

## Re: Is microprocessor an integrated circuit???

**Source:** <http://sci.tech-archive.net/Archive/sci.electronics.design/2005-02/1000.html>

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**From:** Terry Given (*my\_name\_at\_ieee.org*)

**Date:** 02/04/05

Date: Fri, 04 Feb 2005 19:23:48 +1300

keith wrote:

> *On Thu, 27 Jan 2005 22:30:01 +0000, Bradley1234 wrote:*

>

>

>> *"Keith Williams" <krw@att.bizzzz> wrote in message*

>> *news:MPG.1c632a0bb56a43259898a4@news.individual.net...*

>>

>>> *In article <PBcKd.1366\$lg5.500@trnddc06>, someone@yahoo.com says...*

>>>

>>>> *Sure send me \$450 to purchase the spec, and Ill felch thru it, that*

>>

>> *seems*

>>

>>>> *like a cromulent arrangement to me*

>>>

>>> *You think you know the spec well enough to state what it states, yet*

>>> *have never read the spec.*

>>

>> *You think I havent read the spec before? I dont have the thing sitting here*

>> *because its not needed for SW dev.*

>

>

> *No I don't. YOur thought it was megabucks, so couldn't be bothered to buy*

> *one (for \$18). You're now showing that on top of being ignoran, your're*

> *stupid, and now a liar. ...not a good day, overall.*

>

>

>> *Ive seen it, there are lots of essay style sections, sub sections, legal*

>> *looking and not many pictures, I like books with pictures in them*

>

>

> *None of which you've read or understood (or even seen – see above). You*

> *were told somethign by your third-rate teachers at your fourth-rate*

> *college (if you got that far) and believe them. Get a refund. They*

> *defrauded you.*

>

>

>>>> *In hardware, a byte is 8 bits, period, case closed*

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>>>

>>>Wrong. Get a refund on your tuition.

>>

>>Im working on that, easier to squeeze water from a rock, those crooks.

>

>

> Si you admit that you're pig ignorant, but assume the rest of the world  
> has had an education as "good" as yours? Sorry, some of us have had very  
> good teachers. Experience; lots of it. Open minds help too. You should  
> try it some time.

>

>

>>>>In the C language it has to represent -127 to + 127, hey thats a

>>

>>coincidence

>>

>>>>8 bits gives you that.

>>>

>>>Nope (understand that I'm not a 'C' programmer, only a processor  
>>>developer). From: <http://www.comeaucomputing.com/techtalk/>

>>

>>So you would say that in 8 bits (aka a "byte") you cannot represent the  
>>range of -127 to +127? What would your math teacher say?

>

>

> You are not only pig-ignorant, now you're adding \*stupid\* to the mix. A  
> "byte" is \*not\* defined as an eight-bit entity (as JL has said, that would  
> be the definition of an "octet"). Of course there are 256 possible values  
> of an 8-bit entity (ignoring representations with two values for zero, for  
> instance). That's not the point! A byte is \*not\* universally defined as  
> being eight bits. Not nowhere, not nohow. It may be defined as being  
> eight but for a particular ISA, but it's not a universal definition.

>

>

>>You are a processor developer? Are you familiar with the use  
>>of signed/unsigned numbers?

>

>

> Give me a fucking break. I was doing binary arithmetic when your father  
> was still shitting yellow.

>

>

>>> How many bits are in a byte?

>>> Although it's common that the number of bits in a byte is 8, this is  
>>> not so for every system. That's right, a byte is not always 8 bits.

>>> A byte is one of those terms which has an interesting history and  
>>> ends up meaning different things to different people. For instance,  
>>> there are some computers where it is 6, 7, 8, 9, 32-bits, and so on.

>>

>>Oh suuuuure there are, and in South American jungles a byte can be 3  
>>bamboo sticks? You may be confusing byte with word, a word is a

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>>>variable width unit that is relative to the architecture of the  
>>>processor or application. A byte is 8 bits today, even when its 9 bits.  
>  
>  
> You're hopeless. \*I\* didn't write the above you retard! I'm quoting from  
> the site referenced. Did you even do the search I suggested? Of course  
> not. You're happy with your ignorance.  
>  
>  
>>> In C (or C++) you can tell what it is for your system by looking at  
>>> limits.h (known as climits in C++) where the macro CHAR\_BIT is  
>>> defined. It represents the "number of bits for the smallest object  
>>> that is not a bit-field", in other words, a byte. Note that it must  
>>> be at least 8 (which mean that strictly speaking, a CPU that  
>>> supports a 6 bit byte has a problem with C or C++). Also note that  
>>> sizeof(char) is defined as 1 by C++ and C (ditto for the sizeof  
>>> unsigned char, signed char, and their const and volatile  
>>> permutations).  
>>>  
>>> It might be helpful to show a quote from Standard C:  
>>>  
>>> \* byte: "addressable unit of data storage large enough to hold any  
>>> member of the basic character set of the execution environment.  
>>> NOTE 1 It is possible to express the address of each individual  
>>> byte of an object uniquely. NOTE 2 A byte is composed of a  
>>> contiguous sequence of bits, the number of which is implementation  
>>> defined. The least significant bit is called the low-order bit; the  
>>> most significant bit is called the high-order bit."  
>>>  
>>> \* character: "bit representation that fits in a byte"  
>>>  
>>> Thus by the 'C' standard the byte is \*not\* fixed at 8-bits.  
>>  
>> No, it leaves the definition open. In the typical limits.h, the word  
>> byte is 8 bits, its like saying an inch can be whatever length you want  
>> it to be. To machinists? they stick to a set standard.  
>  
>  
> Can you fucking read? (that's a rhetorical question, sicne your postings  
> show that you clearly cannot).  
>  
>  
>>>> Well Ive never seen anywhere (in reality) where people in the  
>>>> business  
>>  
>> use a  
>>  
>>>> byte for more than 8 bits. There can be a byte embedded within a 32  
>>>> bit word, if the bus width is 32b, since when would that be called a  
>>>> byte?  
>>>>

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>>>...and you're telling me that I don't know everything. Well, I've been  
>>>in the business long enough to know that you're zero for two today.  
>>  
>>Yet you havent shown where people, today, in business, use the byte for  
>>MORE than 8 bits? Not in some novelty scenario 40 years ago thats long  
>>gone, does Intel use a non 8-bit byte? Xilinx? Altera? Microsoft?  
>  
>  
> Retard, you were arguing not a half-day ago that ninety thousand years ago  
> a "microprocessor" was defined as being a processor that was microcoded  
> (absolutely wrong). Now you decide that all processors made \*today\* have  
> eight-bit bytes, thus a byte is \*defined\* to be 8-bits.  
>  
> The fact is that you're wrong, twice. In fact you haven't been right  
> about anything yet. ...but are pig-headed enough to continue on fighting  
> your 0-n-2 record. Give it up and flip burgers. You'll be a lot less  
> dangerous in a McD's.  
>  
>  
>  
>>>>Aside from pointing to data on the surface of the moon we cannot read  
>>>>here  
>>>>online, like specs costing \$\$ can you show where a byte is used for  
>>>>more than 8 bits in the software industry?  
>>>>  
>>>>  
>>>>Several systems had byte sizes other than 8-bits. If you want  
>>>>references that aren't on "on the surface of the moon", even though  
>>>>they are the \*standards\* which you're mistakenly using, try a search on  
>>>>"6-bit byte" and report back. You gotta promise to report back though  
>>>>or I won't do any more work for you.  
>>>>  
>>>>  
>>>>  
>>>>  
>>>>Yes Ive heard of Octal, yes some people for a particular era/industry  
>>>>adopted the word byte for 6 bits. The originator made it 8 bits which  
>>>>has lasted and is the standard. In hardware, are there any non 8 bit  
>>>>byte devices?  
>  
>  
> You are off-the-chart stupid. A 6-bit byte is \*still\* a byte, whether  
> it's represented in octal or not. The "originator" of the term "byte" did  
> \*not\* specify it as 8-bits. In fact it was IBM that standardized on  
> 8-bits, \*after\* the term was already in use. Sheesh!  
>  
>  
>>>Do you use 2629 code? Hollerith punched cards? if not, why not? I  
>>>want, no I demand all computers today be equipped with a Hollerith  
>>>punched card reader that uses 2629 code.  
>  
>

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> *Stupid is as stupid types.*

>

> *Anyone else reading along will see that you're hopeless and won't go down*

> *the quagmire you call a road. I feel sorry for anyone who has to pick up*

> *your messes.*

>

My 1976 "encyclopedia of computer science" has this definition (p.817):

" 'Byte' is the usual term where the machines addressable storage segment is designed to hold one alphanumeric character, and is hence 6, 7, or 8 bits long"

and on p.1356 has:

"the term 'byte' is used in reference to a bit string which is of the size corresponding to the symbol representation in a particular system. Thus, there are computers with 6-bit bytes, but today one expects 8-bit bytes"

QED

Cheers

Terry