

To build or to buy?



In the world of low power DC-DC converters there is a bewildering array of solutions available to the design engineer, with the most fundamental question: Do I build or buy?

Is the lowest cost solution for an engineer to build their own solution?

A switching regulator, a controller IC, a handful of discrete components and the task is finished.

Is it really this easy?

In a simple world this would be true; however reality has to be applied and it is the total cost of ownership that has to be taken in account. Consider the

following and non-insurmountable costs and time factors that can all significantly add to new product development, delay to market and damage return on investment.

Engineering resource is a finite, can development time be justified? Is there the essential experience? Is there the necessary EMC considerations? Will it work first time? An in house built solution may require multiple PCB iterations before an optimized final design is produced.

Every component placement and PCB interconnect has costs. A discrete solution has many more solder connects than a modular solution, so placements costs are higher. Rework costs also have to be considered. Mechanics need careful thought; a discrete solution will often consume more valuable PCB real estate on the PCB than a modular solution, a major concern for dense designs.

With the additional components from a discrete solution come the additional inventory costs, storage, ordering and dealing with multiple suppliers.

When an isolated DC-DC solution is required, significant and additional factors need to be considered. Is the isolation barrier needed going to be considered as safety critical? Does the final product need to be safety agency recognized? If it does, an in-house built solution will need to satisfy regulatory approvals, this can add significant time and huge costs.

A modular solution with agency approvals will save cost and time.

By using a modular solution, you are not only reducing the overall cost, you are bringing on-board RECOM's experience in power conversion products through innovative designs, state-of-the-art production techniques, confidence of 100% burn in and full electrical testing and finally assurance that you are buying not just a component, but a solution from the fastest growing global power supply company.