Release Notes for Cisco NCS 4000 Series, IOS XR Release 6.5.35

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Release Notes for Cisco NCS 4000 Series, IOS XR Release 6.5.35

The release notes contain information about the new features introduced in the Cisco NCS 4000 Series.

Revision History

Table 1: Revision history

Date	Notes
July 2025	Added the **BGP VPNv6 Route Reflect support** feature under the **What's New in Cisco NCS 4000 Series, Release 6.5.35** section.
December 2024	This is the first release of this publication.

Software and Hardware Requirements

Before you begin to install the software, you must check whether your system meets the minimum software and hardware requirements.

- Hardware—Intel Core i5, i7, or faster processor. A minimum of 4 GB RAM, 100 GB hard disk with 250 MB of available hard drive space.
- One of these operating system:
  - Windows 7, Windows Server 2008, or later.
  - Apple Mac OS X
  - UNIX workstation with Solaris Version 9 or 10 on an UltraSPARC-III or faster processor, with a minimum of 1 GB RAM and a minimum of 250 MB of available hard drive space.
  - Ubuntu 12.10
- Java Runtime Environment—Java Runtime Environment Version 1.8.
- Browser:
  - Internet Explorer

- Mozilla
- Safari
- Google Chrome

What's New in Cisco NCS 4000 Series, Release 6.5.35

Cisco is continuously enhancing the product with every release and this section covers a brief description of key features and enhancements.

Feature	Description
Hardware Installation	
NCS4K-4H-QDD-P Line Card	The NCS4K-4H-QDD-P line card is a new addition to the NCS 4000 platform. It uses the Bright DCO pluggable variant, DP04QSDD-HE0, to scale WDM traffic from 100G to 400G in 100G increments, providing flexibility and high performance across regional, metro, and long-haul routes.This line card has eight port interfaces: • **SFP28 ports**: Four SFP port interfaces. Each supports 25G data. • **QSFP-DD ports**: Four QSFP-DD port interfaces. The interface at port 4 supports up to 400G data, while the remaining three QSFP-DD interfaces support up to 100G data each.
Pluggable Support	The NCS4K-4H-OPW-QC2 line card is compatible with the QSFP-100G-ZR4-S pluggable for ports 0,1,5, and 6, supporting a data rate of 100 Gbps. The QSFP-100G-ZR4-S pluggable supports configurations for Ethernet or Ethernet over OTN controllers only.

Feature	Description
Configuration	
100MHz Grid Spacing for NCS4K-4H-QDD-P line card	The 100MHz flex-grid-spacing feature is now supported on the NCS4K-4H-QDD-P card. Configuration can be done on Bright ZRP optics ports 4 to 7 using the Cisco Transport Controller (CTC) interface or command-line interface (CLI).
BFD Strict-Mode for BGP	BFD fast detect strict-mode when enabled allows to block the establishment of a BGP session until a BFD session is successfully established. In default behaviour, BGP session establishment operates independently of the BFD state change, meaning a BGP session can be established even if the BFD state is down or dampened. The newly introduced optional keyword, strict-mode, prevents a BGP session from being established if the BFD is in a down state. When BFD is dampened or down, the routing protocol states or sessions cannot be initiated. Keyword Added: • strict-mode

Feature	Description
Ethernet SAT Support for NCS4K-4H-QDD-P Line Card	You can now perform an Ethernet Service Activation Test (SAT) on the NCS4K-4H-QDD-P Line Card. Ethernet SAT helps test service turn-up, installation, and troubleshooting of Ethernet-based services.
Field Programmable Device (FPD) Upgrade for NCS4K-4H-QDD-P Line Card	You can now perform FPD upgrades on the NCS4K-4H-QDD-P line card. Upgrading the line card is essential to ensure its proper functioning.
GMPLS Support for NCS4K-4H-QDD-P Line Card	GMPLS UNI circuits can now be created for the NCS4K-4H-QDD-P line card. This enhancement optimizes network resources and improves network utilization across packet and optical networks.
LAN PHY Controller Support for NCS4K-4H-QDD-P Line Card	You can now configure the NCS4K-4H-QDD-P line card in port mode and breakout mode with 25GE, 100GE, and 400GE data rates. This enhancement offers flexibility and high performance across regional, metro, and long-haul routes.
Link Layer Discovery Protocol (LLDP) for NCS4K-4H-QDD-P Line Card	You can now configure LLDP on the packet interfaces of the NCS4K-4H-QDD-P line card.
Loopback for Y.1564 Service Activation Test	This feature enables the redirection of test traffic from the destination network to the source network in Loopback Message (LBM) format. The Loopback Message allows the measurement of various parameters and performance metrics, such as frame delay, frame loss rates, and QoS settings, after the traffic has completed its round trip. Such comprehensive measurement helps identify issues within the network setup. You can also use it to ensure the service is running and meets the SLA.
Pseudo Wire Ping	The Pseudo Wire ping enables you to test connectivity between Provider Edge (PE) devices and identify any connection breakages.
Stronger Secret Encryption	This feature introduces a **secret** command that enables you to choose encryption types, such as Type 5, Type 8, Type 9, and Type 10, for encrypting the Secret. This feature employs hashing algorithms to build a more secure, strong, and robust secret to enhance the device security. Commands added: • secret

Feature	Description
AAA Password Security Policies	This feature introduces strong password security policies to strengthen the secret and password configuration of usernames. These policies also have the option of blocking a local user from accessing the router for a configurable amount of time if the maximum number of attempts to log in to the device is reached. The feature thus enhances router security by enforcing strong user password policies. Commands added: • policy
BGP VPNv6 Route Reflect support	NCS 4000 devices now support Route Reflector functionality for VPNv6 prefixes, reflecting routes without participating in data forwarding. Acting as a P-node, it uses IPv4 MPLS label switching to carry VPNv6 traffic, enabling scalable, hardware-compatible deployments with reduced control-plane state for large service provider cores. A new CLI keyword is added within the address-family configuration for BGP: • **vpnv6 unicast**
NCS 4000 Bundle Convergence Time Improvement	In this release, the bundle convergence time is improved in the event of: • Adding or removing link members • Shut or No Shut operation on the interface • Shut or no Shut operation of the controller This enhancement reduces the traffic outage duration during bundle operational impact.
Changes in **show ethernet service-activation-test profile** Command	The output of the **show ethernet service-activation-test profile** command now includes the **duration** field.
Support for Flow Label Load Balancing	Prior to R6.5.31, Flow-Aware Transport Pseudowire (FAT-PW) load balancing is supported on the Link Aggregation Group (LAG) NNI interface with the insertion of up to three labels. From R6.5.31 onwards, FAT-PW load balancing is supported on the LAG NNI interface with the insertion of up to five labels. This enhancement allows the flow-aware traffic to be optimally load-balanced among all the links on the LAG AC interfaces.
ACL on Management Port	ACL allows you to control the packets that move through the network. This control allows you to limit the network traffic and restrict the access of users and devices to the network. NCS 4000 supports the following ACL: • ACL1—Ingress ACL on the out-of-band (OOB) management port

Feature	Description
IPv4 VRF Support for Layer 3 VPN In-Band Management	The IPv4 VRF support for Layer 3 is now suported by the NCS4K-4H-QDD-P line card. ACL and QoS are not supported simultaneously on the same interface.
Bidirectional Forwarding Detection (BFD) over Link Aggregation Group (LAG)	BFD allows you to detect network failures between neighbors. Two modes are supported: • BFD over Bundle (BoB) - Standards-based fast failure detection of non-VLAN interfaces in LAG. • BFD over Logical Bundle - Standards-based fast failure detection of VLAN interfaces in LAG. Commands added: • interface Bundle-Ether • bfd address-family • bfd mode • bundle minimum-active • encapsulation dot1q • bfd fast-detect • bfd minimum-interval • bfd multiplier

The following features are also introduced in this release:

- You can now use In-Service Software Upgrade through OLR mechanism to deploy new Cisco IOS XR Software images that supports new software features and services.
- On a Ethernet Service Activation Test (SAT) interface with internal direction, QoS policies apply to both transmitted and received packets.
- Ethernet Service Activation Test (SAT) can now be performed on both tagged and untagged interfaces.
- You can now define the MTU packet size in SAT, allowing for tailored testing that matches the network's maximum frame capacity.
- SAT now supports testing of various packet sizes and provides throughput analysis, considering both frame sizes and interface bandwidth.
- You can now configure a color-aware profile for SAT.
- The SAT feature supports up to four parallel SAT sessions in a single chassis and up to four parallel SAT sessions for each rack in a multi-chassis.
- You can remotely test the throughput of an Ethernet port and verify the maximum rate of frame transmission without frame loss.
- SAT can now detect out-of-sequence packets.

- SAT External direction now supports all frame sizes, with a maximum throughput of 21G.
- Ethernet Data Plane Loopback now supports different Layer 2 VLAN translations and encapsulations.
- From this release, Cisco NCS 4000 complies with the Cisco Security Policy defined by the TPSB.
- The *port-mode* yang model now supports the **opu4** framing for the otn controller.

Caveats

Open Caveats

The following list contains known issues for Release 6.5.35:

Identifier	Headline
CSCwh93884	On 0/7/0/0 25G fiber removal , Traffic hit is seen on 100GE on port 4 and 5
CSCwk28765	After active RP reload seen "MLAP protocol state is not Active or Standby" alarm
CSCwn21168	NCS4K Device Error: Performance monitor is disabled but still device is generating data.
CSCwn30943	Interface went down after Post SU to 6535

Bug Search Tool

Cisco Bug Search Tool (BST) is a web-based tool that acts as a gateway to the Cisco bug tracking system that maintains a comprehensive list of defects and vulnerabilities in Cisco products and software. BST provides you with detailed defect information about your products and software.

Using Bug Search Tool

You can use the Cisco Bug Search Tool to search for a specific bug or to search for all bugs in a release.

Procedure

Step 1 Go to the http://tools.cisco.com/bugsearch.

Step 2 Log in using your registered Cisco.com username and password.

The Bug Search page opens.

Step 3 Use any of these options to search for bugs, and then press Enter (Return) to initiate the search:

- To search for a specific bug, enter the bug ID in Search For field.
- To search for bugs based on specific criteria, enter search criteria, such as problem description, a feature or a product name, in the Search For field.
- To search for bugs based on products, enter or select a product from the Product list. For Example, if you enter "WAE," you get several options from which to choose.

- To search for bugs based on releases, in the Releases list select whether to search for bugs affecting a specific release, bugs that were fixed in a specific release, or both. Then enter one or more release numbers in the Release field.

Step 4 When the search results are displayed, use the filter tools to narrow the results. You can filter the bugs by status, severity, and so on. To export the results to a spreadsheet, click **Export Results to Excel**.

Supported FPD Version

The following command lists the FPD versions supported in Release 6.5.35

```
RP/0/RP1:router#show fpd package

Wed Nov 13 17:14:16.598 IST


================================ ================================================
                                          Field Programmable Device Package
                                 ================================================
                                                    Req     SW      Min Req   Min Req
Card Type            FPD Description               Reload  Ver     SW Ver  Board Ver
================== ========================== ====== ======= ======== =========
--------------------------------------------------------------------------------
NCS4009-FC-S         CCC-FPGA(A)                 NO      1.05    1.05    0.1
                     CCC-Power-On(A)             NO      1.03    1.03    0.1
                     PLX-8608(A)                 YES     0.03    0.03    0.1
                     SB Certificates(A)          NO      1.00    1.00    0.0
--------------------------------------------------------------------------------
NCS4009-FC2-S        CCC-FPGA(A)                 NO      2.05    2.05    0.1
                     CCC-Power-On(A)             NO      1.03    1.03    0.1
                     PLX-8714(A)                 YES     0.04    0.04    0.1
                     SB Certificates(A)          NO      1.00    1.00    0.0
--------------------------------------------------------------------------------
NCS4009-FC2-SP       CCC-FPGA(A)                 NO      1.11    1.11    0.1
                     CCC-Power-On(A)             NO      1.03    1.03    0.1
                     PLX-8608(A)                 YES     0.03    0.03    0.1
                     SB Certificates(A)          NO      1.00    1.00    0.0
```

NCS4009-FC2F-S	CCC-FPGA(A)	NO	2.05	2.05	0.1
	CCC-Power-On(A)	NO	1.03	1.03	0.1
	PLX-8714(A)	YES	0.04	0.04	0.1
	SB Certificates(A)	NO	1.00	1.00	0.0
NCS4016-FC-M	CCC-FPGA(A)	NO	4.40	4.40	0.1
	CCC-Power-On(A)	NO	1.14	1.14	0.1
	PLX-8649(A)	YES	0.08	0.08	0.1
	SB Certificates(A)	NO	1.00	1.00	0.0
NCS4016-FC-S	CCC-FPGA(A)	YES	0.05	0.01	0.1
	CCC-Power-On(A)	YES	1.12	1.08	0.1
	PLX-8649(A)	YES	0.08	0.08	0.1
	SB Certificates(A)	NO	1.00	1.00	0.0
	CCC-FPGA(A)	NO	5.07	5.07	0.1
	CCC-Power-On(A)	NO	1.01	1.01	0.1
	PLX-8649(A)	YES	0.08	0.08	0.1
	SB Certificates(A)	NO	1.00	1.00	0.0
NCS4016-FC2-M	CCC-FPGA(A)	NO	1.35	1.35	0.1
	CCC-Power-On(A)	NO	1.03	1.03	0.1
	LTC2978_420848_ISP(A)	YES	1.00	1.00	0.0
	PLX-8649(A)	YES	1.00	1.00	0.1
	SB Certificates(A)	NO	1.00	1.00	0.0
NCS4K-20T-O-S	Backup-ZYNQ	YES	1.68	1.00	0.1
	CCC-FPGA(A)	NO	3.27	3.27	0.1
	CCC-Power-On(A)	NO	1.19	1.19	0.1
	DIGI1	YES	2.03	2.03	0.1
	DIGI2	YES	2.03	2.03	0.1
	Ethernet-Switch(A)	YES	1.41	1.41	0.1

	GENNUM	YES	3.01	3.01	0.1
	PLX-8618(A)	YES	0.09	0.09	0.1
	Primary-ZYNQ	NO	1.68	1.68	0.1
	SB Certificates(A)	NO	1.00	1.00	0.0
NCS4K-24LR-O-S	Backup-ZYNQ	YES	4.15	0.01	0.1
	CCC-FPGA(A)	NO	4.39	4.39	0.1
	CCC-Power-On(A)	NO	1.21	1.21	0.1
	Ethernet-Switch(A)	YES	1.38	1.38	0.1
	PLX-8618(A)	YES	0.11	0.11	0.1
	Primary-ZYNQ	NO	4.20	4.20	0.1
	SB Certificates(A)	NO	1.00	1.00	0.0
NCS4K-2H-O-K	Backup-ZYNQ	YES	1.55	0.01	0.1
	CCC-FPGA(A)	NO	3.38	3.38	0.1
	CCC-Power-On(A)	NO	1.19	1.19	0.1
	DIGI1	YES	2.03	2.03	0.1
	DIGI2	YES	2.03	2.03	0.1
	Ethernet-Switch(A)	YES	1.41	1.41	0.1
	GENNUM	YES	3.01	3.01	0.1
	LEPTON	NO	4.02	4.02	0.1
	PLX-8618(A)	YES	0.10	0.10	0.1
	Primary-ZYNQ	NO	1.56	1.56	0.1
	SB Certificates(A)	NO	1.00	1.00	0.0
NCS4K-2H-W	Backup-ZYNQ	NO	1.60	1.00	0.1
	CCC-FPGA(A)	NO	4.34	4.34	0.1
	CCC-Power-On(A)	NO	1.20	1.20	0.1
	EAGLE-0-FPD	NO	5.05	5.05	0.1
	EAGLE-1-FPD	NO	5.05	5.05	0.1
	Ethernet-Switch(A)	YES	1.35	1.35	0.1
	GN2411-FPD-1	YES	3.05	3.05	0.1

	GN2411-FPD-2	YES	3.05	3.05	0.1
	GN2411-FPD-3	YES	3.05	3.05	0.1
	GN2411-FPD-4	YES	3.05	3.05	0.1
	PLX-8608(A)	YES	0.10	0.10	0.1
	Primary-ZYNQ	NO	1.60	1.60	0.1
	SB Certificates(A)	NO	1.00	1.00	0.0
NCS4K-2H10T-OP-KS	Backup-ZYNQ	YES	1.91	1.00	0.1
	CCC-FPGA(A)	NO	1.50	1.50	0.1
	CCC-Power-On(A)	NO	1.14	1.14	0.1
	DIGI1	YES	2.03	2.03	0.1
	DIGI2	YES	2.03	2.03	0.1
	Ethernet-Switch(A)	YES	1.02	1.02	0.1
	GRIMA	YES	1.51	1.51	0.1
	PLX-8649(A)	YES	0.11	0.11	0.1
	Primary-ZYNQ	NO	1.91	1.91	0.1
	SB Certificates(A)	NO	1.00	1.00	0.0
NCS4K-4H-OP-K	Backup-ZYNQ	YES	0.09	0.09	0.1
	CCC-FPGA(A)	YES	2.02	2.02	0.1
	CCC-Power-On(A)	YES	1.09	1.09	0.1
	DIGI1	NO	2.03	2.03	0.1
	DIGI2	NO	2.03	2.03	0.1
	Ethernet-Switch(A)	YES	1.01	1.01	0.1
	LEPTON	NO	5.00	5.00	0.1
	PLX-8649(A)	YES	0.01	0.01	0.1
	Primary-ZYNQ	NO	1.09	1.09	0.1
	SB Certificates(A)	NO	1.00	1.00	0.0
NCS4K-4H-OPW-QC2	Backup-MELKOR	YES	6.00	6.00	0.1
	Backup-ZYNQ	NO	4.11	4.11	0.1
	CCC-FPGA(A)	NO	1.01	1.01	0.1

	CCC-Power-On(A)	NO	1.12	1.12	0.1
	DENALI	NO	13.48	13.48	0.1
	DIGI1	YES	2.02	2.02	0.1
	DIGI2	YES	2.02	2.02	0.1
	Ethernet-Switch(A)	YES	1.51	1.51	0.1
	PLX-8750(A)	YES	0.10	0.10	0.1
	Primary-MELKOR	NO	6.01	6.01	0.1
	Primary-ZYNQ	NO	4.11	4.11	0.1
	SB Certificates(A)	NO	1.00	1.00	0.0
	SMAUG	YES	0.10	0.10	0.1
NCS4K-4H-QDD-P	Backup-ZYNQ	NO	1.15	1.15	0.1
	CCC-FPGA(A)	NO	1.01	1.01	0.1
	CCC-Power-On(A)	NO	1.12	1.12	0.1
	Ethernet-Switch(A)	YES	1.51	1.51	0.1
	PLX-8750(A)	YES	0.10	0.10	0.1
	Primary-ZYNQ	NO	1.15	1.15	0.1
	SB Certificates(A)	NO	1.00	1.00	0.0
	SMAUG	YES	0.10	0.10	0.1
NCS4K-AC-PSU	AB-PriMCU(A)	NO	1.31	1.31	0.1
	AB-Sec54vMCU(A)	NO	1.49	1.49	0.1
	AB-Sec5vMCU(A)	NO	1.43	1.43	0.1
	DT-PriMCU(A)	NO	3.00	3.00	1.0
	DT-PriMCU(A)	NO	1.06	1.06	0.2
	DT-PriMCU(A)	NO	2.01	2.01	0.3
	DT-Sec54vMCU(A)	NO	4.00	4.00	1.0
	DT-Sec54vMCU(A)	NO	2.03	2.03	0.2
	DT-Sec54vMCU(A)	NO	3.02	3.02	0.3
	DT-Sec5vMCU(A)	NO	3.01	3.01	1.0
	DT-Sec5vMCU(A)	NO	1.09	1.09	0.2
	DT-Sec5vMCU(A)	NO	2.02	2.02	0.3

NCS4K-CRAFT	Craft-NCS4009(A)	NO	1.04	1.04	0.1
	Craft-NCS4016(A)	NO	1.04	1.04	0.1
NCS4K-DC-PSU-V1	AB-PriMCU(A)	NO	4.01	4.01	0.1
	AB-Sec54vMCU(A)	NO	4.02	4.02	0.1
	AB-Sec5vMCU(A)	NO	4.03	4.03	0.1
	DT-Pri2MCU(A)	NO	3.02	3.02	1.0
	DT-PriMCU(A)	NO	3.02	3.02	1.0
	DT-Sec54v2MCU(A)	NO	3.01	3.00	1.0
	DT-Sec54vMCU(A)	NO	3.01	3.00	1.0
	DT-Sec5vMCU(A)	NO	3.08	3.08	1.0
NCS4K-ECU	ECU-FPGA(A)	NO	3.01	3.01	0.1
NCS4K-ECU2	ECU-FPGA(A)	NO	5.01	5.01	0.1
NCS4K-FTA	Fantray-FPGA(A)	NO	3.01	3.01	0.1
NCS4K-RP	Backup-BIOS(A)	YES	14.04	1.00	0.1
	Backup-CCC-PwrOn(A)	YES	1.23	1.00	0.1
	Backup-EthSwitch(A)	YES	1.36	1.00	0.1
	Backup-Timing(A)	YES	5.11	3.18	0.1
	BP-FPGA(A)	NO	3.21	3.21	0.1
	CCC-Bootloader(A)	YES	4.29	4.08	0.1
	CCC-FPGA(A)	YES	4.29	4.29	0.1
	CCC-Power-On(A)	YES	1.23	1.23	0.1
	CPU-Complex-BckKey(A)	YES	1.00	1.00	0.1
	CPU-Complex-Boot(A)	YES	2.09	2.04	0.1
	CPU-Complex-FPGA(A)	YES	2.09	2.09	0.1
	CPU-Complex-PriKey(A)	YES	1.00	1.00	0.1
	Ethernet-Switch(A)	YES	1.36	1.36	0.1

	PLX-8649(A)	YES	0.08	0.08	0.1
	PLX-8696(A)	YES	0.05	0.05	0.1
	Primary-BIOS(A)	YES	14.04	14.04	0.1
	SB Backup Key(A)	NO	1.00	1.00	0.0
	SB Certificates(A)	NO	1.00	1.00	0.0
	SB Primary Key(A)	NO	1.00	1.00	0.0
	SMART-iSATA(A)	NO	7.05	7.05	0.0
	SMART-SATA(A)	NO	7.05	7.05	0.0
	Timing-FPGA(A)	YES	5.11	5.11	0.1
NCS4KF-CRAFT	Craft-NCS4K-FCC(A)	NO	1.07	1.07	0.1
NCS4KF-FC2-C	Back-CRE-FPGA-MB(A)	YES	1.05	1.05	0.0
	CCC-FPGA(A)	YES	1.26	1.26	0.1
	CCC-Power-On(A)	YES	1.05	1.05	0.1
	CRE-FPGA-MB(A)	YES	1.05	1.05	0.0
	LTC2978_42094A_ISP(A)	YES	1.00	1.00	0.0
	LTC3882_42094A_ISP(A)	YES	1.00	1.00	0.0
	PLX-8713(A)	YES	0.06	0.06	0.1
	SB Certificates(A)	NO	1.00	1.00	0.0
	Back-CRE-FPGA-MB(A)	YES	1.05	1.05	0.0
	CCC-FPGA(A)	YES	1.26	1.26	0.1
	CCC-Power-On(A)	YES	1.05	1.05	0.1
	CRE-FPGA-MB(A)	YES	1.05	1.05	0.0
	LTC2978_42094A_ISP(A)	YES	1.00	1.00	0.0
	LTC2978_42094E_ISP(A)	YES	1.00	1.00	0.0
	LTC3882_42094A_ISP(A)	YES	1.00	1.00	0.0
	LTC3882_42094E_ISP(A)	YES	1.00	1.00	0.0
	PLX-8713(A)	YES	0.06	0.06	0.1
	SB Certificates(A)	NO	1.00	1.00	0.0
NCS4KF-FTA	Backup-Fantray(A)	NO	2.03	2.03	0.1

	Fantray-FPGA(A)	NO	2.04	2.04	0.1
NCS4KF-RPMC	Backup-BIOS(A)	YES	14.09	14.00	0.0
	Backup-CCC-PwrOn(A)	NO	2.01	1.38	0.0
	Backup-EthSwitch(A)	YES	1.33	1.33	0.0
	CCC-Bootloader(A)	YES	3.07	2.01	0.0
	CCC-FPGA(A)	YES	3.07	3.07	0.0
	CCC-Power-On(A)	NO	2.01	2.01	0.0
	CPU Backup_Key(A)	NO	1.00	1.00	0.0
	CPU Primary_Key(A)	NO	1.00	1.00	0.0
	CPU-Complex-BOOT(A)	YES	4.09	4.04	0.1
	CPU-Complex-FPGA(A)	YES	4.09	4.09	0.1
	Ethernet-Switch(A)	YES	1.33	1.33	0.0
	LTC2977_1F0807_DB_ISP.hex(	YES	1.00	1.00	0.0
	LTC2977_1F0807_MB_ISP.hex(	YES	1.00	1.00	0.0
	PLX-8625(A)	YES	0.05	0.05	0.0
	Primary-BIOS(A)	YES	14.09	14.09	0.0
	SB Backup Key(A)	NO	1.00	1.00	0.0
	SB Certificates(A)	NO	1.00	1.00	0.0
	SB Primary Key(A)	NO	1.00	1.00	0.0
	SMART-iSATA(A)	NO	7.05	7.05	0.0
	SMART-SATA(A)	NO	7.05	7.05	0.0
NCS4KF-RPMC (SW)	CCC-FPGA(A)	YES	2.06	2.06	0.0
	CCC-Power-On(A)	NO	2.01	2.01	0.0
	LTC2977_1F0808_MB_ISP.hex(	YES	1.00	1.00	0.0
	PLX-8614(A)	YES	0.06	0.06	0.0
	SB Certificates(A)	NO	1.00	1.00	0.0
P-S-FANTRAY	Fantray-FPGA(A)	NO	2.04	2.04	0.2