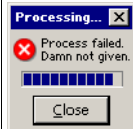


DIGICO Minicomputer - CPU Board and Core Memory

Goto page 1, 2, 3 [Next](#)[CPU-World.com forums Forum Index](#) -> [Vintage Computers and Boards](#)[View previous topic](#) :: [View next topic](#)**Author****Message****debs3759**

Posted: Fri Jan 16, 2009 9:01 pm Post subject: DIGICO Minicomputer - CPU Board and Core Memory

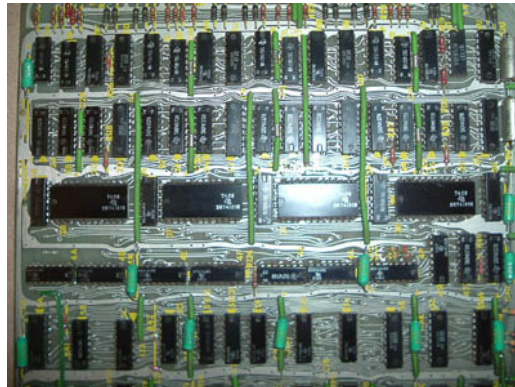
Joined: 18 Jan 2006
Posts: 4552
Location: Planet Debs

I received a gift today of a couple of very nice boards from a DIGICO Minicomputer (a UK manufacturer in the late 60's and early 70's). I'm not sure of which model they are from, but I hope to know within a couple of days. Most images can be clicked to get a higher resolution picture

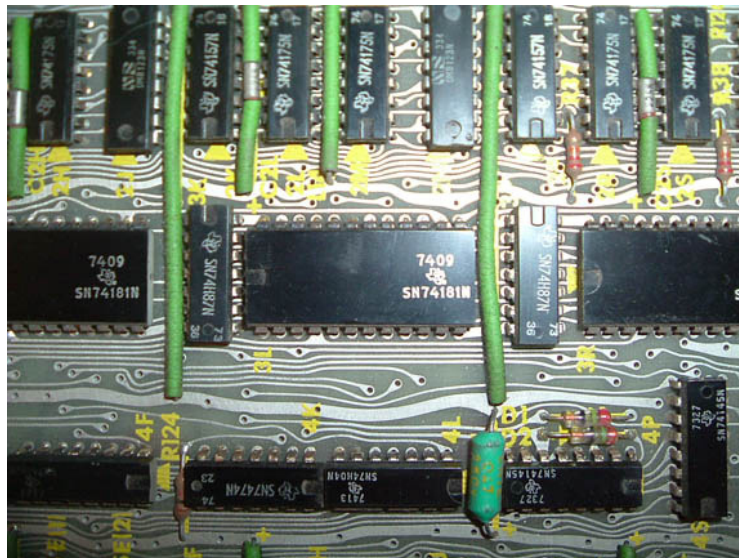
First up is the CPU Board:



A close-up of the 4 ALUs:



And of one of the ALUs, to give more detail:



The core memory is made by Core Memories, Inc. The size is 4K * 16 bits.

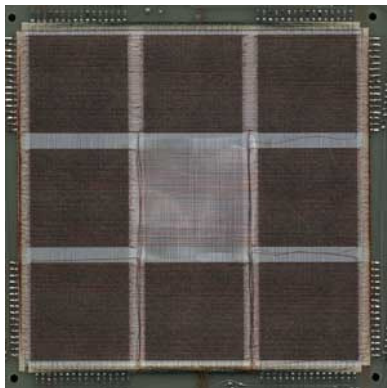
The top of the board:



Bottom of the board:



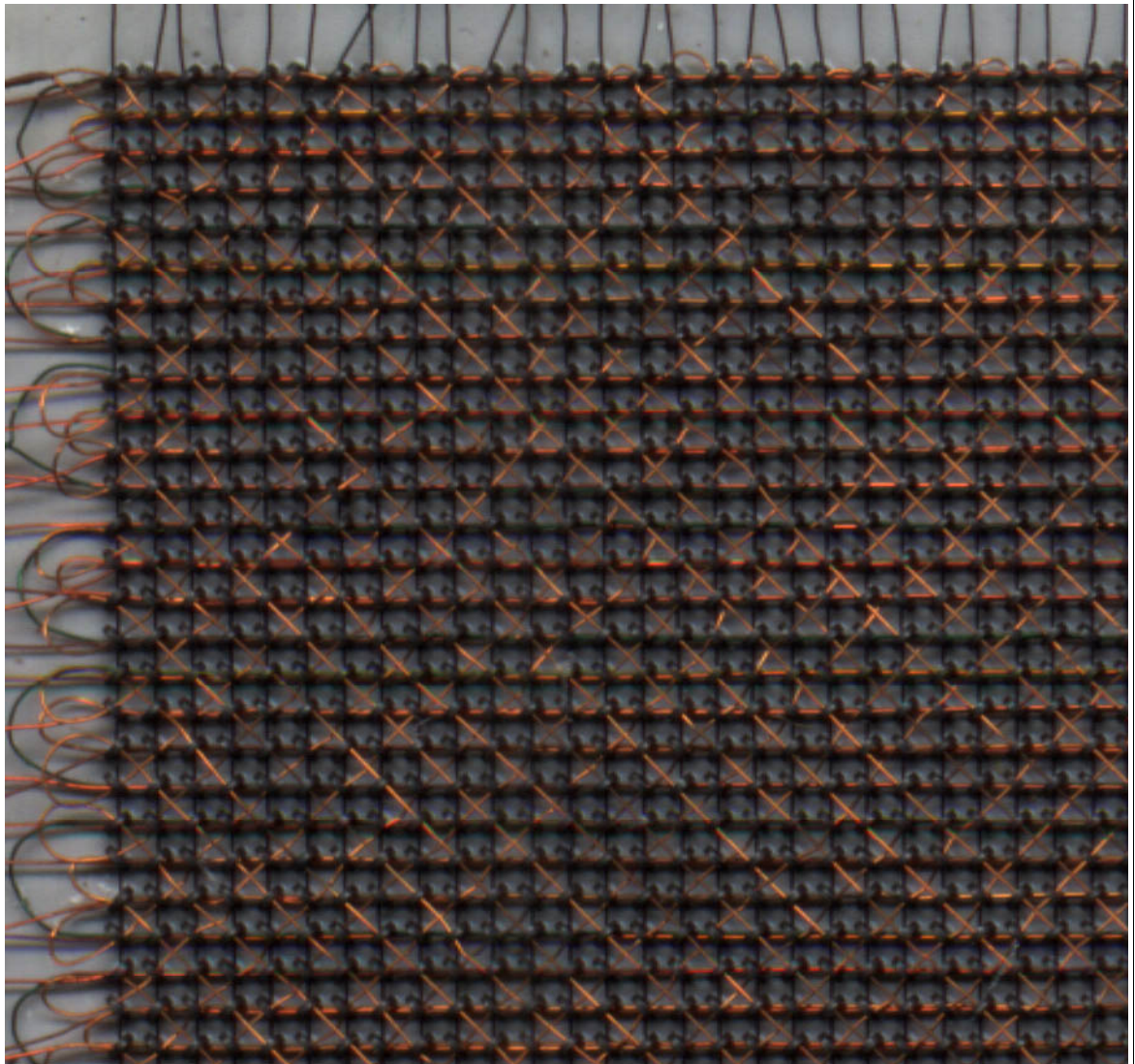
Close up of the memory area on one side (both sides are the same):



One section of one side:



A closer look at part of one section of the memory, showing more detail of how it is constructed:



Some cause happiness wherever they go; others, whenever they go.

- Oscar Wilde (1854-1900)

Debs

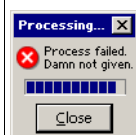
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debs3759

Posted: Fri Jan 16, 2009 9:05 pm Post subject:

[quote](#)



On the CPU board, many of the capacitors (the green component all over the board...) have deteriorated and some are barely attached to their legs. Can anyone who is more up on different types of capacitor tell me what type they are, so I can repair the board? I will of course be looking for a cheap source for the same type of capacitor next time I can afford to do much buying 😊

Some cause happiness wherever they go; others, whenever they go.

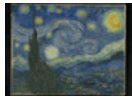
- Oscar Wilde (1854-1900)

Debs

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Joined: 18 Jan 2006
Posts: 4552
Location: Planet Debs

Wizzard1

Joined: 05 Nov 2006
Posts: 918
Location: Boston MA USA

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Posted: Fri Jan 16, 2009 10:10 pm Post subject:



Wow, thats sexy!

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johnorun

Joined: 04 Apr 2008
Posts: 2472
Location: Chicago, IL- US

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Posted: Sat Jan 17, 2009 12:32 am Post subject:



debs3759 wrote:

On the CPU board, many of the capacitors (the green component all over the board...) have deteriorated and some are barely attached to their legs. Can anyone who is more up on different types of capacitor tell me what type they are, so I can repair the board? I will of course be looking for a cheap source for the same type of capacitor next time I can afford to do much buying 😊

Nice old boards, Debs, but where is the CPU?

I have an old AT&T board with lots of green Capacitors and if you can give me the spec. numbers that you need, I'll see if mine are the same. (They would be cheap to ship!) 😊
Do you solder?

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CPUShack

Joined: 16 Jun 2003
Posts: 10626
Location: State of Jefferson, USA

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Posted: Sat Jan 17, 2009 2:14 am Post subject:



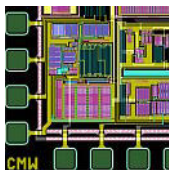
CPU is the 4 74181 ALU chips

I Aim to Misbehave.

Some where out there . There's a bullet with your name on it
Trick is, to die of old age before it finds you.

Visit [The CPU Shack of microprocessor history and information.](#)

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chip68

Joined: 19 Oct 2004
Posts: 1048
Location: Central Pennsylvania

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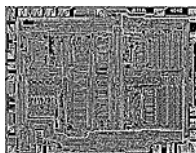
Posted: Sat Jan 17, 2009 3:40 am Post subject:



The CPU is the entire board... All of the instruction decoding and such is done with discrete TTL logic.

- CMW

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wepwawet

Joined: 18 Mar 2004
Posts: 2322
Location: Seligenstadt - Germany

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Posted: Sat Jan 17, 2009 4:15 am Post subject:



What's the marking on the capacitors?

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debs3759

Joined: 18 Jan 2006
Posts: 4552
Location: Planet Debs

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Posted: Sat Jan 17, 2009 7:03 am Post subject:



The capacitors are marked:

FRIE
.047
250v

I assume they are .047µF (micro F, in case anyone's system doesn't show the symbol...)

Some cause happiness wherever they go; others, whenever they go.

- *Oscar Wilde (1854-1900)*

Debs

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debs3759

Posted: Sat Jan 17, 2009 7:05 am Post subject:





Joined: 18 Jan 2006
Posts: 4552
Location: Planet Debs

johnorun wrote:

debs3759 wrote:

On the CPU board, many of the capacitors (the green component all over the board...) have deteriorated and some are barely attached to their legs. Can anyone who is more up on different types of capacitor tell me what type they are, so I can repair the board? I will of course be looking for a cheap source for the same type of capacitor next time I can afford to do much buying 😊

Nice old boards, Debs, but where is the CPU?

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Do you solder?

As chips68 said, the whole board is the CPU. The 74181 ALUs are what most would recognise as processors, all the TTL is used to help decode the instruction code.

Some cause happiness wherever they go; others, whenever they go.

- Oscar Wilde (1854-1900)

Debs

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Elar

Posted: Sat Jan 17, 2009 7:38 am Post subject:



<http://www.digico-computers.com/about.htm>

Quote:

Two young engineers, excited by the potential of minicomputers, formed Digico Computers Ltd in 1966. Avo Hiiemae and Keith Trickett expected their products to sell on their own merits as individual hardware solutions, and they did.

😊 Hey, Avo Hiiemae name is estonian.

debs, your CPU board seems to be from Micro 16-V minicomputer:



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Guest

Posted: Sat Jan 17, 2009 7:42 am Post subject:



That's a beautiful couple of boards you have there.

Really cool stuff!

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debs3759

Posted: Sat Jan 17, 2009 8:34 am Post subject:



Elar wrote:

<http://www.digico-computers.com/about.htm>

Quote:

Two young engineers, excited by the potential of minicomputers, formed Digico Computers Ltd in 1966. Avo Hiiemae and Keith Trickett expected their products to sell on their own merits as individual hardware solutions, and they did.

😊 Hey, Avo Hiiemae name is estonian.

debs, your CPU board seems to be from Micro 16-V minicomputer:



Joined: 18 Jan 2006
Posts: 4552
Location: Planet Debs



I did wonder when I looked on that site, but the following quote:

Quote:

Digico decided to design the 16-V to resist obsolescence, and provide a computer system that would reliably continue its job, for 10 years or more. This was done by using the latest technologies available to them, such as single integrated chip components, and replacing magnetic core memory with semiconductor memory. Resultantly, a British Steel manufacturing plant ordered a £134,000 system from them, to automate industrial processes.

had me wondering. They say they replaced magnetic core memory with semiconductor memory in that model, and this is most definitely core memory. I was told both boards came from the same system...

I actually wondered if it might be a 16-P, although the dates would imply a 16-V. I'm still waiting for the email that will confirm either way.

I'm hoping the site gets updated with some more info soon, but am not going to hold my breath. I understand there are other projects trying to rebuild a 16-V, and I will certainly be in touch with a couple to see what other info I can get (although probably not for a few weeks, knowing how fast I am at doing things!) 😊

Some cause happiness wherever they go; others, whenever they go.

- Oscar Wilde (1854-1900)

Debs

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Elar

Posted: Sat Jan 17, 2009 8:49 am Post subject:

[quote](#)

Page 4 in Micro 16V manual says core memory was used:

<http://www.digico-computers.com/docs/16VManual.pdf>

[profile](#) [pm](#) [email](#) [msnm](#)

Joined: 16 Jul 2003
Posts: 580
Location: Tallinn, Estonia

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debs3759

Posted: Sat Jan 17, 2009 10:17 am Post subject:

[quote](#)

I took that to mean the memory at the core of the system, rather than core memory, but I guess you might be right 😊 I found some of the info on the site rather ambiguous...

Either way, I'm pleased with this gift I got 😊

Some cause happiness wherever they go; others, whenever they go.

- Oscar Wilde (1854-1900)

Debs

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dockeybrown

Posted: Sat Jan 17, 2009 10:41 am Post subject:

[quote](#)

Very nice old boards! 😊
I'm impressed by the
early 181-ALUs made in '74!
What's the value of the crystal?

Ordem e Progresso

[profile](#) [pm](#)

Joined: 03 Oct 2005
Posts: 1530
Location: Germany

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