Dual Ported RAM:

These are type of RAM that allows multiple reads or writes to occur at the same, or nearly-at the same time, unlike single ported RAM allowing only one access at a time.

VRAM is the best example of DRAM in CPU.
Features of the Fullflex^{TM} Synchronous SDR Dual Port RAM given by CYPRESS 3.0 COMPANY.

- True dual port memory enables simultaneous access to the shared array from each port.
- Synchronous pipelined operation with single data rate (SDR) operation on each port:
  - SDR interfaced at 200 M Hz.
  - Up to 28.8Gb/s bandwidth (200MHz x 72bits x 2ports)

- Selectable pipelined or flow through mode.
- 1.5 or 1.8 V core power supply.
- Commercial & Industrial temperature.
- IEEE 1149.1 JTAG boundary scan.
- Available in 484-ball PBGA (x72) and 256-ball FBGA (x36 and x18) packages.

Why to go for the Dual Ports?

1. Dual ports have an addressable memory and provide random access to data.
2. Dual ports provide high bandwidth and buffering.
3. Dual ports resolve interface mismatch.
4. Dual ports provide flexible interfaces and support for common standards.
5. It reduces the design complexity.

Single Port RAM:
It has only one data/ address bus or port. It can either read or writes data at a time.

Two port RAM:
It has 2 data / address port. It can read or write at same time using both ports. But only one clock signal.

Dual port RAM:
It has 2 data/ address port. It can read or write at same time using both ports. But it needs two different clocks.