Release Notes for Cisco NCS 540 Series Routers, Cisco IOS XR Release 24.4.2

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Network Convergence System 540 Series Routers

What's New in Cisco IOS XR Release 24.4.2

Cisco IOS XR Release 24.4.2 is a maintenance release for Cisco NCS 540 Series routers. There are no new software features or hardware introduced in this release.

For more details on the Cisco IOS XR release model and associated support, see Software Lifecycle Support Statement - IOS XR.

Restrictions and Limitations on the Cisco NCS 540 Series Router

- The statistics collection may time out due to CPU overload during route churn. In such scenarios, statistics collection will resume when the CPU becomes available after the route churn is complete.
- Autonegotiation is disabled by default on the fixed GigE - 0/0/0/0 - 0/0/0/4 copper ports of N540X-16Z4G8Q2C-A/D and N540X-12Z16G-SYS-A/D router variants. It is recommended to enable the Autonegotiation support. To enable autonegotiation, use the **negotiation auto** command.
- If you're migrating from previous XR versions, then you must enable autonegotiation for fixed copper ports using the **negotiation auto** command before performing the software upgrade to avoid any links going down.
- Enabling or disabling frame preemption on the Time Sensitive Networking (TSN) port results in traffic drop for N540-FH-CSR-SYS. The port Twenty Five G0/0/12 is used as the TSN port.
- Fabric multicast queue stats are not supported in N540X-8Z16G-SYS-A/D, N540X-6Z18G-SYS-A/D, N540-6Z14S-SYS-D, N540-6Z18G-SYS-A/D, and N540X-4Z14G2Q-A/D variants.
- Unlabeled BGP PIC EDGE for global prefixes is not supported.
- The interface ports 0/0/0/24 to 0/0/0/31 do not support 1G Copper SFPs on N540-24Z8Q2C-SYS, N540-ACC-SYS, and N540X-ACC-SYS variants. Also, these ports do not support Auto-Negotiation with 1GE optical SFPs and they cannot act as 1GE Synchronous Ethernet sources.
- The interface ports 0/0/0/20 to 0/0/0/27 do not support 1G Copper SFPs on N540X-16Z4G8Q2C-A, N540X-16Z8Q2C-D, and N540X-16Z4G8Q2C-D variants. Also, these ports do not support Auto-Negotiation with 1GE optical SFPs and they cannot act as 1GE Synchronous Ethernet sources.

- The 1G ports on the N540-24Q8L2DD-SYS variant do not support Auto-Negotiation with 1GE optical SFPs.
- Remove the speed settings on the 1G Copper optics when 10M/100M is configured and replaced with 1G SFP optics.
- The **hw-module profile mfib statistics** command is not supported.

Caveats

There are no caveats in this release.

IOS XR Base Images and Optional Packages

For more information on system setup and software installation process, see System Setup and Software Installation Guide for Cisco NCS 540 Series Routers.

For general and ordering information see:

- Cisco Network Convergence System 540 Fronthaul Routers Data Sheet
- Cisco Network Convergence System 540 Large Density Router Data Sheet
- Cisco Network Convergence System 540 Medium Density Routers Data Sheet
- Cisco Network Convergence System 540 Small Density Router Data Sheet

To install the Cisco NCS 540 Series Routers, see Cisco NCS 540 Router Hardware Installation Guide.

Release 24.4.2 Software

The following tables list the supported base images and optional packages and their corresponding file names.

- The first table lists the supported software for N540-24Z8Q2C-SYS, N540-ACC-SYS, and N540X-ACC-SYS variants.
- The second table lists the supported software for N540-24Q8L2DD-SYS, N540X-16Z4G8Q2C-A/D, N540-28Z4C-SYS-A/D, N540X-12Z16G-SYS-A/D, N540-12Z20G-SYS-A/D, N540-FH-CSR-SYS, N540X-16Z8Q2C-D and N540-FH-AGG-SYS variants.
- The third table lists the supported software for N540X-4Z14G2Q-A/D, N540X-8Z16G-SYS-A/D, N540-6Z14S-SYS-D, N540-6Z18G-SYS-A/D, and N540X-6Z18G-SYS-A/D variants.

Visit the Cisco Software Download page to download the Cisco IOS XR software images.

Table 1: Release 24.4.2 Software for N540-24Z8Q2C-SYS, N540-ACC-SYS, and N540X-ACC-SYS

Base Image	Filename	Description
IOS XR Base Image	ncs540-mini-x-24.4.2.iso	IOS XR mandatory base image.

USB Boot Package	ncs540-usb_boot-24.4.2.zip	Package required to perform USB Boot. Includes the same packages as the base image.
Optional Packages not included in the base image		
Package	**Filename**	**Description**
IOS XR Manageability	ncs540-mgbl-1.0.0.0-r2442.x86_64.rpm	Supports Extensible Markup Language (XML) Parser, Telemetry, Netconf, gRPC and HTTP server
IOS XR MPLS	ncs540-mpls-1.0.0.0-r2442.x86_64.rpm ncs540-mpls-te-rsvp-1.0.0.0-r2442.x86_64.rpm	Supports MPLS and MPLS Traffic Engineering (MPLS-TE)
IOS XR Security	ncs540-k9sec-1.0.0.0-r2442.x86_64.rpm	Supports MACsec and 802.1X
IOS XR ISIS	ncs540-isis-1.0.0.0-r2442.x86_64.rpm	Supports ISIS
IOS XR OSPF	ncs540-ospf-1.0.0.0-r2442.x86_64.rpm	Supports OSPF
IOS XR Lawful Intercept	ncs540-li-1.0.0.0-r2442.x86_64.rpm	Supports Lawful Intercept (LI)
IOS XR Multicast	ncs540-mcast-1.0.0.0-r2442.x86_64.rpm	Supports Multicast
IOS XR EIGRP	ncs540-eigrp-1.0.0.0-r2442.x86_64.rpm	Supports EIGRP
IOS XR LI-CTRL	ncs540-lictrl-1.0.0.0-r2442.x86_64.rpm	Supports LI-CTRL

Table 2: Release 24.4.2 Software for N540-24Q8L2DD-SYS, N540X-16Z4G8Q2C-A/D, N540-28Z4C-SYS-A/D, N540X-12Z16G-SYS-A/D, N540-12Z20G-SYS-A/D, N540-FH-CSR-SYS, N540X-16Z8Q2C-D and N540-FH-AGG-SYS

Base Image	Filename	Description

IOS XR Base Image	ncs540l-x64-24.4.2.iso	IOS XR base image with mandatory packages. The base ISO image also includes the following optional packages: • xr-bgp • xr-cdp • xr-eigrp • xr-ipsla • xr-is-is • xr-k9sec • xr-lictrl • xr-lldp • xr-mcast • xr-mpls-oam • xr-netflow • xr-ospf • xr-perf-meas • xr-perfmgmt • xr-rip • xr-telnet • xr-track These optional packages are also included in NCS540l-iosxr-24.4.2.tar.
USB Boot Package	ncs540l-usb_boot-24.4.2.zip	Package required to perform USB Boot. Includes the same packages as the base image.
Optional Packages not included in the base image		
Package	**Filename**	**Description**
IOS XR Telnet (xr-telnet)	NCS540l-iosxr-optional-rpms-24.4.2.tar	Supports Telnet
IOS XR EIGRP (xr-eigrp)	NCS540l-iosxr-optional-rpms-24.4.2.tar	Supports EIGRP
IOS XR CDP (xr-cdp)	NCS540l-iosxr-optional-rpms-24.4.2.tar	Supports CDP
IOS XR k9sec (xr-k9sec)	NCS540l-k9sec-rpms.24.4.2.tar	Supports 802.1X

IOS XR RIP (xr-rip)	NCS540l-iosxr-optional-rpms-24.4.2.tar	Supports RIP

Table 3: Release 24.4.2 Software for N540X-4Z14G2Q-A/D, N540X-8Z16G-SYS-A/D, N540-6Z14S-SYS-D, N540-6Z18G-SYS-A/D, and N540X-6Z18G-SYS-A/D

Base Image	Filename	Description
IOS XR Base Image	ncs540l-aarch64-24.4.2.iso	IOS XR base image with mandatory packages. The ISO image also includes the following optional packages: • xr-bgp • xr-cdp • xr-eigrp • xr-ipsla • xr-is-is • xr-k9sec • xr-lictrl • xr-lldp • xr-mcast • xr-mpls-oam • xr-ncs540l-mcast • xr-ncs540l-netflow • xr-netflow • xr-ospf • xr-perf-meas • xr-perfmgmt • xr-rip • xr-telnet • xr-track These optional packages are also included in NCS540l aarch64 iosxr optional rpms-24.4.2.tar.
USB Boot Package	ncs540l-aarch64-usb_boot-24.4.2.zip	Package required to perform USB Boot. Includes the same packages as the base image.

Optional Packages not included in the base image		
Package	**Filename**	**Description**
IOS XR Telnet (xr-telnet)	NCS540l-aarch64-iosxr-optional-rpms-24.4.2.tar	Supports Telnet
IOS XR EIGRP (xr-eigrp)	NCS540l-aarch64-iosxr-optional-rpms-24.4.2.tar	Supports EIGRP
IOS XR CDP (xr-cdp)	NCS540l-aarch64-iosxr-optional-rpms-24.4.2.tar	Supports CDP
IOS XR k9sec (xr-k9sec)	NCS540l-aarch64-k9sec-rpms.24.4.2.tar	Supports 802.1X
IOS XR RIP (xr-rip)	NCS540l-aarch64-iosxr-optional-rpms-24.4.2.tar	Supports RIP

Determine Software Version

Log in to the router and enter the **show version** command on the N540-24Z8Q2C-SYS, N540-ACC-SYS, and N540X-ACC-SYS variants:

```
RP/0/RP0/CPU0:Router#show version
Cisco IOS XR Software, Version 24.4.2
Copyright (c) 2013-2024 by Cisco Systems, Inc.

Build Information:
 Built By     : swtools
 Built On     : Thu Mar 20 05:15:16 PDT 2025
 Built Host   : iox-lnx-125
 Workspace    : /auto/srcarchive11/prod/24.4.2/ncs540/ws
 Version      : 24.4.2
 Location     : /opt/cisco/XR/packages/
 Label        : 24.4.2

cisco NCS-540 () processor
System uptime is 1 hour 5 minutes
```

Log in to the router and enter the **show version** command on the N540X-4Z14G2Q-A/D, N540-6Z18G-SYS-A/D, N540X-8Z16G-SYS-A/D, N540-6Z14S-SYS-D, and N540X-6Z18G-SYS-A/D variants:

```
RP/0/RP0/CPU0:Router#show version
Cisco IOS XR Software, Version 24.4.2 LNT
Copyright (c) 2013-2024 by Cisco Systems, Inc.

Build Information:
 Built By     : cisco
 Built On     : Thu Mar 20 09:13:58 UTC 2025
 Build Host   : iox-lnx-117
 Workspace    : /auto/srcarchive11/prod/24.4.2/ncs540l/ws/
 Version      : 24.4.2
 Label        : 24.4.2

cisco NCS540L (C3508 @ 1.60GHz)
cisco N540-12Z20G-SYS-A (C3508 @ 1.60GHz) processor with 8GB of memory
NCS540L_ROUTER uptime is 2 hours, 3 minutes
Cisco NCS 540 Series Fixed Router 20 X 1G, 12X10/1G AC Chassis
```

Log in to the router and enter the **show version** command on the N540-24Q8L2DD-SYS variant:

```
RP/0/RP0/CPU0:Router#show version
Cisco IOS XR Software, Version 24.4.2 LNT
Copyright (c) 2013-2024 by Cisco Systems, Inc.
```

```
Build Information:
 Built By     : cisco
 Built On     : Thu Mar 20 09:13:58 UTC 2025
 Build Host   : iox-lnx-119
 Workspace    : /auto/srcarchive11/prod/24.4.2/ncs540l-aarch64/ws/
 Version      : 24.4.2
 Label        : 24.4.2

cisco NCS540L
cisco N540X-6Z18G-SYS-D processor with 8GB of memory
NCS540L-aarch64_ROUTER uptime is 2 hours, 6 minutes
Cisco NCS 540 Series Fixed Router 18x1G, 6x1/10G, DC
```

Determine Firmware Support

Use the show command in EXEC mode to view the hardware components with their current FPD version and status. The status of the hardware must be “CURRENT”; Running and Programed version must be the same. The Golden FPDs with “NEED UPGD” can be ignored, the Golden FPDs are not upgradable.

Log in to the router and enter the **show fpd package** and **show hw-module fpd** commands on the Cisco N540-24Z8Q2C-SYS, N540X-ACC-SYS, and N540-ACC-SYS variants:



Note If the **Req Reload** field is mentioned as **Yes** in the output, then it indicates the need for a router reboot for the FPD's latest version to take effect.

```
RP/0/RP0/CPU0:Router#show fpd package

================================ ============================================
                                        Field Programmable Device Package
                                 ============================================
                                              Req      SW       Min Req   Min Req
Card Type            FPD Description          Reload   Ver      SW Ver    Board Ver
==================== ======================== ====== ======= ======== =========
--------------------------------------------------------------------------------
N540-24Z8Q2C-M       Bootloader(A)             YES     1.18      1.18       0.0
                     CPU-IOFPGA(A)             YES     0.10      0.10       0.0
                     MB-IOFPGA(A)              YES     0.28      0.28       0.0
                     MB-MIFPGA                 YES     0.08      0.08       0.0
                     SATA-INTEL_240G(A)        NO    1132.00   1132.00     0.0
                     SATA-INTEL_480G(A)        NO    1132.00   1132.00     0.0
                     SATA-M1100(A)             NO     50.00     50.00      0.0
                     SATA-M500IT-MC(A)         NO      3.00      3.00      0.0
                     SATA-M500IT-MU-A(A)       NO      5.00      5.00      0.0
                     SATA-M500IT-MU-B(A)       NO      4.00      4.00      0.0
                     SATA-M5100(A)             NO     75.00     75.00      0.0
                     SATA-M600-MCT(A)          NO      5.00      5.00      0.0
                     SATA-M600-MU(A)           NO      6.00      6.00      0.0
                     SATA-Micron(A)            NO      1.00      1.00      0.0
                     SATA-SMART-128G(A)        NO    1535.00   1535.00     0.0
                     SATA-SOLIDIGM-240G(A)     NO    130.00    130.00      0.0
                     SATA-SOLIDIGM-480G(A)     NO    130.00    130.00      0.0
                     SSFP_E1F_0                NO     13.01     13.01      0.0
                     SSFP_E1F_1                NO     13.01     13.01      0.0
                     SSFP_E1F_10               NO     13.01     13.01      0.0
                     SSFP_E1F_11               NO     13.01     13.01      0.0
                     SSFP_E1F_12               NO     13.01     13.01      0.0
                     SSFP_E1F_13               NO     13.01     13.01      0.0
                     SSFP_E1F_14               NO     13.01     13.01      0.0
```

SSFP_E1F_15	NO	13.01	13.01	0.0
SSFP_E1F_16	NO	13.01	13.01	0.0
SSFP_E1F_17	NO	13.01	13.01	0.0
SSFP_E1F_18	NO	13.01	13.01	0.0
SSFP_E1F_19	NO	13.01	13.01	0.0
SSFP_E1F_2	NO	13.01	13.01	0.0
SSFP_E1F_20	NO	13.01	13.01	0.0
SSFP_E1F_21	NO	13.01	13.01	0.0
SSFP_E1F_22	NO	13.01	13.01	0.0
SSFP_E1F_23	NO	13.01	13.01	0.0
SSFP_E1F_24	NO	13.01	13.01	0.0
SSFP_E1F_25	NO	13.01	13.01	0.0
SSFP_E1F_26	NO	13.01	13.01	0.0
SSFP_E1F_27	NO	13.01	13.01	0.0
SSFP_E1F_28	NO	13.01	13.01	0.0
SSFP_E1F_29	NO	13.01	13.01	0.0
SSFP_E1F_3	NO	13.01	13.01	0.0
SSFP_E1F_30	NO	13.01	13.01	0.0
SSFP_E1F_31	NO	13.01	13.01	0.0
SSFP_E1F_32	NO	13.01	13.01	0.0
SSFP_E1F_33	NO	13.01	13.01	0.0
SSFP_E1F_34	NO	13.01	13.01	0.0
SSFP_E1F_35	NO	13.01	13.01	0.0
SSFP_E1F_36	NO	13.01	13.01	0.0
SSFP_E1F_37	NO	13.01	13.01	0.0
SSFP_E1F_38	NO	13.01	13.01	0.0
SSFP_E1F_39	NO	13.01	13.01	0.0
SSFP_E1F_4	NO	13.01	13.01	0.0
SSFP_E1F_40	NO	13.01	13.01	0.0
SSFP_E1F_41	NO	13.01	13.01	0.0
SSFP_E1F_42	NO	13.01	13.01	0.0
SSFP_E1F_43	NO	13.01	13.01	0.0
SSFP_E1F_44	NO	13.01	13.01	0.0
SSFP_E1F_45	NO	13.01	13.01	0.0
SSFP_E1F_46	NO	13.01	13.01	0.0
SSFP_E1F_47	NO	13.01	13.01	0.0
SSFP_E1F_5	NO	13.01	13.01	0.0
SSFP_E1F_6	NO	13.01	13.01	0.0
SSFP_E1F_7	NO	13.01	13.01	0.0
SSFP_E1F_8	NO	13.01	13.01	0.0
SSFP_E1F_9	NO	13.01	13.01	0.0
SSFP_OC3_STM1_0	NO	12.01	12.01	0.0
SSFP_OC3_STM1_1	NO	12.01	12.01	0.0
SSFP_OC3_STM1_10	NO	12.01	12.01	0.0
SSFP_OC3_STM1_11	NO	12.01	12.01	0.0
SSFP_OC3_STM1_12	NO	12.01	12.01	0.0
SSFP_OC3_STM1_13	NO	12.01	12.01	0.0
SSFP_OC3_STM1_14	NO	12.01	12.01	0.0
SSFP_OC3_STM1_15	NO	12.01	12.01	0.0
SSFP_OC3_STM1_16	NO	12.01	12.01	0.0
SSFP_OC3_STM1_17	NO	12.01	12.01	0.0
SSFP_OC3_STM1_18	NO	12.01	12.01	0.0
SSFP_OC3_STM1_19	NO	12.01	12.01	0.0
SSFP_OC3_STM1_2	NO	12.01	12.01	0.0
SSFP_OC3_STM1_20	NO	12.01	12.01	0.0
SSFP_OC3_STM1_21	NO	12.01	12.01	0.0
SSFP_OC3_STM1_22	NO	12.01	12.01	0.0
SSFP_OC3_STM1_23	NO	12.01	12.01	0.0
SSFP_OC3_STM1_24	NO	12.01	12.01	0.0
SSFP_OC3_STM1_25	NO	12.01	12.01	0.0
SSFP_OC3_STM1_26	NO	12.01	12.01	0.0
SSFP_OC3_STM1_27	NO	12.01	12.01	0.0
SSFP_OC3_STM1_28	NO	12.01	12.01	0.0
SSFP_OC3_STM1_29	NO	12.01	12.01	0.0

SSFP_OC3_STM1_3	NO	12.01	12.01	0.0
SSFP_OC3_STM1_30	NO	12.01	12.01	0.0
SSFP_OC3_STM1_31	NO	12.01	12.01	0.0
SSFP_OC3_STM1_32	NO	12.01	12.01	0.0
SSFP_OC3_STM1_33	NO	12.01	12.01	0.0
SSFP_OC3_STM1_34	NO	12.01	12.01	0.0
SSFP_OC3_STM1_35	NO	12.01	12.01	0.0
SSFP_OC3_STM1_36	NO	12.01	12.01	0.0
SSFP_OC3_STM1_37	NO	12.01	12.01	0.0
SSFP_OC3_STM1_38	NO	12.01	12.01	0.0
SSFP_OC3_STM1_39	NO	12.01	12.01	0.0
SSFP_OC3_STM1_4	NO	12.01	12.01	0.0
SSFP_OC3_STM1_40	NO	12.01	12.01	0.0
SSFP_OC3_STM1_41	NO	12.01	12.01	0.0
SSFP_OC3_STM1_42	NO	12.01	12.01	0.0
SSFP_OC3_STM1_43	NO	12.01	12.01	0.0
SSFP_OC3_STM1_44	NO	12.01	12.01	0.0
SSFP_OC3_STM1_45	NO	12.01	12.01	0.0
SSFP_OC3_STM1_46	NO	12.01	12.01	0.0
SSFP_OC3_STM1_47	NO	12.01	12.01	0.0
SSFP_OC3_STM1_5	NO	12.01	12.01	0.0
SSFP_OC3_STM1_6	NO	12.01	12.01	0.0
SSFP_OC3_STM1_7	NO	12.01	12.01	0.0
SSFP_OC3_STM1_8	NO	12.01	12.01	0.0
SSFP_OC3_STM1_9	NO	12.01	12.01	0.0
SSFP_STM1_TSOP_0	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_1	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_10	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_11	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_12	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_13	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_14	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_15	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_16	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_17	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_18	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_19	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_2	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_20	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_21	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_22	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_23	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_24	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_25	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_26	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_27	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_28	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_29	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_3	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_30	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_31	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_32	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_33	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_34	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_35	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_36	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_37	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_38	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_39	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_4	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_40	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_41	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_42	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_43	NO	13.00	13.00	0.0

	SSFP_STM1_TSOP_44	NO	13.00	13.00	0.0
	SSFP_STM1_TSOP_45	NO	13.00	13.00	0.0
	SSFP_STM1_TSOP_46	NO	13.00	13.00	0.0
	SSFP_STM1_TSOP_47	NO	13.00	13.00	0.0
	SSFP_STM1_TSOP_5	NO	13.00	13.00	0.0
	SSFP_STM1_TSOP_6	NO	13.00	13.00	0.0
	SSFP_STM1_TSOP_7	NO	13.00	13.00	0.0
	SSFP_STM1_TSOP_8	NO	13.00	13.00	0.0
	SSFP_STM1_TSOP_9	NO	13.00	13.00	0.0
N540-ACC-SYS	Bootloader(A)	YES	1.18	1.18	0.0
	CPU-IOFPGA(A)	YES	0.10	0.10	0.0
	MB-IOFPGA(A)	YES	0.28	0.28	0.0
	MB-MIFPGA	YES	0.08	0.08	0.0
	SATA-INTEL_240G(A)	NO	1132.00	1132.00	0.0
	SATA-INTEL_480G(A)	NO	1132.00	1132.00	0.0
	SATA-M1100(A)	NO	50.00	50.00	0.0
	SATA-M500IT-MC(A)	NO	3.00	3.00	0.0
	SATA-M500IT-MU-A(A)	NO	5.00	5.00	0.0
	SATA-M500IT-MU-B(A)	NO	4.00	4.00	0.0
	SATA-M5100(A)	NO	75.00	75.00	0.0
	SATA-M600-MCT(A)	NO	5.00	5.00	0.0
	SATA-M600-MU(A)	NO	6.00	6.00	0.0
	SATA-Micron(A)	NO	1.00	1.00	0.0
	SATA-SMART-128G(A)	NO	1535.00	1535.00	0.0
	SATA-SOLIDIGM-240G(A)	NO	130.00	130.00	0.0
	SATA-SOLIDIGM-480G(A)	NO	130.00	130.00	0.0
	SSFP_E1F_0	NO	13.01	13.01	0.0
	SSFP_E1F_1	NO	13.01	13.01	0.0
	SSFP_E1F_10	NO	13.01	13.01	0.0
	SSFP_E1F_11	NO	13.01	13.01	0.0
	SSFP_E1F_12	NO	13.01	13.01	0.0
	SSFP_E1F_13	NO	13.01	13.01	0.0
	SSFP_E1F_14	NO	13.01	13.01	0.0
	SSFP_E1F_15	NO	13.01	13.01	0.0
	SSFP_E1F_16	NO	13.01	13.01	0.0
	SSFP_E1F_17	NO	13.01	13.01	0.0
	SSFP_E1F_18	NO	13.01	13.01	0.0
	SSFP_E1F_19	NO	13.01	13.01	0.0
	SSFP_E1F_2	NO	13.01	13.01	0.0
	SSFP_E1F_20	NO	13.01	13.01	0.0
	SSFP_E1F_21	NO	13.01	13.01	0.0
	SSFP_E1F_22	NO	13.01	13.01	0.0
	SSFP_E1F_23	NO	13.01	13.01	0.0
	SSFP_E1F_24	NO	13.01	13.01	0.0
	SSFP_E1F_25	NO	13.01	13.01	0.0
	SSFP_E1F_26	NO	13.01	13.01	0.0
	SSFP_E1F_27	NO	13.01	13.01	0.0
	SSFP_E1F_28	NO	13.01	13.01	0.0
	SSFP_E1F_29	NO	13.01	13.01	0.0
	SSFP_E1F_3	NO	13.01	13.01	0.0
	SSFP_E1F_30	NO	13.01	13.01	0.0
	SSFP_E1F_31	NO	13.01	13.01	0.0
	SSFP_E1F_32	NO	13.01	13.01	0.0
	SSFP_E1F_33	NO	13.01	13.01	0.0
	SSFP_E1F_34	NO	13.01	13.01	0.0
	SSFP_E1F_35	NO	13.01	13.01	0.0
	SSFP_E1F_36	NO	13.01	13.01	0.0
	SSFP_E1F_37	NO	13.01	13.01	0.0
	SSFP_E1F_38	NO	13.01	13.01	0.0
	SSFP_E1F_39	NO	13.01	13.01	0.0
	SSFP_E1F_4	NO	13.01	13.01	0.0
	SSFP_E1F_40	NO	13.01	13.01	0.0
	SSFP_E1F_41	NO	13.01	13.01	0.0

SSFP_E1F_42	NO	13.01	13.01	0.0
SSFP_E1F_43	NO	13.01	13.01	0.0
SSFP_E1F_44	NO	13.01	13.01	0.0
SSFP_E1F_45	NO	13.01	13.01	0.0
SSFP_E1F_46	NO	13.01	13.01	0.0
SSFP_E1F_47	NO	13.01	13.01	0.0
SSFP_E1F_5	NO	13.01	13.01	0.0
SSFP_E1F_6	NO	13.01	13.01	0.0
SSFP_E1F_7	NO	13.01	13.01	0.0
SSFP_E1F_8	NO	13.01	13.01	0.0
SSFP_E1F_9	NO	13.01	13.01	0.0
SSFP_OC3_STM1_0	NO	12.01	12.01	0.0
SSFP_OC3_STM1_1	NO	12.01	12.01	0.0
SSFP_OC3_STM1_10	NO	12.01	12.01	0.0
SSFP_OC3_STM1_11	NO	12.01	12.01	0.0
SSFP_OC3_STM1_12	NO	12.01	12.01	0.0
SSFP_OC3_STM1_13	NO	12.01	12.01	0.0
SSFP_OC3_STM1_14	NO	12.01	12.01	0.0
SSFP_OC3_STM1_15	NO	12.01	12.01	0.0
SSFP_OC3_STM1_16	NO	12.01	12.01	0.0
SSFP_OC3_STM1_17	NO	12.01	12.01	0.0
SSFP_OC3_STM1_18	NO	12.01	12.01	0.0
SSFP_OC3_STM1_19	NO	12.01	12.01	0.0
SSFP_OC3_STM1_2	NO	12.01	12.01	0.0
SSFP_OC3_STM1_20	NO	12.01	12.01	0.0
SSFP_OC3_STM1_21	NO	12.01	12.01	0.0
SSFP_OC3_STM1_22	NO	12.01	12.01	0.0
SSFP_OC3_STM1_23	NO	12.01	12.01	0.0
SSFP_OC3_STM1_24	NO	12.01	12.01	0.0
SSFP_OC3_STM1_25	NO	12.01	12.01	0.0
SSFP_OC3_STM1_26	NO	12.01	12.01	0.0
SSFP_OC3_STM1_27	NO	12.01	12.01	0.0
SSFP_OC3_STM1_28	NO	12.01	12.01	0.0
SSFP_OC3_STM1_29	NO	12.01	12.01	0.0
SSFP_OC3_STM1_3	NO	12.01	12.01	0.0
SSFP_OC3_STM1_30	NO	12.01	12.01	0.0
SSFP_OC3_STM1_31	NO	12.01	12.01	0.0
SSFP_OC3_STM1_32	NO	12.01	12.01	0.0
SSFP_OC3_STM1_33	NO	12.01	12.01	0.0
SSFP_OC3_STM1_34	NO	12.01	12.01	0.0
SSFP_OC3_STM1_35	NO	12.01	12.01	0.0
SSFP_OC3_STM1_36	NO	12.01	12.01	0.0
SSFP_OC3_STM1_37	NO	12.01	12.01	0.0
SSFP_OC3_STM1_38	NO	12.01	12.01	0.0
SSFP_OC3_STM1_39	NO	12.01	12.01	0.0
SSFP_OC3_STM1_4	NO	12.01	12.01	0.0
SSFP_OC3_STM1_40	NO	12.01	12.01	0.0
SSFP_OC3_STM1_41	NO	12.01	12.01	0.0
SSFP_OC3_STM1_42	NO	12.01	12.01	0.0
SSFP_OC3_STM1_43	NO	12.01	12.01	0.0
SSFP_OC3_STM1_44	NO	12.01	12.01	0.0
SSFP_OC3_STM1_45	NO	12.01	12.01	0.0
SSFP_OC3_STM1_46	NO	12.01	12.01	0.0
SSFP_OC3_STM1_47	NO	12.01	12.01	0.0
SSFP_OC3_STM1_5	NO	12.01	12.01	0.0
SSFP_OC3_STM1_6	NO	12.01	12.01	0.0
SSFP_OC3_STM1_7	NO	12.01	12.01	0.0
SSFP_OC3_STM1_8	NO	12.01	12.01	0.0
SSFP_OC3_STM1_9	NO	12.01	12.01	0.0
SSFP_STM1_TSOP_0	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_1	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_10	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_11	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_12	NO	13.00	13.00	0.0

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                      SSFP_STM1_TSOP_13          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_14          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_15          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_16          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_17          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_18          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_19          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_2           NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_20          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_21          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_22          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_23          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_24          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_25          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_26          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_27          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_28          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_29          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_3           NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_30          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_31          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_32          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_33          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_34          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_35          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_36          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_37          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_38          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_39          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_4           NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_40          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_41          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_42          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_43          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_44          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_45          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_46          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_47          NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_5           NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_6           NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_7           NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_8           NO     13.00     13.00      0.0
                      SSFP_STM1_TSOP_9           NO     13.00     13.00      0.0
--------------------------------------------------------------------------------
N540-PWR400-A         LIT-PriMCU-ACFW(A)         NO      0.04      0.04      0.0
                      LIT-SecMCU-ACFW(A)         NO      0.07      0.07      0.0
--------------------------------------------------------------------------------
N540-PWR400-D         LIT-PriMCU-DCFW(A)         NO      0.04      0.04      0.0
                      LIT-SecMCU-DCFW(A)         NO      0.06      0.06      0.0
                      SDG-PriMCU-DCFW(A)         NO      1.03      1.03      0.0
                      SDG-SecMCU-DCFW(A)         NO      1.03      1.03      0.0
--------------------------------------------------------------------------------
N540-X-24Z8Q2C-M      Bootloader(A)              YES     1.18      1.18      0.0
                      CPU-IOFPGA(A)              YES     0.10      0.10      0.0
                      MB-IOFPGA(A)               YES     0.28      0.28      0.0
                      MB-MIFPGA                  YES     0.08      0.08      0.0
                      SATA-INTEL_240G(A)         NO    1132.00   1132.00     0.0
                      SATA-INTEL_480G(A)         NO    1132.00   1132.00     0.0
                      SATA-M1100(A)              NO      50.00     50.00     0.0
                      SATA-M500IT-MC(A)          NO       3.00      3.00     0.0
                      SATA-M500IT-MU-A(A)        NO       5.00      5.00     0.0
                      SATA-M500IT-MU-B(A)        NO       4.00      4.00     0.0
                      SATA-M5100(A)              NO      75.00     75.00     0.0
                      SATA-M600-MCT(A)           NO       5.00      5.00     0.0
```

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SATA-M600-MU(A)             NO      6.00      6.00      0.0
SATA-Micron(A)              NO      1.00      1.00      0.0
SATA-SMART-128G(A)          NO   1535.00   1535.00      0.0
SATA-SOLIDIGM-240G(A)       NO    130.00    130.00      0.0
SATA-SOLIDIGM-480G(A)       NO    130.00    130.00      0.0
SSFP_E1F_0                  NO     13.01     13.01      0.0
SSFP_E1F_1                  NO     13.01     13.01      0.0
SSFP_E1F_10                 NO     13.01     13.01      0.0
SSFP_E1F_11                 NO     13.01     13.01      0.0
SSFP_E1F_12                 NO     13.01     13.01      0.0
SSFP_E1F_13                 NO     13.01     13.01      0.0
SSFP_E1F_14                 NO     13.01     13.01      0.0
SSFP_E1F_15                 NO     13.01     13.01      0.0
SSFP_E1F_16                 NO     13.01     13.01      0.0
SSFP_E1F_17                 NO     13.01     13.01      0.0
SSFP_E1F_18                 NO     13.01     13.01      0.0
SSFP_E1F_19                 NO     13.01     13.01      0.0
SSFP_E1F_2                  NO     13.01     13.01      0.0
SSFP_E1F_20                 NO     13.01     13.01      0.0
SSFP_E1F_21                 NO     13.01     13.01      0.0
SSFP_E1F_22                 NO     13.01     13.01      0.0
SSFP_E1F_23                 NO     13.01     13.01      0.0
SSFP_E1F_24                 NO     13.01     13.01      0.0
SSFP_E1F_25                 NO     13.01     13.01      0.0
SSFP_E1F_26                 NO     13.01     13.01      0.0
SSFP_E1F_27                 NO     13.01     13.01      0.0
SSFP_E1F_28                 NO     13.01     13.01      0.0
SSFP_E1F_29                 NO     13.01     13.01      0.0
SSFP_E1F_3                  NO     13.01     13.01      0.0
SSFP_E1F_30                 NO     13.01     13.01      0.0
SSFP_E1F_31                 NO     13.01     13.01      0.0
SSFP_E1F_32                 NO     13.01     13.01      0.0
SSFP_E1F_33                 NO     13.01     13.01      0.0
SSFP_E1F_34                 NO     13.01     13.01      0.0
SSFP_E1F_35                 NO     13.01     13.01      0.0
SSFP_E1F_36                 NO     13.01     13.01      0.0
SSFP_E1F_37                 NO     13.01     13.01      0.0
SSFP_E1F_38                 NO     13.01     13.01      0.0
SSFP_E1F_39                 NO     13.01     13.01      0.0
SSFP_E1F_4                  NO     13.01     13.01      0.0
SSFP_E1F_40                 NO     13.01     13.01      0.0
SSFP_E1F_41                 NO     13.01     13.01      0.0
SSFP_E1F_42                 NO     13.01     13.01      0.0
SSFP_E1F_43                 NO     13.01     13.01      0.0
SSFP_E1F_44                 NO     13.01     13.01      0.0
SSFP_E1F_45                 NO     13.01     13.01      0.0
SSFP_E1F_46                 NO     13.01     13.01      0.0
SSFP_E1F_47                 NO     13.01     13.01      0.0
SSFP_E1F_5                  NO     13.01     13.01      0.0
SSFP_E1F_6                  NO     13.01     13.01      0.0
SSFP_E1F_7                  NO     13.01     13.01      0.0
SSFP_E1F_8                  NO     13.01     13.01      0.0
SSFP_E1F_9                  NO     13.01     13.01      0.0
SSFP_OC3_STM1_0             NO     12.01     12.01      0.0
SSFP_OC3_STM1_1             NO     12.01     12.01      0.0
SSFP_OC3_STM1_10            NO     12.01     12.01      0.0
SSFP_OC3_STM1_11            NO     12.01     12.01      0.0
SSFP_OC3_STM1_12            NO     12.01     12.01      0.0
SSFP_OC3_STM1_13            NO     12.01     12.01      0.0
SSFP_OC3_STM1_14            NO     12.01     12.01      0.0
SSFP_OC3_STM1_15            NO     12.01     12.01      0.0
SSFP_OC3_STM1_16            NO     12.01     12.01      0.0
SSFP_OC3_STM1_17            NO     12.01     12.01      0.0
SSFP_OC3_STM1_18            NO     12.01     12.01      0.0
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SSFP_OC3_STM1_19	NO	12.01	12.01	0.0
SSFP_OC3_STM1_2	NO	12.01	12.01	0.0
SSFP_OC3_STM1_20	NO	12.01	12.01	0.0
SSFP_OC3_STM1_21	NO	12.01	12.01	0.0
SSFP_OC3_STM1_22	NO	12.01	12.01	0.0
SSFP_OC3_STM1_23	NO	12.01	12.01	0.0
SSFP_OC3_STM1_24	NO	12.01	12.01	0.0
SSFP_OC3_STM1_25	NO	12.01	12.01	0.0
SSFP_OC3_STM1_26	NO	12.01	12.01	0.0
SSFP_OC3_STM1_27	NO	12.01	12.01	0.0
SSFP_OC3_STM1_28	NO	12.01	12.01	0.0
SSFP_OC3_STM1_29	NO	12.01	12.01	0.0
SSFP_OC3_STM1_3	NO	12.01	12.01	0.0
SSFP_OC3_STM1_30	NO	12.01	12.01	0.0
SSFP_OC3_STM1_31	NO	12.01	12.01	0.0
SSFP_OC3_STM1_32	NO	12.01	12.01	0.0
SSFP_OC3_STM1_33	NO	12.01	12.01	0.0
SSFP_OC3_STM1_34	NO	12.01	12.01	0.0
SSFP_OC3_STM1_35	NO	12.01	12.01	0.0
SSFP_OC3_STM1_36	NO	12.01	12.01	0.0
SSFP_OC3_STM1_37	NO	12.01	12.01	0.0
SSFP_OC3_STM1_38	NO	12.01	12.01	0.0
SSFP_OC3_STM1_39	NO	12.01	12.01	0.0
SSFP_OC3_STM1_4	NO	12.01	12.01	0.0
SSFP_OC3_STM1_40	NO	12.01	12.01	0.0
SSFP_OC3_STM1_41	NO	12.01	12.01	0.0
SSFP_OC3_STM1_42	NO	12.01	12.01	0.0
SSFP_OC3_STM1_43	NO	12.01	12.01	0.0
SSFP_OC3_STM1_44	NO	12.01	12.01	0.0
SSFP_OC3_STM1_45	NO	12.01	12.01	0.0
SSFP_OC3_STM1_46	NO	12.01	12.01	0.0
SSFP_OC3_STM1_47	NO	12.01	12.01	0.0
SSFP_OC3_STM1_5	NO	12.01	12.01	0.0
SSFP_OC3_STM1_6	NO	12.01	12.01	0.0
SSFP_OC3_STM1_7	NO	12.01	12.01	0.0
SSFP_OC3_STM1_8	NO	12.01	12.01	0.0
SSFP_OC3_STM1_9	NO	12.01	12.01	0.0
SSFP_STM1_TSOP_0	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_1	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_10	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_11	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_12	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_13	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_14	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_15	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_16	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_17	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_18	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_19	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_2	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_20	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_21	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_22	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_23	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_24	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_25	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_26	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_27	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_28	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_29	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_3	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_30	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_31	NO	13.00	13.00	0.0
SSFP_STM1_TSOP_32	NO	13.00	13.00	0.0

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                    SSFP_STM1_TSOP_33          NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_34          NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_35          NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_36          NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_37          NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_38          NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_39          NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_4           NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_40          NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_41          NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_42          NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_43          NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_44          NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_45          NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_46          NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_47          NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_5           NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_6           NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_7           NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_8           NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_9           NO     13.00     13.00      0.0
--------------------------------------------------------------------------------
N540X-ACC-SYS       Bootloader(A)              YES     1.18      1.18      0.0
                    CPU-IOFPGA(A)              YES     0.10      0.10      0.0
                    MB-IOFPGA(A)               YES     0.28      0.28      0.0
                    MB-MIFPGA                  YES     0.08      0.08      0.0
                    SATA-INTEL_240G(A)         NO    1132.00   1132.00     0.0
                    SATA-INTEL_480G(A)         NO    1132.00   1132.00     0.0
                    SATA-M1100(A)              NO     50.00     50.00      0.0
                    SATA-M500IT-MC(A)          NO      3.00      3.00      0.0
                    SATA-M500IT-MU-A(A)        NO      5.00      5.00      0.0
                    SATA-M500IT-MU-B(A)        NO      4.00      4.00      0.0
                    SATA-M5100(A)              NO     75.00     75.00      0.0
                    SATA-M600-MCT(A)           NO      5.00      5.00      0.0
                    SATA-M600-MU(A)            NO      6.00      6.00      0.0
                    SATA-Micron(A)             NO      1.00      1.00      0.0
                    SATA-SMART-128G(A)         NO    1535.00   1535.00     0.0
                    SATA-SOLIDIGM-240G(A)      NO    130.00    130.00      0.0
                    SATA-SOLIDIGM-480G(A)      NO    130.00    130.00      0.0
                    SSFP_E1F_0                 NO     13.01     13.01      0.0
                    SSFP_E1F_1                 NO     13.01     13.01      0.0
                    SSFP_E1F_10                NO     13.01     13.01      0.0
                    SSFP_E1F_11                NO     13.01     13.01      0.0
                    SSFP_E1F_12                NO     13.01     13.01      0.0
                    SSFP_E1F_13                NO     13.01     13.01      0.0
                    SSFP_E1F_14                NO     13.01     13.01      0.0
                    SSFP_E1F_15                NO     13.01     13.01      0.0
                    SSFP_E1F_16                NO     13.01     13.01      0.0
                    SSFP_E1F_17                NO     13.01     13.01      0.0
                    SSFP_E1F_18                NO     13.01     13.01      0.0
                    SSFP_E1F_19                NO     13.01     13.01      0.0
                    SSFP_E1F_2                 NO     13.01     13.01      0.0
                    SSFP_E1F_20                NO     13.01     13.01      0.0
                    SSFP_E1F_21                NO     13.01     13.01      0.0
                    SSFP_E1F_22                NO     13.01     13.01      0.0
                    SSFP_E1F_23                NO     13.01     13.01      0.0
                    SSFP_E1F_24                NO     13.01     13.01      0.0
                    SSFP_E1F_25                NO     13.01     13.01      0.0
                    SSFP_E1F_26                NO     13.01     13.01      0.0
                    SSFP_E1F_27                NO     13.01     13.01      0.0
                    SSFP_E1F_28                NO     13.01     13.01      0.0
                    SSFP_E1F_29                NO     13.01     13.01      0.0
                    SSFP_E1F_3                 NO     13.01     13.01      0.0
                    SSFP_E1F_30                NO     13.01     13.01      0.0
```

SSFP_E1F_31	NO	13.01	13.01	0.0
SSFP_E1F_32	NO	13.01	13.01	0.0
SSFP_E1F_33	NO	13.01	13.01	0.0
SSFP_E1F_34	NO	13.01	13.01	0.0
SSFP_E1F_35	NO	13.01	13.01	0.0
SSFP_E1F_36	NO	13.01	13.01	0.0
SSFP_E1F_37	NO	13.01	13.01	0.0
SSFP_E1F_38	NO	13.01	13.01	0.0
SSFP_E1F_39	NO	13.01	13.01	0.0
SSFP_E1F_4	NO	13.01	13.01	0.0
SSFP_E1F_40	NO	13.01	13.01	0.0
SSFP_E1F_41	NO	13.01	13.01	0.0
SSFP_E1F_42	NO	13.01	13.01	0.0
SSFP_E1F_43	NO	13.01	13.01	0.0
SSFP_E1F_44	NO	13.01	13.01	0.0
SSFP_E1F_45	NO	13.01	13.01	0.0
SSFP_E1F_46	NO	13.01	13.01	0.0
SSFP_E1F_47	NO	13.01	13.01	0.0
SSFP_E1F_5	NO	13.01	13.01	0.0
SSFP_E1F_6	NO	13.01	13.01	0.0
SSFP_E1F_7	NO	13.01	13.01	0.0
SSFP_E1F_8	NO	13.01	13.01	0.0
SSFP_E1F_9	NO	13.01	13.01	0.0
SSFP_OC3_STM1_0	NO	12.01	12.01	0.0
SSFP_OC3_STM1_1	NO	12.01	12.01	0.0
SSFP_OC3_STM1_10	NO	12.01	12.01	0.0
SSFP_OC3_STM1_11	NO	12.01	12.01	0.0
SSFP_OC3_STM1_12	NO	12.01	12.01	0.0
SSFP_OC3_STM1_13	NO	12.01	12.01	0.0
SSFP_OC3_STM1_14	NO	12.01	12.01	0.0
SSFP_OC3_STM1_15	NO	12.01	12.01	0.0
SSFP_OC3_STM1_16	NO	12.01	12.01	0.0
SSFP_OC3_STM1_17	NO	12.01	12.01	0.0
SSFP_OC3_STM1_18	NO	12.01	12.01	0.0
SSFP_OC3_STM1_19	NO	12.01	12.01	0.0
SSFP_OC3_STM1_2	NO	12.01	12.01	0.0
SSFP_OC3_STM1_20	NO	12.01	12.01	0.0
SSFP_OC3_STM1_21	NO	12.01	12.01	0.0
SSFP_OC3_STM1_22	NO	12.01	12.01	0.0
SSFP_OC3_STM1_23	NO	12.01	12.01	0.0
SSFP_OC3_STM1_24	NO	12.01	12.01	0.0
SSFP_OC3_STM1_25	NO	12.01	12.01	0.0
SSFP_OC3_STM1_26	NO	12.01	12.01	0.0
SSFP_OC3_STM1_27	NO	12.01	12.01	0.0
SSFP_OC3_STM1_28	NO	12.01	12.01	0.0
SSFP_OC3_STM1_29	NO	12.01	12.01	0.0
SSFP_OC3_STM1_3	NO	12.01	12.01	0.0
SSFP_OC3_STM1_30	NO	12.01	12.01	0.0
SSFP_OC3_STM1_31	NO	12.01	12.01	0.0
SSFP_OC3_STM1_32	NO	12.01	12.01	0.0
SSFP_OC3_STM1_33	NO	12.01	12.01	0.0
SSFP_OC3_STM1_34	NO	12.01	12.01	0.0
SSFP_OC3_STM1_35	NO	12.01	12.01	0.0
SSFP_OC3_STM1_36	NO	12.01	12.01	0.0
SSFP_OC3_STM1_37	NO	12.01	12.01	0.0
SSFP_OC3_STM1_38	NO	12.01	12.01	0.0
SSFP_OC3_STM1_39	NO	12.01	12.01	0.0
SSFP_OC3_STM1_4	NO	12.01	12.01	0.0
SSFP_OC3_STM1_40	NO	12.01	12.01	0.0
SSFP_OC3_STM1_41	NO	12.01	12.01	0.0
SSFP_OC3_STM1_42	NO	12.01	12.01	0.0
SSFP_OC3_STM1_43	NO	12.01	12.01	0.0
SSFP_OC3_STM1_44	NO	12.01	12.01	0.0
SSFP_OC3_STM1_45	NO	12.01	12.01	0.0

```
                    SSFP_OC3_STM1_46          NO     12.01     12.01      0.0
                    SSFP_OC3_STM1_47          NO     12.01     12.01      0.0
                    SSFP_OC3_STM1_5           NO     12.01     12.01      0.0
                    SSFP_OC3_STM1_6           NO     12.01     12.01      0.0
                    SSFP_OC3_STM1_7           NO     12.01     12.01      0.0
                    SSFP_OC3_STM1_8           NO     12.01     12.01      0.0
                    SSFP_OC3_STM1_9           NO     12.01     12.01      0.0
                    SSFP_STM1_TSOP_0          NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_1          NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_10         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_11         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_12         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_13         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_14         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_15         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_16         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_17         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_18         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_19         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_2          NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_20         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_21         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_22         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_23         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_24         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_25         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_26         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_27         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_28         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_29         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_3          NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_30         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_31         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_32         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_33         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_34         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_35         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_36         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_37         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_38         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_39         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_4          NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_40         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_41         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_42         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_43         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_44         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_45         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_46         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_47         NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_5          NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_6          NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_7          NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_8          NO     13.00     13.00      0.0
                    SSFP_STM1_TSOP_9          NO     13.00     13.00      0.0

RP/0/RP0/CPU0:Router#show hw-module fpd
Auto-upgrade:Enabled
                                                  FPD Versions
                                                 ==============
Location   Card type              HWver FPD device       ATR Status    Running   Programd
-------------------------------------------------------------------------------------------

0/RP0      N540-ACC-SYS           1.0   MB-MIFPGA             CURRENT     0.08      0.08

0/RP0      N540-ACC-SYS           1.0   Bootloader            CURRENT     1.18      1.18
```

```
0/RP0      N540-ACC-SYS          1.0   CPU-IOFPGA            CURRENT     0.10      0.10

0/RP0      N540-ACC-SYS          1.0   MB-IOFPGA             CURRENT     0.28      0.28

0/RP0      N540-ACC-SYS          1.0   SATA-M500IT-MU-B      CURRENT     4.00      4.00

0/PM1      N540-PWR400-A         1.256 LIT-PriMCU-ACFW       CURRENT     0.04      0.04

0/PM1      N540-PWR400-A         1.256 LIT-SecMCU-ACFW       CURRENT     0.07      0.07
```

Log in to the router and enter the **show fpd package** and **show hw-module fpd** commands on the Cisco N540X-4Z14G2Q-A/D, N540-6Z18G-SYS-A/D, N540X-6Z18G-SYS-A/D, N540-6Z14S-SYS-D, and N540X-8Z16G-SYS-A/D variants:

```
RP/0/RP0/CPU0:Router#show fpd package
================================= ==============================================
                                          Field Programmable Device Package
                                  ==============================================
                                             Req      SW       Min Req   Min Req
Card Type            FPD Description         Reload   Ver      SW Ver    Board Ver
================== ========================= ====== ======= ======== =========
-------------------------------------------------------------------------------
N540-12Z20G-SYS-A    ADM_FW                    YES    14.03     14.03      0.0
                     ADMConfig                 NO      1.05      1.05      0.0
                     IoFpga                    YES     3.13      3.13      0.0
                     IoFpgaGolden              YES     2.07      2.03      0.0
                     Primary-BIOS              YES     1.51      1.51      0.0
                     StdbyFpga                 YES     0.70      0.70      0.0
                     StdbyFpgaGolden           YES     0.50      0.40      0.0
                     TamFw                     YES     4.16      4.16      0.0
                     TamFwGolden               YES     4.13      4.11      0.0
-------------------------------------------------------------------------------
N540-12Z20G-SYS-D    ADM_FW                    YES    14.03     14.03      0.0
                     ADMConfig                 NO      1.05      1.05      0.0
                     IoFpga                    YES     3.13      3.13      0.0
                     IoFpgaGolden              YES     2.07      2.03      0.0
                     Primary-BIOS              YES     1.51      1.51      0.0
                     StdbyFpga                 YES     0.70      0.70      0.0
                     StdbyFpgaGolden           YES     0.50      0.40      0.0
                     TamFw                     YES     4.16      4.16      0.0
                     TamFwGolden               YES     4.13      4.11      0.0
-------------------------------------------------------------------------------
N540-24Q8L2DD-SYS    ADM-DBConfig              NO      2.05      2.05      0.0
                     ADM-MBConfig              NO      2.05      2.05      0.0
                     IoFpga                    YES     2.12      2.12      0.0
                     IoFpgaGolden              YES     2.12      2.12      0.0
                     Primary-BIOS              YES     4.07      4.07      0.0
                     SsdSAMSA64G3              YES    12.41     12.41      0.0
                     SsdSRM24M2                YES    14.02     14.02      0.0
                     StdbyFpga                 YES     2.59      2.59      0.0
                     StdbyFpgaGolden           YES     2.56      2.39      0.0
                     TamFw                     YES     6.05      6.05      0.0
                     TamFwGolden               YES     6.05      6.05      0.0
-------------------------------------------------------------------------------
N540-28Z4C-SYS-A     ADM_FW                    YES    14.03     14.03      0.0
                     ADMConfig                 NO      1.05      1.05      0.0
                     IoFpga                    YES     3.13      3.13      0.0
                     IoFpgaGolden              YES     2.07      2.03      0.0
                     JMAC1-Config              YES     3.00      3.00      0.0
                     JMAC2-Config              YES     3.00      3.00      0.0
                     JMAC3-Config              YES     3.00      3.00      0.0
                     JMAC4-Config              YES     3.00      3.00      0.0
```

```
                    JMAC5-Config              YES     3.00      3.00      0.0
                    Primary-BIOS              YES     1.51      1.51      0.0
                    StdbyFpga                 YES     0.70      0.70      0.0
                    StdbyFpgaGolden           YES     0.50      0.40      0.0
                    TamFw                     YES     4.16      4.16      0.0
                    TamFwGolden               YES     4.13      4.11      0.0
--------------------------------------------------------------------------------
N540-28Z4C-SYS-D    ADM_FW                    YES    14.03     14.03      0.0
                    ADMConfig                 NO      1.05      1.05      0.0
                    IoFpga                    YES     3.13      3.13      0.0
                    IoFpgaGolden              YES     2.07      2.03      0.0
                    JMAC1-Config              YES     3.00      3.00      0.0
                    JMAC2-Config              YES     3.00      3.00      0.0
                    JMAC3-Config              YES     3.00      3.00      0.0
                    JMAC4-Config              YES     3.00      3.00      0.0
                    JMAC5-Config              YES     3.00      3.00      0.0
                    Primary-BIOS              YES     1.51      1.51      0.0
                    StdbyFpga                 YES     0.70      0.70      0.0
                    StdbyFpgaGolden           YES     0.50      0.40      0.0
                    TamFw                     YES     4.16      4.16      0.0
                    TamFwGolden               YES     4.13      4.11      0.0
--------------------------------------------------------------------------------
N540-FH-AGG-SYS     ADM1_Config               NO      1.02      1.02      1.0
                    ADM2_Config               NO      1.02      1.02      1.0
                    DpFpgaCpri                YES     0.24      0.24      0.0
                    DpFpgaEth                 YES     1.22      1.22      0.0
                    IoFpga                    YES     1.30      1.30      0.0
                    IoFpgaGolden              YES     1.30      1.30      0.0
                    Primary-BIOS              YES     1.49      1.49      0.0
                    StdbyFpga                 YES     0.46      0.46      0.0
                    StdbyFpgaGolden           YES     0.46      0.46      0.0
                    TamFw                     YES     6.05      6.05      0.0
                    TamFwGolden               YES     6.05      6.05      0.0
--------------------------------------------------------------------------------
N540-FH-CSR-SYS     ADM1_Config               NO      0.09      0.09      0.0
                    ADM1_Config               NO      1.01      1.01      2.0
                    ADM2_Config               NO      0.09      0.09      0.0
                    ADM2_Config               NO      1.01      1.01      2.0
                    DpFpga                    YES     0.23      0.23      0.0
                    IoFpga                    YES     1.30      1.30      0.0
                    IoFpgaGolden              YES     1.30      1.30      0.0
                    Primary-BIOS              YES     1.49      1.49      0.0
                    StdbyFpga                 YES     0.46      0.46      0.0
                    StdbyFpgaGolden           YES     0.46      0.46      0.0
                    TamFw                     YES     6.05      6.05      0.0
                    TamFwGolden               YES     6.05      6.05      0.0
--------------------------------------------------------------------------------
N540-PWR400-A       LI-PrimMCU                NO      0.04      0.04      0.0
                    LI-SecMCU                 NO      0.06      0.06      0.0
                    PrimMCU                   NO      1.02      1.02      0.0
                    SecMCU                    NO      1.03      1.03      0.0
--------------------------------------------------------------------------------
N540-PWR400-D       LI-PrimMCU                NO      0.04      0.04      0.0
                    LI-SecMCU                 NO      0.06      0.06      0.0
                    PrimMCU                   NO      1.03      1.03      0.0
                    SecMCU                    NO      1.03      1.03      0.0
--------------------------------------------------------------------------------
N540-PWR750-A       EM-PrimMCU                NO      1.02      1.02      0.0
                    EM-SecMCU                 NO      1.03      1.03      0.0
--------------------------------------------------------------------------------
N540-PWR750-D       EM-PrimMCU                NO      1.03      1.03      0.0
                    EM-SecMCU                 NO      3.01      3.01      0.0
--------------------------------------------------------------------------------
N540X-12Z16G-SYS-A  ADM_FW                    YES    14.03     14.03      0.0
```

```
                    ADMConfig                NO      1.05      1.05      0.0
                    IoFpga                   YES     3.13      3.13      0.0
                    IoFpgaGolden             YES     2.07      2.03      0.0
                    Primary-BIOS             YES     1.51      1.51      0.0
                    StdbyFpga                YES     0.70      0.70      0.0
                    StdbyFpgaGolden          YES     0.50      0.40      0.0
                    TamFw                    YES     4.16      4.16      0.0
                    TamFwGolden              YES     4.13      4.11      0.0
--------------------------------------------------------------------------------
N540X-12Z16G-SYS-D  ADM_FW                   YES    14.03     14.03      0.0
                    ADMConfig                NO      1.05      1.05      0.0
                    IoFpga                   YES     3.13      3.13      0.0
                    IoFpgaGolden             YES     2.07      2.03      0.0
                    Primary-BIOS             YES     1.51      1.51      0.0
                    StdbyFpga                YES     0.70      0.70      0.0
                    StdbyFpgaGolden          YES     0.50      0.40      0.0
                    TamFw                    YES     4.16      4.16      0.0
                    TamFwGolden              YES     4.13      4.11      0.0
--------------------------------------------------------------------------------
N540X-16Z4G8Q2C-A   ADM_FW                   YES    14.03     14.03      0.0
                    ADMConfig                NO      1.05      1.05      0.0
                    IoFpga                   YES     3.13      3.13      0.0
                    IoFpgaGolden             YES     2.07      2.03      0.0
                    Primary-BIOS             YES     1.51      1.51      0.0
                    StdbyFpga                YES     0.70      0.70      0.0
                    StdbyFpgaGolden          YES     0.50      0.40      0.0
                    TamFw                    YES     4.16      4.16      0.0
                    TamFwGolden              YES     4.13      4.11      0.0
--------------------------------------------------------------------------------
N540X-16Z4G8Q2C-D   ADM_FW                   YES    14.03     14.03      0.0
                    ADMConfig                NO      1.05      1.05      0.0
                    IoFpga                   YES     3.13      3.13      0.0
                    IoFpgaGolden             YES     2.07      2.03      0.0
                    Primary-BIOS             YES     1.51      1.51      0.0
                    StdbyFpga                YES     0.70      0.70      0.0
                    StdbyFpgaGolden          YES     0.50      0.40      0.0
                    TamFw                    YES     4.16      4.16      0.0
                    TamFwGolden              YES     4.13      4.11      0.0
--------------------------------------------------------------------------------
N540X-16Z8Q2C-A     ADMConfig                NO      1.05      1.05      0.0
                    IoFpga                   YES     3.13      3.13      0.0
                    IoFpgaGolden             YES     2.07      2.03      0.0
                    Primary-BIOS             YES     1.51      1.51      0.0
                    StdbyFpga                YES     0.70      0.70      0.0
                    StdbyFpgaGolden          YES     0.50      0.40      0.0
                    TamFw                    YES     4.16      4.16      0.0
                    TamFwGolden              YES     4.13      4.11      0.0
--------------------------------------------------------------------------------
N540X-16Z8Q2C-D     ADMConfig                NO      1.05      1.05      0.0
                    IoFpga                   YES     3.13      3.13      0.0
                    IoFpgaGolden             YES     2.07      2.03      0.0
                    Primary-BIOS             YES     1.51      1.51      0.0
                    StdbyFpga                YES     0.70      0.70      0.0
                    StdbyFpgaGolden          YES     0.50      0.40      0.0
                    TamFw                    YES     4.16      4.16      0.0
                    TamFwGolden              YES     4.13      4.11      0.0


RP/0/RP0/CPU0:Router#show hw-module fpd
Auto-upgrade:Enabled,PM excluded
Attribute codes: B golden, P protect, S secure, A Anti Theft aware
                                                                  FPD Versions
                                                                 ==============
Location   Card type            HWver FPD device       ATR Status    Running  Programd
Reload Loc
```

```
--------------------------------------------------------------------------------------------
0/RP0/CPU0 N540-12Z20G-SYS-A     1.0   ADM_FW               CURRENT     14.03    14.03
    NOT REQ
0/RP0/CPU0 N540-12Z20G-SYS-A     1.0   ADMConfig            CURRENT      1.05     1.05
    NOT REQ
0/RP0/CPU0 N540-12Z20G-SYS-A     1.0   IoFpga               CURRENT      3.13     3.13
      0/RP0
0/RP0/CPU0 N540-12Z20G-SYS-A     1.0   IoFpgaGolden     B   NEED UPGD             1.31
      0/RP0
0/RP0/CPU0 N540-12Z20G-SYS-A     1.0   Primary-BIOS     SA  CURRENT      1.51     1.51
      0/RP0
0/RP0/CPU0 N540-12Z20G-SYS-A     1.0   StdbyFpga        S   CURRENT      0.70     0.70
      0/RP0
0/RP0/CPU0 N540-12Z20G-SYS-A     1.0   StdbyFpgaGolden  BS  NEED UPGD             0.37
      0/RP0
0/RP0/CPU0 N540-12Z20G-SYS-A     1.0   TamFw            S   CURRENT      4.16     4.16
      0/RP0
0/RP0/CPU0 N540-12Z20G-SYS-A     1.0   TamFwGolden      BS  CURRENT              4.11
      0/RP0
```

Log in to the router and enter the **show fpd package** and **show hw-module fpd** commands on the Cisco N540-24Q8L2DD-SYS variant:

```
RP/0/RP0/CPU0:Router#show fpd package
================================= ==============================================
================================= ==============================================
                                          Field Programmable Device Package
                                  ==============================================
                                             Req      SW       Min Req   Min Req
Card Type            FPD Description         Reload   Ver      SW Ver    Board Ver
==================== ======================= ======= ======== ======== =========
--------------------------------------------------------------------------------
N540-6Z14S-SYS-D     ADMConfig                NO       5.03      5.03       0.0
                     BckUp-BootLoader         YES     20.08     20.08       0.0
                     IoFpga                   YES      0.17      0.17       0.0
                     IoFpgaGolden             YES      0.15      0.15       0.0
                     Prim-BootLoader          YES     20.08     20.08       0.0
                     StdbyFpga                YES      2.05      2.05       0.0
                     StdbyFpgaGolden          YES      0.33      0.33       0.0
                     TamFw                    YES      6.05      6.05       0.0
                     TamFwGolden              YES      6.05      6.05       0.0
--------------------------------------------------------------------------------
N540-6Z18G-SYS-A     ADMConfig                NO       5.03      5.03       0.0
                     BckUp-BootLoader         YES     20.08     20.08       0.0
                     IoFpga                   YES      0.08      0.08       0.0
                     IoFpgaGolden             YES      0.03      0.03       0.0
                     Prim-BootLoader          YES     20.08     20.08       0.0
                     StdbyFpga                YES      2.05      2.05       0.0
                     StdbyFpgaGolden          YES      0.33      0.33       0.0
                     TamFw                    YES      6.05      6.05       0.0
                     TamFwGolden              YES      6.05      6.05       0.0
--------------------------------------------------------------------------------
N540-6Z18G-SYS-D     ADMConfig                NO       5.03      5.03       0.0
                     BckUp-BootLoader         YES     20.08     20.08       0.0
                     IoFpga                   YES      0.08      0.08       0.0
                     IoFpgaGolden             YES      0.03      0.03       0.0
                     Prim-BootLoader          YES     20.08     20.08       0.0
                     StdbyFpga                YES      2.05      2.05       0.0
                     StdbyFpgaGolden          YES      0.33      0.33       0.0
                     TamFw                    YES      6.05      6.05       0.0
                     TamFwGolden              YES      6.05      6.05       0.0
--------------------------------------------------------------------------------
N540X-4Z14G2Q-A      ADMConfig                NO       5.00      5.00       0.0
                     BckUp-BootLoader         YES     20.08     20.08       0.0
```

```
                    IoFpga                    YES     0.17      0.17      0.0
                    IoFpgaGolden              YES     0.15      0.15      0.0
                    Prim-BootLoader           YES    20.08     20.08      0.0
                    StdbyFpga                 YES     2.05      2.05      0.0
                    StdbyFpgaGolden           YES     0.33      0.33      0.0
                    TamFw                     YES     6.05      6.05      0.0
                    TamFwGolden               YES     6.05      6.05      0.0
--------------------------------------------------------------------------------
N540X-4Z14G2Q-D     ADMConfig                 NO      5.00      5.00      0.0
                    BckUp-BootLoader          YES    20.08     20.08      0.0
                    IoFpga                    YES     0.17      0.17      0.0
                    IoFpgaGolden              YES     0.15      0.15      0.0
                    Prim-BootLoader           YES    20.08     20.08      0.0
                    StdbyFpga                 YES     2.05      2.05      0.0
                    StdbyFpgaGolden           YES     0.33      0.33      0.0
                    TamFw                     YES     6.05      6.05      0.0
                    TamFwGolden               YES     6.05      6.05      0.0
--------------------------------------------------------------------------------
N540X-6Z18G-SYS-A   ADMConfig                 NO      5.00      5.00      0.0
                    BckUp-BootLoader          YES    20.08     20.08      0.0
                    IoFpga                    YES     0.17      0.17      0.0
                    IoFpgaGolden              YES     0.15      0.15      0.0
                    Prim-BootLoader           YES    20.08     20.08      0.0
                    StdbyFpga                 YES     2.05      2.05      0.0
                    StdbyFpgaGolden           YES     0.33      0.33      0.0
                    TamFw                     YES     6.05      6.05      0.0
                    TamFwGolden               YES     6.05      6.05      0.0
--------------------------------------------------------------------------------
N540X-6Z18G-SYS-D   ADMConfig                 NO      5.00      5.00      0.0
                    BckUp-BootLoader          YES    20.08     20.08      0.0
                    IoFpga                    YES     0.17      0.17      0.0
                    IoFpgaGolden              YES     0.15      0.15      0.0
                    Prim-BootLoader           YES    20.08     20.08      0.0
                    StdbyFpga                 YES     2.05      2.05      0.0
                    StdbyFpgaGolden           YES     0.33      0.33      0.0
                    TamFw                     YES     6.05      6.05      0.0
                    TamFwGolden               YES     6.05      6.05      0.0
--------------------------------------------------------------------------------
N540X-8Z16G-SYS-A   ADMConfig                 NO      5.00      5.00      0.0
                    BckUp-BootLoader          YES    20.08     20.08      0.0
                    IoFpga                    YES     0.17      0.17      0.0
                    IoFpgaGolden              YES     0.15      0.15      0.0
                    Prim-BootLoader           YES    20.08     20.08      0.0
                    StdbyFpga                 YES     2.05      2.05      0.0
                    StdbyFpgaGolden           YES     0.33      0.33      0.0
                    TamFw                     YES     6.05      6.05      0.0
                    TamFwGolden               YES     6.05      6.05      0.0
--------------------------------------------------------------------------------
N540X-8Z16G-SYS-D   ADMConfig                 NO      5.00      5.00      0.0
                    BckUp-BootLoader          YES    20.08     20.08      0.0
                    IoFpga                    YES     0.17      0.17      0.0
                    IoFpgaGolden              YES     0.15      0.15      0.0
                    Prim-BootLoader           YES    20.08     20.08      0.0
                    StdbyFpga                 YES     2.05      2.05      0.0
                    StdbyFpgaGolden           YES     0.33      0.33      0.0
                    TamFw                     YES     6.05      6.05      0.0
                    TamFwGolden               YES     6.05      6.05      0.0

RP/0/RP0/CPU0:Router#show hw-module fpd
Auto-upgrade:Enabled,PM excluded
Attribute codes: B golden, P protect, S secure, A Anti Theft aware
                                                                 FPD Versions
                                                                ==============
Location   Card type             HWver FPD device       ATR Status    Running  Programd
Reload Loc
```

```
--------------------------------------------------------------------------------------------
0/RP0/CPU0 N540X-6Z18G-SYS-D     0.2   ADMConfig            NEED UPGD    1.02      1.02
    NOT REQ
0/RP0/CPU0 N540X-6Z18G-SYS-D     0.2   IoFpga               CURRENT      0.17      0.17
      0/RP0
0/RP0/CPU0 N540X-6Z18G-SYS-D     0.2   IoFpgaGolden     B   CURRENT                0.15
      0/RP0
0/RP0/CPU0 N540X-6Z18G-SYS-D     0.2   Prim-BootLoader  A   CURRENT     20.08     20.08
      0/RP0
0/RP0/CPU0 N540X-6Z18G-SYS-D     0.2   StdbyFpga        S   CURRENT      2.05      2.05
      0/RP0
0/RP0/CPU0 N540X-6Z18G-SYS-D     0.2   StdbyFpgaGolden  BS  NEED UPGD              0.18
      0/RP0
0/RP0/CPU0 N540X-6Z18G-SYS-D     0.2   TamFw            S   CURRENT      6.05      6.05
      0/RP0
0/RP0/CPU0 N540X-6Z18G-SYS-D     0.2   TamFwGolden      BS  NEED UPGD              5.06
      0/RP0
```

Important Notes

Licensing

Starting with Cisco IOS XR Release 24.1.1, Smart Licensing Using Policy (SLP) is the default Licensing model. When you upgrade to the Cisco IOS XR Release 24.1.1 release or later, the Smart Licensing Using Policy is enabled by default.

You can migrate your devices to Smart Licensing with Policy model, see *Migrating from Smart Licensing to Smart Licensing Using Policy*, Smart Licensing Using Policy on Cisco IOS XR Routers.

We recommend that you update to the latest version of SSM On-Prem or Cisco Smart Licensing Utility.

Note SSM On-Prem and CSSM both support SLP devices and SL devices. SLP devices and SL devices can coexist in a network. The Smart Licensing (SL) model is available in releases Cisco IOS XR Release 7.11.1 and earlier.

Supported Transceiver Modules

For more information on the supported transceiver modules, see Transceiver Module Group (TMG) Compatibility Matrix. In the **Begin your Search** search box, enter the keyword NCS540 and click **Enter**.

Upgrading Cisco IOS XR Software

Note For software installation and upgrades, refer to the respective upgrade/downgrade docs *.tar* files based on your 540 router varaint.

Cisco IOS XR Software is installed and activated from modular packages, allowing specific features or software patches to be installed, upgraded, or downgraded without affecting unrelated processes.

The upgrade document for N540-24Z8Q2C-SYS, N540X-ACC-SYS, and N540-ACC-SYS variants is available along with the software image in *NCS540-docs-24.4.2.tar* file.

The upgrade document for N540-28Z4C-SYS-A/D, N540-12Z20G-SYS-A/D, N540X-12Z16G-SYS-A/D, N540X-16Z4G8Q2C-A/D, N540-24Q8L2DD-SYS, N540-FH-AGG-SYS, N540X-16Z8Q2C-D, and N540-FH-CSR-SYS variants is available along with the software image in *NCS540l-docs-24.4.2.tar* file.

The upgrade document for N540X-4Z14G2Q-A/D, N540X-8Z16G-SYS-A/D, N540-6Z14S-SYS-D, N540-6Z18G-SYS-A/D, and N540X-6Z18G-SYS-A/D variants is available along with the software image in *NCS540l-aarch64-docs-24.4.2.tar* file.

Note Quad configurations will be lost when you perform a software downgrade on Cisco NCS 540 Routers that support quad configurations from IOS XR Release 7.5.1 onwards to a release prior to IOS XR Release 7.5.1 due to a non-backward compatibility change. The lost configuration can be applied manually after the downgrade.

Production Software Maintenance Updates (SMUs)

A production SMU is a SMU that is formally requested, developed, tested, and released. Production SMUs are intended for use in a live network environment and are formally supported by the Cisco TAC and the relevant development teams. Software bugs identified through software recommendations or Bug Search Tools are not a basis for production SMU requests.

For information on production SMU types, refer the Production SMU Types section of the *IOS XR Software Maintenance Updates (SMUs)* guide.

Cisco IOS XR Error messages

To view, search, compare, and download Cisco IOS XR Error Messages, refer to the Cisco IOS XR Error messages tool.

Cisco IOS XR MIBs

To determine the MIBs supported by platform and release, refer to the Cisco IOS XR MIBs tool.

Related Documentation

The most current Cisco NCS 540 router documentation is located at the following URL:

https://www.cisco.com/c/en/us/td/docs/iosxr/ncs-540-series-routers.html

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