



Cybord: Electronic Component Traceability

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Using visual algorithms to check components for authenticity.

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Counterfeit electronics is a multibillion-dollar industry worldwide. The challenge is finding them, and this is where Israeli startup Cybord is working to gain a foothold.

The company has developed an AI-driven solution that checks for counterfeit parts during product assembly. "It's a huge task to check electronic components, said Cybord CEO Zeev Efrat. "It's not capacitors only, or resistors only, or chips only. It's everything."

Artificial intelligence (AI) has advanced to the point where it can identify these fake parts, said Efrat. Cybord's visual software verifies the authenticity of each component through its measurements, date code, lot code, and batch. It also detects lead age, reprogramming, and external damage.

"We are providing traceability, based on a real image of every component," said Efrat. "That means means if you have a problem, we are able to trace exactly which components are affecting your product."

From a financial perspective, this is a big deal. An estimated \$7.5 billion is lost each year due to phony parts. This problem is alarming to manufacturers and product designers, as well the military. But in the past, the recall process was inefficient.

Cybord contends that the best way to simplify and speed up this process is to ensure that all components are in good condition and functional, which can significantly lower the odds of failure.

"Today, a lot of scrap is because the bad components are sometimes never found, or sometimes found only at the end of the manufacturing process. We are enabling surgical traceability, and we are enabling high productivity during the manufacturing process," Efrat said.

As with any good AI algorithm, the challenge is finding sufficient good data. Cybord claims to have compiled data for billions of electronic parts in its database, analyzing about 250 million components a month. And that's still only "the tip of the industry," said Efrat, who notes that the system is 98.5% accurate.

Cybord already is working with paying customers. So far, it has garnered \$5 million in cash from two rounds of funding.