



Release Notes for Cisco NCS 5500 Series Routers, IOS XR Release 24.2.2

[Network Convergence System 5500 Series Routers](#) 2

[What's New in Cisco IOS XR Release 24.2.2](#) 2

[Caveats](#) 2

[Release Package](#) 2

[Determine Software Version](#) 4

[Determine Firmware Support](#) 4

[Compatibility Matrix for EPNM and Crosswork with Cisco IOS XR Software](#) 21

[Important Notes](#) 21

Revised: October 1, 2024

Network Convergence System 5500 Series Routers



Note Cisco IOS XR Release 24.2.2 is an Extended Maintenance Release of [Cisco IOS XR Release 24.2.1](#) for Cisco NCS 5500 Series routers. For more details on the Cisco IOS XR release model and associated support, see [Guidelines for Cisco IOS XR Software](#).

What's New in Cisco IOS XR Release 24.2.2

Cisco IOS XR Release 24.2.2 is an extended maintenance release for Cisco NCS 5500 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](#).

Caveats

Table 1: Cisco NCS 5500 Series Router Specific Bugs

Bug ID	Headline
CSCwm41974	Improper label programming during microloop avoidance activation causes a traffic drop.
CSCwj51309	The show controller optics command triggers EDM timeout syslog and keeps line card interface down.
CSCwm53117	Please change the headline to: Offloading performance monitoring liveness to NPU causes probe packet drops.

Release Package

This table lists the Cisco IOS XR Software feature set matrix (packages) with associated filenames.

Visit the [Cisco Software Download page](#) to download the Cisco IOS XR software images.

Table 2: Release 24.2.2 Packages for Cisco NCS 5500 Series Router

Composite Package		
Feature Set	Filename	Description

Cisco IOS XR IP Unicast Routing Core Bundle	ncs5500-mini-x.iso	Contains base image contents that includes: <ul style="list-style-type: none"> • Host operating system • System Admin boot image • IOS XR boot image • BGP packages
Individually-Installable Optional Packages		
Feature Set	Filename	Description
Cisco IOS XR Manageability Package	ncs5500-mgbl-3.0.0.0-r2422.x86_64.rpm	Extensible Markup Language (XML) Parser, Telemetry, Netconf, gRPC and HTTP server packages.
Cisco IOS XR MPLS Package	ncs5500-mpls-2.1.0.0-r2422.x86_64.rpm ncs5500-mpls-te-rsvp-2.2.0.0-r2422.x86_64.rpm	MPLS and MPLS Traffic Engineering (MPLS-TE) RPM.
Cisco IOS XR Security Package	ncs5500-k9sec-3.1.0.0-r2422.x86_64.rpm	Support for Encryption, Decryption, Secure Shell (SSH), Secure Socket Layer (SSL), and Public-key infrastructure (PKI)
Cisco IOS XR ISIS package	ncs5500-isis-1.2.0.0-r2422.x86_64.rpm	Support ISIS
Cisco IOS XR OSPF package	ncs5500-ospf-2.0.0.0-r2422.x86_64.rpm	Support OSPF
Lawful Intercept (LI) Package	ncs5500-li-1.0.0.0-r2422.x86_64.rpm	Includes LI software images
Multicast Package	ncs5500-mcast-1.0.0.0-r2422.x86_64rpm	Support Multicast
EIGRP	ncs5500-eigrp-1.0.0.0-r2422.x86_64.rpm	Supports Enhanced Interior Gateway Routing Protocol
Lawful Intercept Control	ncs5500-lictrl-1.0.0.0-r2422x86_64.rpm	Supports Lawful Intercept Control
Healthcheck	ncs5500-healthcheck-1.0.0.0-r2422.x86_64.rpm	Supports System Health Check

Table 3: Release 24.2.2 TAR files for Cisco NCS 5500 Series Router

Feature Set	Filename
NCS 5500 IOS XR Software 3DES	NCS5500-iosxr-k9-24.2.2.tar
NCS 5500 IOS XR Software	NCS5500-iosxr-24.2.2.tar
NCS 5500 IOS XR Software	NCS5500-docs-24.2.2.tar

Table 4: Release 24.2.2 Packages for Cisco NCS 5700 Series Router

Feature Set	Filename
-------------	----------

NCS 5700 IOS XR Software	ncs5700-x64-24.2.2.iso
NCS 5700 IOS XR Software (only k9 RPMs)	ncs5700-k9sec-rpms.24.2.2.tar
NCS 5700 IOS XR Software Optional Package	NCS5700-optional-rpms.24.2.2.tar This TAR file contains the following RPMS: <ul style="list-style-type: none"> • optional-rpms/cdp/* • optional-rpms/eigrp/* • optional-rpms/telnet/*

Determine Software Version

To verify the software version running on the router, use **show version** command in the EXEC mode.

```
Router# show version
Cisco IOS XR Software, Version 24.2.2
Copyright (c) 2013-2024 by Cisco Systems, Inc.

Build Information:
  Built By      : swtools
  Built On     : Sun Sep 29 01:49:04 PDT 2024
  Built Host   : iox-ucs-032
  Workspace    : /auto/srcarchive10/prod/24.2.2/ncs5500/ws
  Version      : 24.2.2
  Location     : /opt/cisco/XR/packages/
  Label       : 24.2.2
```

```
cisco NCS-5500 () processor
System uptime is 23 hours 9 minutes
```

Determine Firmware Support

Use the **show hw-module fpd** command in EXEC and Admin 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.

You can also use the **show fpd package** command in Admin mode to check the fpd versions.

NCS 5500 Fixed Port Routers

```
Router# show fpd package
=====
                          Field Programmable Device Package
=====
Card Type          FPD Description          Req   SW   Min Req  Min Req
=====          =====          Reload Ver   SW Ver  Board Ver
=====          =====          =====
NC55-12X100G-SE-PR  Bootloader (A)           YES   1.20   1.20     0.0
                   IOFPGA (A)              YES   0.12   0.12     0.0
                   MIFPGA                 YES   0.03   0.03     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-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	1241.00	1241.00	0.0

NC55-12X100GE-PROT	Bootloader (A)	YES	1.22	1.22	0.0
	IOFPGA (A)	YES	0.15	0.15	0.0
	MIFPGA	YES	0.09	0.09	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-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	1241.00	1241.00	0.0

NC55-18H18F	Bootloader (A)	YES	1.20	1.20	0.0
	IOFPGA (A)	YES	0.22	0.22	0.0
	MIFPGA	YES	0.03	0.03	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-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	1241.00	1241.00	0.0

NC55-24H12F-SE	Bootloader (A)	YES	1.20	1.20	0.0
	IOFPGA (A)	YES	0.09	0.09	0.0
	MIFPGA	YES	0.03	0.03	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-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	1241.00	1241.00	0.0

NC55-24X100G-SE	Bootloader (A)	YES	1.20	1.20	0.0
	IOFPGA (A)	YES	0.13	0.13	0.0
	MIFPGA	YES	0.03	0.03	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-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	1241.00	1241.00	0.0

NC55-32T16Q4H-A	Bootloader (A)	YES	0.05	0.05	0.0

	DBFPGA (A)	YES	0.14	0.14	0.0
	IOFPGA (A)	YES	0.93	0.93	0.0
	MIFPGA	YES	0.60	0.60	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-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	1241.00	1241.00	0.0
	TimingIC-A	YES	7.216	7.216	0.0
	TimingIC-B	YES	7.216	7.216	0.0

NC55-32T16Q4H-AT	Bootloader (A)	YES	0.05	0.05	0.0
	DBFPGA (A)	YES	0.14	0.14	0.0
	IOFPGA (A)	YES	0.93	0.93	0.0
	MIFPGA	YES	0.60	0.60	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-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	1241.00	1241.00	0.0
	TimingIC-A	YES	7.216	7.216	0.0
	TimingIC-B	YES	7.216	7.216	0.0

NC55-36X100G	Bootloader (A)	YES	1.22	1.22	0.0
	IOFPGA (A)	YES	0.15	0.15	0.0
	MIFPGA	YES	0.09	0.09	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-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	1241.00	1241.00	0.0

NC55-36X100G-A-SE	Bootloader (A)	YES	0.15	0.15	0.0
	DBFPGA (A)	YES	0.14	0.14	0.0
	IOFPGA (A)	YES	0.26	0.26	0.0
	MIFPGA	YES	0.03	0.03	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-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	1241.00	1241.00	0.0

NC55-36X100G-S	Bootloader (A)	YES	1.20	1.20	0.0
	IOFPGA (A)	YES	0.12	0.12	0.0

	MIFPGA	YES	0.07	0.07	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-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	1241.00	1241.00	0.0

NC55-5504-FC	Bootloader (A)	YES	1.75	1.75	0.0
	IOFPGA (A)	YES	0.10	0.10	0.0

NC55-5504-FC2	Bootloader (A)	YES	1.13	1.13	0.0
	IOFPGA (A)	YES	0.47	0.47	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-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	1241.00	1241.00	0.0

NC55-5508-FC	Bootloader (A)	YES	1.74	1.74	0.0
	IOFPGA (A)	YES	0.17	0.17	0.0

NC55-5508-FC2	Bootloader (A)	YES	1.80	1.80	0.0
	IOFPGA (A)	YES	0.20	0.20	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-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	1241.00	1241.00	0.0

NC55-5516-FC	Bootloader (A)	YES	1.75	1.75	0.0
	IOFPGA (A)	YES	0.26	0.26	0.0

NC55-5516-FC2	Bootloader (A)	YES	1.80	1.80	0.0
	IOFPGA (A)	YES	0.24	0.24	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-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	1241.00	1241.00	0.0

NC55-6X100GE-PROT	Bootloader (A)	YES	1.22	1.22	0.0
	IOFPGA (A)	YES	0.15	0.15	0.0
	MIFPGA	YES	0.09	0.09	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-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	1241.00	1241.00	0.0

NC55-6X200-DWDM-S	Bootloader (A)	YES	1.20	1.20	0.0
	CFP2_PORT_0	NO	5.56	5.56	2.1
	CFP2_PORT_1	NO	5.56	5.56	2.1
	CFP2_PORT_2	NO	5.56	5.56	2.1
	CFP2_PORT_3	NO	5.56	5.56	2.1
	CFP2_PORT_4	NO	5.56	5.56	2.1
	CFP2_PORT_5	NO	5.56	5.56	2.1
	DENALI0	NO	13.48	13.48	0.0
	DENALI1	NO	13.48	13.48	0.0
	DENALI2	NO	13.48	13.48	0.0
	IOFPGA (A)	YES	0.14	0.14	0.0
	MORGOOTH	YES	5.26	5.26	0.0
	MSFPGA0	YES	2.22	2.22	0.0
	MSFPGA1	YES	2.22	2.22	0.0
	MSFPGA2	YES	2.22	2.22	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-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	1241.00	1241.00	0.0

NC55-MOD-A-S	Bootloader (A)	YES	1.03	1.03	0.0
	DBFPGA (A)	YES	0.14	0.14	0.0
	IOFPGA (A)	YES	0.14	0.14	0.0
	MIFPGA	YES	0.16	0.16	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-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	1241.00	1241.00	0.0

NC55-MOD-A-SE-S	Bootloader (A)	YES	1.03	1.03	0.0
	DBFPGA (A)	YES	0.14	0.14	0.0
	IOFPGA (A)	YES	0.14	0.14	0.0
	MIFPGA	YES	0.16	0.16	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-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	1241.00	1241.00	0.0
NC55-MPA-12T-S	MPAFPGA	YES	0.28	0.28	0.0
NC55-MPA-1TH2H-S	CFP2-D-DCO_2	NO	38.27397	38.27397	0.1
	CFP2-D10-DCO_2	NO	67.30726	67.30726	0.1
	CFP2-D15-DCO_2	NO	67.30726	67.30726	0.1
	CFP2-DE-DCO_2	NO	38.27397	38.27397	0.1
	CFP2-DETS-DCO_2	NO	38.27397	38.27397	0.1
	CFP2-DS-DCO_2	NO	38.27397	38.27397	0.1
	CFP2-DS100-DCO_2	NO	38.27397	38.27397	0.1
	MPAFPGA	YES	0.54	0.54	0.0
NC55-MPA-2TH-HX-S	CFP2-D-DCO_0	NO	38.27397	38.27397	0.1
	CFP2-D-DCO_1	NO	38.27397	38.27397	0.1
	CFP2-D10-DCO_0	NO	67.30726	67.30726	0.1
	CFP2-D10-DCO_1	NO	67.30726	67.30726	0.1
	CFP2-D15-DCO_0	NO	67.30726	67.30726	0.1
	CFP2-D15-DCO_1	NO	67.30726	67.30726	0.1
	CFP2-DE-DCO_0	NO	38.27397	38.27397	0.1
	CFP2-DE-DCO_1	NO	38.27397	38.27397	0.1
	CFP2-DETS-DCO_0	NO	38.27397	38.27397	0.1
	CFP2-DETS-DCO_1	NO	38.27397	38.27397	0.1
	CFP2-DS-DCO_0	NO	38.27397	38.27397	0.1
	CFP2-DS-DCO_1	NO	38.27397	38.27397	0.1
	CFP2-DS100-DCO_0	NO	38.27397	38.27397	0.1
	CFP2-DS100-DCO_1	NO	38.27397	38.27397	0.1
	MPAFPGA	YES	0.54	0.54	0.0
NC55-MPA-2TH-S	CFP2-D-DCO_0	NO	38.27397	38.27397	0.1
	CFP2-D-DCO_1	NO	38.27397	38.27397	0.1
	CFP2-D10-DCO_0	NO	67.30726	67.30726	0.1
	CFP2-D10-DCO_1	NO	67.30726	67.30726	0.1
	CFP2-D15-DCO_0	NO	67.30726	67.30726	0.1
	CFP2-D15-DCO_1	NO	67.30726	67.30726	0.1
	CFP2-DE-DCO_0	NO	38.27397	38.27397	0.1
	CFP2-DE-DCO_1	NO	38.27397	38.27397	0.1
	CFP2-DETS-DCO_0	NO	38.27397	38.27397	0.1
	CFP2-DETS-DCO_1	NO	38.27397	38.27397	0.1
	CFP2-DS-DCO_0	NO	38.27397	38.27397	0.1
	CFP2-DS-DCO_1	NO	38.27397	38.27397	0.1
	CFP2-DS100-DCO_0	NO	38.27397	38.27397	0.1
	CFP2-DS100-DCO_1	NO	38.27397	38.27397	0.1
	MPAFPGA	YES	0.54	0.54	0.0
NC55-MPA-4H-HD-S	MPAFPGA	YES	0.55	0.55	0.0
NC55-MPA-4H-HX-S	MPAFPGA	YES	0.54	0.54	0.0
NC55-MPA-4H-S	MPAFPGA	YES	0.54	0.54	0.0
NC55-OIP-2	CPLD-MPAFPGA	YES	2.00	2.00	0.0
	MPAFPGA	YES	4.09	4.09	0.0
NC55-OIP-4	MPAFPGA	YES	0.10	0.10	0.0
NC55-PWR-3KW-2HV	DT-LogicMCU (A)	NO	3.01	3.01	0.2
	DT-PrimMCU (A)	NO	3.00	3.00	0.2
	DT-SecMCU (A)	NO	3.01	3.01	0.2
NC55-PWR-3KW-DC	DT-SecMCU (A)	NO	4.12	4.12	0.1
NC55-PWR-4.4KW-DC	QCS-LogicMCU (A)	NO	3.00	3.00	0.1
	QCS-PrimMCU (A)	NO	3.00	3.00	0.1

	QCS-SecMCU (A)	NO	3.00	3.00	0.1

NC55-RP	Bootloader (A)	YES	9.31	9.31	0.0
	IOFPGA (A)	YES	0.09	0.09	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-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	1241.00	1241.00	0.0

NC55-RP-E	Bootloader (A)	YES	1.24	1.24	0.0
	IOFPGA (A)	YES	0.23	0.23	0.0
	OMGFPGA (A)	YES	0.61	0.61	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-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	1241.00	1241.00	0.0

NC55-RP-PROTO	Bootloader (A)	YES	9.31	9.31	0.0
	IOFPGA (A)	YES	0.06	0.06	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-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	1241.00	1241.00	0.0

NC55-RP2-E	Bootloader (A)	YES	0.08	0.08	0.0
	IOFPGA (A)	YES	0.50	0.50	0.0
	OMGFPGA (A)	YES	0.52	0.52	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-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	1241.00	1241.00	0.0
	TimingIC-A	YES	7.216	7.216	0.0
	TimingIC-B-0	YES	7.216	7.216	0.0
	TimingIC-B-1	YES	7.216	7.216	0.0

NC55-SC	Bootloader (A)	YES	1.74	1.74	0.0
	IOFPGA (A)	YES	0.11	0.11	0.0

NC57-1600W-ACFW	PrimMCU-ACFW (A)	NO	1.02	1.02	0.0
	SecMCU-ACFW (A)	NO	1.07	1.07	0.0

NC57-1600W-DCFW	PriMCU-DCFW (A)	NO	1.07	1.00	0.0
NC57-18DD-SE	Bootloader (A)	YES	1.03	1.03	0.0
	DBFPGA (A)	YES	0.14	0.14	0.0
	IOFPGA (A)	YES	0.22	0.22	0.0
	MIFPGA	YES	0.11	0.11	0.0
	QDD_BRT_FW_CO_P00	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P01	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P02	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P03	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P04	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P05	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P06	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P07	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P08	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P09	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P10	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P11	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P12	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P13	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P14	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P15	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P16	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P17	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P18	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P19	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P20	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P21	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P22	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P23	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P24	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P25	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P26	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P27	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P28	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P29	YES	70.130	70.130	0.0
	QDD_FW_CO_P00	YES	61.23	61.23	0.0
	QDD_FW_CO_P01	YES	61.23	61.23	0.0
	QDD_FW_CO_P02	YES	61.23	61.23	0.0
	QDD_FW_CO_P03	YES	61.23	61.23	0.0
	QDD_FW_CO_P04	YES	61.23	61.23	0.0
	QDD_FW_CO_P05	YES	61.23	61.23	0.0
	QDD_FW_CO_P06	YES	61.23	61.23	0.0
	QDD_FW_CO_P07	YES	61.23	61.23	0.0
	QDD_FW_CO_P08	YES	61.23	61.23	0.0
	QDD_FW_CO_P09	YES	61.23	61.23	0.0
	QDD_FW_CO_P10	YES	61.23	61.23	0.0
	QDD_FW_CO_P11	YES	61.23	61.23	0.0
	QDD_FW_CO_P12	YES	61.23	61.23	0.0
	QDD_FW_CO_P13	YES	61.23	61.23	0.0
	QDD_FW_CO_P14	YES	61.23	61.23	0.0
	QDD_FW_CO_P15	YES	61.23	61.23	0.0
	QDD_FW_CO_P16	YES	61.23	61.23	0.0
	QDD_FW_CO_P17	YES	61.23	61.23	0.0
	QDD_FW_CO_P18	YES	61.23	61.23	0.0
	QDD_FW_CO_P19	YES	61.23	61.23	0.0
	QDD_FW_CO_P20	YES	61.23	61.23	0.0
	QDD_FW_CO_P21	YES	61.23	61.23	0.0
	QDD_FW_CO_P22	YES	61.23	61.23	0.0
	QDD_FW_CO_P23	YES	61.23	61.23	0.0
	QDD_FW_CO_P24	YES	61.23	61.23	0.0
	QDD_FW_CO_P25	YES	61.23	61.23	0.0
	QDD_FW_CO_P26	YES	61.23	61.23	0.0

QDD_FW_CO_P27	YES	61.23	61.23	0.0
QDD_FW_CO_P28	YES	61.23	61.23	0.0
QDD_FW_CO_P29	YES	61.23	61.23	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-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	1241.00	1241.00	0.0

NC57-24DD

Bootloader(A)	YES	1.03	1.03	0.0
DBFPGA(A)	YES	0.14	0.14	0.0
IOFPGA(A)	YES	0.23	0.23	0.0
MIFPGA	YES	0.11	0.11	0.0
QDD_BRT_FW_CO_P00	YES	70.130	70.130	0.0
QDD_BRT_FW_CO_P01	YES	70.130	70.130	0.0
QDD_BRT_FW_CO_P02	YES	70.130	70.130	0.0
QDD_BRT_FW_CO_P03	YES	70.130	70.130	0.0
QDD_BRT_FW_CO_P04	YES	70.130	70.130	0.0
QDD_BRT_FW_CO_P05	YES	70.130	70.130	0.0
QDD_BRT_FW_CO_P06	YES	70.130	70.130	0.0
QDD_BRT_FW_CO_P07	YES	70.130	70.130	0.0
QDD_BRT_FW_CO_P08	YES	70.130	70.130	0.0
QDD_BRT_FW_CO_P09	YES	70.130	70.130	0.0
QDD_BRT_FW_CO_P10	YES	70.130	70.130	0.0
QDD_BRT_FW_CO_P11	YES	70.130	70.130	0.0
QDD_BRT_FW_CO_P12	YES	70.130	70.130	0.0
QDD_BRT_FW_CO_P13	YES	70.130	70.130	0.0
QDD_BRT_FW_CO_P14	YES	70.130	70.130	0.0
QDD_BRT_FW_CO_P15	YES	70.130	70.130	0.0
QDD_BRT_FW_CO_P16	YES	70.130	70.130	0.0
QDD_BRT_FW_CO_P17	YES	70.130	70.130	0.0
QDD_BRT_FW_CO_P18	YES	70.130	70.130	0.0
QDD_BRT_FW_CO_P19	YES	70.130	70.130	0.0
QDD_BRT_FW_CO_P20	YES	70.130	70.130	0.0
QDD_BRT_FW_CO_P21	YES	70.130	70.130	0.0
QDD_BRT_FW_CO_P22	YES	70.130	70.130	0.0
QDD_BRT_FW_CO_P23	YES	70.130	70.130	0.0
QDD_FW_CO_P00	YES	61.23	61.23	0.0
QDD_FW_CO_P01	YES	61.23	61.23	0.0
QDD_FW_CO_P02	YES	61.23	61.23	0.0
QDD_FW_CO_P03	YES	61.23	61.23	0.0
QDD_FW_CO_P04	YES	61.23	61.23	0.0
QDD_FW_CO_P05	YES	61.23	61.23	0.0
QDD_FW_CO_P06	YES	61.23	61.23	0.0
QDD_FW_CO_P07	YES	61.23	61.23	0.0
QDD_FW_CO_P08	YES	61.23	61.23	0.0
QDD_FW_CO_P09	YES	61.23	61.23	0.0
QDD_FW_CO_P10	YES	61.23	61.23	0.0
QDD_FW_CO_P11	YES	61.23	61.23	0.0
QDD_FW_CO_P12	YES	61.23	61.23	0.0
QDD_FW_CO_P13	YES	61.23	61.23	0.0
QDD_FW_CO_P14	YES	61.23	61.23	0.0
QDD_FW_CO_P15	YES	61.23	61.23	0.0
QDD_FW_CO_P16	YES	61.23	61.23	0.0
QDD_FW_CO_P17	YES	61.23	61.23	0.0
QDD_FW_CO_P18	YES	61.23	61.23	0.0
QDD_FW_CO_P19	YES	61.23	61.23	0.0
QDD_FW_CO_P20	YES	61.23	61.23	0.0
QDD_FW_CO_P21	YES	61.23	61.23	0.0

	QDD_FW_CO_P22	YES	61.23	61.23	0.0
	QDD_FW_CO_P23	YES	61.23	61.23	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-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	1241.00	1241.00	0.0

NC57-36H-SE	Bootloader (A)	YES	1.03	1.03	0.0
	DBFPGA (A)	YES	0.14	0.14	0.0
	IOFPGA (A)	YES	0.07	0.07	0.0
	MIFPGA	YES	0.03	0.03	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-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	1241.00	1241.00	0.0

NC57-36H6D-S	Bootloader (A)	YES	0.02	0.02	0.0
	DBFPGA (A)	YES	0.14	0.14	0.0
	IOFPGA (A)	YES	0.47	0.47	0.0
	MIFPGA	YES	0.40	0.40	0.0
	QDD_BRT_FW_CO_P24	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P25	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P26	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P27	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P28	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P29	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P30	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P31	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P32	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P33	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P34	YES	70.130	70.130	0.0
	QDD_BRT_FW_CO_P35	YES	70.130	70.130	0.0
	QDD_FW_CO_P24	YES	61.23	61.23	0.0
	QDD_FW_CO_P25	YES	61.23	61.23	0.0
	QDD_FW_CO_P26	YES	61.23	61.23	0.0
	QDD_FW_CO_P27	YES	61.23	61.23	0.0
	QDD_FW_CO_P28	YES	61.23	61.23	0.0
	QDD_FW_CO_P29	YES	61.23	61.23	0.0
	QDD_FW_CO_P30	YES	61.23	61.23	0.0
	QDD_FW_CO_P31	YES	61.23	61.23	0.0
	QDD_FW_CO_P32	YES	61.23	61.23	0.0
	QDD_FW_CO_P33	YES	61.23	61.23	0.0
	QDD_FW_CO_P34	YES	61.23	61.23	0.0
	QDD_FW_CO_P35	YES	61.23	61.23	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-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	1241.00	1241.00	0.0
	TimingIC-A	YES	7.216	7.216	0.0
	TimingIC-B	YES	7.216	7.216	0.0

NC57-48Q2D-S	ALDRINFPGA (A)	YES	1.06	1.06	0.0
	Bootloader (A)	YES	1.00	1.00	0.0
	DBFPGA (A)	YES	0.14	0.14	0.0
	IOFPGA (A)	YES	0.105	0.105	0.0
	MIFPGA	YES	0.21	0.21	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-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	1241.00	1241.00	0.0
	TimingIC-A	YES	7.216	7.216	0.0
	TimingIC-B	YES	7.216	7.216	0.0

NC57-48Q2D-SE-S	ALDRINFPGA (A)	YES	1.06	1.06	0.0
	Bootloader (A)	YES	1.00	1.00	0.0
	DBFPGA (A)	YES	0.14	0.14	0.0
	IOFPGA (A)	YES	0.105	0.105	0.0
	MIFPGA	YES	0.21	0.21	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-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	1241.00	1241.00	0.0
	TimingIC-A	YES	7.216	7.216	0.0
	TimingIC-B	YES	7.216	7.216	0.0

NC57-MOD-RP2-E	Bootloader (A)	YES	0.14	0.14	0.0
	IOFPGA	YES	0.51	0.51	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-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	1241.00	1241.00	0.0

NC57-MOD-S	Bootloader (A)	YES	2.03	2.03	0.0
	DBFPGA (A)	YES	0.14	0.14	0.0
	IOFPGA (A)	YES	0.42	0.42	0.0
	MIFPGA	YES	0.18	0.18	0.0
	QDD_BRT_FW_C0_P08	YES	70.130	70.130	0.0
	QDD_BRT_FW_C0_P09	YES	70.130	70.130	0.0
	QDD_FW_C0_P08	YES	61.23	61.23	0.0
	QDD_FW_C0_P09	YES	61.23	61.23	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-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	1241.00	1241.00	0.0
	TimingIC-A	YES	7.216	7.216	0.0
	TimingIC-B	YES	7.216	7.216	0.0

NC57-MPA-12L-S	MPAFPGA	YES	0.28	0.28	0.0

NC57-MPA-1FH1D-S	CFP2-M25-DCO_1	NO	67.30726	67.30726	0.1
	MPAFPGA	YES	0.80	0.80	0.0
	QDD_BRT_FW_C1_P00	YES	70.130	70.130	0.0
	QDD_BRT_FW_C2_P00	YES	70.130	70.130	0.0
	QDD_BRT_FW_C3_P00	YES	70.130	70.130	0.0
	QDD_FW_C1_P00	YES	61.23	61.23	0.0
	QDD_FW_C2_P00	YES	61.23	61.23	0.0
	QDD_FW_C3_P00	YES	61.23	61.23	0.0

NC57-MPA-2D4H-S	MPAFPGA	YES	0.07	0.07	0.0
	QDD_FW_C1_P00	YES	61.23	61.23	0.0
	QDD_FW_C1_P01	YES	61.23	61.23	0.0
	QDD_FW_C1_P02	YES	61.23	61.23	0.0
	QDD_FW_C1_P03	YES	61.23	61.23	0.0
	QDD_FW_C2_P00	YES	61.23	61.23	0.0
	QDD_FW_C2_P01	YES	61.23	61.23	0.0
	QDD_FW_C2_P02	YES	61.23	61.23	0.0
	QDD_FW_C2_P03	YES	61.23	61.23	0.0
	QDD_FW_C3_P00	YES	61.23	61.23	0.0
	QDD_FW_C3_P01	YES	61.23	61.23	0.0
	QDD_FW_C3_P02	YES	61.23	61.23	0.0
	QDD_FW_C3_P03	YES	61.23	61.23	0.0

NCS-57C3-MOD-SYS	ALDRINFPGA (A)	YES	1.04	1.04	0.0
	Bootloader (A)	YES	0.16	0.16	0.0
	DBFPGA (A)	YES	0.56	0.56	0.0
	IOFPGA	YES	0.101	0.101	0.0
	MIFPGA	YES	0.19	0.19	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-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	1241.00	1241.00	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
TimingIC-A	YES	23.112	23.112	0.0
TimingIC-B	YES	7.216	7.216	0.0

NCS-57C3-MODS-SYS

ALDRINFPGA (A)	YES	1.04	1.04	0.0
Bootloader (A)	YES	0.16	0.16	0.0
DBFPGA (A)	YES	0.56	0.56	0.0
IOFPGA	YES	0.101	0.101	0.0
MIFPGA	YES	0.19	0.19	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-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	1241.00	1241.00	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
TimingIC-A	YES	23.112	23.112	0.0
TimingIC-B	YES	7.216	7.216	0.0

NCS 5700 Fixed Port Routers

Router# show fpd package

```
=====
```

Field Programmable Device Package

```
=====
```

Card Type	FPD Description	Req Reload	SW Ver	Min Req SW Ver	Min Req Board Ver

NCS-57B1-5DSE-SYS	ADM1_Config	NO	0.50	0.50	0.0
	ADM2_Config	NO	0.50	0.50	0.0
	ADM3_Config	NO	0.50	0.50	0.0
	IoFpga	YES	0.09	0.09	0.0
	IoFpgaGolden	YES	0.09	0.08	0.0
	Primary-BIOS	YES	1.11	1.11	0.0
	StdbyFpga	YES	0.24	0.24	0.0
	StdbyFpgaGolden	YES	0.24	0.24	0.0
	TamFw	YES	6.05	6.05	0.0
TamFwGolden	YES	6.05	6.05	0.0	

NCS-57B1-6D24-SYS	ADM1_Config	NO	0.94	0.94	0.0
	ADM2_Config	NO	0.94	0.94	0.0
	ADM3_Config	NO	0.94	0.94	0.0
	IoFpga	YES	0.09	0.09	0.0
	IoFpgaGolden	YES	0.09	0.08	0.0
	Primary-BIOS	YES	1.11	1.11	0.0
	SsdIntelS4510	YES	11.20	11.20	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	StdbyFpga	YES	0.24	0.24	0.0
	StdbyFpgaGolden	YES	0.24	0.24	0.0
	TamFw	YES	6.05	6.05	0.0
TamFwGolden	YES	6.05	6.05	0.0	

NCS-57C1-48Q6-SYS	ADM1_Config	YES	0.07	0.07	0.0
	ADM2_Config	YES	0.07	0.07	0.0
	IoFpga	YES	0.47	0.47	0.0
	IoFpgaGolden	YES	0.47	0.47	0.0
	Primary-BIOS	YES	3.07	3.07	0.0
	SsdIntelS4510	YES	11.32	11.32	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	StdbyFpga	YES	0.31	0.31	0.0
	StdbyFpgaGolden	YES	0.31	0.31	0.0
	TamFw	YES	7.10	7.10	0.0
TamFwGolden	YES	7.10	7.10	0.0	

NCS-57D2-18DD-SYS	ADM1-DBConfig	YES	1.92	1.92	0.0
	ADM2-DBConfig	YES	1.92	1.92	0.0
	ADM3-DBConfig	YES	1.92	1.92	0.0
	ADM4-MBConfig	YES	1.92	1.92	0.0
	ADM5-MBConfig	YES	1.92	1.92	0.0
	ADM6-MBConfig	YES	1.92	1.92	0.0
	FtFpga	NO	0.20	0.20	0.0
	FtFpgaGolden	NO	0.20	0.00	0.0
	IoFpga	YES	0.06	0.06	0.0
	IoFpgaDB	YES	0.07	0.07	0.0
	IoFpgaGolden	YES	0.05	0.05	0.0

	IoFpgaGoldenDB	YES	0.05	0.05	0.0
	Primary-BIOS	YES	4.10	4.10	0.0
	SsdIntelS4510	YES	11.32	11.32	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	StdbyFpga	YES	0.96	0.96	0.0
	StdbyFpgaGolden	YES	0.83	0.83	0.0
	TamFw	YES	7.09	7.09	0.0
	TamFwGolden	YES	7.09	7.09	0.0

PSU1100W-ACPI	EM-PrimMCU	NO	1.01	1.01	0.0
	EM-SecMCU	NO	1.05	1.05	0.0

PSU2KW-ACPE	PO-PrimMCU	NO	1.03	1.03	0.0
	PO-SecMCU	NO	1.10	1.10	0.0

PSU2KW-ACPI	PO-PrimMCU	NO	1.03	1.03	0.0
	PO-SecMCU	NO	1.13	1.13	0.0

PSU2KW-DCPE	PO-PrimMCU	NO	1.11	1.11	0.0

PSU2KW-DCPI	PO-PrimMCU	NO	1.11	1.11	0.0

PSU950W-DCPI	EM-PrimMCU	NO	1.00	1.00	0.0

This sample output is for **show hw-module fpd** command from the Admin mode:

```
sysadmin-vm:0_RP0# show hw-module fpd
Auto-upgrade:Disabled
```

Location	Card type	HWver	FPD device	ATR Status	FPD Versions	
					Running	Programd
0/0	NC57-24DD	1.1	MIFPGA	CURRENT	0.11	0.11
0/0	NC57-24DD	1.1	Bootloader	CURRENT	1.03	1.03
0/0	NC57-24DD	1.1	DBFPGA	CURRENT	0.14	0.14
0/0	NC57-24DD	1.1	IOFPGA	CURRENT	0.23	0.23
0/0	NC57-24DD	1.1	SATA-M5100	CURRENT	75.00	75.00
0/1	NC55-32T16Q4H-A	0.12	MIFPGA	CURRENT	0.60	0.60
0/1	NC55-32T16Q4H-A	1.0	TimingIC-A	CURRENT	7.216	7.216
0/1	NC55-32T16Q4H-A	1.0	TimingIC-B	CURRENT	7.216	7.216
0/1	NC55-32T16Q4H-A	0.12	Bootloader	CURRENT	0.05	0.05
0/1	NC55-32T16Q4H-A	0.12	DBFPGA	CURRENT	0.14	0.14
0/1	NC55-32T16Q4H-A	0.12	IOFPGA	CURRENT	0.93	0.93
0/1	NC55-32T16Q4H-A	0.12	SATA-M5100	CURRENT	75.00	75.00
0/2	NC55-24X100G-SE	1.0	MIFPGA	CURRENT	0.03	0.03
0/2	NC55-24X100G-SE	1.0	Bootloader	CURRENT	1.20	1.20
0/2	NC55-24X100G-SE	1.0	IOFPGA	CURRENT	0.13	0.13
0/2	NC55-24X100G-SE	1.0	SATA-M600-MCT	CURRENT	5.00	5.00
0/3	NC55-36X100G-A-SE	0.303	MIFPGA	CURRENT	0.03	0.03
0/3	NC55-36X100G-A-SE	0.303	Bootloader	CURRENT	0.15	0.15
0/3	NC55-36X100G-A-SE	0.303	DBFPGA	CURRENT	0.14	0.14
0/3	NC55-36X100G-A-SE	0.303	IOFPGA	CURRENT	0.26	0.26
0/RP0	NC55-RP-E	1.1	Bootloader	CURRENT	1.24	1.24
0/RP0	NC55-RP-E	1.1	IOFPGA	CURRENT	0.23	0.23
0/RP0	NC55-RP-E	1.1	OMGFPGA	CURRENT	0.61	0.61
0/RP0	NC55-RP-E	1.1	SATA-M5100	CURRENT	75.00	75.00
0/RP1	NC55-RP-E	1.1	Bootloader	CURRENT	1.24	1.24
0/RP1	NC55-RP-E	1.1	IOFPGA	CURRENT	0.23	0.23
0/RP1	NC55-RP-E	1.1	OMGFPGA	CURRENT	0.61	0.61
0/RP1	NC55-RP-E	1.1	SATA-M5100	CURRENT	75.00	75.00
0/FC0	NC55-5504-FC2	0.3	Bootloader	CURRENT	1.13	1.13
0/FC0	NC55-5504-FC2	0.3	IOFPGA	CURRENT	0.47	0.47
0/FC0	NC55-5504-FC2	0.3	SATA-INTEL_240G	CURRENT	1132.00	1132.00
0/FC1	NC55-5504-FC2	0.3	Bootloader	CURRENT	1.13	1.13
0/FC1	NC55-5504-FC2	0.3	IOFPGA	CURRENT	0.47	0.47

0/FC1	NC55-5504-FC2	0.3	SATA-INTEL_240G	CURRENT	1132.00	1132.00
0/FC2	NC55-5504-FC2	0.3	Bootloader	CURRENT	1.13	1.13
0/FC2	NC55-5504-FC2	0.3	IOFPGA	CURRENT	0.47	0.47
0/FC2	NC55-5504-FC2	0.3	SATA-INTEL_240G	CURRENT	1132.00	1132.00
0/FC3	NC55-5504-FC2	0.2	Bootloader	CURRENT	1.13	1.13
0/FC3	NC55-5504-FC2	0.2	IOFPGA	CURRENT	0.47	0.47
0/FC3	NC55-5504-FC2	0.2	SATA-INTEL_240G	CURRENT	1132.00	1132.00
0/FC4	NC55-5504-FC2	0.3	Bootloader	CURRENT	1.13	1.13
0/FC4	NC55-5504-FC2	0.3	IOFPGA	CURRENT	0.47	0.47
0/FC4	NC55-5504-FC2	0.3	SATA-INTEL_240G	CURRENT	1132.00	1132.00
0/FC5	NC55-5504-FC2	0.3	Bootloader	CURRENT	1.13	1.13
0/FC5	NC55-5504-FC2	0.3	IOFPGA	CURRENT	0.47	0.47
0/FC5	NC55-5504-FC2	0.3	SATA-INTEL_240G	CURRENT	1132.00	1132.00
0/SC0	NC55-SC	2.0	Bootloader	CURRENT	1.74	1.74
0/SC0	NC55-SC	2.0	IOFPGA	CURRENT	0.11	0.11
0/SC1	NC55-SC	2.0	Bootloader	CURRENT	1.74	1.74
0/SC1	NC55-SC	2.0	IOFPGA	CURRENT	0.11	0.11

Compatibility Matrix for EPNM and Crosswork with Cisco IOS XR Software

The compatibility matrix lists the version of EPNM and Crosswork that are supported with Cisco IOS XR Release in this release.

Table 5: Compatibility Matrix

Cisco IOS XR	Crosswork	EPNM
Release 24.2.2	Crosswork Optimization Engine 7.0	Evolved Programmable Network Manager 8.0

Important Notes

- The total number of bridge-domains (2*BDs) and GRE tunnels put together should not exceed 1518. Here the number 1518 represents the multi-dimensional scale value.
- The offline diagnostics functionality is not supported in NCS 5500 platform. Therefore, the **hw-module service offline location** command will not work. However, you can use the **(sysadmin)# hw-module shutdown location** command to bring down the LC.

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

To determine the transceivers that Cisco hardware device supports, refer to the [Transceiver Module Group \(TMG\) Compatibility Matrix](#) tool.

Upgrading Cisco IOS XR Software

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. Software packages can be upgraded or downgraded on all supported card types, or on a single card (node).

Before starting the software upgrade, use the **show install health** command in the admin mode. This command validates if the statuses of all relevant parameters of the system are ready for the software upgrade without interrupting the system.



Note

- If you use a TAR package to upgrade from a Cisco IOS XR release prior to 7.x, the output of the **show install health** command in admin mode displays the following error messages:

```
sysadmin-vm:0_RSP0# show install health
. . .
ERROR /install_repo/gl/xr -rw-r--r--. 1 8413 floppy 3230320 Mar 14 05:45 <platform>-isis-2.2.0.0-r702.x86_64
ERROR /install_repo/gl/xr -rwxr-x---. 1 8413 165 1485781 Mar 14 06:02 <platform>-k9sec-3.1.0.0-r702.x86_64
ERROR /install_repo/gl/xr -rw-r--r--. 1 8413 floppy 345144 Mar 14 05:45 <platform>-li-1.0.0.0-r702.x86_64
```

You can ignore these messages and proceed with the installation operation.

- Quad configurations will be lost when you perform a software downgrade on a NCS-55A1-48Q6H device from IOS XR Release 7.5.1 onwards to a release prior to IOS XR Release 7.5.1 due to non-backward compatibility change. The lost configuration can be applied manually after the downgrade.



Note

A quad is a group of four ports with common speeds, 1G/10G or 25G. You can configure the ports speed for a quad by using the **hw-module quad** command.

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 5500 router documentation is located at the following URL:

<https://www.cisco.com/c/en/us/td/docs/iosxr/ios-xr.html>



Americas Headquarters
Cisco Systems, Inc.
San Jose, CA 95134-1706
USA

Asia Pacific Headquarters
CiscoSystems(USA)Pte.Ltd.
Singapore

Europe Headquarters
CiscoSystemsInternationalBV
Amsterdam,TheNetherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at www.cisco.com/go/offices.