

CASE STUDY



COMPANY

Cardo Systems

INDUSTRY

Consumer Electronics

COUNTRY

Israel

EMPLOYEES

100+

WEBSITE

cardosystems.com

CHALLENGES

- Rapid growth of premium motorcycle consumer brand necessitated world-class manufacturing and supply chain support
- Stringent quality testing required to ensure robust product performance
- Speed and agility in product development, supply chain and logistics needed to address rising customer demand

SOLUTION

- Jabil's world-class manufacturing capabilities kept pace with ever-increasing production volumes
- Jabil's supply chain expertise and dedicated Workcell model provided responsive support to mitigate risks, lower costs and ensure on-time deliveries
- Jabil's quality focus and acoustics experience supported production of industry-leading products

BENEFITS

- Collaboration led to reduction in SKUs from hundreds to tens for streamlined supply chain management
- 5X year-over-year growth fueled worldwide expansion across Europe, the U.S., Asia and Latin America
- Seamless collaboration fueling expansion into new markets, including skiing, snowboarding and professional sport



Cardo Systems Sets New Standard in Helmet Communication Systems

Jabil's manufacturing expertise and quality focus help global leader in wireless communications deliver top-quality products for motorcyclists and skiers while expanding global reach

Today's fast-moving world demands constant connectivity for everyone, whether they're on two feet—or even two wheels. According to [Bloomberg](#), the COVID-19 pandemic kickstarted an urban motorcycle boom as the number of two-wheeled vehicles surged during lockdown as part of a trend in socially distanced rides. In fact, the Motorcycle Industry Council reported an uptick of 11.4% in new-model motorcycle and scooter sales in 2020, reinforcing robust growth across the sector.

For the past decade, bike-to-bike communication has played an important part in elevating the motorcycle riding experience. Boasting an ever-growing list of innovations, “smart” motorcycle helmets now sport Bluetooth connectivity, mesh technology, wind-suppressing capabilities, natural language control and more. The latest in wireless helmet communications also is believed to boost motorcycle safety, primarily thanks to hands-free communications, integrated intercoms and navigation apps that alert riders to traffic, weather and road conditions.

As the pioneer in this space, Cardo Systems has spent years at the forefront of the industry with an extensive list of industry firsts. “We thrive on an endless desire to deliver state-of-the-art wireless communications and entertainment systems,” explains Alon Lumbroso, CEO of Cardo Systems. “Our success comes from an extreme focus on three things: innovation, quality and an understanding of our customers’ needs and requirements.”



Advancing Innovation Through Collaboration

Cardo Systems' non-stop innovations started in 2004 when the start-up based in Israel created the world's first motorcycle Bluetooth headset. This achievement was followed by a lengthy list of other firsts, including a built-in FM radio in 2005, rider-to-rider intercom in 2007, long-range intercom in 2009, music sharing in 2012, the introduction of dynamic mesh communications in 2015 connecting up to 15 riders, the inaugural natural language control communicators in 2018, the list goes on and on. By 2019, the entire lineup met stringent waterproof guidelines while also heralding an extended collaboration with HARMAN to set the benchmark for audio quality with new integrated JBL speakers.

Today, led by its PACKTALK, FREECOM and SPIRIT products, Cardo Systems is bringing a new generation of state-of-the-art wireless products to market with an array of standard features, such as over-the-air software updates, the most advanced Bluetooth 5.2 chip on the market and fast-charging capabilities. Long recognized for raising the bar in innovation, Cardo Systems also is known for its unflinching focus on quality.



We always look for quality, on-time delivery and cost from our manufacturing partner. Equally important is flexibility. Jabil has kept up with dramatic market changes, especially over the past two years, which is a very big advantage.

ALON LUMBROSO
CEO, CARDO SYSTEMS



For that reason, company executives realized that its initial manufacturing model wouldn't keep pace with aggressive growth. "You need to have a lot of years of experience to achieve the high standard of world-class manufacturing level we wanted," says Shlomo Ehrlich, Vice President of Operations at Cardo Systems. "We couldn't do that by ourselves as a company with fewer than 100 employees. Our focus needed to be on innovation, R&D, marketing and sales—things that are unique to us."

As a result, the company initiated a search for a global manufacturing solutions provider that could advance Cardo's fast pace of innovation through collaboration. The search for a proven, quality-focused, tier-one manufacturer led to Jabil, known for its proven manufacturing expertise and decades of experience working with many of the world's leading consumer brands. "Cardo had a very unique product that didn't exist in the market, but what they really needed was help in scaling early-stage product designs for volume manufacturing," recalls Scott Gebicke, President of Jabil Industrial. "We also provide a lot of supply chain leverage, as well as the opportunity to use different materials and components to evolve their products more cost effectively."

Cardo's path to leadership has been fueled by its collaboration with Jabil. "We have benefited from Jabil's turnkey approach, encompassing sourcing, purchasing, production and logistics," adds Ehrlich. As Europe represents Cardo's biggest market, the company chose to manufacture at Jabil's Ukraine facility to minimize lead times. "We always look for quality, on-time delivery and cost from our manufacturing partner," says Lumbroso. "Equally important is flexibility. Jabil has kept up with dramatic market changes, especially over the past two years, which is a very big advantage."



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SCOTT GEBICKE
President, Industrial Division, Jabil





Commitment to Teamwork and Quality

Working as an extended part of Cardo's internal team, Jabil helped reduce Cardo's Stock Keeping Units (SKUs) from hundreds to tens. This streamlined approach also reduced the number of Engineering Change Notices (ECNs), which can slow manufacturing while increasing production costs. Jabil then helped refine industrial design and improved packaging while keeping a steady focus on reducing costs across each product's entire lifecycle.

"Our relationship with Jabil is like having an additional department in our company," Lumbroso adds. "We have constant communications. The Jabil team sees themselves as an extended arm of Cardo, which is great for us."

As part of the seamless teamwork, Jabil and Cardo share an unrelenting focus on quality. To achieve the best audio sound for motorcycle riders requires fastidious attention to detail in both product design and manufacturing processes. Cardo developed automated test equipment that Jabil Ukraine uses to provide feedback on New Product Introduction (NPI) efforts. "Quality is one of our business pillars, and Jabil has helped us become number one in our market," says Ehrlich. "The quality of our processes—and our products—have improved dramatically."

In particular, Jabil took advantage of deep-rooted expertise in acoustics to build and test Cardo's products to deliver the highest yields on the manufacturing line while ensuring high-fidelity sound performance. "Our ability to deliver consistent, quality performance was really valuable to Cardo as they began scaling sales of their products," Gebicke says. "We met all the standards for a premium product that gets to customers on time and works as advertised."

To that end, Cardo Systems experiences less than a 1% failure rate across its extensive product line. Since 2019, the company encounters zero to two quality events per quarter, which is a strong indicator of product stability and reliability. Additionally, Cardo holds quarterly customer forums with people from R&D, operations, sales and marketing to collect direct input on products. Additionally, the company seeks insights from Jabil and its distributors worldwide to identify potential areas of improvement.



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SHLOMO EHRLICH
Vice President of Operations, Cardo Systems

Accelerating Growth and Market Expansion

Maintaining open lines of communication and sustaining long-term collaboration have proven pivotal to Cardo's rapid business growth. "We experienced 5X year-over-year growth during the past five years," Ehrlich says. "That's hard to do unless you have someone like Jabil that lets you run as fast as you can. As an infinite capacity manufacturer, Jabil is a major growth accelerant."

Cardo currently ships more than one million units a year to customers in over 100 countries. Jabil plays a vital role in extending the reach of Cardo's innovative products across Europe, the U.S., Asia and Latin America. For example, Jabil helped Cardo ramp manufacturing for U.S. customers when the company began selling online through Amazon. This enabled Cardo to keep pace with fast-rising demand while competitors struggled to meet the needs of this ripe market sector.

Jabil's Ukraine Workcell, which comprises a team of experts dedicated to Cardo Systems, facilitates fast, agile responses to dynamic market demands worldwide. This approach eased the burden caused by COVID-19-related supply chain disruptions starting in the winter for 2020. "COVID-19 exacerbated supply chain constraints, increasing lead times of certain components while impacting logistics costs significantly," Gebicke says. "We mitigated a lot of risk by having a supply chain and manufacturing facility in Eastern Europe."

In the past year or more as the global market for components and purchasing has continued to suffer from COVID-19 aftereffects and shortages, Cardo realized its best chance to thrive was being part of Jabil's extensive and established supply chain network.

"Strong Jabil supply chain expertise and general connections to suppliers allow us to make predictions to prevent disruptions in deliveries and keep production

running, which was especially important during the COVID-19 pandemic," says Natalya Markovic, Senior Business Unit Manager, Jabil.

Looking ahead, Cardo is working with Jabil to expand its APAC manufacturing presence while taking advantage of Jabil's engineering prowess to get involved earlier in the product prototype phase. "Since day one, Cardo has had aggressive growth goals and Jabil has been right there working with Cardo on new design projects that will help them enter new markets and increase their business dramatically," says Jerry Harmer, Senior Business Unit Director, Jabil.

Jabil has become an important part of Cardo's R&D and development process. "Through increased collaboration with Jabil, we'll be able to produce better products in shorter lead times and at lower costs," says Ehrlich.

Jabil also is well positioned to assist as Cardo moves into new active lifestyle markets, including skiing and snowboarding, as well as professional sports. "Flexibility is the name of the game here because the market is changing, and we can communicate and change everything in order to meet the market requirements," Ehrlich concludes. "Because Jabil is so big, I have no doubt they can add production lines as needed and support our aggressive growth plans without any problem."



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Jabil (NYSE: JBL) is a manufacturing solutions provider with over 260,000 employees across 100 locations in 30 countries. The world's leading brands rely on Jabil's unmatched breadth and depth of end-market experience, technical and design capabilities, manufacturing knowhow, supply chain insights and global product management expertise. Driven by a common purpose, Jabil and its people are committed to making a positive impact on their local community and the environment.

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