



Release Notes for Cisco 8000 Series Routers, IOS XR Release 7.8.2

Cisco 8100, 8200, and 8800 Series	2
What's New in Cisco IOS XR Release 7.8.2	2
Release 7.8.2 Packages	2
Caveats	6
Determine Software Version	6
Determine Firmware Support	6
Important Notes	13
Related Documentation	14

Revised: March 17, 2023

Cisco 8100, 8200, and 8800 Series



Note Cisco IOS XR Release 7.8.2 is an Extended Maintenance Release of [Cisco IOS XR Release 7.8.1](#) for Cisco 8000 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 7.8.2

Cisco IOS XR Release 7.8.2 is an extended maintenance release for Cisco 8000 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 [Guidelines for Cisco IOS XR Software](#).

Release 7.8.2 Packages

The Cisco IOS XR software is composed of a base image (ISO) that provides the XR infrastructure. The ISO image is made up of a set of packages (also called RPMs). These packages are of three types:

- A mandatory package that is included in the ISO
- An optional package that is included in the ISO
- An optional package that is not included in the ISO

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

To determine the Cisco IOS XR Software packages installed on your router, log in to the router and enter the **show install active** command:

```
RP/0/RP0/CPU0#show install active
  Software Hash: 6995b7cea6419169b8932ef8f1c989aeecc32eec956ba7efa040298f176c03a5b
Package                                                                                               Version
-----
xr-8000-af-ea                                                7.8.2v1.0.0-1
xr-8000-aib                                                  7.8.2v1.0.0-1
xr-8000-bfd                                                  7.8.2v1.0.0-1
xr-8000-buffhdr-ea                                           7.8.2v1.0.0-1
xr-8000-bundles                                              7.8.2v1.0.0-1
xr-8000-card-support                                         7.8.2v1.0.0-1
xr-8000-cdp-ea                                               7.8.2v1.0.0-1
xr-8000-cem-driver                                           7.8.2v1.0.0-1
xr-8000-cfm                                                  7.8.2v1.0.0-1
xr-8000-core                                                 7.8.2v1.0.0-1
xr-8000-cpa                                                  7.8.2v1.0.0-1
xr-8000-cpa-devobj-misc                                       7.8.2v1.0.0-1
xr-8000-cpa-npu                                              7.8.2v1.0.0-1
xr-8000-cpa-sb-data                                          7.8.2v1.0.0-1
xr-8000-dot1x                                               7.8.2v1.0.0-1
xr-8000-dsm                                                  7.8.2v1.0.0-1
xr-8000-encap-id                                             7.8.2v1.0.0-1
```

xr-8000-ether-ea	7.8.2v1.0.0-1
xr-8000-fabric	7.8.2v1.0.0-1
xr-8000-feat-mgr	7.8.2v1.0.0-1
xr-8000-fib-ea	7.8.2v1.0.0-1
xr-8000-forwarder	7.8.2v1.0.0-1
xr-8000-fpd	7.8.2v1.0.0-1
xr-8000-fwd-tools	7.8.2v1.0.0-1
xr-8000-fwdlib	7.8.2v1.0.0-1
xr-8000-gil-ea	7.8.2v1.0.0-1
xr-8000-host-core	7.8.2v1.0.0-1
xr-8000-l2fib	7.8.2v1.0.0-1
xr-8000-l2mcast	7.8.2v1.0.0-1
xr-8000-leabaofa	7.8.2v1.0.0-1
xr-8000-libofaasync	7.8.2v1.0.0-1
xr-8000-lpts-ea	7.8.2v1.0.0-1
xr-8000-mcast	7.8.2v1.0.0-1
xr-8000-netflow	7.8.2v1.0.0-1
xr-8000-npu	7.8.2v1.0.0-1
xr-8000-oam	7.8.2v1.0.0-1
xr-8000-optics	7.8.2v1.0.0-1
xr-8000-os-wr9	7.8.2v1.0.0-1
xr-8000-os-wr9-extra	7.8.2v1.0.0-1
xr-8000-pbr	7.8.2v1.0.0-1
xr-8000-pfilter	7.8.2v1.0.0-1
xr-8000-pidb	7.8.2v1.0.0-1
xr-8000-pktio	7.8.2v1.0.0-1
xr-8000-port-mapper	7.8.2v1.0.0-1
xr-8000-port-mode	7.8.2v1.0.0-1
xr-8000-ppinfo	7.8.2v1.0.0-1
xr-8000-pwhe-ea	7.8.2v1.0.0-1
xr-8000-qos-ea	7.8.2v1.0.0-1
xr-8000-span	7.8.2v1.0.0-1
xr-8000-spio	7.8.2v1.0.0-1
xr-8000-spp-ea	7.8.2v1.0.0-1
xr-8000-timing	7.8.2v1.0.0-1
xr-8000-tunnel-ip	7.8.2v1.0.0-1
xr-8000-utapp-blaze	7.8.2v1.0.0-1
xr-8000-vether	7.8.2v1.0.0-1
xr-8000-ztp-ea	7.8.2v1.0.0-1
xr-aaa	7.8.2v1.0.0-1
xr-acl	7.8.2v1.0.0-1
xr-apphosting	7.8.2v1.0.0-1
xr-appmgr	7.8.2v1.0.0-1
xr-bcdl	7.8.2v1.0.0-1
xr-bfd	7.8.2v1.0.0-1
xr-bgp	7.8.2v1.0.0-1
xr-bgputil	7.8.2v1.0.0-1
xr-bng-stubs	7.8.2v1.0.0-1
xr-bundles	7.8.2v1.0.0-1
xr-cal-pi	7.8.2v1.0.0-1
xr-cdp	7.8.2v1.0.0-1
xr-cds	7.8.2v1.0.0-1
xr-cfgmgr	7.8.2v1.0.0-1
xr-cfm	7.8.2v1.0.0-1
xr-cofo	7.8.2v1.0.0-1
xr-core	7.8.2v1.0.0-1
xr-core-calv	7.8.2v1.0.0-1
xr-cpa-common	7.8.2v1.0.0-1
xr-cpa-common-optics	7.8.2v1.0.0-1
xr-cpa-common-psu	7.8.2v1.0.0-1
xr-cpa-driver-devobj-gnss	7.8.2v1.0.0-1
xr-cpa-driver-devobj-misc	7.8.2v1.0.0-1
xr-cpa-driver-devobj-npu	7.8.2v1.0.0-1
xr-cpa-driver-devobj-phy	7.8.2v1.0.0-1

xr-cpa-driver-devobj-sensors	7.8.2v1.0.0-1
xr-cpa-driver-devobj-storage	7.8.2v1.0.0-1
xr-cpa-driver-devobj-test	7.8.2v1.0.0-1
xr-cpa-driver-devobj-timing	7.8.2v1.0.0-1
xr-cpa-driver-fpgalib-access	7.8.2v1.0.0-1
xr-cpa-driver-fpgalib-common	7.8.2v1.0.0-1
xr-cpa-driver-fpgalib-infra	7.8.2v1.0.0-1
xr-cpa-driver-fpgalib-kmod	7.8.2v1.0.0-1
xr-cpa-driver-fpgalib-misc	7.8.2v1.0.0-1
xr-cpa-driver-fpgalib-optics	7.8.2v1.0.0-1
xr-cpa-driver-optics	7.8.2v1.0.0-1
xr-cpa-ethsw	7.8.2v1.0.0-1
xr-cpa-idprom	7.8.2v1.0.0-1
xr-cpa-tamlib	7.8.2v1.0.0-1
xr-ctc	7.8.2v1.0.0-1
xr-debug	7.8.2v1.0.0-1
xr-dhcp	7.8.2v1.0.0-1
xr-diags	7.8.2v1.0.0-1
xr-diskboot	7.8.2v1.0.0-1
xr-drivers	7.8.2v1.0.0-1
xr-eem	7.8.2v1.0.0-1
xr-elmi-stubs	7.8.2v1.0.0-1
xr-ema	7.8.2v1.0.0-1
xr-enhancedmanageability	7.8.2v1.0.0-1
xr-erp	7.8.2v1.0.0-1
xr-featurecapability	7.8.2v1.0.0-1
xr-fib	7.8.2v1.0.0-1
xr-filesysinv	7.8.2v1.0.0-1
xr-foundation-8000	7.8.2v1.0.0-1
xr-fpd	7.8.2v1.0.0-1
xr-ha-infra	7.8.2v1.0.0-1
xr-healthcheck	7.8.2v1.0.0-1
xr-host-core	7.8.2v1.0.0-1
xr-httpclient	7.8.2v1.0.0-1
xr-icpe-eth	7.8.2v1.0.0-1
xr-icpe-opt	7.8.2v1.0.0-1
xr-identifier	7.8.2v1.0.0-1
xr-infra-sla	7.8.2v1.0.0-1
xr-install	7.8.2v1.0.0-1
xr-ip-apps	7.8.2v1.0.0-1
xr-ip-core	7.8.2v1.0.0-1
xr-ip-infra-vrf	7.8.2v1.0.0-1
xr-ip-mibs	7.8.2v1.0.0-1
xr-ip-static	7.8.2v1.0.0-1
xr-ipc	7.8.2v1.0.0-1
xr-ipsla	7.8.2v1.0.0-1
xr-is-is	7.8.2v1.0.0-1
xr-k9sec	7.8.2v1.0.0-1
xr-l2snooptransport	7.8.2v1.0.0-1
xr-l2vpn	7.8.2v1.0.0-1
xr-ldp	7.8.2v1.0.0-1
xr-licensing	7.8.2v1.0.0-1
xr-link-oam	7.8.2v1.0.0-1
xr-linuxnetworking	7.8.2v1.0.0-1
xr-linuxsecurity	7.8.2v1.0.0-1
xr-lldp	7.8.2v1.0.0-1
xr-lpts	7.8.2v1.0.0-1
xr-manageabilityxml	7.8.2v1.0.0-1
xr-mandatory	7.8.2v1.0.0-1
xr-mcast	7.8.2v1.0.0-1
xr-mcastl2snoop	7.8.2v1.0.0-1
xr-mds	7.8.2v1.0.0-1
xr-mpls	7.8.2v1.0.0-1
xr-mpls-oam	7.8.2v1.0.0-1

xr-mppls-oam-client	7.8.2v1.0.0-1
xr-mppls-static	7.8.2v1.0.0-1
xr-netflow	7.8.2v1.0.0-1
xr-networkboot	7.8.2v1.0.0-1
xr-nosi	7.8.2v1.0.0-1
xr-ntp	7.8.2v1.0.0-1
xr-ofa	7.8.2v1.0.0-1
xr-optics	7.8.2v1.0.0-1
xr-orrspf	7.8.2v1.0.0-1
xr-os-wr9-apps	7.8.2v1.0.0-1
xr-os-wr9-core	7.8.2v1.0.0-1
xr-os-wr9-hardware	7.8.2v1.0.0-1
xr-ospf	7.8.2v1.0.0-1
xr-p4rt	7.8.2v1.0.0-1
xr-perf-meas	7.8.2v1.0.0-1
xr-perfmgmt	7.8.2v1.0.0-1
xr-pfi	7.8.2v1.0.0-1
xr-pird-stubs	7.8.2v1.0.0-1
xr-pkt-trace	7.8.2v1.0.0-1
xr-platforms-ras	7.8.2v1.0.0-1
xr-pm-alarm	7.8.2v1.0.0-1
xr-procmgr	7.8.2v1.0.0-1
xr-pxeserver	7.8.2v1.0.0-1
xr-python	7.8.2v1.0.0-1
xr-qos	7.8.2v1.0.0-1
xr-rid-mgr	7.8.2v1.0.0-1
xr-routing	7.8.2v1.0.0-1
xr-rpl	7.8.2v1.0.0-1
xr-rsvp-te	7.8.2v1.0.0-1
xr-security	7.8.2v1.0.0-1
xr-security-tams	7.8.2v1.0.0-1
xr-secy-driver	7.8.2v1.0.0-1
xr-servicelayer	7.8.2v1.0.0-1
xr-snmp	7.8.2v1.0.0-1
xr-snmp-hw	7.8.2v1.0.0-1
xr-span	7.8.2v1.0.0-1
xr-spi-core	7.8.2v1.0.0-1
xr-spi-hw	7.8.2v1.0.0-1
xr-spp	7.8.2v1.0.0-1
xr-sr	7.8.2v1.0.0-1
xr-stats	7.8.2v1.0.0-1
xr-stp	7.8.2v1.0.0-1
xr-stubs	7.8.2v1.0.0-1
xr-sysdb	7.8.2v1.0.0-1
xr-syslog	7.8.2v1.0.0-1
xr-telemetry	7.8.2v1.0.0-1
xr-telnet	7.8.2v1.0.0-1
xr-timing	7.8.2v1.0.0-1
xr-tmpdir-cleanup	7.8.2v1.0.0-1
xr-track	7.8.2v1.0.0-1
xr-transport	7.8.2v1.0.0-1
xr-tty	7.8.2v1.0.0-1
xr-tunnel-ip	7.8.2v1.0.0-1
xr-tunnel-nve	7.8.2v1.0.0-1
xr-upgradematrix	7.8.2v1.0.0-1
xr-utils	7.8.2v1.0.0-1
xr-vether	7.8.2v1.0.0-1
xr-vpnmib	7.8.2v1.0.0-1
xr-xmlinfra	7.8.2v1.0.0-1
xr-xrlicurl	7.8.2v1.0.0-1
xr-ztp	7.8.2v1.0.0-1

To know about all the RPMs installed including XR, OS and other components use the **show install active all** command.

The software modularity approach provides a flexible model that allows you to install a subset of IOS XR packages on devices based on your individual requirements. All critical components are modularized as packages so that you can select the features that you want to run on your router.



Note The above show command output displays mandatory packages that are installed on the router. To view the optional and bug fix RPM packages, first install the package and use the **show install active summary** command.

Caveats

These caveats are applicable for Cisco IOS XR Software:

Table 1: Cisco 8000 Series Router Specific Bugs

Bug ID	Headline
CSCwe52302	After initiating RPFO, Router is not accessible via console, new mgmt sessions.
CSCwe49065	Seeing FABRIC-NPU_DRV3-NPU_CPA_GEN_ERR_INFO error logs on active RP reload.

Determine Software Version

Log in to the router and enter the **show version** command:

```
RP/0/RP0/CPU0# show version
Cisco IOS XR Software, Version 7.8.2 LNT
Copyright (c) 2013-2023 by Cisco Systems, Inc.

Build Information:
  Built By      : ingunawa
  Built On     : Wed Mar 15 16:45:19 UTC 2023
  Build Host   : iox-ucs-060
  Workspace    : /auto/srcarchive13/prod/7.8.2/8000/ws
  Version      : 7.8.2
  Label       : 7.8.2
```

```
cisco 8000 (Intel(R) Xeon(R) CPU D-1530 @ 2.40GHz)
cisco 8812 (Intel(R) Xeon(R) CPU D-1530 @ 2.40GHz) processor with 32GB of memory
R1 uptime is 7 hours, 19 minutes
Cisco 8812 12-slot Chassis
```

Determine Firmware Support

Log in to the router and enter **show fpd package** command:

Cisco 8100 Series Router

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

```

=====
                                Field Programmable Device Package
                                =====
Card Type          FPD Description          Req      SW      Min Req  Min Req
=====          =====          Reload  Ver      SW Ver  Board Ver
-----
8102-64H          Bios                      YES      1.06    1.06     0.0
                  BiosGolden                YES      1.06    0.13     0.0
                  IoFpga                    YES      1.04    1.04     0.0
                  IoFpgaGolden              YES      1.04    1.04     0.0
                  SsdIntelS3520             YES      1.21    1.21     0.0
                  SsdIntelS4510            YES      11.32   11.32    0.0
                  SsdMicron5100            YES      7.01    7.01     0.0
                  SsdMicron5300            YES      0.01    0.01     0.0
                  x86Fpga                   YES      1.81    1.81     0.0
                  x86FpgaGolden            YES      1.81    1.06     0.0
                  x86TamFw                  YES      6.13    6.13     0.0
                  x86TamFwGolden           YES      6.13    6.05     0.0
-----
8102-64H-O        Bios                      YES      0.219   0.219    0.0
                  BiosGolden                YES      0.219   0.219    0.0
                  IoFpga                    YES      1.04    1.04     0.0
                  IoFpgaGolden              YES      1.04    1.04     0.0
                  SsdIntelS3520             YES      1.21    1.21     0.0
                  SsdIntelS4510            YES      11.32   11.32    0.0
                  SsdMicron5100            YES      7.01    7.01     0.0
                  SsdMicron5300            YES      0.01    0.01     0.0
                  x86Fpga                   YES      1.81    1.81     0.0
                  x86FpgaGolden            YES      1.81    1.06     0.0
                  x86TamFw                  YES      6.13    6.13     0.0
                  x86TamFwGolden           YES      6.13    6.05     0.0
-----
PSU650W-ACPE     LI-SecMCU                 NO       2.55    2.55     0.0
-----
PSU650W-ACPI     LI-SecMCU                 NO       2.54    2.54     0.0
-----
PSU930W-DCPE     LI-SecMCU                 NO       2.03    2.03     0.0
-----
PSU930W-DCPI     LI-SecMCU                 NO       3.03    3.03     0.0
-----

```

Cisco 8200 Series Router

RP/0/RP0/CPU0# show fpd package

```

=====
                                Field Programmable Device Package
                                =====
Card Type          FPD Description          Req      SW      Min Req  Min Req
=====          =====          Reload  Ver      SW Ver  Board Ver
-----
8202-32FH-M      Bios                      YES      1.02    1.02     0.0
                  BiosGolden                YES      1.02    1.01     0.0
                  DbIoFpga1                 YES      1.06    1.06     0.0
                  DbIoFpga2                 YES      1.06    1.06     0.0
                  DbIoFpgaGolden1          YES      1.06    1.03     0.0
                  DbIoFpgaGolden2          YES      1.06    1.03     0.0
                  IoFpga1                   YES      1.06    1.06     0.0
                  IoFpga2                   YES      1.06    1.06     0.0
                  IoFpgaGolden1            YES      1.06    1.03     0.0
                  IoFpgaGolden2            YES      1.06    1.03     0.0
                  SsdIntelS3520             YES      1.21    1.21     0.0
                  SsdIntelS4510            YES      11.32   11.32    0.0
-----

```

	SsdMicron5100	YES	7.01	7.01	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	x86Fpga	YES	1.04	1.04	0.0
	x86FpgaGolden	YES	1.04	1.00	0.0
	x86TamFw	YES	7.12	7.12	0.0
	x86TamFwGolden	YES	7.12	7.10	0.0

8202-32FH-M[FB]	IoFpga	NO	1.00	1.00	0.0
	IoFpgaGolden	NO	1.00	1.00	0.0

8202-32FH-MO	DbIoFpga1	YES	1.06	1.06	0.0
	DbIoFpga2	YES	1.06	1.06	0.0
	DbIoFpgaGolden1	YES	1.06	1.03	0.0
	DbIoFpgaGolden2	YES	1.06	1.03	0.0
	IoFpga1	YES	1.06	1.06	0.0
	IoFpga2	YES	1.06	1.06	0.0
	IoFpgaGolden1	YES	1.06	1.03	0.0
	IoFpgaGolden2	YES	1.06	1.03	0.0
	SsdIntelS3520	YES	1.21	1.21	0.0
	SsdIntelS4510	YES	11.32	11.32	0.0
	SsdMicron5100	YES	7.01	7.01	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	x86Fpga	YES	1.03	1.03	0.0
	x86FpgaGolden	YES	1.03	1.00	0.0
	x86TamFw	YES	7.10	7.10	0.0
	x86TamFwGolden	YES	7.10	7.10	0.0

PSU2KW-ACPE	PO-PrimMCU	NO	17.54	17.54	0.0

PSU2KW-ACPI	PO-PrimMCU	NO	17.56	17.56	0.0

PSU2KW-DCPE	PO-PrimMCU	NO	1.07	1.07	0.0

PSU2KW-DCPI	PO-PrimMCU	NO	1.07	1.07	0.0

PSU2KW-HVPI	PO-PrimMCU	NO	17.136	17.136	0.0

PSU3KW-HVPI	DT-PrimMCU	NO	2.01	2.01	0.0
	DT-SecMCU	NO	2.02	2.02	0.0

Cisco 8800 Series Router

RP/0/RP0/CPU0# show fpd package

```

=====
                                Field Programmable Device Package
                                =====
Card Type          FPD Description          Req   SW   Min Req  Min Req
=====          =====          =====
                                Reload Ver   SW Ver   Board Ver
=====          =====          =====
88-LC0-34H14FH    Bios                      YES    1.06   1.06     0.0
                  BiosGolden                YES    1.06   0.13     0.0
                  EthSwitch                 YES    1.04   1.04     0.0
                  EthSwitchGolden          YES    1.04   0.07     0.0
                  IoFpga                   YES    1.09   1.09     0.1
                  IoFpgaGolden             YES    1.09   1.01     0.1
                  SsdIntelS3520            YES    1.21   1.21     0.0
                  SsdIntelS4510            YES    11.32  11.32    0.0
                  SsdMicron5100            YES    7.01   7.01     0.0
                  SsdMicron5300            YES    0.01   0.01     0.0
                  x86Fpga                  YES    0.91   0.91     0.1
                  x86FpgaGolden            YES    0.91   0.78     0.1
                  x86TamFw                 YES    6.13   6.13     0.1
=====

```


	x86TamFwGolden	YES	6.13	6.10	0.1
88-LC0-34H14FH-O	Bios	YES	0.219	0.219	0.0
	BiosGolden	YES	0.219	0.219	0.0
	EthSwitch	YES	1.04	1.04	0.0
	EthSwitchGolden	YES	1.04	0.07	0.0
	IoFpga	YES	1.09	1.09	0.1
	IoFpgaGolden	YES	1.09	1.01	0.1
	SsdIntelS3520	YES	1.21	1.21	0.0
	SsdIntelS4510	YES	11.32	11.32	0.0
	SsdMicron5100	YES	7.01	7.01	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	x86Fpga	YES	0.91	0.91	0.1
	x86FpgaGolden	YES	0.91	0.78	0.1
	x86TamFw	YES	6.13	6.13	0.1
	x86TamFwGolden	YES	6.13	6.10	0.1
88-LC0-36FH	Bios	YES	1.06	1.06	0.0
	BiosGolden	YES	1.06	0.13	0.0
	EthSwitch	YES	1.04	1.04	0.0
	EthSwitchGolden	YES	1.04	0.07	0.0
	IoFpga	YES	1.13	1.13	0.1
	IoFpgaGolden	YES	1.13	1.00	0.1
	SsdIntelS3520	YES	1.21	1.21	0.0
	SsdIntelS4510	YES	11.32	11.32	0.0
	SsdMicron5100	YES	7.01	7.01	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	x86Fpga	YES	1.36	1.36	0.1
	x86FpgaGolden	YES	1.36	1.04	0.1
	x86TamFw	YES	6.13	6.13	0.1
	x86TamFwGolden	YES	6.13	6.05	0.1
88-LC0-36FH-M	Bios	YES	1.06	1.06	0.0
	BiosGolden	YES	1.06	0.13	0.0
	EthSwitch	YES	1.04	1.04	0.0
	EthSwitchGolden	YES	1.04	0.07	0.0
	IoFpga	YES	1.13	1.13	0.1
	IoFpgaGolden	YES	1.13	1.00	0.1
	SsdIntelS3520	YES	1.21	1.21	0.0
	SsdIntelS4510	YES	11.32	11.32	0.0
	SsdMicron5100	YES	7.01	7.01	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	x86Fpga	YES	1.36	1.36	0.1
	x86FpgaGolden	YES	1.36	1.04	0.1
	x86TamFw	YES	6.13	6.13	0.1
	x86TamFwGolden	YES	6.13	6.05	0.1
88-LC0-36FH-MO	Bios	YES	0.219	0.219	0.0
	BiosGolden	YES	0.219	0.219	0.0
	EthSwitch	YES	1.04	1.04	0.0
	EthSwitchGolden	YES	1.04	0.07	0.0
	IoFpga	YES	1.13	1.13	0.1
	IoFpgaGolden	YES	1.13	1.00	0.1
	SsdIntelS3520	YES	1.21	1.21	0.0
	SsdIntelS4510	YES	11.32	11.32	0.0
	SsdMicron5100	YES	7.01	7.01	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	x86Fpga	YES	1.36	1.36	0.1
	x86FpgaGolden	YES	1.36	1.04	0.1
	x86TamFw	YES	6.13	6.13	0.1
	x86TamFwGolden	YES	6.13	6.05	0.1
88-LC0-36FH-O	Bios	YES	0.219	0.219	0.0
	BiosGolden	YES	0.219	0.219	0.0

	EthSwitch	YES	1.04	1.04	0.0
	EthSwitchGolden	YES	1.04	0.07	0.0
	IoFpga	YES	1.13	1.13	0.1
	IoFpgaGolden	YES	1.13	1.00	0.1
	SsdIntelS3520	YES	1.21	1.21	0.0
	SsdIntelS4510	YES	11.32	11.32	0.0
	SsdMicron5100	YES	7.01	7.01	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	x86Fpga	YES	1.36	1.36	0.1
	x86FpgaGolden	YES	1.36	1.04	0.1
	x86TamFw	YES	6.13	6.13	0.1
	x86TamFwGolden	YES	6.13	6.05	0.1

8800-LC-36FH	Bios	YES	1.23	1.23	0.0
	BiosGolden	YES	1.23	1.15	0.0
	EthSwitch	YES	1.04	1.04	0.0
	EthSwitchGolden	YES	1.04	0.07	0.0
	IoFpga	YES	1.38	1.38	0.0
	IoFpgaGolden	YES	1.38	0.08	0.0
	SsdIntelS3520	YES	1.21	1.21	0.0
	SsdIntelS4510	YES	11.32	11.32	0.0
	SsdMicron5100	YES	7.01	7.01	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	x86Fpga	YES	1.52	1.52	0.0
	x86FpgaGolden	YES	1.52	0.33	0.0
	x86TamFw	YES	5.13	5.13	0.0
	x86TamFwGolden	YES	5.13	5.05	0.0

8800-LC-36FH-O	Bios	YES	1.208	1.208	0.0
	BiosGolden	YES	1.208	1.207	0.0
	EthSwitch	YES	1.04	1.04	0.0
	EthSwitchGolden	YES	1.04	0.07	0.0
	IoFpga	YES	1.38	1.38	0.0
	IoFpgaGolden	YES	1.38	0.08	0.0
	SsdIntelS3520	YES	1.21	1.21	0.0
	SsdIntelS4510	YES	11.32	11.32	0.0
	SsdMicron5100	YES	7.01	7.01	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	x86Fpga	YES	1.52	1.52	0.0
	x86FpgaGolden	YES	1.52	0.33	0.0
	x86TamFw	YES	5.13	5.13	0.0
	x86TamFwGolden	YES	5.13	5.05	0.0

8800-LC-48H	Bios	YES	1.23	1.23	0.0
	BiosGolden	YES	1.23	1.15	0.0
	EthSwitch	YES	1.04	1.04	0.0
	EthSwitchGolden	YES	1.04	0.07	0.0
	IoFpga	YES	1.38	1.38	0.0
	IoFpgaGolden	YES	1.38	0.08	0.0
	SsdIntelS3520	YES	1.21	1.21	0.0
	SsdIntelS4510	YES	11.32	11.32	0.0
	SsdMicron5100	YES	7.01	7.01	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	x86Fpga	YES	1.52	1.52	0.0
	x86FpgaGolden	YES	1.52	0.33	0.0
	x86TamFw	YES	5.13	5.13	0.0
	x86TamFwGolden	YES	5.13	5.05	0.0

8800-LC-48H-O	Bios	YES	1.208	1.208	0.0
	BiosGolden	YES	1.208	1.207	0.0
	EthSwitch	YES	1.04	1.04	0.0
	EthSwitchGolden	YES	1.04	0.07	0.0
	IoFpga	YES	1.38	1.38	0.0
	IoFpgaGolden	YES	1.38	0.08	0.0

	SsdIntelS3520	YES	1.21	1.21	0.0
	SsdIntelS4510	YES	11.32	11.32	0.0
	SsdMicron5100	YES	7.01	7.01	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	x86Fpga	YES	1.52	1.52	0.0
	x86FpgaGolden	YES	1.52	0.33	0.0
	x86TamFw	YES	5.13	5.13	0.0
	x86TamFwGolden	YES	5.13	5.05	0.0

8800-RP	Bios	YES	1.23	1.23	0.0
	BiosGolden	YES	1.23	1.15	0.0
	EthSwitch	YES	1.02	1.02	0.0
	EthSwitchGolden	YES	1.02	0.07	0.0
	SsdIntelS3520	YES	1.21	1.21	0.0
	SsdIntelS4510	YES	11.32	11.32	0.0
	SsdMicron5100	YES	7.01	7.01	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	TimingFpga	YES	1.02	1.02	0.0
	TimingFpgaGolden	YES	1.02	0.11	0.0
	x86Fpga	YES	1.32	1.32	0.0
	x86FpgaGolden	YES	1.32	0.24	0.0
	x86TamFw	YES	5.13	5.13	0.0
	x86TamFwGolden	YES	5.13	5.05	0.0

8800-RP-E	Bios	YES	1.23	1.23	0.0
	BiosGolden	YES	1.23	1.15	0.0
	EthSwitch	YES	1.02	1.02	0.0
	EthSwitchGolden	YES	1.02	0.07	0.0
	SsdIntelS3520	YES	1.21	1.21	0.0
	SsdIntelS4510	YES	11.32	11.32	0.0
	SsdMicron5100	YES	7.01	7.01	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	TimingFpga	YES	1.02	1.02	0.0
	TimingFpgaGolden	YES	1.02	0.11	0.0
	x86Fpga	YES	1.32	1.32	0.0
	x86FpgaGolden	YES	1.32	0.24	0.0
	x86TamFw	YES	5.13	5.13	0.0
	x86TamFwGolden	YES	5.13	5.05	0.0

8800-RP-O	Bios	YES	1.208	1.208	0.0
	BiosGolden	YES	1.208	1.207	0.0
	EthSwitch	YES	1.02	1.02	0.0
	EthSwitchGolden	YES	1.02	0.07	0.0
	SsdIntelS3520	YES	1.21	1.21	0.0
	SsdIntelS4510	YES	11.32	11.32	0.0
	SsdMicron5100	YES	7.01	7.01	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	TimingFpga	YES	1.02	1.02	0.0
	TimingFpgaGolden	YES	1.02	0.11	0.0
	x86Fpga	YES	1.32	1.32	0.0
	x86FpgaGolden	YES	1.32	0.24	0.0
	x86TamFw	YES	5.13	5.13	0.0
	x86TamFwGolden	YES	5.13	5.05	0.0

8800-RP2	Bios	YES	1.01	1.01	0.0
	BiosGolden	YES	1.01	1.01	0.0
	EthSwitch	YES	1.02	1.02	0.0
	EthSwitchGolden	YES	1.02	0.07	0.0
	SsdIntelS3520	YES	1.21	1.21	0.0
	SsdIntelS4510	YES	11.32	11.32	0.0
	SsdMicron5100	YES	7.01	7.01	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	TimingFpga	YES	0.08	0.08	0.0
	TimingFpgaGolden	YES	0.08	0.08	0.0

	x86Fpga	YES	0.71	0.71	0.0
	x86FpgaGolden	YES	0.71	0.71	0.0
	x86TamFw	YES	7.09	7.09	0.0
	x86TamFwGolden	YES	7.09	7.09	0.0

8800-RP2-E	Bios	YES	1.01	1.01	0.0
	BiosGolden	YES	1.01	1.01	0.0
	EthSwitch	YES	1.02	1.02	0.0
	EthSwitchGolden	YES	1.02	0.07	0.0
	SsdIntelS3520	YES	1.21	1.21	0.0
	SsdIntelS4510	YES	11.32	11.32	0.0
	SsdMicron5100	YES	7.01	7.01	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	TimingFpga	YES	0.08	0.08	0.0
	TimingFpgaGolden	YES	0.08	0.08	0.0
	x86Fpga	YES	0.71	0.71	0.0
	x86FpgaGolden	YES	0.71	0.71	0.0
	x86TamFw	YES	7.09	7.09	0.0
	x86TamFwGolden	YES	7.09	7.09	0.0

8800-RP2-O	Bios	YES	0.02	0.02	0.0
	BiosGolden	YES	0.02	0.02	0.0
	EthSwitch	YES	1.02	1.02	0.0
	EthSwitchGolden	YES	1.02	0.07	0.0
	SsdIntelS3520	YES	1.21	1.21	0.0
	SsdIntelS4510	YES	11.32	11.32	0.0
	SsdMicron5100	YES	7.01	7.01	0.0
	SsdMicron5300	YES	0.01	0.01	0.0
	TimingFpga	YES	0.08	0.08	0.0
	TimingFpgaGolden	YES	0.08	0.08	0.0
	x86Fpga	YES	0.73	0.73	0.0
	x86FpgaGolden	YES	0.73	0.73	0.0
	x86TamFw	YES	7.09	7.09	0.0
	x86TamFwGolden	YES	7.09	7.09	0.0

8804-FAN	FtFpga	NO	1.00	1.00	0.0
	FtFpgaGolden	NO	1.00	0.16	0.0

8804-FC0	IoFpga	YES	1.00	1.00	0.0
	IoFpgaGolden	YES	1.00	0.16	0.0

8808-FAN	FtFpga	NO	1.00	1.00	0.0
	FtFpgaGolden	NO	1.00	0.16	0.0

8808-FC	IoFpga	YES	1.02	1.02	0.0
	IoFpgaGolden	YES	1.02	0.05	0.0

8808-FC0	IoFpga	YES	1.00	1.00	0.0
	IoFpgaGolden	YES	1.00	0.16	0.0

8808-FC1	IoFpga	YES	0.12	0.12	0.0
	IoFpgaGolden	YES	0.12	0.12	0.0

8812-FAN	FtFpga	NO	1.00	1.00	0.0
	FtFpgaGolden	NO	1.00	0.16	0.0

8812-FC	IoFpga	YES	1.02	1.02	0.0
	IoFpgaGolden	YES	1.02	0.05	0.0
	Retimer	YES	3.00	3.00	0.0

8818-FAN	FtFpga	NO	1.00	1.00	0.0
	FtFpgaGolden	NO	1.00	0.16	0.0

8818-FC	IoFpga	YES	1.02	1.02	0.0

	IoFpgaGolden	YES	1.02	0.05	0.0
	Retimer	YES	3.00	3.00	0.0

8818-FC0	IoFpga	YES	1.00	1.00	0.0
	IoFpgaGolden	YES	1.00	0.16	0.0
	Retimer	YES	3.00	3.00	0.0

PSU-4.8KW-DC100	PO-PrimMCU	NO	51.85	51.85	0.0

PSU6.3KW-20A-HV	DT-LogicMCU	NO	1.00	1.00	0.0
	DT-PrimMCU	NO	1.00	1.00	0.0
	DT-SecMCU	NO	1.00	1.00	0.0

PSU6.3KW-HV	AB-LogicMCU	NO	3.08	3.08	0.0
	AB-PrimMCU	NO	3.08	3.08	0.0
	AB-SecMCU	NO	3.06	3.06	0.0
	DT-LogicMCU	NO	4.11	4.11	0.0
	DT-PrimMCU	NO	4.01	4.01	0.0
	DT-SecMCU	NO	4.00	4.00	0.0

PWR-4.4KW-DC-V3	DT-LogicMCU	NO	3.02	3.02	0.0
	DT-Prim1MCU	NO	3.01	3.01	0.0
	DT-Prim2MCU	NO	3.01	3.01	0.0
	DT-Sec1MCU	NO	3.01	3.01	0.0
	DT-Sec2MCU	NO	3.01	3.01	0.0

Important Notes

- The warning message that the smart licensing evaluation period has expired is displayed in the console every hour. There is, however, no functionality impact on the device. The issue is seen on routers that don't have the Flexible Consumption licensing model enabled. To stop the repetitive messaging, register the device with the smart licensing server and enable the Flexible Consumption model. Later load a new registration token.

To register the device with the smart licensing server, see the [Registering and Activating Your Router](#).

- When you execute the **show tech-support** command, a temporary directory is created and the related data is stored in this directory. This directory is deleted after the command is completed. For example,

```
Router#run ls -ltr
drwxrwxrwx. 3 root root show-tech-fabric-link-incl-loca-010cpu0_2.tgz
```

In case, you terminate the **show tech-support** command manually, we recommend you to delete the corresponding show tech directory if not needed.

Supported Transceiver Modules

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

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 8000 router documentation is located at the following URL:

<https://www.cisco.com/c/en/us/td/docs/iosxr/8000-series-routers.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.