Data sheet Cisco public IIIIII CISCO The bridge to possible

# Cisco Network Convergence System 540 Small Density Routers

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Cisco NCS 540 Small Density Routers are temperature-hardened, conformal-coated platforms with advanced timing (Class C), security, and QoS features that revolutionize sub-100G routing by bringing the power of the IOS XR operating system to 3G/4G/5G cell sites (CSRs) and ease "IP" fication of Radio Access Network (RAN) and small-cell backhaul.

#### Product overview

The next phase of the network traffic explosion will be driven by use cases that make massive demands on communication service providers. Not only do these new-age applications stipulate greater data bandwidth, but they also need to be complemented by ultra-reliable, low-latency communications to deliver use cases like AR/VR media, UltraHD and new multimedia consumer experiences, massive Internet of Things (IoT), tactile internet, smart cities, AI surveillance, smart health, and Machine-to-Machine (M2M) applications such as smart meters.

Cisco Network Convergence System 540 (NCS 540) Small Density Routers, part of the larger <u>NCS 540 router</u> family, are designed for cost-effective delivery of next-generation services and applications for mobile and wireline. These routers are sub-100G-bandwidth, cost-effective, native-25G, carrier-class, I-Temp, conformal-coated, ETSI-compliant, ultra-low-power, devices capable of Class-C timing, best-in-class security, service exposure using NC/YANG, streaming telemetry, and flexible rollouts using SDN. Built for deployment in any-gen RAN backhaul, sub-6 5G cell sites, Fixed-Wireless Access (FWA), small-cell backhaul, FTTx, utilities, mission-critical enterprise applications, and low-speed Ethernet rings, the three variants of NCS 540 Small Density Routers support a programmable SR (Segment Routing) fabric and EVPN (Ethernet Virtual Private Network) as overlay for a unified end-to-end architecture with cross-domain orchestration via the industry-leading IOS XR software bundled with best-in-class services.

## Key product highlights

- Cell site routers based on IOS XR extending Cisco's 5G Converged SDN Transport with the smallest footprint, ever
- The only router in the industry with native 25G interfaces in a sub-100G bandwidth form factor allowing cost-effective and seamless backhauling of 5G NR
- G.8273.2 Class C Timing complaint
- Low power consumption: minimum <40W, typical <70W, maximum 100W
- 1 RU small form factor routers. Passively cooled (fanless) variant is of 2.5 RU form factor
- 2.5 RU passively cooled (fanless) router is suitable for indoor or outdoor cabinets
- 1RU routers with fans are suitable for indoor or outdoor (Sealed IP65/IP66 cabinet with heat exchanger conforming to GR487 Specs with sufficient cooling) cabinets: I-Temp, conformal-coated form factors conforming to GR-3108 class 2 and ETSI standards

- Segment Routing with MPLS (SR-MPLS) and IPv6 data plane (SRv6)
- Versatile Ethernet interface options: 10/100/1000M, 1/10/25G
- Security Trust Anchor infrastructure, secure boot, image signing, run-time defense
- True, secure zero-touch provisioning with the Cisco Crosswork™ automation suite
- Fully compliant to MEF3.0 architecture for wireline networks\*
- Flexible consumption model

\* Indicates certification post FCS









Figure 1. Cisco NCS 540 Small Density Routers

# Model comparison

#### Table 1. NCS 540 Small Density Routers Comparison

Chassis PID	N540X-6Z18G- SYS-A N540X-6Z18G- SYS-D	N540X-8Z16G- SYS-A N540X-8Z16G- SYS-D	N540X- 4Z14G2Q-A N540X- 4Z14G2Q-D	N540-6Z14S- SYS-D	N540-6Z18G-SYS-A N540-6Z18G-SYS-D
CPU	4-core 2GHz CPU	4-core 2GHz CPU	4-core 2GHz CPU	4-core 2GHz CPU	4-core 2GHz CPU
Memory	8 GB DRAM	8 GB DRAM	8 GB DRAM	8 GB DRAM	8 GB DRAM
Storage	16 GB eMMC	16 GB eMMC	16 GB eMMC	16 GB eMMC	16 GB eMMC
Interfaces	6x 10/1GE 18x 1GE	8x 10/1GE 4x 1GE SFP 4x 1GE RJ45 8x 1GE SFP or 16x 1GE cSFP	2x 25/10/1GE 4x 10/1GE 10x 1GE SFP 4x 1GE Combo SFP/RJ45	6x 10/1GE 4x 1GE SFP 4x 1GE RJ45 6x 1GE SFP or 12x 1GE cSFP	6x 10/1GE 18x 1GE
Performance	Up to 125 Mpps	Up to 125 Mpps	Up to 125 Mpps	Up to 125 Mpps	Up to 125 Mpps
Power Supplies	1 + 1 Fixed redundant DC 1 + 1 Fixed redundant AC	1 + 1 Fixed redundant DC 1 + 1 Fixed redundant AC	1 + 1 Fixed redundant DC 1 + 1 Fixed redundant AC	1 + 1 Fixed redundant DC	1 Fixed DC with dual feed 1 Fixed AC
Fans	Fixed redundant fans: 3+1	Fixed redundant fans: 3+1	Fixed redundant fans: 3+1	Fanless	Fixed redundant fans: 2+1
Airflow	Side to side: right to left	Side to side: right to left	Side to side: right to left	Passively cooled	Front to side**
Operating Temperature Range	I-Temp: -40°C to +70°C up to 300 m	I-Temp: -40°C to +70°C up to 300 m	I-Temp: -40°C to +70°C up to 300 m	I-Temp: -20°C to +65°C at 300 m	C-Temp: <b>0°C to +55°C at 300</b> m

Chassis PID	N540X-6Z18G- SYS-A N540X-6Z18G- SYS-D -40°C to +65°C up to 1800 m -40°C to +55°C up to 4000 m	up to 1800 m -40°C to +60°C with CSFP -40°C to +55°C up to 4000 m	N540X- 4Z14G2Q-A N540X- 4Z14G2Q-D -40°C to +65°C up to 1800 m -40°C to +55°C up to 4000 m	N540-6Z14S- SYS-D -20°C to +60°C up to 1800 m -20°C to +50°C up to 4000 m	N540-6Z18G-SYS-A N540-6Z18G-SYS-D 0°C to +50°C at 1800 m +40°C at 4000 m
Nonoperating (Storage) Temperature	-40°C to +70°C	-40°C to +70°C	-40°C to +70°C	-20°C to +70°C	−5°C to +55°C
Operating Humidity Range	5-95% RH, noncondensing	5-95% RH, noncondensing	5-95% RH, noncondensing	5-95% RH, noncondensing	5-95% RH, noncondensing
Storage (Relative) Humidity	5-95% at 40°C per NEBS GR-63-Core	<b>5-95% at 40°C</b> per NEBS GR-63- Core	<b>5-95% at 40°C</b> per NEBS GR- 63-Core	<b>5-95% at 40° C</b> per NEBS GR-63- Core	<b>5-95% at 40°C per</b> NEBS GR-63-Core
Power	Universal AC (90-26 Wide range DC (-20			Wide range DC (-40V to -72V)	Universal AC (90-265V; 50-60 Hz) Wide range DC (-20V to -72V)
Surge Rating*	4KV common mode 2KV differential mode	4KV common mode 2KV differential mode	4KV common mode 2KV differential mode	4KV common mode 2KV differential mode	1KV common mode 1KV differential mode
Timing	SyncE, PTP, Interfaces: 1pps, 10MHz, ToD Class C	SyncE, PTP, Interfaces: 1pps, 10MHz, ToD Class C	SyncE, PTP, Interfaces: 1pps, 10MHz, ToD Class C	SyncE, PTP, Interfaces: 1pps, 10MHz, ToD Class C	N/A

Chassis PID	N540X-6Z18G-	N540X-8Z16G-	N540X-	N540-6Z14S-	N540-6Z18G-SYS-A
	SYS-A	SYS-A	4Z14G2Q-A	SYS-D	N540-6Z18G-SYS-D
	N540X-6Z18G-	N540X-8Z16G-	N540X-		
	SYS-D	SYS-D	4Z14G2Q-D		
		Class B on RJ45	Class B on RJ45	Class B on RJ45	
		1GE	1GE	1GE	
			Class B on Ports		
			14, 15		
Physical	Height: 1 RU	Height: 1 RU	Height: 1 RU	Height: 2.5 RU	Height: 1 RU
Specification	Width: 439.5 mm	Width: 445 mm	Width: 445 mm	Width: 445 mm	Width: 445 mm
	Depth: 232 mm	Depth: 232 mm	Depth: 232 mm	Depth: 384 mm	Depth: 232 mm
	Weight: 5.85 kg -	Weight: 5.85 kg -	Weight: 5.85 kg	Weight: 10 kg	Weight: 3.3 kg - AC
	AC unit	AC unit	- AC unit		unit
	5.5 kg – DC unit	5.5 kg – DC unit	5.5 kg – DC unit		3.5 kg – DC unit
Conformal	Yes	Yes	Yes	No	No
Coated					
Mounting Options	19", 23", ETSI	19", 23", ETSI	19", 23", ETSI	19", 23"	19", 23", ETSI
Management	USB console port,	USB console port,		USB console port,	USB console port,
Interfaces	USB memory port, RJ45 console	USB memory port, RJ45	port, USB memory port,	USB memory port, RJ45 console	USB memory port, RJ45 console
		console	RJ45 console		
Sensors	Humidity, Altitude	Humidity, Altitude	Humidity, Altitude	No	No
NEBS GR-3108	Designed to meet	Designed to meet	Designed to meet	Designed to meet	Designed to meet
	Class III when	Class III when	Class III when	Class II	Class I
	installed in sealed cabinets	installed in sealed cabinets	installed in sealed cabinets		
		- 20			

\* Requires external surge protection devices for installations where higher surge levels are expected. Failure to do so might lead to permanent damage.

\*\* Reach out to your sales if front to back airflow support is needed.

# Key software feature support

#### Table 2.Key software feature support

Specification	Description
Layer 2	VPWS, VPLS, IRB/BVI v4/v6
	Layer 2 forwarding and bridging Bridge Domains (BD)
	Ethernet Flow Point (EFP)
	IEEE 802.1Q VLANs and Q-in-Q
	Ethernet Link Aggregation Group (LAG)
	Link Aggregation Control Protocol (LACP) 802.3ad
	G.8032
Layer 3	IPv4 and IPv6 unicast routing
	Layer 3 interfaces: physical interfaces and subinterfaces
	Virtual Routing and Forwarding (VRF)
	Open Shortest Path First (OSPFv2, OSPFv3)
	Border Gateway Protocol (BGP) v4/v6, LU, PIC, Path Selection, Attributes, TE, Authentication, Security, LS
	Multiprotocol Border Gateway Protocol (MP-BGP)
	Intermediate System to Intermediate System (ISIS, ISISv6)
	Equal-Cost Multipath (ECMP)
	Bidirectional Forwarding Detection (BFD) v4/v6, Timers, Routing Protocols, Bundle Interfaces, BFD unnumbered
	Virtual Router Redundancy Protocol (VRRP)
	Integrated Routing Bridging (IRB) with Bridge Virtual Interface (BVI)
	Generic Routing Encapsulation (GRE)
MPLS	Label switching (LER, LSR)
	Label Distribution Protocol (LDP)

Specification	Description
	BGP Labeled Unicast (BGP-LU)
	L3 VPN, MPLS Traffic Engineering with RSVP-TE
	Point-to-point L2VPN - Static, T-LDP, EVPN-VPWS
	Multipoint L2VPN – VPLS, EVPN
	L2/L3 EVPN with Anycast IRB
	6PE, 6VPE
	IP Loop-Free Alternate (LFA) Fast Reroute (FRR)
	RSVP-TE Fast Reroute (FRR)
Segment Routing (SR)	Segment Routing with MPLS data plane (SR-MPLS)
	Segment Routing with IPv6 data plane (SRv6)
	ISIS, OSPF, BGP extensions to segment routing
	BGP Egress Peering Engineering (BGP-EPE)
	Segment Routing Traffic Engineering (SRTE)
	Segment Routing Path Computation Element (SR-PCE)
	Topology Independent Loop-Free Alternate (TI-LFA)
	Segment Routing On-Demand Next-hop (SR-ODN)
Multicast	IPv4 and IPv6 multicast routing
	PIM-SM, PIM-SSM
	IGMPv3, MLDv2
	mLDP
	mVPN
	P2MP-TE
Quality of Service (QoS)	Class-based 3-level Hierarchical QoS
	Virtual Output Queueing (VOQ)
	Policing, Shaping

Specification	Description
	Multilevel priority queuing
	Match, Stats, Classification, Queue management, Remarking
	Classification based on L2/L3/L4 fields
	Weighted Random Early Detection (WRED)
	Deep packet buffer
Timing	SyncE with ESMC
	External GNSS receiver
	IEEE 1588-2008 PTP T-GM, T-BC, T-TSC
	G.8265.1, G.8275.1, G.8275.2
	G.8273.2 Class C (Class B on RJ45 1GE)
Security	Control-plane and management plane protection
	Local Packet Transport Services (LPTS)
	Authentication, Authorization, and Accounting (AAA)
	Terminal Access Controller Access-Control System Plus (TACACS+)
	Secure Shell (SSH)
	Layer 3 ingress and egress ACLs for IPv4 and IPv6
	Layer 2 ingress ACLs
	Unicast Reverse Path Forwarding (Unicast RPF)
ОАМ	CDP, LLDP, ICMP, DHCP Relay
	IP SLA
	MPLS OAM
	Ethernet OAM: CFM, Y.1731 DM/SLM
	TWAMP
	NetFlow
	SPAN/ERSPAN

Specification	Description
Manageability	CLI, ICMP, EEM, FTP, TFTP, Telnet
	SNMP MIB
	NETCONF/gRPC (XML, JSON, GPB)
	YANG models (native, open: OpenConfig, IETF)
	Model/Event-Driven Telemetry
	RPM-based SW infrastructure
	Zero-Touch Provisioning (ZTP) with iPXE

# Supported transceiver modules

Please refer to the <u>Transceiver Module Group (TMG) Compatibility Matrix</u> for the NCS 540 Series supported transceivers.

# Regulatory standards compliance

Table 3.	Regulatory standards	s compliance:	Safety and FMC
Table 5.	Regulatory standards	s compnance.	

Specification	Product:	Product:	Product:
	N540X-6Z18G-SYS-D,	N540-6Z14S-SYS-D	N540-6Z18G-SYS-A
	N540X-6Z18G-SYS-A,		N540-6Z18G-SYS-D
	N540X-8Z18G-SYS-D, N540X-8Z18G-SYS-A,		
	N540X-4Z14G2Q-D,		
	N540X-4Z14G2Q-A		
Regulatory Compliance	Products comply with CE	Products comply with CE	Products comply with CE
	markings according to	markings according to	markings according to
	directives 2004/108/EC and 2006/95/EC	directives 2004/108/EC and 2006/95/EC	directives 2004/108/EC and 2006/95/EC
Network Equipment Building	Designed to meet GR-63-	Designed to meet GR-63-	Designed to meet GR-63-
Standards (NEBS)	CORE and GR-1089-CORE	CORE and GR-1089-CORE	CORE and GR-1089-CORE
Safety	UL 60950-1 Second Edition	UL 60950-1 Second Edition	UL 60950-1 Second Edition
	CAN/CSA-C22.2 No. 60950-	CAN/CSA-C22.2 No. 60950-	CAN/CSA-C22.2 No. 60950-
	1 Second Edition	1 Second Edition	1 Second Edition
	EN 60950-1 Second Edition	EN 60950-1 Second Edition	EN 60950-1 Second Edition
	IEC 60950-1 Second Edition	IEC 60950-1 Second Edition	IEC 60950-1 Second Edition
	AS/NZS 60950-1	CSA 62368-1	CSA 62368-1: 2019
	GB4943	ANSI/UL 62368-1	ANSI/UL 62368-1: 3rd
	CSA 62368-1	IEC 62368-1:2014	Edition
	ANSI/UL 62368-1	EN 62368-	IEC 62368-1:2020
	IEC 62368-1:2014	1:2014+A11:201760870	EN 62368-1:2020
	EN 62368-1:2014+A11:2017		
EMC Standards	EN55032:2015	EN55032:2015	EN55032:2015
	EN61000-3-2:2014	EN61000-3-2:2014	EN61000-3-2:2014

Product:	Product:	Product:
N540X-6Z18G-SYS-D,	N540-6Z14S-SYS-D	N540-6Z18G-SYS-A
N540X-6Z18G-SYS-A,		N540-6Z18G-SYS-D
N540X-8Z18G-SYS-D,		
N540X-4Z14G2Q-D, N540X-4Z14G2Q-A		
ICES-003:2016:Iss:6	ICES-003:2016:Iss:6	ICES-003:2016:Iss:6
EN55032:2012	EN55032:2012	EN55032:2012
47 CFR Part 15:2016	47 CFR Part 15:2016	47 CFR Part 15:2016
KN61000-3-3:2014	KS C 9610-3-3:2020	KS C 9610-3-3:2020
CISPR32:2015:Ed:2	CISPR32:2015:Ed:2	CISPR32:2015:Ed:2
CNS13438:2006	CNS13438:2006	CNS13438:2006
KN32:2015	KS C 9832	KS C 9832
EN300 386:2012:V1.6.1	EN300 386:2012:V1.6.1	EN300 386:2012:V1.6.1
KN61000-3-2:2014	KS C 9610-3-2:2020	KS C 9610-3-2:2020
VCCI-CISPR 32:2016	VCCI-CISPR 32:2016	VCCI-CISPR 32:2016
EN61000-3-3:2013	EN61000-3-3:2013	EN61000-3-3:2013
TEC/SD/DD/EMC-	TEC/SD/DD/EMC-	TEC/SD/DD/EMC-
221/05/OCT-16	221/05/OCT-16	221/05/OCT-16
EN50121-4:2016		
EN50121-4:2016:A1:2019		
IEC62236-4:2018:Ed:3.0		
IEC/EN61000-4-2	IEC/EN61000-4-2	IEC/EN61000-4-2
IEC/EN61000-4-3	IEC/EN61000-4-3	IEC/EN61000-4-3
IEC/EN61000-4-4	IEC/EN61000-4-4	IEC/EN61000-4-4
IEC/EN61000-4-5	IEC/EN61000-4-5	IEC/EN61000-4-5
IEC/EN61000-4-6	IEC/EN61000-4-6	IEC/EN61000-4-6
	N540X-6Z18G-SYS-D, N540X-8Z18G-SYS-D, N540X-8Z18G-SYS-D, N540X-8Z18G-SYS-A,N540X-8Z18G-SYS-D, 	N540X-6Z18G-SYS-D, N540X-8Z18G-SYS-D, N540X-8Z18G-SYS-A,N540X-8Z18G-SYS-D, N540X-8Z18G-SYS-A,N540X-8Z18G-SYS-D, N540X-4Z14G2O-D, N540X-4Z14G2O-ACES-003:2016:Iss:6ICES-003:2016:Iss:6EN55032:2012ICES-003:2016:Iss:6EN55032:201247 CFR Part 15:201647 CFR Part 15:201647 CFR Part 15:201647 CFR Part 15:201650 KN61000-3-3:2014KS C 9610-3-3:202051 KN61000-3-3:2015EN5032:2015:Ed:252 CNS13438:2006CNS13438:200653 KN32:2015EN300 386:2012:V1.6.154 KN61000-3-2:2014KS C 9610-3-2:202055 C 9610-3-2:2020KN61000-3-2:201455 C 9610-3-2:2020VCC1-CISPR 32:201655 C 9610-3-2:2020VCC1-CISPR 32:201655 C 9610-3-2:2020SCC1-CISPR 32:201656 C 96100-3-3:2013SCC1-CISPR 32:201657 C 9610-3-2:2020SCC1-CISPR 32:201658 C 9610-3-2:2020SCC1-CISPR 32:201659 C 9610-3-3:2013SCC1-CISPR 32:201650 C 96100-3-3:2013SCC1-CISPR 32:201650 C 96100-3-3:2013SCC1-CISPR 32:201650 C 96100-1-4:2SCC1-CISPR 32:201650 C 96100-1-4:2SCC1-CISPR 32:2016

Specification	Product:	Product:	Product:
	N540X-6Z18G-SYS-D, N540X-6Z18G-SYS-A, N540X-8Z18G-SYS-D, N540X-8Z18G-SYS-A, N540X-4Z14G2Q-D,	N540-6Z14S-SYS-D	N540-6Z18G-SYS-A N540-6Z18G-SYS-D
	N540X-4Z14G2Q-A		
	IEC/EN61000-4-11	IEC/EN61000-4-11	IEC/EN61000-4-11
	CISPR24:2010+A1:2015	CISPR24:2010+A1:2015	CISPR24:2010+A1:2015
	CISPR35:2016:Ed:1	CISPR35:2016:Ed:1	CISPR35:2016:Ed:1
	EN IEC61000-6-1:2019	EN IEC61000-6-1:2019	EN IEC61000-6-1:2019
	EN300 386:2012:V1.6.1	EN300 386:2012:V1.6.1	EN300 386:2012:V1.6.1
	EN55024:2010	EN55024:2010	EN55024:2010
	EN55024:2010:A1	EN55024:2010:A1	EN55024:2010:A1
	EN55035:2017	EN55035:2017	EN55035:2017
	EN61000-6-1:2007	EN61000-6-1:2007	EN61000-6-1:2007
	EN61000-6-2:2019	EN61000-6-2:2019	EN61000-6-2:2019
	IEC61000-6-1:2016:Ed:3	IEC61000-6-1:2016:Ed:3	IEC61000-6-1:2016:Ed:3
	IEC61000-6-2:2016:Ed:3	IEC61000-6-2:2016:Ed:3	IEC61000-6-2:2016:Ed:3
	KN35:2015	KS C 9835	KS C 9835
	EN50121-4:2016	IEC 61850-3	
	EN50121-4:2016:A1:2019		
	IEC62236-4:2018:Ed:3.0		
	IEC61000-4-5 (4kV/CM and 2kV/DM on DC input)		
ETSI	ETS/EN 300 119 Part 4	ETS/EN 300 119 Part 4	ETS/EN 300 119 Part 4
	ETS/EN 300 019 - Storage: Class 1.2, Transportation: Class 2.3, In-	ETS/EN 300 019 - Storage: Class 1.2, Transportation: Class 2.3, In-	ETS/EN 300 019 - Storage: Class 1.2, Transportation: Class 2.3, In-

Specification	Product: N540X-6Z18G-SYS-D, N540X-6Z18G-SYS-A, N540X-8Z18G-SYS-D, N540X-8Z18G-SYS-A, N540X-4Z14G2Q-D, N540X-4Z14G2Q-A Use/Operational: Class 3.2 ETS/EN 300 753	Product: N540-6Z14S-SYS-D Use/Operational: Class 3.2 ETS/EN 300 753	Product: N540-6Z18G-SYS-A N540-6Z18G-SYS-D Use/Operational: Class 3.2 ETS/EN 300 753
RoHS	The product is RoHS-6	The product is RoHS-6	The product is RoHS-6
	compliant with exceptions for	compliant with exceptions for	compliant with exceptions for
	leaded-Ball Grid-Array (BGA)	leaded-Ball Grid-Array (BGA)	leaded-Ball Grid-Array (BGA)
	balls and lead press-fit	balls and lead press-fit	balls and lead press-fit
	connectors.	connectors.	connectors.

# Ordering information

#### Table 4.Ordering information

Router PID	N540X-6Z18G- SYS-A N540X-6Z18G- SYS-D	N540X-8Z16G- SYS-A N540X-8Z16G- SYS-D	N540X-4Z14G2Q- A N540X-4Z14G2Q- D	N540-6Z14S- SYS-D	N540-6Z18G- SYS-A N540-6Z18G- SYS-D
Description	NCS540 18x1G SFP + 6x1/10G SFP+ Dual-AC iTEMP Conformal-Coated Chassis NCS540 18x1G SFP + 6x1/10G SFP+ Dual-DC iTEMP Conformal-Coated Chassis	N540 12/20(CSFP) x1G + 4x1GCu + 8x1/10G Dual-AC iTEMP Conformal- Coated Chassis N540 12/20(CSFP) x1G + 4x1GCu + 8x1/10G Dual-DC iTEMP Conformal- Coated Chassis	NCS540 14x1G + 4x1/10G + 2x10/25G Dual- AC iTEMP Conformal-Coated Chassis NCS540 14x1G + 4x1/10G + 2x10/25G Dual- DC iTEMP Conformal-Coated Chassis	N540 10/6(CSFP) x1G + 4x1GCu + 6x1/10G Dual-DC iTEMP	NCS540 18x1G SFP + 6x1/10G SFP+ AC cTEMP Chassis NCS540 18x1G SFP + 6x1/10G SFP+ DC cTEMP Chassis
Rackmount for AC Variant	N540-RCKMT-19- ACA N540-RCKMT-23- ACA N540-RKMT-ETSI- ACA	ACA N540-RCKMT-23- ACA	N540-RCKMT-19- ACA N540-RCKMT-23- ACA N540-RKMT-ETSI- ACA	Not Applicable	N540-RCKMT-19- ACA N540-RCKMT-23- ACA N540-RKMT-ETSI- ACA
Rackmount for DC Variant	N540-RCKMT-19- ACD N540-RCKMT-23- ACD N540-RKMT-ETSI- ACD	ACD N540-RCKMT-23- ACD	N540-RCKMT-19- ACD N540-RCKMT-23- ACD N540-RKMT-ETSI- ACD	MRK	ACD
Cable Bracket	N540-CBL-BRKT-	N540-CBL-BRKT-	N540-CBL-BRKT-		N540-CBL-BRKT-

Router PID	N540X-6Z18G- SYS-A N540X-6Z18G- SYS-D	N540X-8Z16G- SYS-A N540X-8Z16G- SYS-D	N540X-4Z14G2Q- A N540X-4Z14G2Q- D	N540-6Z14S- SYS-D	N540-6Z18G- SYS-A N540-6Z18G- SYS-D
	AC	AC	AC		AC
F2B Plenum Accessories	Not Applicable	Not Applicable	Not Applicable	Not Applicable	N540-6Z18G-PL- E N540-6Z18G-PL- 23 N540-CBL-BRKT- FN
FCS Software	IOS XR 7.3.1	IOS XR 7.3.1	IOS XR 7.4.1	IOS XR 7.5.2	IOS XR 7.8.1

Product ID (PID)	Description
ESS-AC-10G-RTU-1	Access Essentials SW Right-to-Use v1.0 per 10G
ADV-AC-10G-RTU-1	Access Advantage w/o Essentials SW RTU v1.0 10G
ADN-AC-10G-RTU-1	Access Advantage w/ Essentials SW RTU v1.0 10G
ESS-ADN-AC-10G-RT	Access Essentials to Advantage Upgrade RTU per 10G
ESS-AC-10G-SIA-3	Access Essentials SIA 10G 3-5 year term
ESS-AC-10G-SIA-5	Access Essentials SIA 10G 5-10 year term
ADV-AC-10G-SIA-3	Access Advantage w/o Essentials SIA 10G 3-5 year term
ADV-AC-10G-SIA-5	Access Advantage w/o Essentials SIA 10G 5-10 year term
ADN-AC-10G-SIA-3	Access Advantage w/ Essentials SIA 10G 3-5 year term
ADN-AC-10G-SIA-5	Access Advantage w/ Essentials SIA 10G 5-10 year term
ESS-ADN-AC-10G-S3	Access Essentials to Advantage Upgrade SIA 10G 3-5 yrs
ESS-ADN-AC-10G-S5	Access Essentials to Advantage Upgrade SIA 10G 5-10 yrs
N540-24Z8Q2C-FC-SW	NCS 540 Series additional Software Licenses (RTU, SIA)

 Table 5.
 Ordering information for software licenses available on NCS 540 portfolio. Learn more.

<b>Table 6.</b> Ordering information for power cables supported
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Part number	Description
CAB-AC-SA	Power Cord - South Africa, 16/10A, 250V, 1830mm, -40C to +85C
CAB-AC-ARG	Power Cord - Argentina, 10A, 250V, 2500mm, -40C to +85C
CAB-AC-ISR	Power Cord - Israel, 16/10A, 250V, 2500mm, -40C to +85C
CAB-AC-TAI	Power Cord - Taiwan, 15/10A, 125V, 2500mm, -40C to +85C
CAB-AC-CHI	Power Cord - China, 10A, 250V, 2500mm, -40C to +85C
CAB-AC-KOR	Power Cord - Korea, 16/10A, 125V, 2500mm, -40C to +85C
CAB-AC-EUR	Power Cord - Europe, 16/10A, 250V, 2500mm, -40C to +85C
CAB-AC-ITL	Power Cord - Italy, 10A, 250V, 2500mm, -40C to +85C
CAB-AC-UK	Power Cord - UK, 13/10A, 250V, 2500mm, -40C to +85C
CAB-AC-AUS	Power Cord - Australia, 10A, 250V, 2500mm, -40C to +85C
CAB-AC-US	Power Cord - US, 15A, 125V, 2500mm, -40C to +85C
CAB-AC-BRA	Power Cord - Brazil, 10A, 250V, 2500mm, -40C to +85C
CAB-AC-IND	Power Cord - India, 16/10A, 250V, 2500mm, -40C to +85C
CAB-AC-SUI	Power Cord - Swiss, 10A, 250V, 2500mm, -40C to +85C

## Warranty information

The Cisco NCS 540 Small Density Routers has a 1-year limited hardware warranty. The warranty includes hardware replacement with a 10-day turnaround from receipt of a Return Materials Authorization (RMA).

### Product sustainability

Information about Cisco's Environmental, Social and Governance (ESG) initiatives and performance is provided in Cisco's CSR and sustainability <u>reporting</u>.

Sustainability Topic		Reference
General	Information on product-material-content laws and regulations	Materials
	Information on electronic waste laws and regulations, including our products, batteries and packaging	WEEE Compliance
	Information on product takeback and reuse program	Cisco Takeback and Reuse Program
	Sustainability Inquiries	Contact: csr_inquiries@cisco.com
Material	Product packaging weight and materials	Contact: environment@cisco.com

 Table 7.
 Cisco Environmental Sustainability Information

## Service and support

Cisco offers a wide range of services to help accelerate your success in deploying and optimizing the **Cisco NCS 540. These innovative** <u>Cisco Customer Experience (CX)</u> offerings are delivered through a unique combination of people, processes, tools, and partners, and they are focused on helping you increase operating efficiency and improve your network operation. Cisco CX helps you resolve mission-critical problems with direct access at any time to Cisco network experts and award-winning resources. Spanning the entire network lifecycle, Cisco CX offerings help increase investment protection, optimize network operations, support migration operations, and strengthen your IT expertise.

## Cisco Capital

#### Flexible payment solutions to help you achieve your objectives

Cisco Capital makes it easier to get the right technology to achieve your objectives, enable business transformation, and help you stay competitive. We can help you reduce the total cost of ownership, conserve capital, and accelerate growth. In more than 100 countries, our flexible payment solutions can help you acquire hardware, software, services, and complementary third-party equipment in easy, predictable payments. Learn more.

### Document history

New or revised topic	Described in	Date
Updated with N540-6Z18G-SYS-A/D Information		November 14 <sup>th</sup> , 2022
Updated with N540-6Z14S-SYS-D Information		May 9 <sup>th</sup> , 2022
Updated Section Ordering information		July 14 <sup>th</sup> , 2022
New data sheet for NCS 540 Small Density Routers		March 16 <sup>th</sup> , 2021

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