

Chapter 6 - BIOS

- **Northbridge:** Deals with high-speed devices such as video cards and RAM
- **Southbridge**¹ : Deals with low-speed devices such as keyboard and mouse
- **IRQ** = Interrupt request that is sent to the CPU
- **Address Bus** : CPU talks to RAM with this series of wires, the more wires, the more RAM is supported
- **External Data Bus** : Bus that connects the CPU to other devices such as USB
- **ROM** :
 - Non-volatile
 - Not easily erased
 - Current flash ROM is often 2 MB
 - The CPU talks to the **ROM** with the **address bus**
- **CMOS:**
 - Complementary Metal-Oxide Semiconductor
 - Separate from ROM BIOS, often part of Southbridge
 - Volatile --> battery on motherboard
 - Stores only changeable data, not programs
 - Customizable via setup program
- **POST** :
 - Power On-Self Test
 - Diagnostic testing sequencethat a computer's basic input/output system (or "starting program") runs to determine if the computer keyboard, random access memory, disk drives, and other hardware are working correctly
- **POSTcard** : Are small expansion cards that are used to identify a failing component during POST
- **Boot Process:**
 - PSU checks proper voltage
 - PSU sends signal through power cable
- **UEFI** :
 - Unified Extensible Firmware Interface
 - Works in a 64-bit environment
 - "Super Bios"



¹ You can also find the Southbridge called *Input/Output Controller Hub (ICH)* in Intel and *Fusion Controller Hub (FCH)* in AMD parts

References:

- Mike Meyers - CompTIA A+ Certification All-In-One Exam Guide 8th edition
- Images :
 - BIOS chip :
<http://www.abc.es/Media/201502/18/entrar-bios--644x362.jpg>