

# Re: Hardware Neural Network

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*Source:* <http://sci.tech-archive.net/Archive/sci.electronics.design/2007-02/msg05522.html>

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- *From:* "EdV" <ed\_vogel@xxxxxxxxxxxx>
  - *Date:* 28 Feb 2007 05:54:39 -0800
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On Feb 28, 3:15 am, "Daniele" <daniele.di...@xxxxxxxxxx> wrote:

Hi all,

I'm a university student, and I'm realizing a research on artificial neural networks. The aim of my research is the feasibility of putting an artificial neural network on a microcontroller or a DSP. Because of the sigmoid function, I think that would be necessary a 32-bit microcontroller (or DSP) for floating point operations. I was searching online but I only had found exhaustive informations on software realization of ANN's, but it's not what I was searching for. Does someone have any hint or any previous experience on the hardware realization of an ANN?

I think the better solution is the DSP, due to its power on floating points operation, is it right?

Here are some details of the network:

5 or 6 inputs  
about 10 neurons in the hidden layer  
2 outputs

Thanks in advance,

Daniele.

If you want to do a HW realization of a neural network your best bet is to do it in Field Programmable Gate Arrays. Try googling FPGA and Neural network:

FPGA Implementations of Neural Networks – a Survey of a Decade of ...  
[http://www.itee.uq.edu.au/~peters/papers/zhu\\_sutton\\_fpl2003.pdf](http://www.itee.uq.edu.au/~peters/papers/zhu_sutton_fpl2003.pdf)

and about 17k more hits.

Have fun,  
Ed V.

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