Re: Guidelines to shrink the PCB size

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- *From*: John Adair <g1@xxxxxxxxxxxxxxx>
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There many ways to shrink a design. As examples a switching power supply where you can use a controller that switches at higher frequencies to reduce magnetics size. Other aspects to consider are the use of phyiscal package like QFN anf BGA which are smaller but generally need a more expert setup for assembly. Our speciality of FPGAs are often used to shrink several digital IC's into one device saving space. When you shrink a design you will often need to use a higher technology pcb e.g. more layers or a smaller track/gap technology.

John Adair
Enterpoint Ltd.

On 21 Nov, 03:54, Ali <abdulra...@xxxxxxxxx> wrote:

> Hello,
>
> Are there any basic guidelines in embedded system when it comes to shrinking the size? what are the probelms/limitations or interferences one should consider while shrinking/sandwiching the board.
>
> I was thinking that should be something like this:
>
> 0− Calculate the empty space in given housing. Thats the space actual available for putting all the electronics.
>
> 1− Draft the physical dimensions of all components.
>
> 2− Now do simple PCB with few layers.
> 2.0− Break the PCBs in parts to fill the empty space,
> connections can be done with ordinary connectors. Why not modularizing the whole thing; LAN, Image sensor and Power circuitry etc. etc.
> 2.1− If the size is greater than free space then increase the layers to adjust the components. (sure, we got to keep in mind the heat emission and EMI if analog is involved)
>
> 3− Try to find components with different sizes with same specs.
>
> 4− And here we are in vicious cycle to fit all the thing in such a

small place , so lets start from point '2' again and keep iterating
unless we find the way−out of this puzzle.

Cheers,
ali

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