



[Forum: 32-bit PIC](#)

[Topic: PIC32有分省不省電嗎?](#)

[Subject: Re: PIC32有分省不省電嗎?](#)

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如果你沒有提到這 AGU 的問題 我也沒注意到

其實 X AGU 跟 Y AGU 並不是說 X AGU 只能定址到 X memory

Y AGU 是有限制 只能用來 讀 Y memory... 他使用得場合是在 DSP 指令 如 MAC 和 MPY 時 同步讀取資料用的 所以沒有寫入Y memory 的弁

X AGU 是可以定址到全域 包含 Y memory, 只有在 DSP 指令時 同步讀取資料時 只能指到 X memory

如果你看一下 CPU 的架構圖 你可以發現 X RAGU/WAGU 是可以定址到 Y memory (如附檔)

詳細的說明在 FRM Data Memory 章節裡面... 節錄如下

## Section 3 Data Memory

### 3.3 Data Space Address

The X AGU is used by all instructions and supports all addressing modes. The X AGU consists

of a read AGU (X RAGU) and a write AGU (X WAGU), which operate independently on separate read and write buses during different phases of the instruction cycle. The X read data bus is the

return data path for all instructions that view data space as combined X and Y address space. It

is also the X address space data path for the dual operand read instructions (DSP instruction

class). The X write data bus is the only write path to the combined X and Y data space for all

instructions.

...

The Y data memory space has one AGU that supports data reads from the Y data memory space.

The Y memory bus is never used for data writes. The function of the Y AGU and Y memory bus

is to support concurrent data reads for DSP class instructions.

附加檔案:

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