



# Release Notes for Cisco ONS 15530 for Cisco IOS Release 12.1(10)EV

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This document describes caveats for Cisco IOS Release 12.1(10)EV for the Cisco ONS 15530.

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## Introduction

The Cisco ONS 15530 is a modular, scalable optical switching and aggregation platform designed to supplement the Cisco ONS 15540 ESP. With the Cisco ONS 15540 ESP, users can take advantage of the availability of dark fiber to build a common infrastructure that supports data, SAN (storage area network), and TDM (time-division multiplexing) traffic. For more information about DWDM technology and applications, refer to the [Introduction to DWDM Technology](#) publication and the [Cisco ONS 15530 Planning Guide](#).



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# System Requirements

This section describes the system requirements for Cisco IOS Release 12.1(10)EV, and it includes the following sections:

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## Memory Requirements

The DRAM memory configuration is 64 MB, which is the default for the Cisco ONS 15530.

## Hardware Supported

[Table 1](#) lists the hardware components supported on the Cisco ONS 15530 and the minimum software version required. See the [“Determining the Software Version” section on page 12](#) for information on determining your software version.

*Table 1 Cisco ONS 15530 Supported Hardware and Minimum Software Requirements*

| Component                | Part Number     | Description                               | Minimum Software Version Required |
|--------------------------|-----------------|-------------------------------------------|-----------------------------------|
| Chassis                  | 15530-CHAS-N    | 15530-CHAS-N chassis                      | 12.1(10)EV                        |
| Chassis                  | 15530-CHAS-E    | 15530-CHAS-E chassis                      | 12.1(10)EV                        |
| Air ramp baffle          | 15530-BAF-E=    | Air baffle for 15530-CHAS-E chassis       | 12.1(10)EV                        |
| Power supplies           | 15530-PWR-AC    | 120 to 240 VAC power supply               | 12.1(10)EV                        |
|                          | 15530-PWR-DC    | Power supply –48 VDC                      | 12.1(10)EV                        |
| CPU switch module        | 15530-CPU       | ONS 15530 CPU switch module               | 12.1(10)EV                        |
| Line card motherboard    | 15530-LCMB-0100 | OSC, WB-VOA, and PB-OE module motherboard | 12.1(10)EV                        |
| OADM modules without OSC | 15530-MDXA-04A0 | 4-channel Band A                          | 12.1(10)EV                        |
|                          | 15530-MDXA-04B0 | 4-channel Band B                          | 12.1(10)EV                        |
|                          | 15530-MDXA-04C0 | 4-channel Band C                          | 12.1(10)EV                        |
|                          | 15530-MDXA-04D0 | 4-channel Band D                          | 12.1(10)EV                        |
|                          | 15530-MDXA-04E0 | 4-channel Band E                          | 12.1(10)EV                        |
|                          | 15530-MDXA-04F0 | 4-channel Band F                          | 12.1(10)EV                        |
|                          | 15530-MDXA-04G0 | 4-channel Band G                          | 12.1(10)EV                        |
|                          | 15530-MDXA-04H0 | 4-channel Band H                          | 12.1(10)EV                        |

**Table 1** Cisco ONS 15530 Supported Hardware and Minimum Software Requirements (continued)

| Component                            | Part Number                                 | Description                                  | Minimum Software Version Required |
|--------------------------------------|---------------------------------------------|----------------------------------------------|-----------------------------------|
| OADM modules with OSC                | 15530-MDXB-04A0                             | 4-channel Band A                             | 12.1(10)EV                        |
|                                      | 15530-MDXB-04B0                             | 4-channel Band B                             | 12.1(10)EV                        |
|                                      | 15530-MDXB-04C0                             | 4-channel Band C                             | 12.1(10)EV                        |
|                                      | 15530-MDXB-04D0                             | 4-channel Band D                             | 12.1(10)EV                        |
|                                      | 15530-MDXB-04E0                             | 4-channel Band E                             | 12.1(10)EV                        |
|                                      | 15530-MDXB-04F0                             | 4-channel Band F                             | 12.1(10)EV                        |
|                                      | 15530-MDXB-04G0                             | 4-channel Band G                             | 12.1(10)EV                        |
|                                      | 15530-MDXB-04H0                             | 4-channel Band H                             | 12.1(10)EV                        |
| MM transponder modules with splitter | 15530-TSP1-0111                             | Ch 1-2 — 1310-nm MM 16 to 622 Mbps with SC   | 12.1(10)EV                        |
|                                      | 15530-TSP1-0311                             | Ch 3-4 — 1310-nm MM 16 to 622 Mbps with SC   | 12.1(10)EV                        |
|                                      | 15530-TSP1-0511                             | Ch 5-6 — 1310-nm MM 16 to 622 Mbps with SC   | 12.1(10)EV                        |
|                                      | 15530-TSP1-0711                             | Ch 7-8 — 1310-nm MM 16 to 622 Mbps with SC   | 12.1(10)EV                        |
|                                      | 15530-TSP1-0911                             | Ch 9-10 — 1310-nm MM 16 to 622 Mbps with SC  | 12.1(10)EV                        |
|                                      | 15530-TSP1-1111                             | Ch 11-12 — 1310-nm MM 16 to 622 Mbps with SC | 12.1(10)EV                        |
|                                      | 15530-TSP1-1311                             | Ch 13-14 — 1310-nm MM 16 to 622 Mbps with SC | 12.1(10)EV                        |
|                                      | 15530-TSP1-1511                             | Ch 15-16 — 1310-nm MM 16 to 622 Mbps with SC | 12.1(10)EV                        |
|                                      | 15530-TSP1-1711                             | Ch 17-18 — 1310-nm MM 16 to 622 Mbps with SC | 12.1(10)EV                        |
|                                      | 15530-TSP1-1911                             | Ch 19-20 — 1310-nm MM 16 to 622 Mbps with SC | 12.1(10)EV                        |
|                                      | 15530-TSP1-2111                             | Ch 21-22 — 1310-nm MM 16 to 622 Mbps with SC | 12.1(10)EV                        |
|                                      | 15530-TSP1-2311                             | Ch 23- 24— 1310-nm MM 16 to 622 Mbps with SC | 12.1(10)EV                        |
|                                      | 15530-TSP1-2511                             | Ch 25-26— 1310-nm MM 16 to 622 Mbps with SC  | 12.1(10)EV                        |
|                                      | 15530-TSP1-2711                             | Ch 27-28— 1310-nm MM 16 to 622 Mbps with SC  | 12.1(10)EV                        |
|                                      | 15530-TSP1-2911                             | Ch 29-30— 1310-nm MM 16 to 622 Mbps with SC  | 12.1(10)EV                        |
| 15530-TSP1-3111                      | Ch 31-32— 1310-nm MM 16 to 622 Mbps with SC | 12.1(10)EV                                   |                                   |

Table 1 Cisco ONS 15530 Supported Hardware and Minimum Software Requirements (continued)

| Component                               | Part Number                                     | Description                                     | Minimum Software Version Required |
|-----------------------------------------|-------------------------------------------------|-------------------------------------------------|-----------------------------------|
| MM transponder modules without splitter | 15530-TSP1-0121                                 | Ch 1-2—1310-nm MM 16 Mbps to 2.5 Gbps with SC   | 12.1(10)EV                        |
|                                         | 15530-TSP1-0321                                 | Ch 3-4—1310-nm MM 16 Mbps to 2.5 Gbps with SC   | 12.1(10)EV                        |
|                                         | 15530-TSP1-0521                                 | Ch 5-6—1310-nm MM 16 Mbps to 2.5 Gbps with SC   | 12.1(10)EV                        |
|                                         | 15530-TSP1-0721                                 | Ch 7-8—1310-nm MM 16 Mbps to 2.5 Gbps with SC   | 12.1(10)EV                        |
|                                         | 15530-TSP1-0921                                 | Ch 9-10—1310-nm MM 16 Mbps to 2.5 Gbps with SC  | 12.1(10)EV                        |
|                                         | 15530-TSP1-1121                                 | Ch 11-12—1310-nm MM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                        |
|                                         | 15530-TSP1-1321                                 | Ch 13-14—1310-nm MM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                        |
|                                         | 15530-TSP1-1521                                 | Ch 15-16—1310-nm MM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                        |
|                                         | 15530-TSP1-1721                                 | Ch 17-18—1310-nm MM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                        |
|                                         | 15530-TSP1-1921                                 | Ch 19-20—1310-nm MM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                        |
|                                         | 15530-TSP1-2121                                 | Ch 21-22—1310-nm MM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                        |
|                                         | 15530-TSP1-2321                                 | Ch 23-24—1310-nm MM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                        |
|                                         | 15530-TSP1-2521                                 | Ch 23-24—1310-nm MM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                        |
|                                         | 15530-TSP1-2721                                 | Ch 25-26—1310-nm MM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                        |
|                                         | 15530-TSP1-2721                                 | Ch 27-28—1310-nm MM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                        |
| 15530-TSP1-2921                         | Ch 29-30—1310-nm MM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                                      |                                   |
| 15530-TSP1-3121                         | Ch 31-32—1310-nm MM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                                      |                                   |

**Table 1** Cisco ONS 15530 Supported Hardware and Minimum Software Requirements (continued)

| Component                            | Part Number                                     | Description                                     | Minimum Software Version Required |
|--------------------------------------|-------------------------------------------------|-------------------------------------------------|-----------------------------------|
| SM transponder modules with splitter | 15530-TSP1-0112                                 | Ch 1-2—1310-nm SM 16 Mbps to 2.5 Gbps with SC   | 12.1(10)EV                        |
|                                      | 15530-TSP1-0312                                 | Ch 3-4—1310-nm SM 16 Mbps to 2.5 Gbps with SC   | 12.1(10)EV                        |
|                                      | 15530-TSP1-0512                                 | Ch 5-6—1310-nm SM 16 Mbps to 2.5 Gbps with SC   | 12.1(10)EV                        |
|                                      | 15530-TSP1-0712                                 | Ch 7-8—1310-nm SM 16 Mbps to 2.5 Gbps with SC   | 12.1(10)EV                        |
|                                      | 15530-TSP1-0912                                 | Ch 9-10—1310-nm SM 16 Mbps to 2.5 Gbps with SC  | 12.1(10)EV                        |
|                                      | 15530-TSP1-1112                                 | Ch 11-12—1310-nm SM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                        |
|                                      | 15530-TSP1-1312                                 | Ch 13-14—1310-nm SM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                        |
|                                      | 15530-TSP1-1512                                 | Ch 15-16—1310-nm SM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                        |
|                                      | 15530-TSP1-1712                                 | Ch 17-18—1310-nm SM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                        |
|                                      | 15530-TSP1-1912                                 | Ch 19-20—1310nm SM 16 Mbps to 2.5 Gbps with SC  | 12.1(10)EV                        |
|                                      | 15530-TSP1-2112                                 | Ch 21-22—1310-nm SM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                        |
|                                      | 15530-TSP1-2312                                 | Ch 23-24—1310-nm SM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                        |
|                                      | 15530-TSP1-2512                                 | Ch 23-24—1310-nm SM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                        |
|                                      | 15530-TSP1-2712                                 | Ch 25-26—1310-nm SM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                        |
|                                      | 15530-TSP1-2912                                 | Ch 27-28—1310-nm SM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                        |
| 15530-TSP1-3112                      | Ch 29-30—1310-nm SM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                                      |                                   |

*Table 1 Cisco ONS 15530 Supported Hardware and Minimum Software Requirements (continued)*

| Component                               | Part Number                                     | Description                                     | Minimum Software Version Required |
|-----------------------------------------|-------------------------------------------------|-------------------------------------------------|-----------------------------------|
| SM transponder modules without splitter | 15530-TSP1-0122                                 | Ch 1-2—1310-nm SM 16 Mbps to 2.5 Gbps with SC   | 12.1(10)EV                        |
|                                         | 15530-TSP1-0322                                 | Ch 3-4—1310-nm SM 16 Mbps to 2.5 Gbps with SC   | 12.1(10)EV                        |
|                                         | 15530-TSP1-0522                                 | Ch 5-6—1310-nm SM 16 Mbps to 2.5 Gbps with SC   | 12.1(10)EV                        |
|                                         | 15530-TSP1-0722                                 | Ch 7-8—1310-nm SM 16 Mbps to 2.5 Gbps with SC   | 12.1(10)EV                        |
|                                         | 15530-TSP1-0922                                 | Ch 9-10—1310-nm SM 16 Mbps to 2.5 Gbps with SC  | 12.1(10)EV                        |
|                                         | 15530-TSP1-1122                                 | Ch 11-12—1310-nm SM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                        |
|                                         | 15530-TSP1-1322                                 | Ch 13-14—1310-nm SM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                        |
|                                         | 15530-TSP1-1522                                 | Ch 15-16—1310-nm SM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                        |
|                                         | 15530-TSP1-1722                                 | Ch 17-18—1310-nm SM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                        |
|                                         | 15530-TSP1-1922                                 | Ch 19-20—1310-nm SM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                        |
|                                         | 15530-TSP1-2122                                 | Ch 21-22—1310-nm SM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                        |
|                                         | 15530-TSP1-2322                                 | Ch 23-24—1310-nm SM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                        |
|                                         | 15530-TSP1-2522                                 | Ch 23-24—1310-nm SM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                        |
|                                         | 15530-TSP1-2722                                 | Ch 25-26—1310-nm SM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                        |
|                                         | 15530-TSP1-2922                                 | Ch 27-28—1310-nm SM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                        |
| 15530-TSP1-3122                         | Ch 29-30—1310-nm SM 16 Mbps to 2.5 Gbps with SC | 12.1(10)EV                                      |                                   |

**Table 1** Cisco ONS 15530 Supported Hardware and Minimum Software Requirements (continued)

| Component                                        | Part Number     | Description                                    | Minimum Software Version Required |
|--------------------------------------------------|-----------------|------------------------------------------------|-----------------------------------|
| 10G ITU trunk line cards with splitter (1550 nm) | 15530-ITU2-0110 | CH 1—10Gbps ITU trunk line card with splitter  | 12.1(10)EV                        |
|                                                  | 15530-ITU2-0210 | CH 2—10Gbps ITU trunk line card with splitter  | 12.1(10)EV                        |
|                                                  | 15530-ITU2-0310 | CH 3—10Gbps ITU trunk line card with splitter  | 12.1(10)EV                        |
|                                                  | 15530-ITU2-0410 | CH 4—10Gbps ITU trunk line card with splitter  | 12.1(10)EV                        |
|                                                  | 15530-ITU2-0510 | CH 5—10Gbps ITU trunk line card with splitter  | 12.1(10)EV                        |
|                                                  | 15530-ITU2-0610 | CH 6—10Gbps ITU trunk line card with splitter  | 12.1(10)EV                        |
|                                                  | 15530-ITU2-0710 | CH 7—10Gbps ITU trunk line card with splitter  | 12.1(10)EV                        |
|                                                  | 15530-ITU2-0810 | CH 8—10Gbps ITU trunk line card with splitter  | 12.1(10)EV                        |
|                                                  | 15530-ITU2-0910 | CH 9—10Gbps ITU trunk line card with splitter  | 12.1(10)EV                        |
|                                                  | 15530-ITU2-1010 | CH 10—10Gbps ITU trunk line card with splitter | 12.1(10)EV                        |
|                                                  | 15530-ITU2-1110 | CH 11—10Gbps ITU trunk line card with splitter | 12.1(10)EV                        |
|                                                  | 15530-ITU2-1210 | CH 12—10Gbps ITU trunk line card with splitter | 12.1(10)EV                        |
|                                                  | 15530-ITU2-1310 | CH 13—10Gbps ITU trunk line card with splitter | 12.1(10)EV                        |
|                                                  | 15530-ITU2-1410 | CH 14—10Gbps ITU trunk line card with splitter | 12.1(10)EV                        |
|                                                  | 15530-ITU2-1510 | CH 15—10Gbps ITU trunk line card with splitter | 12.1(10)EV                        |
|                                                  | 15530-ITU2-1610 | CH 16—10Gbps ITU trunk line card with splitter | 12.1(10)EV                        |
|                                                  | 15530-ITU2-1710 | CH 17—10Gbps ITU trunk line card with splitter | 12.1(10)EV                        |
|                                                  | 15530-ITU2-1810 | CH 18—10Gbps ITU trunk line card with splitter | 12.1(10)EV                        |
|                                                  | 15530-ITU2-1910 | CH 19—10Gbps ITU trunk line card with splitter | 12.1(10)EV                        |
|                                                  | 15530-ITU2-2010 | CH 20—10Gbps ITU trunk line card with splitter | 12.1(10)EV                        |

*Table 1 Cisco ONS 15530 Supported Hardware and Minimum Software Requirements (continued)*

| Component | Part Number     | Description                                    | Minimum Software Version Required |
|-----------|-----------------|------------------------------------------------|-----------------------------------|
|           | 15530-ITU2-2110 | CH 21—10Gbps ITU trunk line card with splitter | 12.1(10)EV                        |
|           | 15530-ITU2-2210 | CH 22—10Gbps ITU trunk line card with splitter | 12.1(10)EV                        |
|           | 15530-ITU2-2310 | CH 23—10Gbps ITU trunk line card with splitter | 12.1(10)EV                        |
|           | 15530-ITU2-2410 | CH 24—10Gbps ITU trunk line card with splitter | 12.1(10)EV                        |
|           | 15530-ITU2-2510 | CH 25—10Gbps ITU trunk line card with splitter | 12.1(10)EV                        |
|           | 15530-ITU2-2610 | CH 26—10Gbps ITU trunk line card with splitter | 12.1(10)EV                        |
|           | 15530-ITU2-2710 | CH 27—10Gbps ITU trunk line card with splitter | 12.1(10)EV                        |
|           | 15530-ITU2-2810 | CH 28—10Gbps ITU trunk line card with splitter | 12.1(10)EV                        |
|           | 15530-ITU2-2910 | CH 29—10Gbps ITU trunk line card with splitter | 12.1(10)EV                        |
|           | 15530-ITU2-3010 | CH 30—10Gbps ITU trunk line card with splitter | 12.1(10)EV                        |
|           | 15530-ITU2-3110 | CH 31—10Gbps ITU trunk line card with splitter | 12.1(10)EV                        |
|           | 15530-ITU2-3210 | CH 32—10Gbps ITU trunk line card with splitter | 12.1(10)EV                        |



**Table 1** *Cisco ONS 15530 Supported Hardware and Minimum Software Requirements (continued)*

| <b>Component</b>                                    | <b>Part Number</b> | <b>Description</b>                                | <b>Minimum Software Version Required</b> |
|-----------------------------------------------------|--------------------|---------------------------------------------------|------------------------------------------|
| 10G ITU trunk line cards without splitter (1550 nm) | 15530-ITU2-0120    | CH 1—10Gbps ITU trunk line card without splitter  | 12.1(10)EV                               |
|                                                     | 15530-ITU2-0220    | CH 2—10Gbps ITU trunk line card without splitter  | 12.1(10)EV                               |
|                                                     | 15530-ITU2-0320    | CH 3—10Gbps ITU trunk line card without splitter  | 12.1(10)EV                               |
|                                                     | 15530-ITU2-0420    | CH 4—10Gbps ITU trunk line card without splitter  | 12.1(10)EV                               |
|                                                     | 15530-ITU2-0520    | CH 5—10Gbps ITU trunk line card without splitter  | 12.1(10)EV                               |
|                                                     | 15530-ITU2-0620    | CH 6—10Gbps ITU trunk line card without splitter  | 12.1(10)EV                               |
|                                                     | 15530-ITU2-0720    | CH 7—10Gbps ITU trunk line card without splitter  | 12.1(10)EV                               |
|                                                     | 15530-ITU2-0820    | CH 8—10Gbps ITU trunk line card without splitter  | 12.1(10)EV                               |
|                                                     | 15530-ITU2-0920    | CH 9—10Gbps ITU trunk line card without splitter  | 12.1(10)EV                               |
|                                                     | 15530-ITU2-1020    | CH 10—10Gbps ITU trunk line card without splitter | 12.1(10)EV                               |
|                                                     | 15530-ITU2-1120    | CH 11—10Gbps ITU trunk line card without splitter | 12.1(10)EV                               |
|                                                     | 15530-ITU2-1220    | CH 12—10Gbps ITU trunk line card without splitter | 12.1(10)EV                               |

Table 1 Cisco ONS 15530 Supported Hardware and Minimum Software Requirements (continued)

| Component | Part Number     | Description                                       | Minimum Software Version Required |
|-----------|-----------------|---------------------------------------------------|-----------------------------------|
|           | 15530-ITU2-1320 | CH 13—10Gbps ITU trunk line card without splitter | 12.1(10)EV                        |
|           | 15530-ITU2-1420 | CH 14—10Gbps ITU trunk line card without splitter | 12.1(10)EV                        |
|           | 15530-ITU2-1520 | CH 15—10Gbps ITU trunk line card without splitter | 12.1(10)EV                        |
|           | 15530-ITU2-1620 | CH 16—10Gbps ITU trunk line card without splitter | 12.1(10)EV                        |
|           | 15530-ITU2-1720 | CH 17—10Gbps ITU trunk line card without splitter | 12.1(10)EV                        |
|           | 15530-ITU2-1820 | CH 18—10Gbps ITU trunk line card without splitter | 12.1(10)EV                        |
|           | 15530-ITU2-1920 | CH 19—10Gbps ITU trunk line card without splitter | 12.1(10)EV                        |
|           | 15530-ITU2-2020 | CH 20—10Gbps ITU trunk line card without splitter | 12.1(10)EV                        |
|           | 15530-ITU2-2120 | CH 21—10Gbps ITU trunk line card without splitter | 12.1(10)EV                        |
|           | 15530-ITU2-2220 | CH 22—10Gbps ITU trunk line card without splitter | 12.1(10)EV                        |
|           | 15530-ITU2-2320 | CH 23—10Gbps ITU trunk line card without splitter | 12.1(10)EV                        |
|           | 15530-ITU2-2420 | CH 24—10Gbps ITU trunk line card without splitter | 12.1(10)EV                        |
|           | 15530-ITU2-2520 | CH 25—10Gbps ITU trunk line card without splitter | 12.1(10)EV                        |
|           | 15530-ITU2-2620 | CH 26—10Gbps ITU trunk line card without splitter | 12.1(10)EV                        |
|           | 15530-ITU2-2720 | CH 27—10Gbps ITU trunk line card without splitter | 12.1(10)EV                        |
|           | 15530-ITU2-2820 | CH 28—10Gbps ITU trunk line card without splitter | 12.1(10)EV                        |
|           | 15530-ITU2-2920 | CH 29—10Gbps ITU trunk line card without splitter | 12.1(10)EV                        |
|           | 15530-ITU2-3020 | CH 30—10Gbps ITU trunk line card without splitter | 12.1(10)EV                        |
|           | 15530-ITU2-3120 | CH 31—10Gbps ITU trunk line card without splitter | 12.1(10)EV                        |
|           | 15530-ITU2-3220 | CH 32—10Gbps ITU trunk line card without splitter | 12.1(10)EV                        |

**Table 1** Cisco ONS 15530 Supported Hardware and Minimum Software Requirements (continued)

| Component                | Part Number       | Description                                  | Minimum Software Version Required |
|--------------------------|-------------------|----------------------------------------------|-----------------------------------|
| 10-GE uplink card        | 15530-10GE-UPLINK | ONS 15530 10-Gbps uplink, 1310nm with SC     | 12.1(10)EV                        |
| WB-VOA module            | 15500-VOA-0100    | Single wide-band variable optical attenuator | 12.1(10)EV                        |
|                          | 15500-VOA-0200    | Dual wide-band variable optical attenuator   | 12.1(10)EV                        |
| Single-band PB-OE module | 15500-PEQ-01A0    | Single-band optical equalizer Band A         | 12.1(10)EV                        |
|                          | 15500-PEQ-01B0    | Single-band optical equalizer Band B         | 12.1(10)EV                        |
|                          | 15500-PEQ-01C0    | Single-band optical equalizer Band C         | 12.1(10)EV                        |
|                          | 15500-PEQ-01D0    | Single-band optical equalizer Band D         | 12.1(10)EV                        |
|                          | 15500-PEQ-01E0    | Single-band optical equalizer Band E         | 12.1(10)EV                        |
|                          | 15500-PEQ-01F0    | Single-band optical equalizer Band F         | 12.1(10)EV                        |
|                          | 15500-PEQ-01G0    | Single-band optical equalizer Band G         | 12.1(10)EV                        |
|                          | 15500-PEQ-01H0    | Single-band optical equalizer Band H         | 12.1(10)EV                        |
| Dual-band PB-OE module   | 15500-PEQ-02AB    | Dual band optical equalizer Band AB          | 12.1(10)EV                        |
|                          | 15500-PEQ-02CD    | Dual band optical equalizer Band CD          | 12.1(10)EV                        |
|                          | 15500-PEQ-02EF    | Dual band optical equalizer Band EF          | 12.1(10)EV                        |
|                          | 15500-PEQ-02GH    | Dual band optical equalizer Band GH          | 12.1(10)EV                        |
| AC cables                | 15530-CAB-AC      | AC cable, North America                      | 12.1(10)EV                        |
|                          | 15530-CAB-ACA     | AC cable, Australia                          | 12.1(10)EV                        |
|                          | 15530-CAB-ACE     | AC cable, Europe                             | 12.1(10)EV                        |
|                          | 15530-CAB-ACU     | AC cable, UK                                 | 12.1(10)EV                        |
|                          | 15530-CAB-ACI     | AC cable, Italy                              | 12.1(10)EV                        |
|                          | 15530-CAB-ACR     | AC cable, Argentina                          | 12.1(10)EV                        |

Table 1 Cisco ONS 15530 Supported Hardware and Minimum Software Requirements (continued)

| Component         | Part Number     | Description                                            | Minimum Software Version Required |
|-------------------|-----------------|--------------------------------------------------------|-----------------------------------|
| Blank panel cover | 15530-COV-MUX=  | OADM blank panel cover                                 | 12.1(10)EV                        |
|                   | 15530-COV-SLOT= | Full slot panel cover                                  | 12.1(10)EV                        |
|                   | 15530-COV-PWR=  | Power supply blank panel cover                         | 12.1(10)EV                        |
|                   | 15530-COV-OSC=  | OSC blank panel cover                                  | 12.1(10)EV                        |
| Fan assembly      | 15530-FT01=     | Fan assembly (spare)                                   | 12.1(10)EV                        |
| CompactFlash card | 15530-MEM=      | CompactFlash card 32 MB                                | 12.1(10)EV                        |
| Accessory kit     | 15530-ACCKIT23  | Accessory kit for 23 inch rack                         | 12.1(10)EV                        |
|                   | 15530-ACCKIT19  | Accessory kit for 19 inch rack                         | 12.1(10)EV                        |
| Rack mount kit    | 15530-RKMT-E=   | Chassis rack mount kit for 15530-CHAS-E                | 12.1(10)EV                        |
|                   | 15530-RKMT-N23= | Chassis rack mount kit for 15530-CHAS-N (23 inch rack) | 12.1(10)EV                        |
|                   | 15530-RKMT-N19= | Chassis rack mount kit for 15530-CHAS-N (19 inch rack) | 12.1(10)EV                        |

## Determining the Software Version



### Note

We strongly recommend that you use the latest available software release for all Cisco ONS 15530 hardware.

To determine the version of Cisco IOS software currently running on a Cisco ONS 15530 system, log in to the system and enter the **show version EXEC** command. The following sample output is from the **show version** command. The software version number is shown on the second line of the sample output.

```
Switch# show version
Cisco Internetwork Operating System Software
IOS (tm) ONS-15530 Software (ONS15530-I-M), Version 12.1(10)EV
<Information deleted>
```

## Upgrading the System Image

To ensure proper system functioning, follow the system image upgrading procedure described in the *Cisco ONS 15530 Software Upgrade Guide*.



### Note

Always set the configuration register to 0x2102 when upgrading the system image using the **config-reg 0x2102** command in configuration mode.

**Caution**

Improper system image upgrades can affect system functioning and redundancy. Always follow the recommended upgrade procedures.

## Feature Set Table

The Cisco IOS Release software is packaged in feature sets (also called software images) depending on the platform. Each feature set contains a specific set of Cisco IOS features. [Table 2](#) lists the Cisco IOS software feature sets available for the Cisco ONS 15530.

**Table 2** *Feature Sets Supported by the Cisco ONS 15530*

| Feature Set                                   | 12.1(10)EV | Feature Set                       | 12.1(10)EV |
|-----------------------------------------------|------------|-----------------------------------|------------|
| Inband message channel                        | X          | FICON <sup>1</sup> (800 Mbps)     | X          |
| Gigabit Ethernet                              | X          | Token Ring                        | X          |
| Fast Ethernet                                 | X          | SNMP                              | X          |
| Ethernet                                      | X          | CiscoView                         | X          |
| ATM OC-3/STM-1, OC-12/STM-4, and OC-48/STM-16 | X          | Cisco Transport Manager           | X          |
| SONET <sup>2</sup> /SDH <sup>3</sup>          | X          | IP packets                        | X          |
| POS <sup>4</sup>                              | X          | OSCP <sup>5</sup>                 | X          |
| Coupling link                                 | X          | APS <sup>6</sup> channel protocol | X          |
| Fibre Channel (1 Gbps)                        | X          | Point-to-point                    | X          |
| Fibre Channel (2 Gbps)                        | X          | Hubbed ring                       | X          |
| FDDI <sup>7</sup>                             | X          | Meshed ring                       | X          |
| ESCON <sup>8</sup> aggregation (2.5 Gbps)     | X          | Sysplex                           | X          |

1. FICON = Fiber Connection
2. SONET = Synchronous Optical Networking
3. SDH = Synchronous Digital Hierarchy
4. POS = Packet over SONET
5. OSCP = Optical Supervisory Channel Protocol
6. APS = Automatic Protection Switching
7. FDDI = Fiber Distributed Data Interface
8. ESCON = Enterprise Systems Connection

# Caveats

This section lists the caveats for the 12.1(10)EV release. Use [Table 3](#) to determine the status of a particular caveat. In the table, “C” indicates a corrected caveat, and “O” indicates an open caveat.

*Table 3 Caveat Matrix for the Cisco ONS 15530*

| DDTS Number                | 12.1(10)EV |
|----------------------------|------------|
| <a href="#">CSCdx78717</a> | O          |
| <a href="#">CSCdx82664</a> | O          |
| <a href="#">CSCdx83919</a> | O          |
| <a href="#">CSCdx87292</a> | O          |
| <a href="#">CSCdx88347</a> | O          |
| <a href="#">CSCdx88864</a> | O          |
| <a href="#">CSCdy01768</a> | O          |
| <a href="#">CSCdy02850</a> | O          |
| <a href="#">CSCdy03076</a> | O          |

This section describes the caveats in the Cisco ONS 15530.

- [CSCdx78717](#)
- **Symptom:** A change in optical threshold condition at a WB-VOA or PB-OE modules power monitor may not be detected if the condition is transient in nature and does not last for more than a second.  
**Workaround:** None
- [CSCdx82664](#)  
**Symptom:** When a threshold group is associated with an interface and it is replaced with another threshold group without removing the original group and the interface is in Signal degrade/threshold we may lose this information.  
**Workaround:** Disassociate the threshold group before associating a new group, or shut/no shut the interface after configuring the new threshold group.
- [CSCdx83919](#)  
**Symptom:** 1. When swapping the ESCON line card with the 10G ITU trunk line card in a given slot, the following error message is seen four times:  
%BPE-3-NOT\_REGISTERED: Interface[EthernetDcc9/0/0] MAC is not registered  
**Workaround:** None.
- [CSCdx87292](#)  
**Symptom:** All the interfaces are moved to IDBS\_UP state in shutdown\_coming\_up patch in common code, the alert handler routine which follows takes care of moving the interface to their appropriate states. During the above sequence 10G ITU trunk line card interfaces will be in UP state momentarily.  
**Workaround:** Have different defaults states based on the idb\_type.
- [CSCdx88347](#)

**Symptom:** Current practise is to clear all alarms associated with an interface upon administrative shutdown. If LOF or LOS existed on a Sonet interface and the interface is shutdown, the sonetSectionCurrentStatus still reports the previous alarm condition, and at times the BIP error count increases when the interface is in a 'down' state.

**Workaround:** None

- [CSCdx88864](#)

**Symptom:** Spurious memory access tracebacks on booting the box with latest image..

**Workaround:** None

- [CSCdy01768](#)

**Symptom:** The CPU LED for alarms do not get cleared even though the Optical Power Monitoring alarm gets cleared. There is no functionality problem. On a CPU switchover this alarm LED is cleared and gives the correct alarm status.

**Workaround:** OIR the card on which ALARM was generated.

- [CSCdy02850](#)

**Symptom:** Wave is in ADMIN down, wavepatches are in down state initially when the card comes up. At this point, both the wavepatches see a LOL since the receive power is less than the threshold configured on those interfaces. When no shut is done on the wave, active wavepatches report a Low Alarm but standby wavepatch is not reporting a low alarm. The reason is, since the standby wavepatch is already DOWN, we are not reporting it again.

Normally when the interface comes to down state, from ADMIN down or UP state, we will force the wavepatch interface to DOWN and generate the alarm.

**Workaround:** Doing a SHUT/NOSHUT on the interface, we can see the low alarm getting reported for this interface.

- [CSCdy03076](#)

**Symptom:** First OIR of the OSC linecard puts the card in admin down state.

**Workaround:** Perform a **no shutdown** command to recover the interface.

## Related Documentation

Refer to the following documents for more information about the Cisco ONS 15540 ESP:

- [Regulatory Compliance and Safety Information for the Cisco ONS 15500 Series](#)
- [Cisco ONS 15530 Planning Guide](#)
- [Cisco ONS 15530 Hardware Installation Guide](#)
- [Cisco ONS 15530 Optical Transport Turn-Up and Test Guide](#)
- [Cisco ONS 15530 Cleaning Procedures for Fiber Optic Connections](#)
- [Cisco ONS 15530 Configuration Guide](#)
- [Cisco ONS 15530 Command Reference](#)
- [Cisco ONS 15530 System Alarms and Error Messages](#)
- [Cisco ONS 15530 Troubleshooting Guide](#)
- [Network Management for the Cisco ONS 15530](#)
- [Cisco ONS 15530 TL1 Commands](#)

- *MIB Quick Reference for the Cisco ONS 15500 Series*
- *Cisco ONS 15530 Software Upgrade Guide*

## Obtaining Documentation

The following sections explain how to obtain documentation from Cisco Systems.

### World Wide Web

You can access the most current Cisco documentation on the World Wide Web at the following URL:

<http://www.cisco.com>

Translated documentation is available at the following URL:

[http://www.cisco.com/public/countries\\_languages.shtml](http://www.cisco.com/public/countries_languages.shtml)

### Documentation CD-ROM

Cisco documentation and additional literature are available in a Cisco Documentation CD-ROM package, which is shipped with your product. The Documentation CD-ROM is updated monthly and may be more current than printed documentation. The CD-ROM package is available as a single unit or through an annual subscription.

### Ordering Documentation

Cisco documentation is available in the following ways:

- Registered Cisco Direct Customers can order Cisco product documentation from the Networking Products MarketPlace:  
[http://www.cisco.com/cgi-bin/order/order\\_root.pl](http://www.cisco.com/cgi-bin/order/order_root.pl)
- Registered Cisco.com users can order the Documentation CD-ROM through the online Subscription Store:  
<http://www.cisco.com/go/subscription>
- Nonregistered Cisco.com users can order documentation through a local account representative by calling Cisco corporate headquarters (California, USA) at 408 526-7208 or, elsewhere in North America, by calling 800 553-NETS (6387).

### Documentation Feedback

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San Jose, CA 95134-9883

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## Obtaining Technical Assistance

Cisco provides Cisco.com as a starting point for all technical assistance. Customers and partners can obtain documentation, troubleshooting tips, and sample configurations from online tools by using the Cisco Technical Assistance Center (TAC) Web Site. Cisco.com registered users have complete access to the technical support resources on the Cisco TAC Web Site.

### Cisco.com

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Cisco.com is a highly integrated Internet application and a powerful, easy-to-use tool that provides a broad range of features and services to help you to

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- Order Cisco learning materials and merchandise
- Register for online skill assessment, training, and certification programs

You can self-register on Cisco.com to obtain customized information and service. To access Cisco.com, go to the following URL:

<http://www.cisco.com>

## Technical Assistance Center

The Cisco TAC is available to all customers who need technical assistance with a Cisco product, technology, or solution. Two types of support are available through the Cisco TAC: the Cisco TAC Web Site and the Cisco TAC Escalation Center.

Inquiries to Cisco TAC are categorized according to the urgency of the issue:

- Priority level 4 (P4)—You need information or assistance concerning Cisco product capabilities, product installation, or basic product configuration.
- Priority level 3 (P3)—Your network performance is degraded. Network functionality is noticeably impaired, but most business operations continue.

- Priority level 2 (P2)—Your production network is severely degraded, affecting significant aspects of business operations. No workaround is available.
- Priority level 1 (P1)—Your production network is down, and a critical impact to business operations will occur if service is not restored quickly. No workaround is available.

Which Cisco TAC resource you choose is based on the priority of the problem and the conditions of service contracts, when applicable.

## Cisco TAC Web Site

The Cisco TAC Web Site allows you to resolve P3 and P4 issues yourself, saving both cost and time. The site provides around-the-clock access to online tools, knowledge bases, and software. To access the Cisco TAC Web Site, go to the following URL:

<http://www.cisco.com/tac>

All customers, partners, and resellers who have a valid Cisco services contract have complete access to the technical support resources on the Cisco TAC Web Site. The Cisco TAC Web Site requires a Cisco.com login ID and password. If you have a valid service contract but do not have a login ID or password, go to the following URL to register:

<http://www.cisco.com/register/>

If you cannot resolve your technical issues by using the Cisco TAC Web Site, and you are a Cisco.com registered user, you can open a case online by using the TAC Case Open tool at the following URL:

<http://www.cisco.com/tac/caseopen>

If you have Internet access, it is recommended that you open P3 and P4 cases through the Cisco TAC Web Site.

## Cisco TAC Escalation Center

The Cisco TAC Escalation Center addresses priority level 1 or priority level 2 issues. These classifications are assigned when severe network degradation significantly impacts business operations. When you contact the TAC Escalation Center with a P1 or P2 problem, a Cisco TAC engineer automatically opens a case.

To obtain a directory of toll-free Cisco TAC telephone numbers for your country, go to this URL:

<http://www.cisco.com/warp/public/687/Directory/DirTAC.shtml>

Before calling, please check with your network operations center to determine the level of Cisco support services to which your company is entitled: for example, SMARTnet, SMARTnet Onsite, or Network Supported Accounts (NSA). When you call the center, please have available your service agreement number and your product serial number.

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This document is to be used in conjunction with the documents listed in the “[Related Documentation](#)” section.

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