

IDENTIFICATION OF VOLATILE AND NON-VOLATILE STORAGE AND SANITIZATION OF SYSTEM COMPONENTS

**JUNIPER NETWORKS
QFX5220-128C**

**REVISION 1.0
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1 INTRODUCTION

1.1 Purpose

The purpose of this document is to provide direction to identify and remove all non-volatile (NV) storage from the Juniper Networks QFX5220-28C platform. Non-Volatile (NV) storage is a system memory that can store user data information and system configuration data even when system not powered. Volatile (V) storage is a system memory that only retains data or its contents while system powered but when system powered off or interrupted, its data or contents are immediately lost.

1.2 Scope

This document only addresses the QFX5220-128C platform. While other platforms offered by Juniper Networks may contain similar hardware components, this document only applies to these devices. Furthermore, this document only provides direction for the identification and removal of NV storage components. It does not address destruction procedures for those components. As all of the NV storage components used in the QFX5220-128C are commercial off-the-shelf (COTS) components, directions for destruction of those components are left to the governing Department, Agency, or Office.

2 EQUIPMENT OVERVIEW

2.1 Identification of Chassis

QFX5220-128C is a 4RU top of the rack switch provided scalable connectivity for the enterprise market, including branch offices, campus locations, and data centers. The switches run under the JUNOS-EVO software, which provides Layer 2 and Layer 3 switching. The same code base that runs on QFX5220-128C switch also runs on some Juniper Networks products.

QFX5220-128C has 128x100G Ethernet fixed ports. Its configuration is a single PFE that provides 12.8TB/s total bandwidth. QFX5220-128C is designed to fit in a standard 19" rack.



Figure 2-1. The QFX5220-128C Chassis

2.2 Description of Field Replaceable Units (FRU)

The power supplies and fan modules are hot-swappable. You can remove and replace them without powering off the system or disrupting system functions.

None of these components contain NV RAM. All NV RAM is either soldered or installed onto the system boards.

3 POWER DOWN AND REMOVAL OF NON-VOLATILE STORAGE

To ensure that no user data or system configurations remain resident on an QFX5220-128C platform, the following steps must be performed:

1. Power must be removed from the system to clear all volatile storage.

2. The NOR Flash and NAND Flash storage devices must be removed from the board.

A detailed process is included in the following sections.

3.1 System Power Down

Power down the system by removing any connected power cords from power supply.

3.2 Disassembly of the QFX5220-128C Chassis and Identification of NV storage

The QFX5220-128C contains NV storages that are socketed and soldered to the system board. To access the memories for removal, refer to the following steps:

1. Remove the PSUs from the system.
2. Remove the Fans from the system.
3. Remove the ear-mounts on both left and right side of the chassis if any.
4. Remove all screws from the top and sides of the system (Figure 3-1 and Figure 3-2).

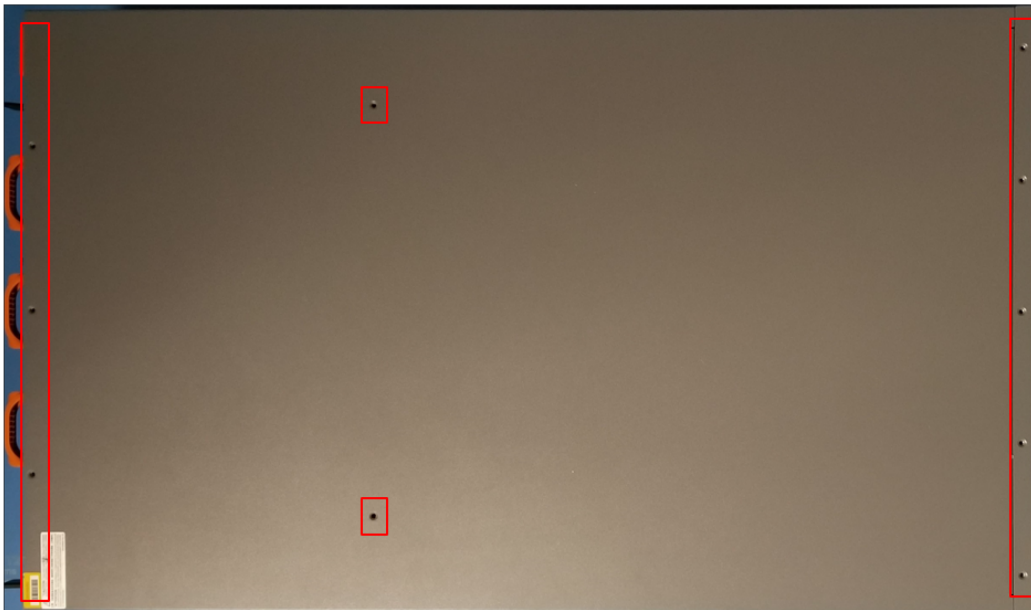


Figure 3-1. Top side screws removal

5. Remove all screws from left and right sides of chassis (Figure 3-2)

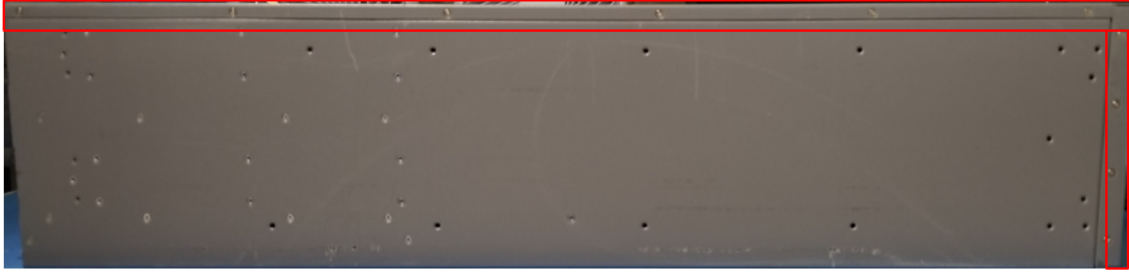


Figure 3-2. Left and Right sides screws removal

6. Remove the screws from the bottom of the chassis to access the two SATA SSD devices. Use a Philips screwdriver to remove the SSD's (Figure 3-3).

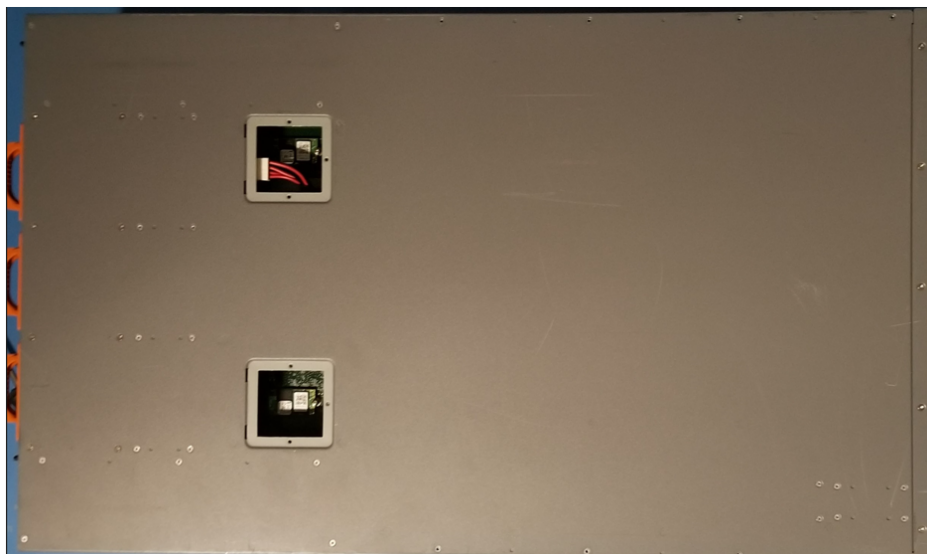
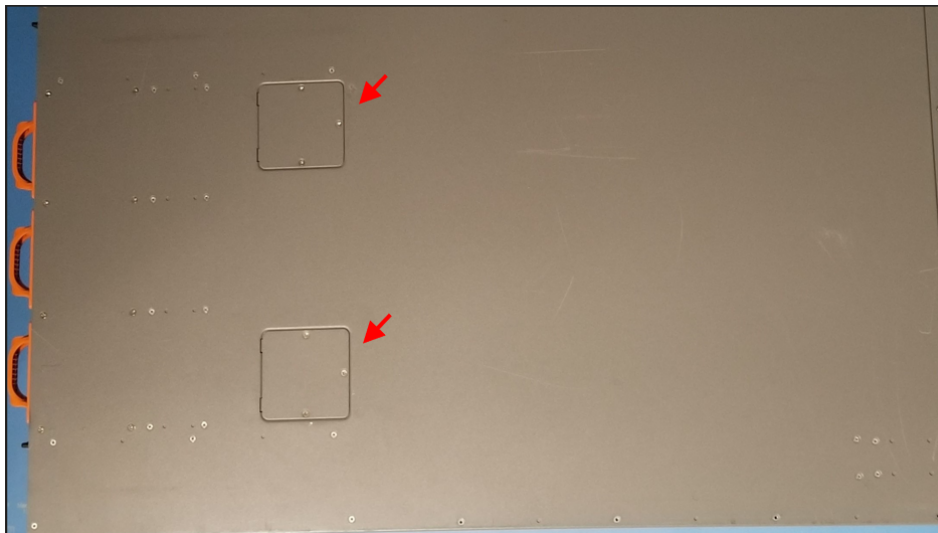


Figure 3-3. SATA SSD Windows

7. Volatile and non-volatile storage devices are located on the CPU board. CPU board removal requires the following steps:
 - 7.1 Remove the Front Panel cover by removing the O-ring screws as shown in Figure 3-4.
 - 7.2 Remove the Mezz board (Figure 3-5) by removing all screws as shown in Figure 3-7.
 - 7.3 Remove the two Fan boards (Figure 3-6) by removing the Fan power assembly, Fan ribbon cable and all the screws as shown in Figure 3-7.



Figure 3-4. Front Panel Cover

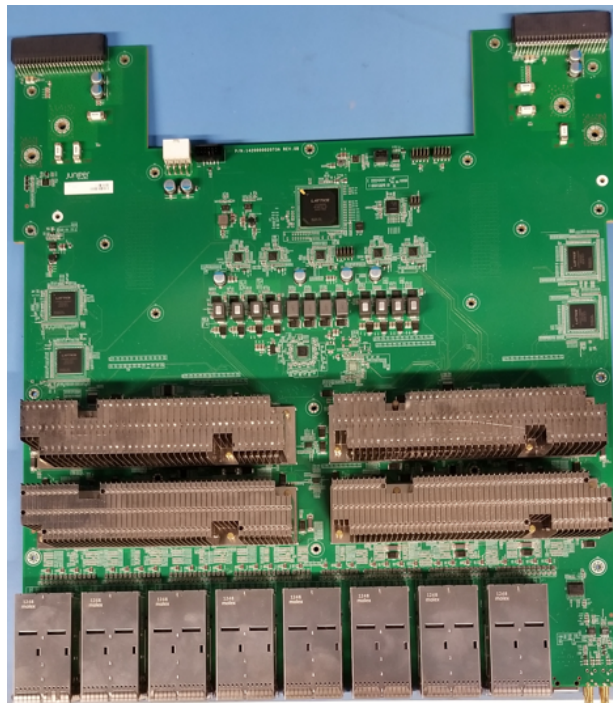


Figure 3-5. Mezz Board

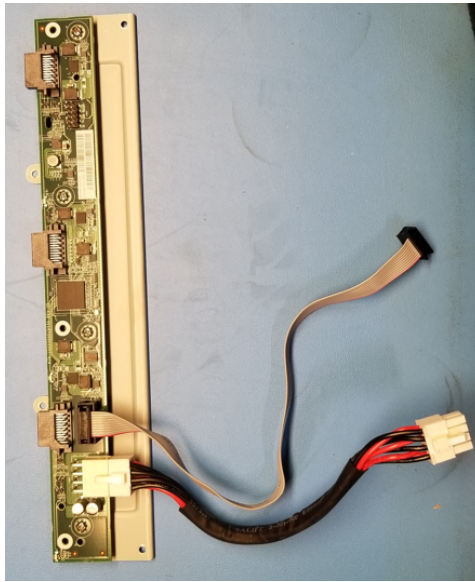


Figure 3-6. Fan Board

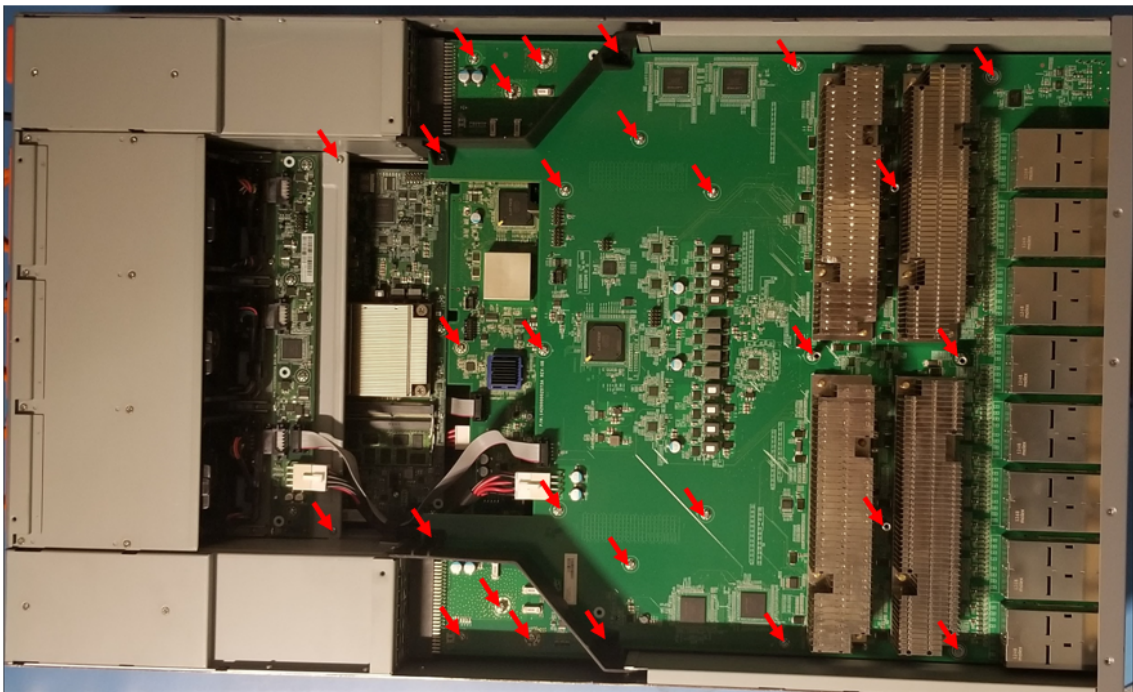


Figure 3-7. CPU board removal

8. Locate NV storage devices on CPU board (Figure 3-8).

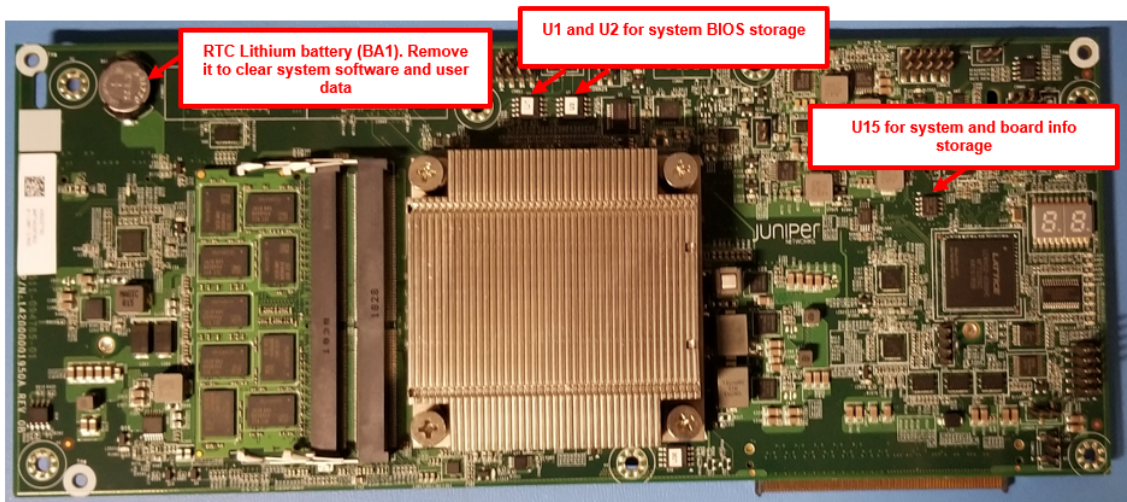


Figure 3-8. Locate NV storage devices on CPU board

9. Locate volatile storage device on CPU board (Figure 3-9).

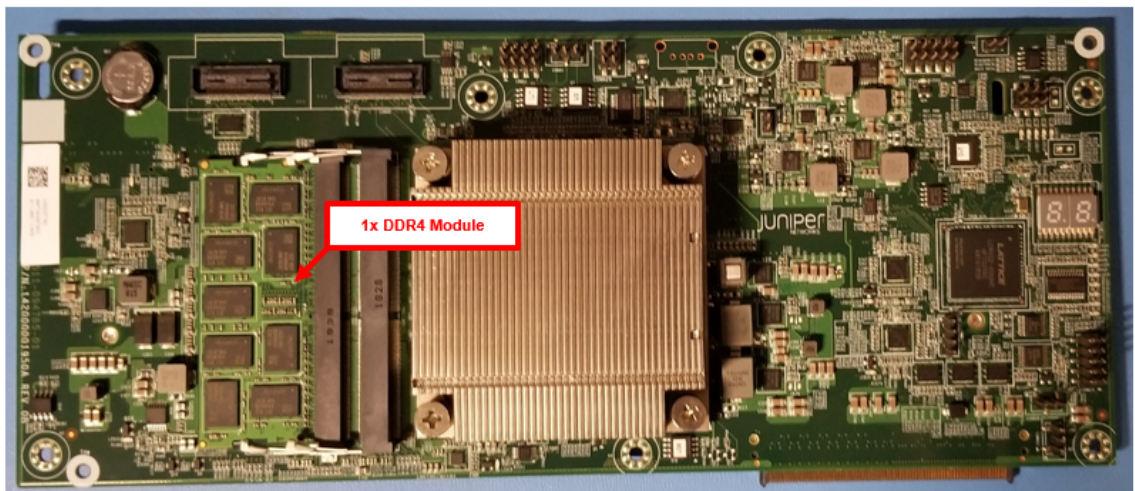


Figure 3-9. Locate volatile storage device on CPU board

10. Locate NV storage devices on Main board (Figure 3-10).

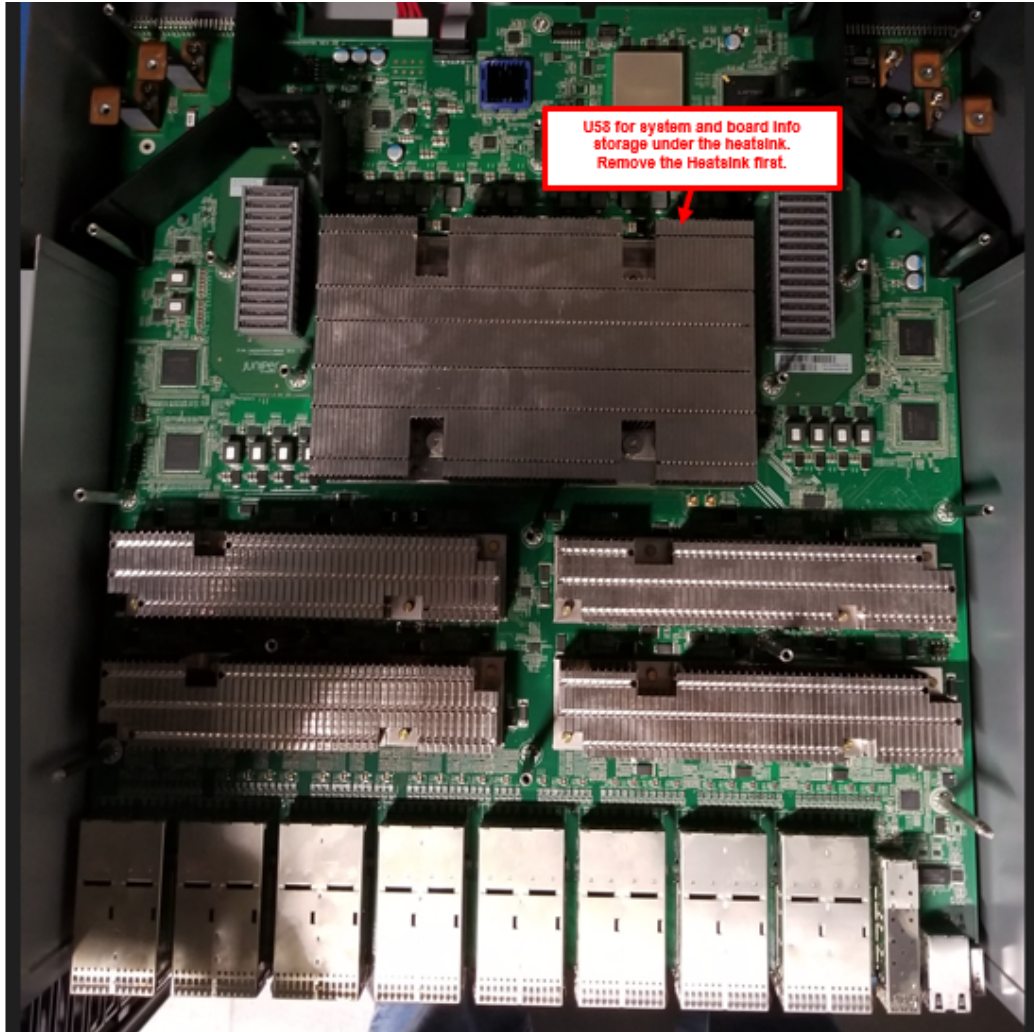


Figure 3-10. Locate NV storage devices on Main board

11. Removal of the NOR and NAND Flash devices from the board.
 - a. Once the NV storage devices have been located, unsolder these devices from the board.

NOTE: Before removal, ensure J-TAC and the appropriate account team have been notified of your intentions.