



Release Notes for Cisco IOS Release 15.2(2)SY

July 06, 2017



Note

-
- See this product bulletin for information about the standard maintenance and extended maintenance 15.2SY releases:

http://www.cisco.com/c/en/us/products/collateral/ios-nx-os-software/ios-15-0sy/product_bulletin_c25-687567.html

- For general product information about the Catalyst 6500 series switches, refer to these product bulletins:

<http://www.cisco.com/c/en/us/products/switches/catalyst-6500-series-switches/literature.html>

The most current version of this document is available on Cisco.com at this URL:

http://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst6500/ios/15-2SY/release_notes/release_notes_15_2_2SY.html



Caution

Cisco IOS supports redundant configurations with identical supervisor engines. If they are not identical, one supervisor engine will boot first and become active and hold the other in a reset condition.

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Chronological List of Releases



Note

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- See the “[Images and Feature Sets](#)” section on [page 10](#) for information about which releases are deferred.
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This is a chronological list of the 15.2SY releases:

- [Release 15.2\(2\)SY3—06 July 2017](#)
- [Release 15.2\(2\)SY2—15 July 2016](#)
- [Release 15.2\(2\)SY1—17 March 2016](#)
- [Release 15.2\(2\)SY—23 September 2015](#)

Supported Hardware

These sections describe the hardware supported in Release 15.2(2)SY and later releases:

- [Cisco Catalyst 6840-X Series Fixed Aggregation Switches](#), page 3
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Note

Enter the **show power** command to display current system power usage.

Cisco Catalyst 6840-X Series Fixed Aggregation Switches

Product ID (append "=" for spares)	Product Description	Minimum Software Version
C6816-X-LE	16 10-Gigabit (SFP+)/1-Gigabit ports (SFP), two power supply slots. It supports standard FIB/ACL/NetFlow tables.	15.2(2)SY
C6832-X-LE	32 10-Gigabit (SFP+)/1-Gigabit ports (SFP), two power supply slots. It supports standard FIB/ACL/NetFlow tables.	
C6824-X-LE-40G	24 10-Gigabit (SFP+)/1-Gigabit ports (SFP), 2 40-Gigabit(QSFP), two power supply slots. It supports standard FIB/ACL/NetFlow tables.	15.2(2)SY
C6840-X-LE-40G	40 10-Gigabit (SFP+)/1-Gigabit ports (SFP), 2 40-Gigabit(QSFP), two power supply slots. It supports standard FIB/ACL/NetFlow tables.	

Note See these publications for more information:

<http://www.cisco.com/c/en/us/products/collateral/switches/catalyst-6800-series-switches/datasheet-c78-734470.html>

These port cards are supported only on the specified switch models and are not interoperable.

Instant Access Catalyst 6800ia Series Switches

Product ID (append "=" for spares)	Product Description	Minimum Software Version
Catalyst C6800IA-48FPDR	48-port 10/100/1000 RJ-45 PoE-capable Ethernet (24 ports up to 30W, 48 ports up to 15.4W, 740W total; dual power supplies) Note <ul style="list-style-type: none"> ISSU upgrade or downgrade is not supported with C6800IA-48FPDR. C6800IA-48FPDR does not support SNMP traps. 	15.2(2)SY
Catalyst C6800IA-48FPD	48-port 10/100/1000 RJ-45 PoE-capable Ethernet (24 ports up to 30W, 48 ports up to 15.4W, 740W total)	15.2(2)SY
Catalyst C6800IA-48TD	48-port 10/100/1000 RJ-45 Ethernet With C6840	

Note See these publications for more information:

http://www.cisco.com/c/en/us/products/collateral/switches/catalyst-6800ia-switch/data_sheet_c78-728230.html

http://www.cisco.com/c/en/us/products/collateral/switches/catalyst-6800ia-switch/white_paper_c11-728265.html

http://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst6800ia/hardware/installation/guide/b_c6800ia_hig.html

IA client maximum values for Catalyst 6840-X switch:

Value Description:	Maximum Value
Maximum IA client ports	1500 ports across 32 Catalyst 6800ia access switches
Maximum IA client switches	32
Maximum Catalyst 6800ia access switches per IA client stack	5 <ul style="list-style-type: none"> • An IA client stack acts as single switch unit. • Instant access only supports connection with stacking cables to form a stack. • With an IA client that has multiple Catalyst 6800ia access switches, the switches in the stack assign incrementing switch numbers to themselves (automatic stacking capability). • If you add Catalyst 6800ia access switches to a configured IA client, the additional switches assign incrementing switch numbers to themselves. • The IA client configuration does not persist if the access switch number changes.

Transceivers

- [10 GE SFP+ Modules, page 4](#)
- [40 GE QSFP Modules, page 6](#)
- [Small Form-Factor Pluggable \(SFP\) Modules, page 7](#)
- [Fast Ethernet SFP Modules, page 9](#)

10 GE SFP+ Modules

Product ID (append "" for spares)	Product Description	Minimum Software Version
DWDM-SFP10G-61.41	10GBASE-DWDM 1561.41 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-60.61	10GBASE-DWDM 1560.61 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-59.79	10GBASE-DWDM 1559.79 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-58.98	10GBASE-DWDM 1558.98 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-58.17	10GBASE-DWDM 1558.17 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-57.36	10GBASE-DWDM 1557.36 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-56.55	10GBASE-DWDM 1556.55 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-55.75	10GBASE-DWDM 1555.75 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-54.94	10GBASE-DWDM 1554.94 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-54.13	10GBASE-DWDM 1554.13 nm SFP+ (100-GHz ITU grid)	15.2(2)SY

Product ID (append "" for spares)	Product Description	Minimum Software Version
DWDM-SFP10G-53.33	10GBASE-DWDM 1553.33 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-52.52	10GBASE-DWDM 1552.52 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-51.72	10GBASE-DWDM 1551.72 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-50.92	10GBASE-DWDM 1550.92 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-50.12	10GBASE-DWDM 1550.12 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-49.32	10GBASE-DWDM 1549.32 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-48.51	10GBASE-DWDM 1548.51 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-47.72	10GBASE-DWDM 1547.72 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-46.92	10GBASE-DWDM 1546.92 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-46.12	10GBASE-DWDM 1546.12 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-45.32	10GBASE-DWDM 1545.32 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-44.53	10GBASE-DWDM 1544.53 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-43.73	10GBASE-DWDM 1543.73 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-42.94	10GBASE-DWDM 1542.94 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-42.14	10GBASE-DWDM 1542.14 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-41.35	10GBASE-DWDM 1541.35 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-40.56	10GBASE-DWDM 1540.56 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-39.77	10GBASE-DWDM 1539.77 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-38.98	10GBASE-DWDM 1538.98 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-38.19	10GBASE-DWDM 1538.19 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-37.40	10GBASE-DWDM 1537.40 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-36.61	10GBASE-DWDM 1536.61 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-35.82	10GBASE-DWDM 1535.82 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-35.04	10GBASE-DWDM 1535.04 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-34.25	10GBASE-DWDM 1534.25 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-33.47	10GBASE-DWDM 1533.47 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-32.68	10GBASE-DWDM 1532.68 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-31.90	10GBASE-DWDM 1531.90 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-31.12	10GBASE-DWDM 1531.12 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
DWDM-SFP10G-30.33	10GBASE-DWDM 1530.33 nm SFP+ (100-GHz ITU grid)	15.2(2)SY
SFP-10G-LR	10GBASE-LR for 1310 nm SMF	15.2(2)SY
SFP-10G-ER	10GBASE-ER for 1550 nm SMF	15.2(2)SY
SFP-10G-LRM	10GBASE-LRM 1310 nm MMF and SMF	15.2(2)SY
SFP-10G-SR	10GBASE-SR 850 nm MMF	15.2(2)SY
SFP-10G-ZR	10GBASE-ZR SFP+ for 1550 nm SMF	15.2(2)SY
SFP-10G-LR-S	10GBASE-LR for 1310 nm SMF, S-Class	15.2(2)SY

Product ID (append "" for spares)	Product Description	Minimum Software Version
SFP-10G-ER-S	10GBASE-ER for 1550 nm SMF, S-Class	15.2(2)SY
SFP-10G-SR-S	10GBASE-SR 850 nm MMF, S-Class	15.2(2)SY
SFP-10G-ZR-S	10GBASE-ZR SFP+ for 1550 nm SMF, S-Class	15.2(2)SY
SFP-H10GB-CU1M	1m Twinax cable, passive, 30AWG cable assembly	15.2(2)SY
SFP-H10GB-CU1-5M	1.5m Twinax cable, passive, 30AWG cable assembly	15.2(2)SY
SFP-H10GB-CU2M	2m Twinax cable, passive, 30AWG cable assembly	15.2(2)SY
SFP-H10GB-CU2-5M	2.5m Twinax cable, passive, 30AWG cable assembly	15.2(2)SY
SFP-H10GB-CU3M	3m Twinax cable, passive, 30AWG cable assembly	15.2(2)SY
SFP-H10GB-CU5M	5m Twinax cable, passive, 24AWG cable assembly	15.2(2)SY
SFP-H10GB-ACU7M	7m Twinax cable, active, 30 AWG cable assembly	15.2(2)SY
SFP-H10GB-ACU10M	10m Twinax cable, active, 28 AWG cable assembly	15.2(2)SY
SFP-10G-AOC1M	1m Active Optical Cable assembly	15.2(2)SY
SFP-10G-AOC2M	2m Active Optical Cable assembly	15.2(2)SY
SFP-10G-AOC3M	3m Active Optical Cable assembly	15.2(2)SY
SFP-10G-AOC5M	5m Active Optical Cable assembly	15.2(2)SY
SFP-10G-AOC7M	7m Active Optical Cable assembly	15.2(2)SY
SFP-10G-AOC10M	10m Active Optical Cable assembly	15.2(2)SY

40 GE QSFP Modules

Product ID (append "" for spares)	Product Description	Minimum Software Version
QSFP-40G-SR4	40GBASE-SR4, 4 lanes, 850 nm MMF	15.2(2)SY
QSFP-40G-CSR4	40GBASE-CSR4, 4 lanes, 850 nm MMF	15.2(2)SY
QSFP-40G-LR4	40GBASE-LR4, 1310 nm, SMF with OTU3 data-rate support	15.2(2)SY
QSFP-40G-ER4	40GBASE-ER4, 1310 nm, SMF with OTU3 data-rate support	15.2(2)SY
QSFP-40G-SR-BD	40GBASE-SR-BiDi, duplex MMF	15.2(2)SY
QSFP-40G-SR4-S	40GBASE-SR4, 4 lanes, 850 nm MMF, S-Class	15.2(2)SY
QSFP-40G-LR4-S	40GBASE-LR4, 1310 nm, SMF, S-Class	15.2(2)SY
WSP-Q40GLR4L	40GBASE-LR4-Lite, 1310 nm, SMF	15.2(2)SY
QSFP-H40G-CU1M	1m QSFP to QSFP passive copper direct-attach cables	15.2(2)SY
QSFP-H40G-CU3M	3m QSFP to QSFP passive copper direct-attach cables	15.2(2)SY
QSFP-H40G-CU5M	5m QSFP to QSFP passive copper direct-attach cables	15.2(2)SY
QSFP-H40G-ACU7M	7m QSFP to QSFP active copper direct-attach cables	15.2(2)SY
QSFP-H40G-ACU10M	10m QSFP to QSFP active copper direct-attach cables	15.2(2)SY

Product ID (append "" for spares)	Product Description	Minimum Software Version
QSFP-H40G-AOC1M	1m QSFP to QSFP active optical cables	15.2(2)SY
QSFP-H40G-AOC2M	2m QSFP to QSFP active optical cables	15.2(2)SY
QSFP-H40G-AOC3M	3m QSFP to QSFP active optical cables	15.2(2)SY
QSFP-H40G-AOC5M	5m QSFP to QSFP active optical cables	15.2(2)SY
QSFP-H40G-AOC7M	7m QSFP to QSFP active optical cables	15.2(2)SY
QSFP-H40G-AOC10M	10m QSFP to QSFP active optical cables	15.2(2)SY
QSFP-H40G-AOC15M	15m QSFP to QSFP active optical cables	15.2(2)SY
QSFP-4SFP10G-CU1M	1m QSFP to 4 SFP+ passive copper break-out cables	15.2(2)SY2
QSFP-4SFP10G-CU3M	3m QSFP to 4 SFP+ passive copper break-out cables	15.2(2)SY2
QSFP-4SFP10G-CU5M	5m QSFP to 4 SFP+ passive copper break-out cables	15.2(2)SY2
QSFP-4X10G-AC7M	7m QSFP to 4 SFP+ passive copper break-out cables	15.2(2)SY2
QSFP-4X10G-AC10M	10m QSFP to 4 SFP+ passive copper break-out cables	15.2(2)SY2

Small Form-Factor Pluggable (SFP) Modules

- [Gigabit Ethernet SFPs, page 7](#)

Gigabit Ethernet SFPs



Note

- For information about coarse wavelength-division multiplexing (CWDM) SFPs, see the *Cisco CWDM GBIC and SFP Solutions* data sheet:
http://www.cisco.com/c/en/us/products/collateral/interfaces-modules/cwdm-transceiver-modules/product_data_sheet09186a00801a557c.html
- For information about DWDM SFPs, see the *Cisco CWDM GBIC and SFP Solutions* data sheet:
http://www.cisco.com/c/en/us/products/collateral/interfaces-modules/dwdm-transceiver-modules/product_data_sheet0900aecd80582763.html
- For information about other SFPs, see the *Cisco SFP Optics For Gigabit Ethernet Applications* data sheet:
http://www.cisco.com/c/en/us/products/collateral/interfaces-modules/gigabit-ethernet-gbic-sfp-modules/product_data_sheet0900aecd8033f885.html

Product ID (append "=" for spares)	Product Description	Minimum Software Version
GLC-T	1000BASE-T 10/100/1000 SFP module	15.2(2)SY
GLC-TE	1000BASE-T 10/100/1000 SFP module	15.2(2)SY

Product ID (append "=" for spares)	Product Description	Minimum Software Version
GLC-BX-D	1000BASE-BX10 SFP module for single-strand SMF, 1490-nm TX/1310-nm RX wavelength	15.2(2)SY
GLC-BX-U	1000BASE-BX10 SFP module for single-strand SMF, 1310-nm TX/1490-nm RX wavelength	15.2(2)SY
GLC-SX-MMD GLC-SX-MM	1000BASE-SX SFP	15.2(2)SY
GLC-LH-SMD GLC-LH-SM	1000BASE-LX/LH SFP	15.2(2)SY
GLC-EX-SMD	1000BASE-EX SFP transceiver module for SMF, 1310-nm wavelength, extended operating temperature range and DOM support, dual LC/PC connector	15.2(2)SY
GLC-ZX-SM	1000BASE-ZX SFP module	15.2(2)SY
GLC-ZX-SMD	1000BASE-ZX SFP transceiver module for SMF, 1550-nm wavelength, dual LC/PC connector	15.2(2)SY
CWDM-SFP-1470	CWDM 1470-nm (Gray) Gigabit Ethernet, 1 and 2 Gb Fibre Channel SFP module	15.2(2)SY
CWDM-SFP-1490	CWDM 1490-nm (Violet) Gigabit Ethernet, 1 and 2 Gb Fibre Channel SFP module	15.2(2)SY
CWDM-SFP-1510	CWDM 1510-nm (Blue) Gigabit Ethernet, 1 and 2 Gb Fibre Channel SFP module	15.2(2)SY
CWDM-SFP-1530	CWDM 1530-nm (Green) Gigabit Ethernet, 1 and 2 Gb Fibre Channel SFP module	15.2(2)SY
CWDM-SFP-1550	CWDM 1550-nm (Yellow) Gigabit Ethernet, 1 and 2 Gb Fibre Channel SFP module	15.2(2)SY
CWDM-SFP-1570	CWDM 1570-nm (Orange) Gigabit Ethernet, 1 and 2 Gb Fibre Channel SFP module	15.2(2)SY
CWDM-SFP-1590	CWDM 1590-nm (Red) Gigabit Ethernet, 1 and 2 Gb Fibre Channel SFP module	15.2(2)SY
CWDM-SFP-1610	CWDM 1610-nm (Brown) Gigabit Ethernet, 1 and 2 Gb Fibre Channel SFP module	15.2(2)SY
DWDM-SFP-5817	1000BASE-DWDM 1558.17 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY
DWDM-SFP-5252	1000BASE-DWDM 1552.52 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY
DWDM-SFP-5172	1000BASE-DWDM 1551.72 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY
DWDM-SFP-5012	1000BASE-DWDM 1550.12 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY
DWDM-SFP-4692	1000BASE-DWDM 1546.92 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY
DWDM-SFP-4373	1000BASE-DWDM 1543.73 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY
DWDM-SFP-4214	1000BASE-DWDM 1542.14 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY
DWDM-SFP-3977	1000BASE-DWDM 1539.77 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY
DWDM-SFP-3898	1000BASE-DWDM 1538.98 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY
DWDM-SFP-3582	1000BASE-DWDM 1535.82 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY
DWDM-SFP-3504	1000BASE-DWDM 1535.04 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY
DWDM-SFP-6061	1000BASE-DWDM 1560.61 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY
DWDM-SFP-5979	1000BASE-DWDM 1559.79 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY
DWDM-SFP-5898	1000BASE-DWDM 1558.98 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY
DWDM-SFP-5655	1000BASE-DWDM 1556.55 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY
DWDM-SFP-5575	1000BASE-DWDM 1555.75 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY

Product ID (append "=" for spares)	Product Description	Minimum Software Version
DWDM-SFP-5494	1000BASE-DWDM 1554.94 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY
DWDM-SFP-5413	1000BASE-DWDM 1554.13 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY
DWDM-SFP-5092	1000BASE-DWDM 1550.92 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY
DWDM-SFP-4851	1000BASE-DWDM 1548.51 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY
DWDM-SFP-4772	1000BASE-DWDM 1547.72 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY
DWDM-SFP-4612	1000BASE-DWDM 1546.12 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY
DWDM-SFP-4453	1000BASE-DWDM 1544.53 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY
DWDM-SFP-4294	1000BASE-DWDM 1542.94 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY
DWDM-SFP-4056	1000BASE-DWDM 1540.56 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY
DWDM-SFP-3819	1000BASE-DWDM 1538.19 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY
DWDM-SFP-3661	1000BASE-DWDM 1536.61 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY
DWDM-SFP-3425	1000BASE-DWDM 1534.25 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY
DWDM-SFP-3268	1000BASE-DWDM 1532.68 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY
DWDM-SFP-3190	1000BASE-DWDM 1531.90 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY
DWDM-SFP-3112	1000BASE-DWDM 1531.12 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY
DWDM-SFP-3033	1000BASE-DWDM 1530.33 nm SFP (100-GHz ITU grid) SFP module	15.2(2)SY

Fast Ethernet SFP Modules



Note

For information about Fast Ethernet SFPs, see the Cisco 100BASE-X SFP For Fast Ethernet SFP Ports data sheet:

http://www.cisco.com/c/en/us/products/collateral/interfaces-modules/fast-ethernet-sfp-modules/product_data_sheet0900aecd801f931c.html

Product ID (append "=" for spares)	Product Description	Minimum Software Version
GLC-GE-100FX	100BASEEX SFP	15.2(2)SY

Power Supplies

Product ID (append “=” for spares)	Product Description	Minimum Software Version
C6840-X-1100W-AC	Cisco Catalyst 6840-X Power Supply AC-1100W	15.2(2)SY
C6840-X-1100W-DC	Cisco Catalyst 6840-X Power Supply DC-1100W	
C6840-X-750W-AC	Cisco Catalyst 6840-X Power Supply AC-750W	
C6840-X-750W-DC	Cisco Catalyst 6840-X Power Supply DC-750W	

Images and Feature Sets

Use [Cisco Feature Navigator](#) to display information about the images and feature sets in Release 15.2SY. The releases includes strong encryption images. Strong encryption images are subject to U.S. and local country export, import, and use laws. The country and class of end users eligible to receive and use Cisco encryption solutions are limited. See this publication for more information:

http://www.cisco.com/web/about/doing_business/legal/global_export_trade/general_export/contract_compliance.html

EFSU Compatibility

[SX SY EFSU Compatibility Matrix](#) (XLSX - Opens with Microsoft Excel)

[SX SY EFSU Compatibility Matrix](#) (PDF - Opens with Adobe Acrobat)

Cisco IOS Behavior Changes

Behavior changes describe the minor modifications that are sometimes introduced in a software release. When behavior changes are introduced, existing documentation is updated.

Release 15.2(2)SY3

None.

Release 15.2(2)SY2

None.

Release 15.2(2)SY1

None.

Release 15.2(2)SY

- [CSCuu55288](#)
Old behavior: N/A
New behavior: Config CLI "flow hardware export priority <high/low>" is added.
- [CSCuv45423](#)
Old behavior: Supported to 42 fex devices
- [CSCum44673](#)
Old behavior: By default it was allowed with no rate control through which hackers can bombard the router and ntp process.
New behavior: by default mode 6 control packets getting allowed with 3 second rate control. If required user can disable with no ntp allow mode control CLI
- [CSCut77619](#)
Old behavior: if ntp authentication with key is configured for symmetric active /passive configuration in one peer, other peer also MAY or MAY NOT need to configure authentication with key or Both peer can ignore authentication.
New behavior: if ntp authentication with key is configured for symmetric active /passive configuration in one peer, other peer also should configure authentication with key. . else sync will not happen or Both peer can ignore authentication.
- [CSCuv05123](#)
Old behavior: N/A
New behavior: drift is not stored properly during reload

New Features in Release 15.2(2)SY3

These sections describe the new features in Release 15.2(2)SY3, 06 July 2017:

- [New Hardware Features in Release 15.2\(2\)SY3, page 11](#)
- [New Software Features in Release 15.2\(2\)SY3, page 11](#)

New Hardware Features in Release 15.2(2)SY3

None.

New Software Features in Release 15.2(2)SY3

None.

New Features in Release 15.2(2)SY2

These sections describe the new features in Release 15.2(2)SY2, 15 July 2016:

- [New Hardware Features in Release 15.2\(2\)SY2, page 12](#)
- [New Software Features in Release 15.2\(2\)SY2, page 12](#)

New Hardware Features in Release 15.2(2)SY2

None.

New Software Features in Release 15.2(2)SY2

- SFP Management (mgmt0) port support.



Note

Upgrading 15.2(2)SY/15.2(2)SY1 to 15.2(2)SY2 requires rommon upgrade of release 15.2(02r)SYS1. For more details, see [Release Notes for Catalyst 6500 Supervisor Engine 2T and Catalyst 6800 Series Switches ROMMON](#).

Below SFPs are supported in SFP management:

- GLC-SX-MM
- GLC-LH-SM
- GLC-SX-MMD
- GLC-LH-SMD
- GLC-EX-SMD
- GLC-ZX-SMD
- GLC-BX-U
- GLC-BX-D
- Breakout cable support added. 40G native port of C6824-X-LE-40G and C6840-X-LE-40G can be converted into 10G ports. Supported list is as follows
 - QSFP-4SFP10G-CU1M
 - QSFP-4SFP10G-CU3M
 - QSFP-4SFP10G-CU5M
 - QSFP-4X10G-AC7M
 - QSFP-4X10G-AC10M

New Features in Release 15.2(2)SY1

These sections describe the new features in Release 15.2(2)SY1, 17 March 2016:

- [New Hardware Features in Release 15.2\(2\)SY1, page 13](#)
- [New Software Features in Release 15.2\(2\)SY1, page 13](#)

New Hardware Features in Release 15.2(2)SY1

None.

New Software Features in Release 15.2(2)SY1

None.

New Features in Release 15.2(2)SY

These sections describe the new features in Release 15.2(2)SY, 23 Sept 2015:

- [New Hardware Features in Release 15.2\(2\)SY, page 13](#)
- [New Software Features in Release 15.2\(2\)SY, page 13](#)

New Hardware Features in Release 15.2(2)SY

None.

New Software Features in Release 15.2(2)SY

None.

Software Features from Earlier Releases

Use [Cisco Feature Navigator](#) to display supported features that were introduced in earlier releases.

Unsupported Commands

Cisco IOS images for the C6840X does not support mls commands or mls as a keyword. See this document for a list of some of the mls commands that have been replaced:

http://www.cisco.com/c/en/us/td/docs/switches/lan/catalyst6500/ios/replacement_commands.html



Note

Some of the replacement commands support different keyword and parameter values than those supported by the Release 12.2SX commands.

Cisco IOS images for the C6840X do not support these commands:

- *ip multicast helper-map*
- *ip pim accept-register route-map*

Restrictions for 15.2(2)SY

Identifier	Component	Description
CSCuu19178	cat6000-l2-infra	In c6840x, the maximum supported MTU for Native Interface is 9154. This is not the same when we compare it with other series like 6880-X or Sup2T. The maximum MTU for 6880-X or Sup2T series is 9216. When we peer a c6840x with 6880-X or Sup2T, we need to ensure that the Peer(6880-X or Sup2T) MTU is not set greater than 9154. If peer is configured with MTU greater than 9154, the c6840x would not be able to process this traffic and will be dropped as per the current design. This is applicable to all c6840x series.
CSCuv21279	cat6000-l2-infra	In c6840x series, the default value of MTU is set to 1500 for IA interface. 6880-X and Sup2T had 9216 default MTU which was changed in c6840x. This is applicable to all c6840x series. When we use existing configuration from 6880-X or Sup2T, we need to make sure the MTU is reset or removed (Incases were MTU is set other than 1500) so it defaults to MTU 1500. The Max MTU that can be configured on a FEX host port cannot be greater than 9154 which is as per Design.

Caveats in Release 15.2(2)SY3

- [Caveats Open in Release 15.2\(2\)SY3, page 14](#)
- [Caveats Resolved in Release 15.2\(2\)SY3, page 14](#)

Caveats Open in Release 15.2(2)SY3

Identifier	Component	Description
CSCus13945	cat6000-hw-fwdding	Optimus - cpu high utilization seen for few secs during mac sync of 128k Mac

Caveats Resolved in Release 15.2(2)SY3

Identifier	Component	Description
CSCvd42234	cat6000-acl	NAT entries wrongly ages out and translated port changes with active flows.
CSCva00330	cat6000-cm	IPv6 ACL not programming in hw
CSCvb33751	cat6000-env	Status LED is unstable when OIR power supply
CSCvb48135	cat6000-env	C6840-X-LE-40G: port range 27-34, PID and VID are not properly displayed.
CSCvb70550	cat6000-env	C6832-X-LE Power supply issue
CSCus31811	cat6000-firmware	Recovery patch is triggered from Firmware seen in ISSU run version
CSCvb55000	cat6000-firmware	MK51:Flapping GLCT link results in VSL link going down for T1 and T2
CSCvb94345	cat6000-firmware	SUP crash due to Reason: Failed TestL3TcamMonitoring
CSCuy12144	cat6000-firmware	40G intfs on primus goto faulty/bad EEPROM or connected/No connector

Caveats in Release 15.2(2)SY2

- [Caveats Open in Release 15.2\(2\)SY2, page 15](#)
- [Caveats Resolved in Release 15.2\(2\)SY2, page 15](#)

Caveats Open in Release 15.2(2)SY2

Identifier	Component	Description
CSCuy25743	cat6000-env	C6880-X-LE: Contiguous 4 10G ports goes down and cannot be brought up
CSCux51666	cat6000-firmware	GLC-T ports may stay in down / notconnect state on standby VSS chassis
CSCux78955	cat6000-l2-ec	T2:Box getting crashed @pagp_switch_agc_compatible
CSCva32900	cat6000-l2-infra	MK32: "duplex full" is automatically added to Management interface
CSCuv00130	cat6000-l2-infra	6T: no syslog for unsupported transceiver upon inserting GLC-T in mgmt0
CSCuz70072	cat6000-rommon	Ping is not working for media-type SFP in rommon

Caveats Resolved in Release 15.2(2)SY2

Identifier	Component	Description
CSCuy31879	cat6000-firmware	T2: 40G interface doesn't comeup on connecting to Nappar 40G with solano
CSCuy31847	cat6000-firmware	Flapping GLCT link results in VSL link going down
CSCuw75571	cat6000-firmware	MK4 : Traceroute broke due to 24 byte of padding
CSCuz88401	cat6000-l2-infra	Mk32:etherchannel ports are went to suspended state
CSCva04798	cat6000-l2-infra	Mk32:Etherchannel port went to suspended mode with GLC-T
CSCuy90212	cat6k-vs-infra	All FEXs down with SDP timeout after a VSS switchover during high CPU
CSCuy47298	cat6k-vs-infra	Standby crash on deleting fex module pre-provision after specific steps
CSCuu39594	cat6000-netflow	tfr:sh flow mon monitor ca fil ipv4 so add 1.1.1.2 its not working 512k
CSCuu28697	cat6000-routing	T2 : wrong hardware programming in Eompls

Caveats in Release 15.2(2)SY1

- [Caveats Open in Release 15.2\(2\)SY1, page 16](#)
- [Caveats Resolved in Release 15.2\(2\)SY1, page 16](#)

Caveats Open in Release 15.2(2)SY1

Identifier	Component	Description
CSCUu39594	cat6000-netflow	tfr:sh flow mon monitor ca fil ipv4 so add 1.1.1.2 its not working 512k
CSCUu96523	cat6k-vs-infra	Standby reloads while configuring 2 or more fex using “fex auto-config”
CSCUy47298	cat6k-vs-infra	Standby crash on deleting fex module pre-provision after specific steps
CSCUv85584	cat6000-l2-infra	T2:1500Ports: Standby getting crashed while configuring RSL
CSCUv56580	cat6000-vntag	Some IA modules may go offline after IA module renumber

Caveats Resolved in Release 15.2(2)SY1

Identifier	Component	Description
CSCUv89092	cat6000-firmware	Cat6800: High CPU usage due to “slcp process” when GLC-T plugged in
CSCUv71803	cat6000-firmware	VSS:Odd Forty Gig MEC link is not coming up after reload on peer device
CSCUv92888	accsw-fex	during sso some fex's reloaded due to “ICC channel not up”
CSCUw30287	cat6000-env	Alignment fix for EHCI controller data structures
CSCUw71689	cat6000-acl	Memory leak at FM core functions leads to crash
CSCUx75929	cat6000-env	T2: Added the TAN block information
CSCUv85721	cat6000-firmware	T2- Delayed Link Up 40G interfaces in some conditions
CSCUw02406	cat6000-ipc	Incremental memory leak at icc_mcast_request_async
CSCUw09694	ssh	Device crash when "ip host" used by an SSH sourced from CLI is removed
CSCUw44036	cat6000-span	6880x crashes when running “sh monitor session egress replication-mode”
CSCUw88059	dhcp	Crash when issuing "show ip dhcp conflict"
CSCUy12424	cat6k-vs-infra	6880 reboots with ICC queue full and i/o pool depleted
CSCUx69727	cat6000-firmware	10th SFP is not detected, when connected consecutively
CSCUv59544	cat6000-hw-fwding	RF KPA messages and VSLP pkt drop on sending ARP pkts from stdby
CSCUv95067	cat6000-l2-infra	C6840x: MAX MTU Supported is 9154
CSCUv21279	cat6000-l2-infra	C6840x series: FEX host port MTU will have default value of 1500
CSCUv81366	cat6000-l2-infra	C6840X - SFP management port feature is not supported in software

Caveats in Release 15.2(2)SY

Caveats Open in Release 15.2(2)SY

Identifier	Component	Description
CSCuv85721	cat6000-firmware	T2- Delayed Link Up 40G interfaces in some conditions
CSCux69727	cat6000-firmware	T2: 10th SFP of same type of transceiver is not detected.
CSCuv59544	cat6000-hw-fwding	RF KPA messages and VSLP pkt drop on sending ARP pkts from stdbby
CSCuv85584	cat6000-12-infra	T2:1500Ports: Standby getting crashed while configuring RSL
CSCuv95067	cat6000-12-infra	C6840x: MAX MTU Supported is 9154
CSCuv21279	cat6000-12-infra	c6848x series : FEX host port MTU will have default value of 1500
CSCuv81366	cat6000-12-infra	C6840X - SFP management port feature is not supported in software
CSCuv56580	cat6000-vntag	T2_1500_FEX:some of fex boxes goes to offline after module renumber

Troubleshooting

These sections describes troubleshooting guidelines for the Catalyst 6500 series switch configuration:

- [System Troubleshooting, page 17](#)
- [VLAN Troubleshooting, page 18](#)
- [Spanning Tree Troubleshooting, page 18](#)
- [Additional Troubleshooting Information, page 19](#)

System Troubleshooting

This section contains troubleshooting guidelines for system-level problems:

- When the system is booting and running power-on diagnostics, do not reset the switch.
- After you initiate a switchover from the active supervisor engine to the redundant supervisor engine, or when you insert a redundant supervisor engine in an operating switch, always wait until the supervisor engines have synchronized and all modules are online before you remove or insert modules or supervisor engines or perform another switchover.
- If you have an interface whose speed is set to **auto** connected to another interface whose speed is set to a fixed value, configure the interface whose speed is set to a fixed value for half duplex. Alternately, you can configure both interfaces to a fixed-value speed and full duplex.

VLAN Troubleshooting

Although DTP is a point-to-point protocol, some internetworking devices might forward DTP frames. To avoid connectivity problems that might be caused by a switch acting on these forwarded DTP frames, do the following:

- For interfaces connected to devices that do not support DTP, in which trunking is not currently being used, configure interfaces with the **switchport mode access** command, which puts the interface into access mode and sends no DTP frames.
- When manually enabling trunking on a link to devices that do not support DTP, use the **switchport nonegotiate** and **switchport mode trunk** commands, which puts the interface into trunking mode without sending DTP frames.

Spanning Tree Troubleshooting

The Spanning Tree Protocol (STP) blocks certain ports to prevent physical loops in a redundant topology. On a blocked port, switches receive spanning tree bridge protocol data units (BPDUs) periodically from neighboring switches. You can configure the frequency with which BPDUs are received by entering the **spanning-tree vlan *vlan_ID* hello-time** command (the default frequency is set to 2 seconds). If a switch does not receive a BPDU in the time period defined by the **spanning-tree vlan *vlan_ID* max-age** command (20 seconds by default), the blocked port transitions to the listening state, the learning state, and to the forwarding state. As it transitions, the switch waits for the time period specified by the **spanning-tree vlan *vlan_ID* forward-time** command (15 seconds by default) in each of these intermediate states. If a blocked spanning tree interface does not receive BPDUs from its neighbor within 50 seconds, it moves into the forwarding state.



Note

We do not recommend using the UplinkFast feature on switches with more than 20 active VLANs. The convergence time might be unacceptably long with more than 20 active VLANs.

To debug STP problems, follow these guidelines:

- The **show vlan virtual-port** command displays the number of virtual interfaces.
- These maximum numbers of virtual interfaces are supported:

	MST	RPVST+	PVST+
Per-switch limits:	100,000 total	12,000 total	15,000 total



Note

Cisco IOS software displays a message if you exceed the maximum number of virtual interfaces.

- After a switchover from the active to the redundant supervisor engine, the ports on the redundant supervisor engine take longer to come up than other ports.
- Record all spanning tree-blocked ports in each switch in your network. For each of the spanning tree-blocked ports, record the output of the **show interface** command. Check to see if the port has registered many alignment, FCS, or any other type of line errors. If these errors are incrementing continuously, the port might drop input BPDUs. If the input queue counter is incrementing continuously, the port is losing input packets because of a lack of receive buffers. This problem can also cause the port to drop incoming BPDUs.

- On a blocked spanning tree port, check the duplex configuration to ensure that the port duplex is set to the same type as the port of its neighboring device.
- On trunks, make sure that the trunk configuration is set properly on both sides of the link.
- On trunks, if the neighboring device supports it, set duplex to full on both sides of the link to prevent any collisions under heavy traffic conditions.

Additional Troubleshooting Information

For additional troubleshooting information, refer to the publications at this URL:

<http://www.cisco.com/c/en/us/support/switches/catalyst-6500-series-switches/tsd-products-support-troubleshooting-and-alerts.html>

System Software Upgrade Instructions

See this publication:

<http://www.cisco.com/c/en/us/support/docs/switches/catalyst-6500-series-switches/28724-161.html>

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