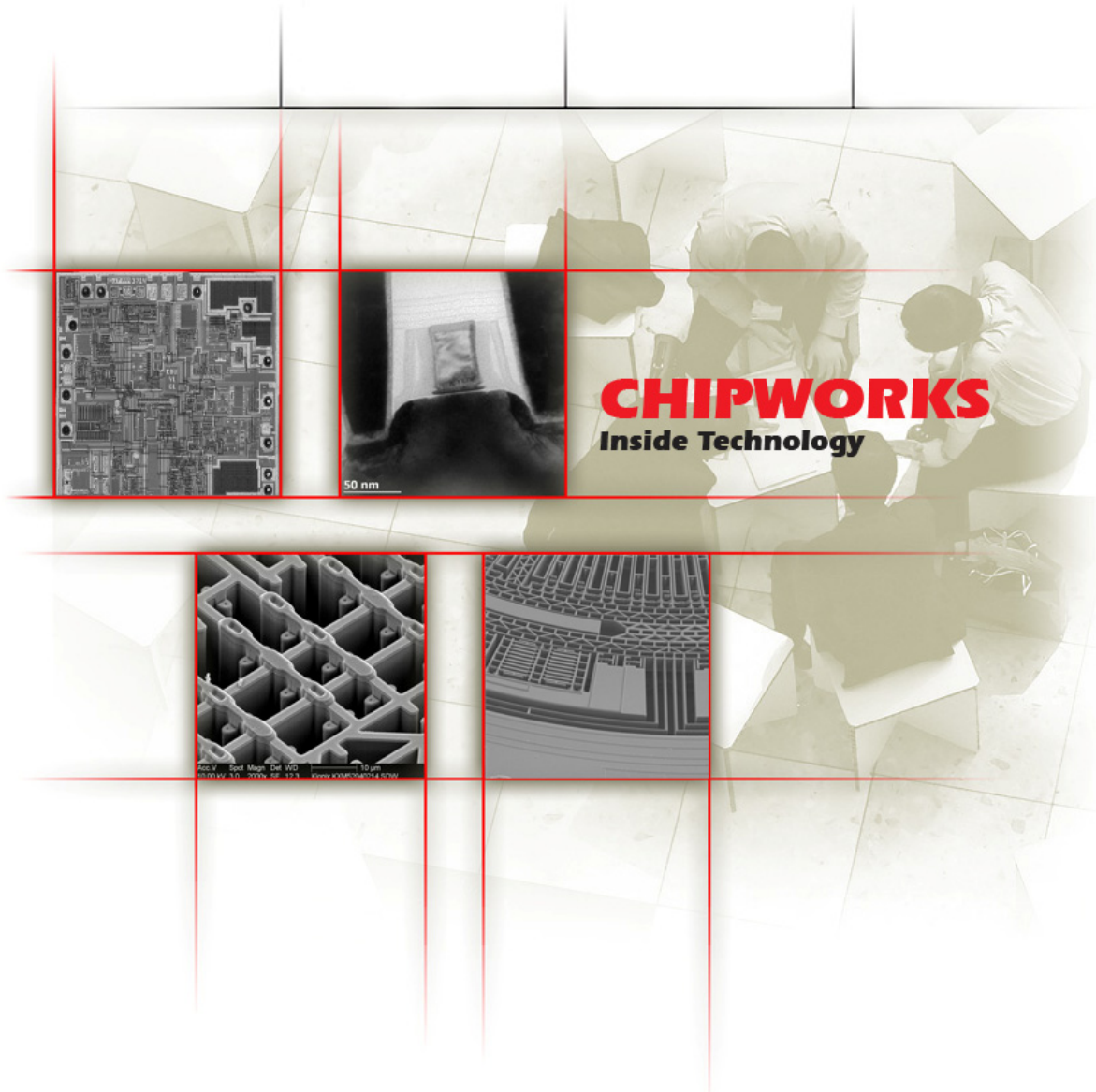


# Image Sensor Powerhouse Saves a Multi-Million Dollar Business Line



## Situation

A global powerhouse, and leading maker of high performance charged couple device (CCD) imaging components for camera phones, was selling into a market with a billion units annually. Having invested heavily in an expensive but proven technology, it was observing increasing instances of CMOS-based technology. Sensing that the industry was nearing a tipping point toward CMOS, the company was increasingly nervous about staying competitive.

With an entire business line and hundreds of millions at risk, the powerhouse realized it needed detailed technical intelligence to understand its competitors' advantage and quickly catch up.

*"A loss this big could have had a significant impact on the entire company,"* said the Design Group Manager. *"We had to change our model quickly and successfully."*

### Competitive Technical Intelligence

Leapfrog  
the competition



Cut design costs



Speed time to market



Assess ability to win  
in new markets



De-risk product  
development

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## Approach

Having perfected a specialized manufacturing process for devices that produced high quality images, the powerhouse doubted that CMOS image sensors were viable, relying on internal intelligence to support this direction. Chipworks believed otherwise, having completed thorough research, and contacted the company to present a summary of its findings.

*“This client was on the verge of being shut out of the camera phone business,” said Gary Tomkins, Vice President of Technical Intelligence at Chipworks. “We identified information that helped them to understand that they could manufacture a competitive CMOS image sensor, strengthen their roadmap and competitive positioning, and continue a leadership role in the image sensor business.”*

After seeing Chipworks’ findings, the company realized a design that could deliver the required quality for camera phones. It decided to act, and had the information needed to act fast.

## Solution

Chipworks provided two extensive reports that examined designs from two leading CMOS image sensor manufacturers. Using reverse engineering, the company produced a circuit analysis report showing precisely how the sensors were designed and how they functioned, down to each transistor. In addition, Chipworks’ process report detailed how the devices were assembled, layer by layer. Together with a schematic design, the Chipworks reports enabled the client to produce a superior product.

*“Chipworks identified how other products set new performance and cost standards, and provided a reference document that expedited our design cycle,” said the Design Group Manager.*

## Results

Armed with the Chipworks reports, the company saved a multi-million dollar business line. It shaved 24 months and a half million dollars off its design cycle, and entered the market just as it exploded. Over the next 24 months, the company grew at five times the market rate, vaulting past its most aggressive competitor.

For less than three percent of the R&D budget for the new product, the company de-risked the effort, enjoying returns that paid for the work many times over. The R&D savings alone were eight times the investment in Chipworks. And by getting to market faster, the company regained market share worth 600 times its investment in Chipworks.

*“We didn’t have the time or budget for a long design phase. The Chipworks reports gave us the technical detail we needed to accelerate our design, securing numerous customer wins. We could not have done it without them,” said the Design Group Manager.*

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