

# Connectors



By Jocelyn Doire

# Static Electricity

- Electricity travels *through* metal
- Touch the chassis before touching a card
- Use anti-static bags to carry cards

# Dust Bunny



# Dust Bunny

- Vacuum dust outside the computer
- Vacuum dust inside the computer, but
  - Avoid spinning the fan
  - Avoid static, touch chassis first
- Remove dust with canned air
  - Better do that outside the house...

# Other Dangers

- Avoid blocking air flow
- Avoid heat sources
- Avoid liquids

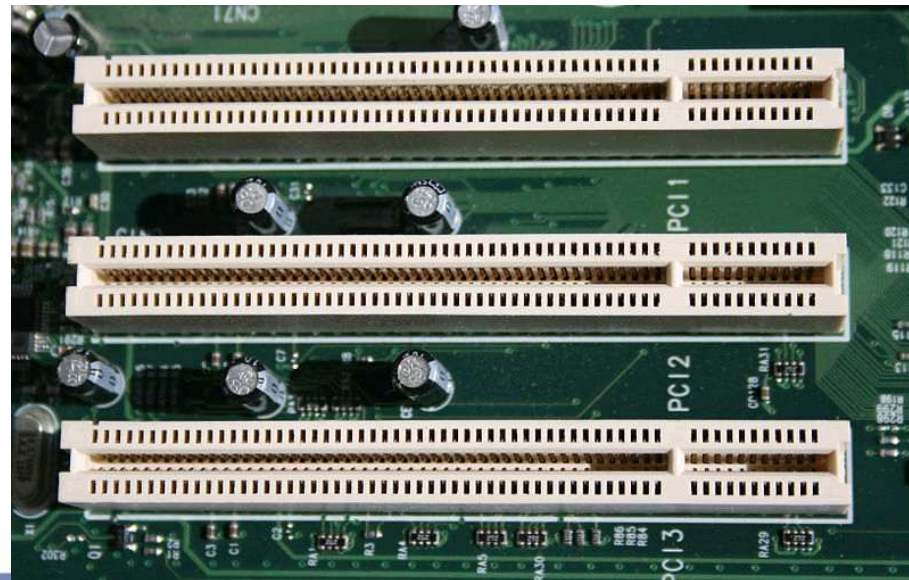
# ISA Connector

- ISA - Industry Standard Architecture
  - Oldest – for IBM PC in 1981
  - 8 bit, then 16 bit card (dual connector)
  - Synchronous with CPU clock
  - Manually configured – Int, DMA, I/O Add



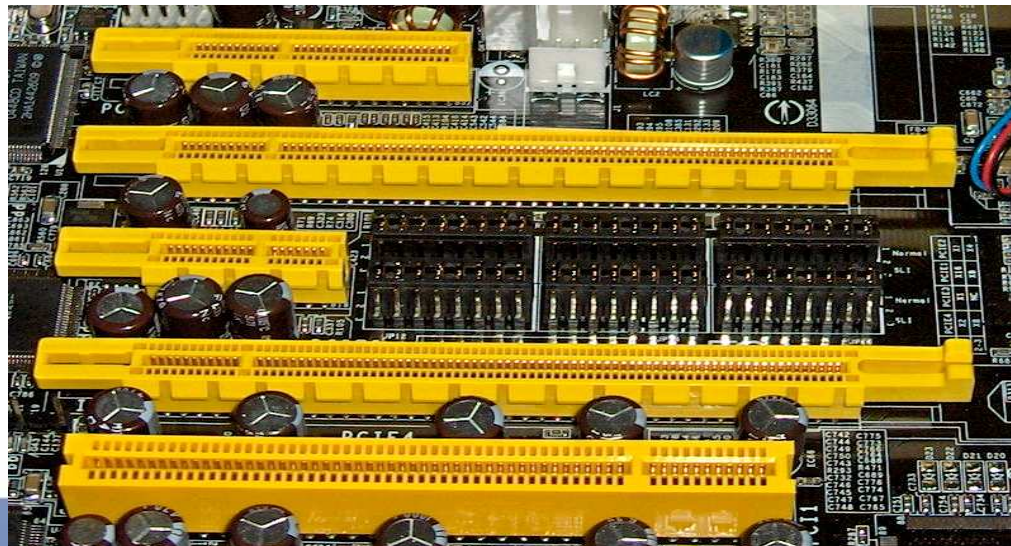
# PCI Connector

- PCI - Peripheral Component Interconnect
  - 32 and 64 bit
  - 33.33MHz clock, 133 MB/s transfer
  - Auto configuration



# PCIe Connector

- Peripheral Component Interconnect express
  - Smaller connector – multiple size X1 to X16
  - Small cards can fit into bigger connector
  - Serial data, hot-pluggable





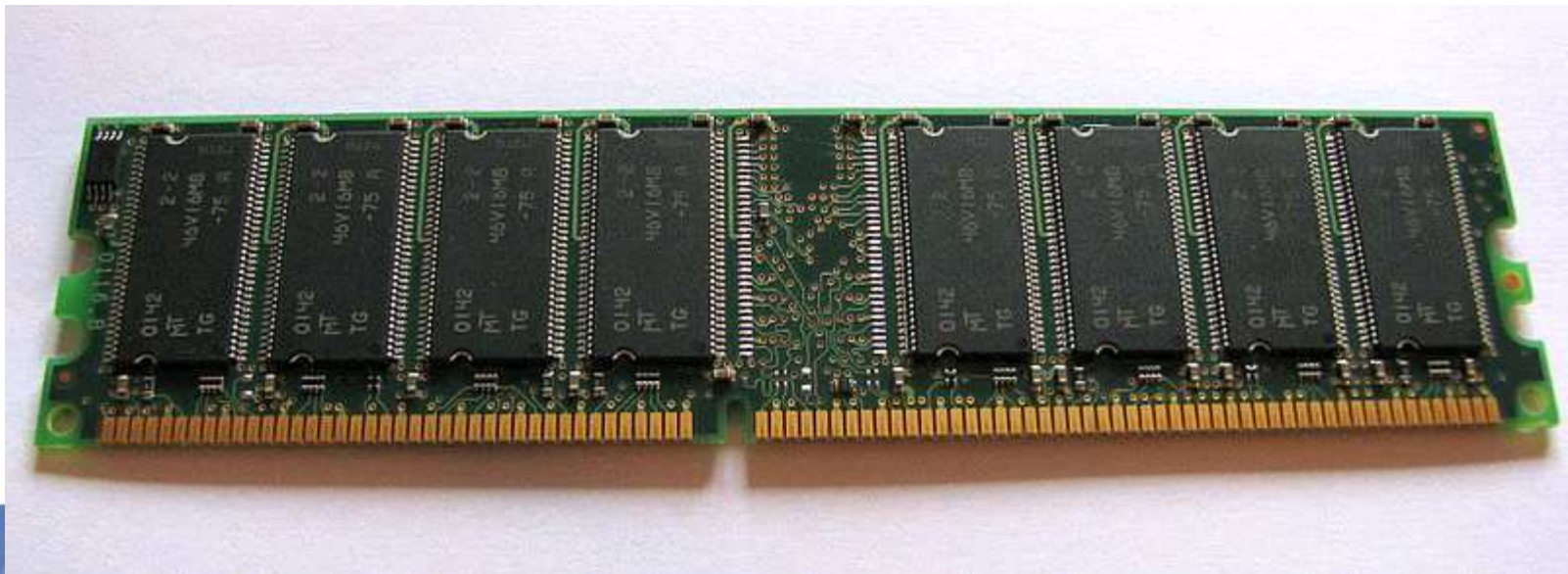
# AGP Connector

- Accelerated Graphics Port
  - Used for video cards



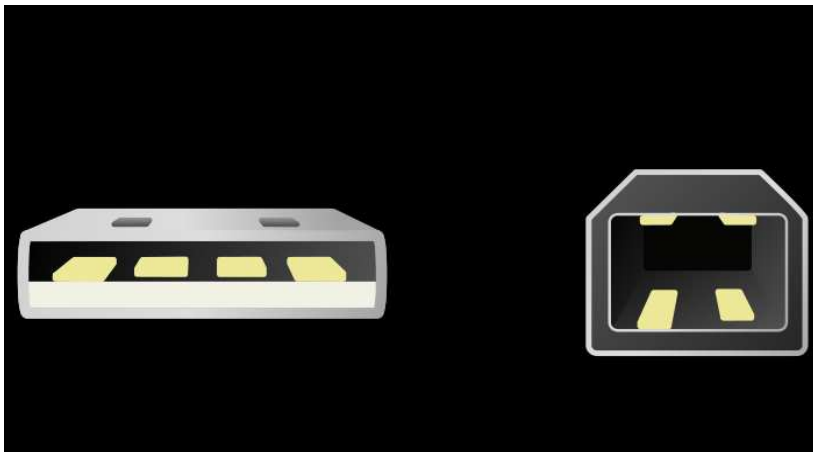
# DIMM Connector

- dual in-line memory module
  - Memory size – 512 MB
  - Speed – 333 MHz
  - Type – DDR Dual Data Rate



# USB Connector

- Universal Serial Bus – Flash Drives
  - USB 1 - 12 Mbit/s
  - USB 2 - 280 Mbit/s
  - USB 3 – 4 Gbit/s



# RJ-45 Connector

- Ethernet (not internet!)
  - Network cable
  - CAT5/5e – 100MHz
  - CAT 6 – 250 MHz



# Low Cost Replacement

- Twenty-twelve electronics Recycling tter.ca
  - Recycle eWaste
  - Sell used cards