

Re: Strange DRAM module, Want to replace it by 72 pin SIMM, need advice.

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On 5 Jul 2006 09:42:42 -0700, mzu2006@xxxxxxxx put finger to keyboard and composed:

Recently I scavenged an old 486 laptop. It boots and says it is "Media Magic PN315/DSTN". BIOS detects 8mb of RAM. I want to put it to work somehow, but first i would like to put in more memory. The beast has 2 slots filled with strange memory modules. I never met such things before.
<http://129.25.13.57/Image1.jpg>
<http://129.25.13.57/Image2.jpg>

It looks like FP memory. I found the datasheet on the chip used (424400) and tracked the pinout with a tester. Each of the modules seem to have 32-bit wide data bus, 4 CAS signals to strobe the column address for each individual byte, and 1 RAS. So it is pretty much like 72pin SIMM, though with only one RAS signal. (By the way, I checked through JEDEC JESD-21C standard. It lists a lot of wierd memory module configs but none with 60 pins x 32 bit on it. So the memory does not conform to JEDEC.)

On both memory slots CAS signals different, as well as RASes. All other signals are common to both slots. I just wonder if a bit of soldering will enable me to use a regular 72 pin SIMM in here. Am I understanding correctly, that wiring just one RAS signal to the SIMM will simply allow me to use just half of memory?

I would think that if you wired all four of the regular SIMM's RAS pins (RAS0-3) together, then you should see its full capacity, assuming it is single-sided.

As for a double-sided SIMM, I would think that you would only be able to see half of it. You would need to connect your RAS pin to either RAS0 + RAS2, or RAS1 + RAS3, but not to both pairs. The unused pair would need to be tied high. Alternatively you could wire RAS1 + RAS3 to the RAS pin of the second header, and then cut the CAS lines of the second half of the module and rewire them to the second header.

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Before you do any surgery I'd suggest you determine the memory limit for the machine. In the absence of documentation, check for PCB traces at the most significant address bits.

If it helps, here are the datasheets for two regular Micron SIMMs.

4 and 8 Meg SIMM:

<http://www.pjrc.com/tech/mp3/simm/dm53.pdf>

16 and 32 Meg:

<http://www.pjrc.com/tech/mp3/simm/dm45.pdf>

– Franc Zabkar

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Please remove one 'i' from my address when replying by email.

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