

OS_110_CH13

I/O Hardware

- Port
 - 插槽
- Bus
 - 連線方式以及協定
 - PCI-bus
- Controller
 - operate

北橋：速度比較快的

南橋：較慢

Basic I/O Method

- unique port address
- four registers
 - Data-in register
 - Data-out
 - Status register
 - Control register
- Port-mapped I/O
 - Use different address space from memory
- Memory-mapped I/O
 - Reserve specific memory space for device
 - 優：大量資料的傳輸 (ex. graph card)
 - 缺：反之

I/O Methods Categorization

- Poll (busy-waiting)
- Interrupt
- Programmed I/O
- DMA

I/O Subsystem