.2 / 20.1			No	4-port FXO NIM
NIM-2FXSP				3.16 / 17.2 / 20.1			No	2-port FXS NIM
NIM-4FXSP				3.16 / 17.2 / 20.1			No	4-port FXS NIM
NIM-2FXS/4FXOP				3.16 / 17.2 / 20.1			No	2-port FXS & 4-port FXO NIM
NIM-2FXS/4FXO				3.16 / 17.2 / 20.1			No	2-port FXS & 4-port FXO NIM
NIM-4E/M				3.16 /No /No			No	4-Port E/M NIM
NIM-2BRI-NT/TE				3.16 /No /No			No	2-port BRI (NT and TE) NIM
NIM-4BRI-NT/TE				3.16 /No /No			No	4-port BRI (NT and TE) NIM
SM-X-8FXS/12FXO				16.7.1 / 17.2 / 20.1			No	8-port FXS & 12-port FXO single-wide Service Module
SM-X-16FXS/2FXO				16.7.1 / 17.2 / 20.1			No	16-port FXS & 2-port FXO single-wide Service Module
SM-X-24FXS/4FXO				16.7.1 / 17.2 / 20.1			No	24-port FXS & 4-port FXO single-wide Service Module
SM-X-72FXS				16.7.1 / 17.2 / 20.1			No	72-port FXS double-wide Service Module
Broadband								
	4461	4451	4431	4351	4331	4321	4221	
Modules	Minimum IOS XE / XE SD-WAN / vManage							Description
NIM-VAB-A	3.14 / 16.11 / 19.1	3.14 / 16.10 / 18.4		3.14 / 16.9 / 18.3			16.4.1 / 16.9 / 18.3	Multi Mode VDSL2/ADSL2/2+ NIM Annex A
NIM-VA-B				3.14 / 17.4.1a / 17.4.1a			16.4.1 / 16.9 / 18.3	Multi Mode VDSL2/ADSL2/2+ NIM Annex B
NIM-VAB-M	3.14 / 16.11 / 19.1	3.14 / 16.10 / 18.4		3.14 / 16.9 / 18.3			16.4.1 / 16.9 / 18.3	Multi Mode VDSL2/ADSL2/2+ NIM Annex M
Serial WAN Interfaces								
	4461	4451	4431	4351	4331	4321	4221	
Modules	Minimum IOS XE / XE SD-WAN / vManage							Description
SM-X-1T3/E3	3.9 /No /No		No	3.9 /No /No		No	No	1-port clear-channel T3/E3 Service Module
NIM-1T	16.8 / 16.12 / 19.1	3.13 / 16.12 / 18.4		3.13 / 16.12 / 18.3			16.4.1 / 16.9 / 18.3	1-Port Serial High-Speed WAN Interface Card
NIM-2T	16.8 / 17.5 / 19.1	3.13 / 17.5 / 18.4		3.13 / 17.5 / 18.3			16.4.1 / 16.9 / 18.3	2-Port Serial High-Speed WAN Interface Card
NIM-4T	16.8 / 17.5 / 19.1	3.13 / 17.5 / 18.4		3.13 / 17.5 / 18.3			No	4-Port Serial High-Speed WAN Interface Card
Async WAN Interface								
	4461	4451	4431	4351	4331	4321	4221	
Modules	Minimum IOS XE / XE SD-WAN / vManage							Description
NIM-16A				16.4.1 / No / No				16-port Asynchronous Module
NIM-24A				16.4.1 / No / No				24-port Asynchronous Module
SM-X-64A	16.6.1 / No / No		No	16.6.1 / No / No		No	No	64-port Asynchronous Module
ISDN BRI Data S/T Interface								
	4461	4451	4431	4351	4331	4321	4221	
Modules	Minimum IOS XE / XE SD-WAN / vManage							Description
NIM-4BRI-S/T	No				16.6.1 /No /No			4-port ISDN BRI S/T network interface module
NIM-2BRI-S/T	No				16.6.1 /No /No			2-port ISDN BRI S/T network interface module
Channelized T1/E1 and ISDN PRI								
	4461	4451	4431	4351	4331	4321	4221	
Modules	Minimum IOS XE / XE SD-WAN / vManage							Description
NIM-1CE1T1-PRI	3.10 / 17.3 / 19.1	3.10 / 17.3 / 18.4		3.10 / 17.3 / 18.3			No	1 port Multi-flex Trunk Voice/Channelized Data T1/E1 Module
NIM-2CE1T1-PRI	3.10 / 17.3 / 19.1	3.10 / 17.3 / 18.4		3.10 / 17.3 / 18.3			No	2 port Multi-flex Trunk Voice/Channelized Data T1/E1 Module
NIM-8CE1T1-PRI	3.13 / 17.3 / 19.1	3.13 / 17.3 / 18.4		3.13 / 17.3 / 18.3			No	8 port Multi-flex Trunk Voice/Channelized Data T1/E1 Module
Storage								
	4461	4451	4431	4351	4331	4321	4221	
Modules	Minimum IOS XE / XE SD-WAN / vManage							Description
NIM-SSD				3.10 /No /No			No	NIM Carrier Card for up to 2 SSD Drives
SM-X-NIM-ADPTR	3.14 / 17.5 / 19.1	3.14 / 17.5 / 18.4	No	3.14 / 17.5 / 18.3		No	No	SM-X Adaptor for one NIM module
Small Form-Factor Pluggable								
	4461	4451	4431	4351	4331	4321	4221	
Modules	Supported Yes / No							Description
GLC-EX-SMD				Yes				1000BASE-EX SFP transceiver module, SMF, 1310nm, DOM
GLC-LH-SM				Yes				GE SFP, LC connector LX/LH transceiver
GLC-LH-SMD				Yes				GE SFP, LC connector LX/LH transceiver; with DOM
GLC-SX-MM				Yes				GE SFP, LC connector SX transceiver
GLC-SX-MMD				Yes				GE SFP, LC connector SX transceiver; with DOM
GLC-ZX-SM				Yes				1000BASE-ZX SFP
GLC-ZX-SMD				Yes				1000BASE-ZX SFP; with DOM
GLC-FE-100FX				Yes				100BASE-FX SFP for FE port
GLC-FE-100LX				Yes				100BASE-LX SFP for FE port
GLC-FE-100ZX				Yes				100BASE-ZX SFP (80km)
GLC-FE-100EX				Yes				100BASE-EX SFP (40km)
GLC-FE-100BX-D				Yes				100BASE-BX10-D SFP
GLC-FE-100BX-U				Yes				100BASE-BX10-U SFP
GLC-GE-100FX				Yes				100FX SFP on GE ports
GLC-BX80-D-I				Yes				1000BASE-BX80 SFP, 1570NM
GLC-BX80-U-I				Yes				1000BASE-BX80 SFP, 1490NM
GLC-BX40-D-I				Yes				1000BASE-BX40 SFP, 1550NM
GLC-BX40-U-I				Yes				1000BASE-BX40 SFP, 1310NM
GLC-BX-D				Yes				1000BASE-BX SFP, 1490NM
GLC-BX				Yes				1000BASE-BX SFP, 1310NM
GLC-TE				Yes				10/100/1000BASE-T
GLC-T				Yes				10/100/1000BASE-T
SFP-10G-LR	Yes	No	No	Yes	No	No	No	10GBASE-LR SFP Module
SFP-10G-LRM	Yes	No	No	Yes	No	No	No	10GBASE-LRM SFP Module
SFP-10G-SR	Yes	No	No	Yes	No	No	No	10GBASE-SR SFP Module
SFP-GE-S				Yes				1000BASE-SX SFP transceiver module for MMF, 850-nm wavelength, extended operating temperature range and DOM support, dual LC/PC connector
SFP-GE-T				Yes				10/100/1000BASE-T SFP (NEBS 3 ESD)
CWDM-SFP-1470				Yes				CWDM 1470 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1490				Yes				CWDM 1490 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1510				Yes				CWDM 1510 NM SFP Gigabit Ethernet and 1G/2G FC
CWDM-SFP-1530				Yes				