

EPILOG AND JABIL DELIVER GAME-CHANGING IMAGING SYSTEM TO DRIVE MAJOR AUTONOMOUS VEHICLE ADVANCEMENTS

Case Study

epilog

Company: Epilog Imaging Systems, Inc.

Industry: Imaging Technologies

Country: San Jose, California USA

Employees: 100

Websites: www.epilog.com

CHALLENGES

- Startup has true game-changing technology but lacks resources to maximize first-mover opportunity.
- Epilog needed a partner with rare mix of manufacturing, sourcing and design expertise.
- End-to-end processes and supply chain expertise were needed to deliver product at production scale.

SOLUTION

- Jabil's optical technology expertise provided advanced design, engineering and prototyping for swift time-to-market.
- Jabil delivered critical design engineering capabilities and support.
- Jabil's intelligent digital supply chain provided world-class sourcing to drive product development and delivery.

BENEFITS

- Jabil's skilled manufacturing expertise reduces cost barriers for mass production.
- Accelerated time-to-market maintains Epilog's first-mover status.
- Jabil's broad industry experience and partnerships position Epilog to drive rapid adoption in automotive and other mass-consumer markets.



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Marc Munford,
Vice President of Business
Development for Epilog

Epilog Imaging Systems, Inc. is poised to revolutionize autonomous vision with advanced 8K panoramic capabilities. The San Jose, Ca., based startup's breakthrough technology, called Quantum Definition, is a patented imaging system that fuses multiple image sensors into one virtual unit capable of surpassing the resolution of the human eye.

"Our mission is to match human vision quality for machines," explains Michael Mojaver, CEO for Epilog. "This is especially important in autonomous vehicles, where you have the problem of being able to identify objects on the road at distance and all around you."

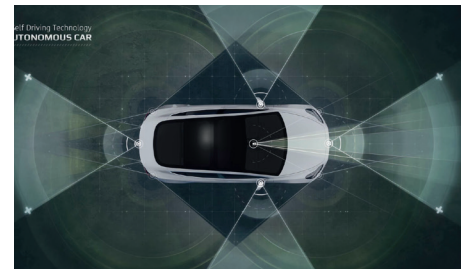
So far, automakers have placed multiple 4K or HD cameras around a car to improve visibility. In some cases, they have stitched together up to 20 video cameras to aggregate multiple HD or 4K video streams.

Another overarching consideration is cost as the high-end cameras used for Hollywood movies and military satellites typically cost tens of thousands or hundreds of thousands of dollars. "The automotive world is highly cost sensitive," says Marc Munford, vice president of business development for Epilog. "We expect to bring our imaging technology to market in the autonomous vehicle space at the hundreds of dollars price point."

Driving Next-Gen Video Innovations

Epilog's breakthrough technology emerged from years of video imaging experience and powerful software that transforms video cameras into smart edge-compute devices with a super high-resolution panoramic images. To bring this innovation to market, however, Epilog needed to integrate advanced optics, superior image sensors, trustworthy electronics, innovative software, adaptable packaging and ample computer power.

The autonomous vehicle environment also required a high-quality, ruggedized precision video imaging solution that can scale to millions of cars, as well as work in all kinds of weather and different light conditions. "That's a very difficult order to fulfill," says Munford. "There is no blueprint to follow here. It requires true out-of-the-box thinking and world-class sourcing skills."



Fortunately, a trip to Jabil's San Jose Blue Sky Innovation Center put the wheels in motion for an ideal partnership. Jabil's "Active Alignment" capability, which is used to dynamically tune camera optics, delivered the first of many "Ah-Ha" moments during the initial visit. Jabil's acknowledged manufacturing, supply chain and product design expertise also gave the Epilog team confidence in how the two companies could work together.

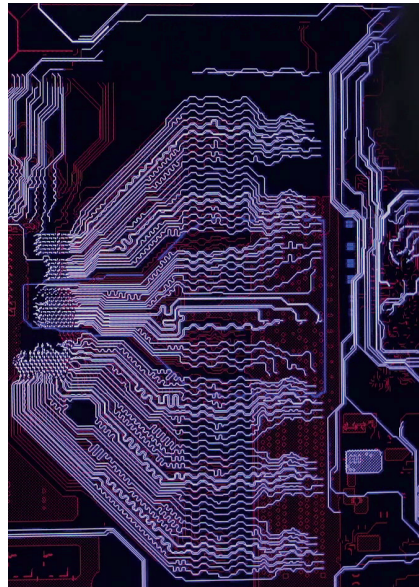
"When we looked, in particular, at the optics area, Jabil is No. 1 in the world, so they were the perfect partner for us," notes Mojaver. The Jabil team was equally excited about the prospect of taking Epilog's disruptive, innovative idea and turning it into a ground-breaking product.

"To do that we leveraged our vertical capabilities in process development, optics design, electro-mechanical design and electronics as well as support from other core groups, such as quality and our supply chain and procurement teams," recalls Yovav Ofri, business unit manager for Jabil.

Jabil's Intelligent Digital Supply Chain Speeds Product Delivery

To accelerate product development and delivery, Jabil designed the electronics, mechanicals and optics. "The electronics were particularly challenging," comments Mojaver. "We have GHz speed, circuitry, multiple processors and a lot of high-speed design work. Jabil did an excellent job. Everything worked the first time, so we were able to get to market quickly."

Epilog also took advantage of Jabil's global supply chain, including strong relationships with more than 27,000 suppliers, to transform its own supply chain ecosystem. By moving supply chain management to Jabil, Epilog immediately benefited from a cadre of optimization solutions, including deep sourcing, negotiation analytics, automated procurement, streamlined compliant processes and end-to-end supply chain visibility.



Moreover, Jabil's intelligent digital supply chain capabilities proved instrumental in helping Epilog reduce cost and risk. Teams of quality assurance engineers tested each working prototype in nearly every possible scenario of possible conditions and circumstance. The result: An industrial-strength video camera that delivers high-speed HDR, 8K+ panoramic video using a single lens, produced at very low cost.



Leveraging a Robust Ecosystem to Drive Adoption

Many of the leading automotive manufacturers have shown early interest in Epilog's technology. At the same time, customer feedback will aid Epilog's product planning for future offerings. Epilog also is exploring incorporating its technology into other consumer goods with Jabil helping guide the development of evolving applications.

"Jabil's world-class, industrial-level manufacturing expertise that produces world-class industrial-level products is key to cementing relationships with car manufacturers," says Munford. "Jabil's relationship makes Epilog a much less risky value proposition."

"With Jabil's help, we can get the cost where Epilog's technology goes beyond cars and into security cameras and consumer devices. Ultimately, you can basically have an IMAX in your pocket."

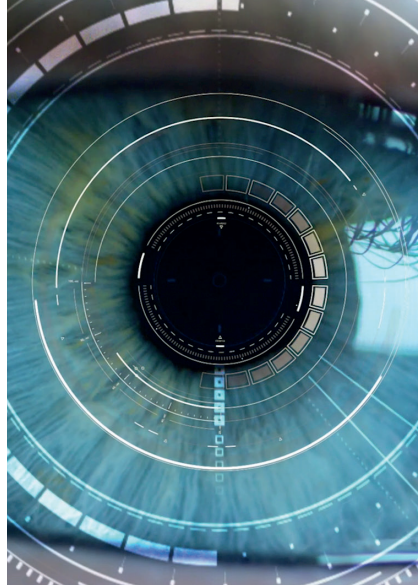
Scott Nisbet,
Strategic Advisor
to Epilog

With the relationship flourishing, Jabil and Epilog remain focused on delivering the next generation of video technology to mass markets. The possibilities include thin, poster-sized televisions with 16K resolution; being able to pinch-zoom 8K videos on any mobile device to see blade-of-grass detail or shoot Hollywood-quality videos on inexpensive cameras.

“Jabil understands what we’re doing,” says Munford. “Jabil’s management team has been absolutely invaluable in managing the relationship, managing the communications challenges, running different corporations globally and bringing all of their resources to help with this mission. Jabil is our life partner for this challenge—and the lifeline of this project.”

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Michael Mojaver,
CEO for Epilog



According to Scott Nisbet, strategic advisor to Epilog, Jabil will play a pivotal role in continuing to reduce the cost of Epilog’s powerful imaging solutions for a wide variety of applications. “With Jabil’s help, we can get the cost where Epilog’s technology goes beyond cars and into security cameras and consumer devices,” he says. “Ultimately, you can basically have an IMAX in your pocket.”

From the very top down, the team at Epilog has enjoyed working with Jabil. “We have a lot of synergy in different areas,” concludes Mojaver. “People who think alike and have the same kind of enthusiasm about the type of product we are developing. We certainly look to build on this relationship in the future.”

About Jabil

Jabil is a digital product solutions company providing comprehensive electronics design, production and product management services to global electronics and technology companies. Offering complete product supply chain management from facilities in 27 countries, Jabil provides comprehensive, custom solutions to customers in a broad range of industries. Nypro, a Jabil company, specializes in medical devices, with a global footprint of ISO13485 and FDA registered facilities, manufacturing many of the most recognized medical brands for major healthcare and wellness companies. Jabil common stock is traded on the NYSE under the symbol, “JBL”. Further information is available on Jabil’s website: jabil.com.