

Firmware Update Guide

Micron RealSSD™ C400 Firmware Revision 0309

Boot from CD/USB Update Guide (Update from Rev 0001, 0002, or 0009 to Rev 0309)

Introduction

This document describes the process of updating the firmware on the Micron RealSSD™ C400 using a bootable USB drive or a CD and a bootable ISO image. The ISO image contains the 0009 firmware update and DOS boot code.

This process is to be used for updating the firmware **from either Revision 0001, 0002, or 0009 to Revision 0309.**

PLEASE NOTE: This firmware update is **not** applicable to any Micron RealSSD™ C300 drive.

WARNING: As with all firmware updates, it is strongly recommended that you backup or make copies of all important files before performing this update. This firmware update process is done entirely at your own risk. If performed correctly, there will be no loss of system or user data on the drive. However, if the firmware process is interrupted for any reason, your solid-state drive may not function properly. If this update is done on a notebook computer, it is strongly recommended that power be supplied by the AC power adapter.

General Instructions

Complete the following steps before starting the firmware update process:

1. Backup the Solid-State Drive

It is highly recommended that full system backup be completed before starting this firmware upgrade procedure. If the upgrade is interrupted (by a power loss or hardware failure of some sort), it is possible that the solid-state drive may not function properly.

2. Use AC Power

Ensure your mobile PC or desktop PC is plugged in to AC power during the update process. It is not recommended to use only battery power during the upgrade. Do not remove power at any time during the firmware update process as this could produce incomplete results and may render your solid-state drive unusable.

3. Edit BIOS Settings

Per the steps below, you may need to edit your computer's BIOS settings. Please see your computer's owner's manual for details on editing these settings.

a) Disable/Remove Drive Passwords

Enter the BIOS (typically by hitting the "Delete," "F2," or "F12" key during the start-up screen) and disable any passwords that you may have set on the SSD. Password protections could block firmware updates.

b) Check the Boot Order

If your system does not boot from CD or USB drive, you will need to edit your BIOS settings. While in the BIOS editor, check the drive boot order. As a default, most systems will boot from the CD drive before the system drive. Depending on the BIOS vendor, find an option called “Boot Device Priority,” “Boot Load Order,” or possibly “Advanced BIOS Features.” Ensure that the system boots to the bootable CD or USB drive before the drive that contains the OS.

Download the Firmware Update

1. Before beginning the firmware download process close all other programs except for your Internet browser.
2. Find the **C400 Rev. 0309 Firmware Update Utility** associated with your Micron SSD at Micron.com/ssdfirmware
3. Click the **hypertext** link for C400 Rev. 0309 Firmware , and the browser will prompt you to select **Open**, **Save** or **Cancel**. Select **Save** to download the ISO Image to your system. **Note:** A micron login and password are needed to unlock the file.
4. Save this file to your desktop or another folder for easy access later and close the download window when download is complete.

Create Bootable Media with the ISO**Option 1: Burn a Bootable CD**

Note: Optical drive burning software is built into Windows 7.

1. Using the CD burning software of your choice, burn the firmware ISO image to CD media.

Option 2: Create a Bootable USB Drive

Note: To use this option, your system must support boot from USB.

1. Start with a newly formatted USB drive (256MB or greater).
2. Open a USB installer program. If you do not have a USB installer program, you may download a free USB installer program such as, for example, the [Universal USB Installer](http://www.pendrivelinux.com/universal-usb-installer-easy-as-1-2-3/) (available at www.pendrivelinux.com/universal-usb-installer-easy-as-1-2-3/).
3. You may need to click through a security dialogue and/or license agreement.
4. If you are using the Universal USB Installer, then:
 - At the Step 1 drop down box, scroll to the bottom and select the last option: **Try Unlisted Linux ISO** .
 - Go to Step 2 and browse to the firmware ISO that you downloaded earlier.
 - Go to Step 3 and select the flash drive on which you want to install the ISO.
 - Click the **Create** button and click **Format E:\Drive (Erases Content)**. Answer **Yes** to the warning about overwriting your USB drive.
 - A sequence of screens will appear and disappear; when that finishes, the USB drive is loaded.

Run the Firmware Update

1. Insert the bootable CD or USB with the ISO Image into your system.
2. Boot the system from the bootable media. This will automatically start the Firmware Update. The following screen will appear:

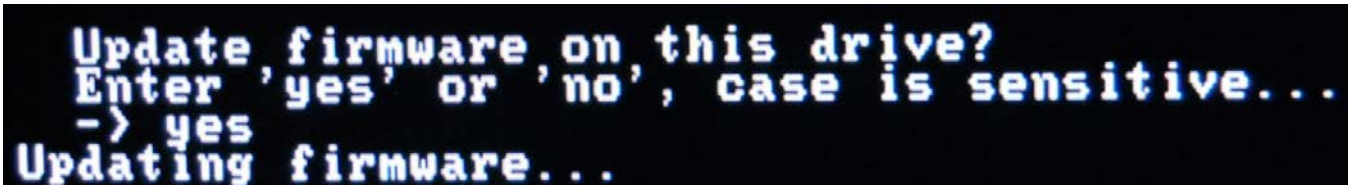


3. After the update tool has fully loaded, you will see the following:



It is acceptable to update from either 0001, 0002, or 0009 for the starting firmware revision, so you may see any of these revisions in the above display. If your C400 drive is not listed in the screen display as above, please see the “Troubleshooting Tips” section below.

4. You may see “Waiting for DRQ” prior to being asked to update the firmware. These messages are normal. Enter “yes” in lower case letters when asked to update the firmware. The following screen will appear:



```
Update firmware on this drive?
Enter 'yes' or 'no', case is sensitive...
-> yes
Updating firmware...
```

5. On most systems, this process will take between 30 to 60 seconds. Some systems may require a longer time to complete.
6. Upon completion, the following message will display:



```
Update firmware on this drive?
Enter 'yes' or 'no', case is sensitive
-> yes
Updating firmware
Current Firmware is: 0309
Finished.
A:\>_
```

7. **IMPORTANT!!!** The revision of the firmware will be listed. If the revision is **NOT** listed as 0309, then repeat the process from Step 1 of the “Run the Firmware Update” section above. You may restart the process by typing “AUTOEXEC.BAT” at the A:\> prompt.
8. If you are not sure which revision firmware you have or if you want to confirm, you can enter:

```
dosmcli --verbose -d
```

at the A:\> prompt. The last line shown is the Firmware Revision. If 0309 is not shown, repeat the process from Step 1 of the “Run the Firmware Update” section above. PLEASE NOTE: This command will list all ATA drives on your system, not just the Micron SSD.

9. Remove the bootable media and shut down your system by pressing and holding the power button.
10. Turn power back ON. You may change any BIOS settings you made at the start of this process back to original settings.
11. Process is complete.

Troubleshooting Tips

- Although efforts have been made to test the compatibility of this software with various system and chipset configurations, it is not possible to test every available system. Therefore, certain systems (e.g., older systems) may experience compatibility problems.
- If your RealSSD™ C400 drive is not recognized in Step 3 of the “Run the Firmware Update” section above, it may be necessary to run this update in IDE mode instead of AHCI mode, on some older systems. To do so, perform the following steps:
 - In a desktop system, ensure that your drive is plugged into one of first 4 ports on the SATA bus. These are normally labeled 0–3. Some motherboards do not support hot-plugging of SATA devices, so it is recommended that power be shut off to the system before changing ports.
 - From BIOS Setup, change the SATA mode to IDE or Legacy mode or Compatibility mode. Look for a parameter called “SATA Configuration,” or possibly “Integrated Peripherals.”
 - Save your settings and exit from the BIOS.
 - Proceed with the instructions from Step 1 of the “Run the Firmware Update” section above.
- Most systems prevent firmware updates when in RAID mode. In this case, changing to AHCI or IDE mode may help to complete the update process. Any RAID configurations should be preserved after the update, when the system is put back into RAID mode, but check with your system’s user manual before proceeding.
- Peripheral RAID cards will not pass the necessary commands to perform firmware updates. You may need to move the target drive onto a SATA host bus adapter or SATA connector on the motherboard that facilitates these commands.

Firmware Release Notes

Firmware for the RealSSD C400 is being updated from version 0009 to 0309. The C400 is updatable to this new firmware starting from version 0001, 0002, or 0009 in a single step. If updating from version 0001 or 0002 to 0309, all interim improvements will also be included (please see Release Notes for version 0002 and 0009 at www.micron.com for details).

Changes between version 0009 and 0309 include the following single change:

- The C400 drive may experience a condition in which an incorrect response to a SMART counter will cause the C400 drive to become unresponsive after 5184 hours of power-on time. Although the drive may recover after a power cycle, such failure may repeat once per hour after reaching this condition. Even if the drive has reached 5184 hours of power-on time and experienced the foregoing offline condition, the drive will allow the end user to successfully apply the firmware update to correct the condition. If the drive has not yet reached 5184 hours of power-on time, the installation of the firmware update to the drive will prevent the foregoing condition from occurring.
- This firmware update is **strongly recommended** for all drives currently in the field to avoid interruptions to normal computing operations and to ensure satisfactory user experiences.



Revision History

Rev. B..... 8 February 2012

Rev. A..... 6 January 2012

- Initial release