

Threatened with extinction?

Pin and function compatible redesigns made by an IC specialist

You are not the first who faces the following situation: The system design of your product has developed and proved itself over the years, the sales figures are good, the life cycle of the product is not close to an end and suddenly something unexpected happens:

The producer of the most important ICs of your product kindly announces the „Last Time Buy“ ... and the discontinuation of the chip. What next? Of course you had good reasons for using right this chip. Maybe it was developed especially for you ...

Thorough research for alternatives results in the certainty for the time being: A redesign of the system including a new chip seems to be unavoidable.

The problem described above is well known in most industries. The life cycle of semiconductor components and the requirements of customers for long-term availability sometimes diverge dramatically.

Semiconductor production is developing too fast and changes in processes and technology follow each other too quickly.

In the past, the problem was partly solved by specialized resellers who bought up discontinued chips during the last time delivery period in large quantities. Those resellers guaranteed long-term availability after production had been cancelled.

However, another problem has arisen: The EU Directives RoHS and WEEE prohibit sales of electronic products containing lead or halogens in many industries as of 07/01/2006. And due to the usage of solders that contain lead this affects almost all electronic products – and

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therefore semiconductor circuits.

This additionally restricts availability and usage of discontinued chips.

So what next if a redesign of the whole system including an new chip is inefficient?

Instead of redesigning the system including all kinds of consequences like new verification and validation runs, different packages and the additional tool costs involved, changes on manuals, new certifications etc. redesigning the discontinued chip could be the better alternative. In such cases service providers specialized in redesign of semiconductor circuits like Silicann from Rostock/Germany can help.

Doing pin and function compatible redesigns of the ICs can avoid changes of the system.

Based on available documentation for the affected IC like data sheets and specifications a new design specification is created. If information is missing further data are generated with special test equipment. This design specification provides the basis for the following ASIC design process.

An important advantage of the pin and function compatible redesign becomes apparent: flaws of the original IC can be corrected. Moreover, changes and enhancements in function are possible e.g. to avoid critical signal conditions or to implement additional features according to customer wishes.

Thus two objectives can be achieved in one design:

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On the one hand, the producibility of the previous component without major changes of the system design is ensured.

On the other hand, the adjusted chip and its enhanced functions can also be used for future product releases.

This stands for stability and a guaranteed future for your product roadmap.

Please find more information concerning Silicann on our website www.silicann.com.