

Chapter 1.1: Laptop Hardware

Laptop Batteries:

- Lithium-Ion (Li-ion) and Lithium-Ion polymer (LiPo) are common
 - No “memory effect” (capacity limiting) but do diminish the capacity for each charge.

Laptop Keyboard:

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Laptop Memory:

- Small Outline Dual In-line Memory Module (SO-DIMM) – very common

Laptop Storage:

- Magnetic disk (older devices): Traditional spinning drive platters
 - 2.5” form factors (3.5 inch for desktops)
- SSD (Solid-state drive)
 - All memory, no moving parts
 - Silent, fast access time, less latency
 - 2.5 inch form factors for SATA connected SSD
- M.2 (SSD M.2)
 - Smaller form factor
 - No SATA data or power cables

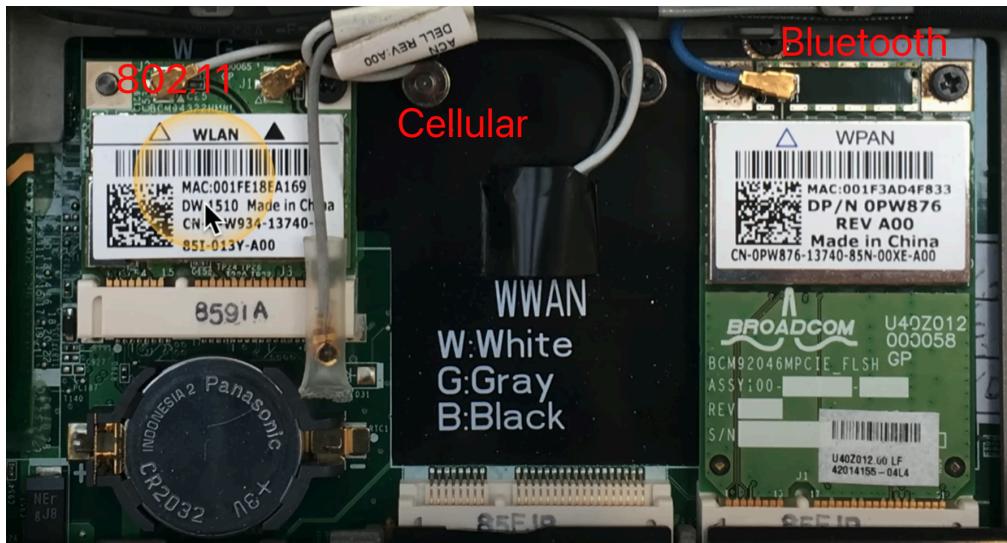


802.11 wireless and Bluetooth



Mini PCI

Mini PCIe



Usually Antenna Wires Connected

Near-field Communication (NFC)

- Used in short-distance authentication like Apple Pay.

Chapter 1.2: Laptop Displays

Portable LCD (Liquid Crystal Display) - ongoing

- Light shines through liquid crystals
 - Advantages: Lightweight, low power, inexpensive
 - Disadvantages: Blacks levels are challenging, and require different types of backlights.

Chapter 2.4: Network Services

- Do more research on SCADA / ICS systems (little previous knowledge).