

Re: XP (x86) or (x64)

Source:

<http://www.tech-archive.net/Archive/WinXP/microsoft.public.windowsxp.general/2008-08/msg00078.html>

- *From:* "M.I.5¾" <no.one@xxxxxxxxxxxxxxxxxxxxxxxxxxxx>
 - *Date:* Fri, 1 Aug 2008 08:24:37 +0100
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"Ken Blake, MVP" <kblake@xxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote in message news:9td49451cfd3ii00pl50ag2stsoa4015k3@xxxxxxxxxxxx

On Thu, 31 Jul 2008 14:02:47 -0600, "Bill in Co."
<not_really_here@xxxxxxxxxxxxxxxx> wrote:

Ken Blake, MVP wrote:

On Thu, 31 Jul 2008 12:56:13 +0100, "M.I.5¾"
<no.one@xxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote:

"Ken Blake, MVP"
<kblake@xxxxxxxxxxxxxxxxxxxxxxxxxxxx>
wrote in message
news:7o5294pkro0kbun757ct26s2g1n93u8vf3@xxxxxxxxxxxx

On Wed, 30 Jul 2008
18:08:43 -0700 (PDT),
Mike
<SulfateIon@xxxxxxxx>
wrote:

Hi

I'd like to
know what
Windows
XP (x86)
and
Windows
XP (x64)
are?
I use

Re: XP (x86) or (x64)

Windows
XP, but I
don't know
which one I
use.
How do I
know?

x86 is 32-bit Windows, and
x64 is 64-bit Windows.

The answer, for almost
everyone who has to ask, is
that you using
32-bit (x86).

For the curious: x86 is a reference to the x86
series of processors
which
started with the intel 8086 processor (which
was a 16 bit processor
and
wouldn't be able to run a 32 bit operating
system).

And interestingly was never used in a PC. The first PC used
an 8088
instead.

Pretty similar, though. :-)
It's been awhile, though, and I can't remember the difference between the
8088 and 8086 anymore.

The major difference is that the 8088 was 8-bit and the 8086 16-bit.

That's not quite true. The 8088 was as much a 16 bit processor as the
8086 – at least internally. The difference lay in the width of the external
data bus. The 8088 used an 8 bit data bus whereas the 8086 used a 16 bit
bus.

Re: XP (x86) or (x64)

Even then the difference wasn't quite that straightforward, because the 8086 couldn't import or export 16 bit data in one go on its 16 bit bus. In fact it read the 2 8 bit halves separately but it was able to read both halves significantly quicker than the 8088 could read its 8 bit bus twice. When running a program that required no branches, the 8086 read each half of the data bus alternately. It was thus possible to run programs where the 16 bit instructions were missaligned in memory and the 8 bit instructions were read on the high byte of the bus. This actually slowed the processor down as it had to swap the data around internally. The architecture was almost closer to an interleaved memory model than a true 16 bit model.

Some PC architectures today closely emulate this model for improved memory access speeds, however, it is not the processor that does this but one of the support chips.