Handling Instructions for Cisco
15454-80-WXC-C= and 15454-WXC-LIC= Cards

May 2017

Cisco Systems, Inc.
www.cisco.com

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.
THE SPECIFICATIONS AND INFORMATION REGARDING THE PRODUCTS IN THIS MANUAL ARE SUBJECT TO CHANGE WITHOUT NOTICE. ALL STATEMENTS, INFORMATION, AND RECOMMENDATIONS IN THIS MANUAL ARE BELIEVED TO BE ACCURATE BUT ARE PRESENTED WITHOUT WARRANTY OF ANY KIND, EXPRESS OR IMPLIED. USERS MUST TAKE FULL RESPONSIBILITY FOR THEIR APPLICATION OF ANY PRODUCTS.

THE SOFTWARE LICENSE AND LIMITED WARRANTY FOR THE ACCOMPANYING PRODUCT ARE SET FORTH IN THE INFORMATION PACKET THAT SHIPPED WITH THE PRODUCT AND ARE INCORPORATED HEIRIN BY THIS REFERENCE. IF YOU ARE UNABLE TO LOCATE THE SOFTWARE LICENSE OR LIMITED WARRANTY, CONTACT YOUR CISCO REPRESENTATIVE FOR A COPY.

The following information is for FCC compliance of Class A devices: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio-frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case users will be required to correct the interference at their own expense.

The following information is for FCC compliance of Class B devices: The equipment described in this manual generates and may radiate radio-frequency energy. If it is not installed in accordance with Cisco’s installation instructions, it may cause interference with radio and television reception. This equipment has been tested and found to comply with the limits for a Class B digital device in accordance with the specifications in part 15 of the FCC rules. These specifications are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation.

Modifying the equipment without Cisco’s written authorization may result in the equipment no longer complying with FCC requirements for Class A or Class B digital devices. In that event, your right to use the equipment may be limited by FCC regulations, and you may be required to correct any interference to radio or television communications at your own expense.

You can determine whether your equipment is causing interference by turning it off. If the interference stops, it was probably caused by the Cisco equipment or one of its peripheral devices. If the equipment causes interference to radio or television reception, try to correct the interference by using one or more of the following measures:

• Turn the television or radio antenna until the interference stops.
• Move the equipment to one side or the other of the television or radio.
• Move the equipment farther away from the television or radio.
• Plug the equipment into an outlet that is on a different circuit from the television or radio. (That is, make certain the equipment and the television or radio are on circuits controlled by different circuit breakers or fuses.)

Modifications to this product not authorized by Cisco Systems, Inc. could void the FCC approval and negate your authority to operate the product.

The Cisco implementation of TCP header compression is an adaptation of a program developed by the University of California, Berkeley (UCB) as part of UCB’s public domain version of the UNIX operating system. All rights reserved. Copyright © 1981, Regents of the University of California.

NOTWITHSTANDING ANY OTHER WARRANTY HEREIN, ALL DOCUMENT FILES AND SOFTWARE OF THESE SUPPLIERS ARE PROVIDED “AS IS” WITH ALL FAULTS. CISCO AND THE ABOVE-NAMED SUPPLIERS DISCLAIM ALL WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, THOSE OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE AND NONINFRINGEMENT OR ARISING FROM A COURSE OF DEALING, USAGE, OR TRADE PRACTICE.

IN NO EVENT SHALL CISCO OR ITS SUPPLIERS BE LIABLE FOR ANY INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES, INCLUDING, WITHOUT LIMITATION, LOST PROFITS OR LOSS OR DAMAGE TO DATA ARISING OUT OF THE USE OR INABILITY TO USE THIS MANUAL, EVEN IF CISCO OR ITS SUPPLIERS HAVE BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. To view a list of Cisco trademarks, go to this URL: www.cisco.com/go/trademarks. Third-party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1110R)

Any Internet Protocol (IP) addresses used in this document are not intended to be actual addresses. Any examples, command display output, and figures included in the document are shown for illustrative purposes only. Any use of actual IP addresses in illustrative content is unintentional and coincidental.

Copyright ©2017 Cisco Systems, Inc. All rights reserved.
This technical note provides guidelines to ensure the proper handling instructions for Cisco 15454-80-WXC-C= and 15454-WXC-LIC= cards to ensure prevention from handling and shipping damages.

For simplicity in this document, we will use the product name "80WXC-C" instead of "15454-80-WXC-C=" and "15454-WXC-LIC=" PID to indicate the card in subject.
1. Precautions

1.1 Electrostatic Discharge

Electrostatic discharge (ESD) damage to the electrical component of the 80WXC-C card is induced from the rapid flow of electrical charge between two bodies at different potentials, either through direct contact or through an induced electric field. ESD can cause catastrophic or latent damage of electronic components that lead to card functional failures.

Latent ESD damage is also possible when an ESD event occurs below that required to exhibit immediate degradation, but may manifest itself during deployment.

The following recommended guidelines must be followed to prevent ESD damage to the 15454-80-WXC-C= and 15454-WXC-LIC= cards.

- Ensure that operators, equipment, WIP transport trays, work surfaces, and systems are grounded to eliminate static electricity.
- Use only confirmed ESD dissipative coatings or surface finishes on fixtures or tools used to handle the card.
- Use ESD-protective smocks, gloves, and shoes or covers, dissipative bench-top mats, and ESD-protective flooring or matting when manipulating pump modules.
- Remove or control static-generating sources to voltages below the specified maximum for safe ESD handling.
- Use electrostatic shielding containers and antistatic or dissipative carriers.
2. Receiving the 80WXC-C Card

1. The 80WXC-C card must arrive packaged in shipping box (Cisco part# 84-1298-02) and clamshell (Cisco part# 501-00968-01).

2. On arrival, inspect shipping box, box labeling, and clamshell packaging for any damages and/or non-conformances. It is recommended to report to the vendor if any problem with packaging has been found.

3. Removing the 80WXC-C Card from Packaging

1. Remove the clamshell with the 80WXC-C card from shipping box and place it on a clean ESD bench.
2. Inspect for any visible damage to the 80WXC-C card or components from the top side.
3. Flip the clamshell for inspection of bottom side for component damages. Backplane connectors must have two Yellow protective caps as shown.
4. Check to ensure clamshell is properly closed/sealed.
5. After inspection, return the card to the Top side position.

It is recommended to report to the vendor if any damage or non-conformance has been found.
6. While the 80WXC-C card is in the clamshell (in the Top up position), release the two snap locks to open the lid of the clamshell. Do not insert any tool beyond the tab to avoid clamshell blade damage.

7. When the lid is opened, the card is secured in the clamshell with 4 tabs (in red circles). Two tabs on each side of the clamshell.

![Card in Clamshell](image1)

To release the card, perform the following steps:

1. Release the tabs on the right hand side.

2. While holding the card by the faceplate with your left hand, bend the lip of the clamshell down with your right hand and pull the card up to release it from clamshell right side tabs.

![Card Release](image2)

3. Release the lip of the clamshell with your right hand making sure the two locking tabs are under the PCBA surface

4. Release your left hand resting the card above the locking tabs (red circles).

5. Check the clamshell right hand side locking tabs - they shall be released too (blue circles).
6. Now with all locking tabs released, remove the card from clamshell as shown.

7. Transfer the card from the clamshell to the piece of ESD foam as shown.

**Note:** When the card is processed outside the clamshell or system shelf/tray, the card must be placed on a piece of ESD foam – the foam insert from the shipping box can be used. Always use two hands to carry the card around. Hold the card firmly with your fingers by the main board edges or by the faceplate when the card is leaning against the foam. Never hold the card by the faceplate only when it is in air.
Examples of Correct Handling

4. Inserting or Removing the 80WXC-C Card with System Shelf

1. Before inserting the card in system shelf, remove the yellow protection caps from backplane connectors.
2. Visually align the card PCBA to the shelf sliders, hold the card firmly in strict horizontal or vertical position when approaching card to the tray sliders – do not allow any tilt of the card from those positions until PCBA edges are in the tray sliders. While holding the card, do not touch PCBA components.

3. Only when position of the card is controlled by shelf sliders, gently slide the card completely to engage the backplane connector and lock faceplate latches.
To remove the card from the shelf, follow all the insertion steps above in reversed sequence.

**Note:** Never force the card in or out of the shelf. Prevent the card from interfering with adjacent cards that can cause component damage.

5. Storing the 80WXC-C Card

For short term storage within one working day, the cards can be stored on shelving or bench units using individual pieces of foam under the cards in a way that prevents mechanical interference between stored cards. The yellow protective caps must be installed on the backplane connectors during storage.
For long term storage of more than one working day, the cards must be installed in clamshells and can be placed on shelving or bench units. The yellow protective caps must be installed on the backplane connector’s prior to packaging into the clamshell. Do not store one card on top of another unless clamshells are over packed in individual shipping/pizza boxes.

6. Packaging the 80WXC-C Card

To install the card into the clamshell - lay the card on the shallow side of the opened clamshell.
When resting the card into clamshell - align positions of faceplate latches to be in corresponding clamshell compartments (red circles). Then, while holding the card with your right hand by the faceplate, bend down the left side lip of the clamshell to snap two clamshell locking tabs over main board edge (blue circles).

**Warning:** When inserting the card into the clamshell or locking tabs, do not touch the electronic components on PCBA. The fingers pressure can introduce damage.
Damage that can occur with contact to the power supply

Now lock the right side clamshell locking tabs – While holding faceplate with left hand, bend the lip of the clamshell down to snap locking tabs over main board edges.

Inspect all the 4 locking tabs – they all must secure the card in clamshell holding it on main board edges,
Close the clamshell. There are two snapping points and all the four corners of the clamshell that are required to be snapped to lock the clamshell.

a) Lock the two back corners:  
b) Lock the two front corners

c) Lock two snapping points  
d) Inspect the position of the card in the clamshell
7. Shipping the 80WXC-C Card

If the 80WXC-C card needs to be shipped to another location, it is required to be shipped in Cisco specified shipping box (Cisco part# 84-1298-02). The box also can be used for long term storage of the card.

Before placing the clamshell in shipping box, inspect the position of the card, all locks, and snapping points. Ensure the card position is secured in the clamshell. Place the clamshell on the bottom of foam insert. Place piece of protective foam on the top of the clamshell and close the box.

Apply shipping label that must contain product ID and serial number.

Notes:

1. Save all the packaging material (box and clamshell) if the card needs to be returned.
2. Only a Cisco resource can approve shipping card in a non-conforming shipping box.