

APOLLO Core - Superscalar

Overview

APOLLO core is a **pipelined** CPU, so that it can use **2 pipes**.

APOLLO core can use Instructions **Fusing** whenever possible.

APOLLO core can use Instructions **Bonding** whenever possible.

With Pipeline, **Fusing** and **Bonding**, the core can executes **up to 4 instructions per clock cycle**.

Description

Feature	Pipe 1	Pipe 2	Notes
All instructions	X	–	Pipe2 can not execute all instructions.
1 cycle instructions	X	X	Pipe2 can only do instructions which finish in 1 single clock.
More than 1 cycle instructions	X	–	Pipe2 can not do MOVEM, CPM, MOVE (mem),(mem), MUL, DIV, for example.
8-bytes instructions	X	X	Pipe2 can do instructions of length 8 bytes.
More than 8-bytes instructions	X	–	Pipe2 can max do instructions of length 8 bytes.
Flags dependant-instructions	X	–	Pipe2 is never allowed to depend of flags created by Pipe1.
Fuse two instructions	X	X	Both pipes can fuse two instructions whenever it is possible.
Bond two instructions	X	X	Both pipes can bond two instructions whenever it is possible.

[Home](#) | [Links](#) | [APOLLO Core](#)

From: <https://apollo-accelerators.com/wiki/> - **Apollo Accelerators Public Wiki**

Permanent link: https://apollo-accelerators.com/wiki/doku.php/cpu_superscalar

Last update: **2016/06/04 11:31**

