TROUBLESHOOTING RAM AND NETWORK / WIRELESS DRIVERS

DOCUMENTATION

1.0. Statement of the problem

Upon receiving the computer, it was observed that there were issues pertaining to the functionality of the RAM as well as the network and wireless drivers. The original RAM was found to be defective, and attempts to replace it with an alternative DDR3L RAM were unsuccessful due to compatibility issues, as the computer only supported DDR3 RAM. Additionally, the network and wireless drivers were not functioning properly, resulting in an inability to establish network connectivity. These issues necessitated a thorough troubleshooting process to identify and rectify the root causes, ensuring the computer's optimal performance and functionality.

1.1. Objective

- To troubleshoot and resolve the issues related to RAM on a computer.
- To troubleshoot and resolve the issues related to network/wireless drivers on a computer.
- To Document all the process and steps involved in troubleshooting and resolving the issues found in a computer.

1.2. Tools/Software Used

- **Snappy Driver Installer (SDI)**

a free and open-source program designed to help users install and update device drivers on their Windows-based computers. It is particularly useful when dealing with missing or outdated drivers, as it automates the process of driver detection and installation. SDI is known for its extensive database of drivers, allowing it to identify and install drivers for a wide range of hardware components such as network adapters, graphics cards, sound cards, and more. By providing a centralized and efficient solution for driver management, Snappy Driver Installer simplifies the task of maintaining optimal system performance and hardware compatibility. Snappy Driver Installer (SDI) can be downloaded for free from its official website: https://sdi-tool.org/ This link provides access to the latest version of the program, ensuring users have access to the most up-to-date features and driver database.

- **Compatible DDR3 RAM module**

refers to a type of random-access memory (RAM) that is designed to work seamlessly with a computer system that supports DDR3 memory technology. DDR3 (Double Data Rate 3) RAM is a type of memory commonly used in older computer systems and offers higher data transfer rates and lower power consumption compared to its predecessors.

Source: https://www.gigastone.com/en/products/ddr3-ramddr3-16gb-8gbx2-1600mhz-pc3-12800-cl11-135v-sodimm-204-pin-ram

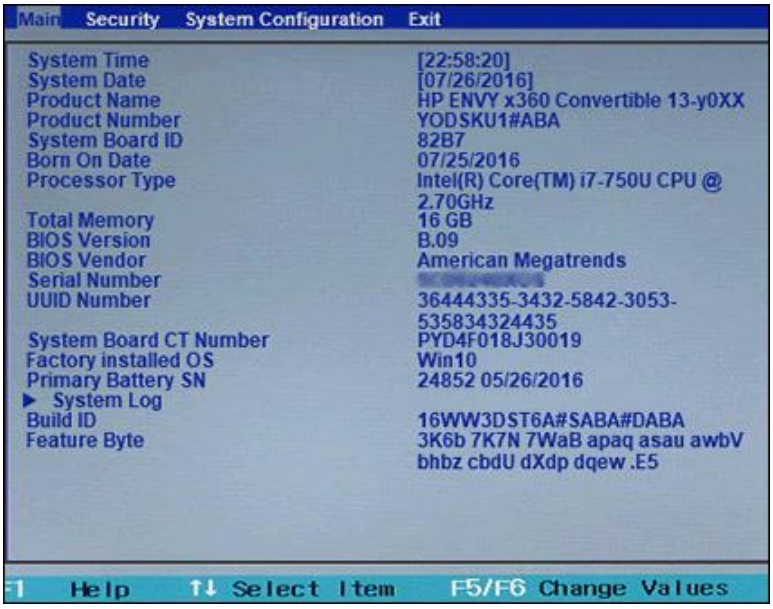
1.3. Step-by-Step Explanation

- **Initial Assessment:**

- Upon receiving the computer, we identified issues with RAM functionality and network/wireless drivers.
- Observed that the original RAM was not working and the network/wireless drivers were also dysfunctional.

- **Troubleshooting RAM:**

- Attempted to replace the faulty RAM with another available RAM module.
- The First attempt with a DDR3L RAM was unsuccessful as the computer only supported DDR3 RAM.
- We then Accessed the computer's specifications using the BIOS through pressing (F9) on a computer to confirm compatible RAM type.



Source: https://support.hp.com/lv-en/document/ish_3900499-3190557-16

RAM Replacement:

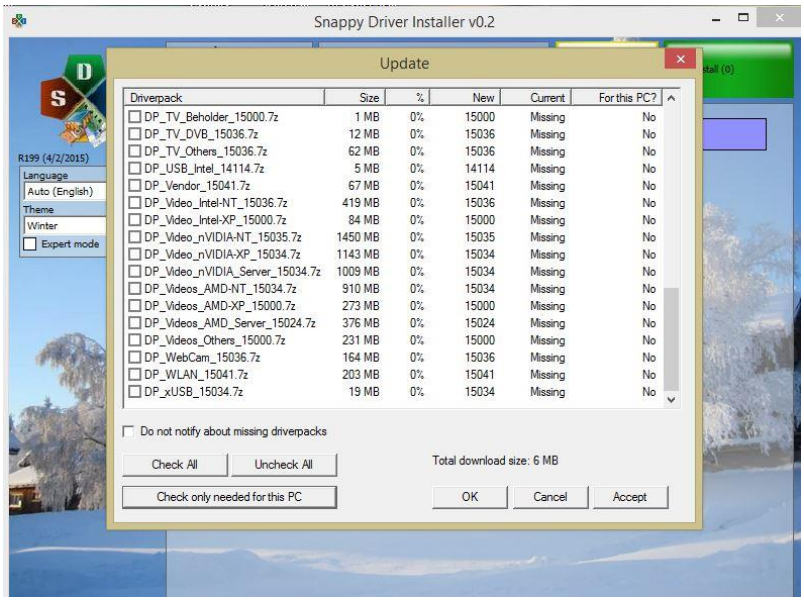
- Procured a compatible DDR3 RAM module according to the computer's specifications.
- Carefully replaced the faulty RAM with the compatible DDR3 RAM module.

Verifying RAM Functionality:

- Powered on the computer to ensure the replacement RAM was recognized.
- Monitored system boot-up process and checked BIOS/UEFI settings to confirm the new RAM's detection.

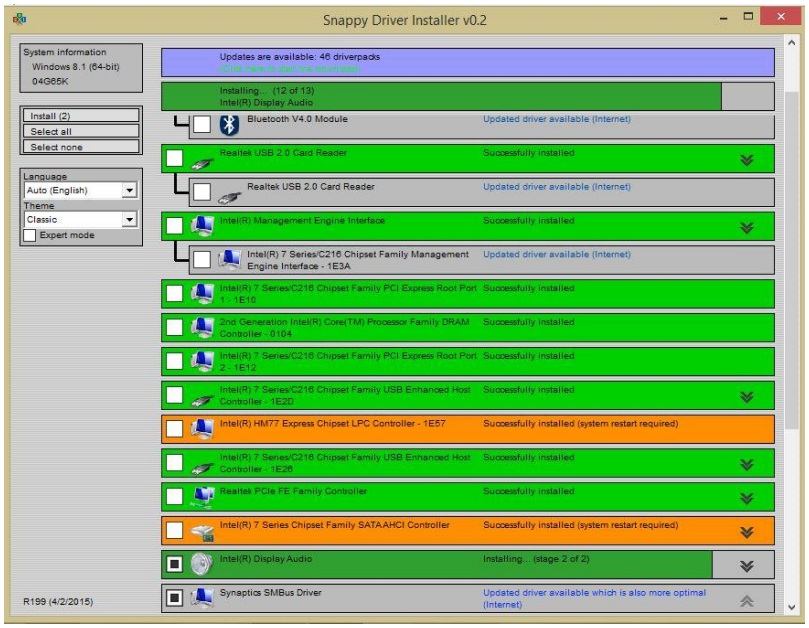
Network/Wireless Drivers Resolution:

- Utilized Snappy Driver Installer (SDI) for automatic detection and installation of missing drivers.



Source: https://sdi-tool.org/

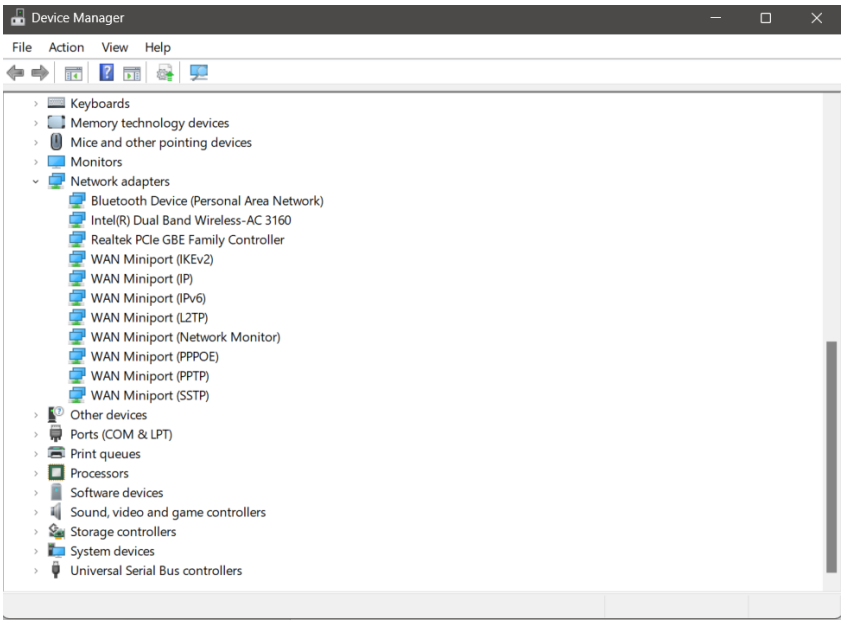
- Downloaded and installed appropriate network and wireless drivers using SDI.



Source: Group Members

6. Verification of Driver Installation:

- Confirmed successful installation of network and wireless drivers by checking Device Manager



Source: Group Members

- Ensured network and wireless connectivity by connecting to available networks.

Source: Group Members

- **Testing:**

- Conducted thorough testing of the computer's functionality post-repairs.
- Tested RAM stability through memory-intensive tasks and monitored for any anomalies.
- Verified network and wireless connectivity by accessing the internet and local network resources.

1.5 Resources Locations

For step-by-step guidance on how to perform different process regarding this troubleshooting, please refer to the following sources

- RAM Replacement and Repair - (https://youtu.be/B3qHrVjIEq4)
- Accessing Bios – (https://youtu.be/GSN0qzXayUY)
- Verifying RAM Functionality – (https://youtu.be/K9XB1ES2ua4)
- Checking RAM Memory & System Specs in BIOS – (https://youtu.be/bv5j3ptc_4M)
- Downloading & Using Snappy driver installer – (https://youtu.be/z0oPX1cyEcE)
- Accessing Device Manager – (https://youtu.be/OvbmrB_hIOc)

Conclusion: The computer's RAM functionality and network/wireless drivers have been successfully restored through systematic troubleshooting and appropriate replacements/installations. This documentation serves as a reference for similar issues in the future and emphasizes the importance of compatibility in hardware and drivers.