

REVERSE ENGINEERING PCBAs



Cloning can provide a cost effective solution compared to complete circuit redesign

One issue increasingly facing the industry is replacement of old PCB assemblies (PCBA), often used in large, expensive equipment or systems. Many companies do not maintain essential information regarding PCBA manufacture, either due to companies closing or simply relaxed document control. PCB gerber data and specifications may be unavailable, or there may not be an up to date bill of materials or circuit diagrams. High value systems can potentially become

When a PCB assembly fails, what happens if the information isn't available to recreate it? Prestwick Circuits offers a solution with its 'cloning' service

problematic due to PCBA failure. This is where PCBA reverse engineering, or 'cloning,' can help.

Component obsolescence adds to the challenge with many components no longer available. If a suitable alternative cannot be found, the component itself has to be reverse engineered. To be able to recreate a PCBA with no information other than the failed product is therefore a key opportunity for Prestwick.

By following a structured process flow, coupled with customer verification, most problems can be avoided and a positive end result will be achieved.

Firstly, define the component bill of materials to identify and verify components. Check for obsolescence and

source alternative components if required. Obtain approval for the BOM from the customer. Next, define PCB specifications such as the build, finish and track/gap thickness. Prepare the gerber details and obtain approval. Finally, manufacture the PCB, procure components, assemble them onto the PCB and test. Again obtain full approval from the customer design authority.

Requests for cloning are on the increase says Prestwick. It can provide a cost effective solution compared to complete circuit redesign, which can be more costly and time consuming.

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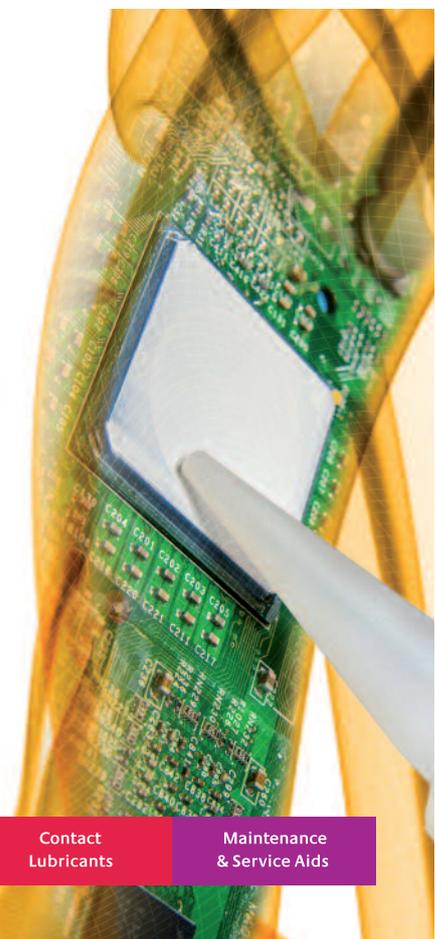
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