

Molex: A Leader and Innovator in Electronics

As a company that believes in the transformative power of connectivity, Molex brings a rich history dating back to the 1930s to help drive present-day innovations in the transportation, data communications, industrial, medical and consumer industries.

When Koch Industries purchased the company in 2013, Molex had \$3.6 billion in annual sales. Since then, Molex has doubled in size and made over a dozen acquisitions. Today, the company has 42,000 employees and 74 plants located in 19 countries to support a robust portfolio of more than 100,000 products.

During the decade of Koch ownership, Molex has expanded its market position by growing its core interconnect business through a continuous commitment to innovation while also investing in adjacent technologies and capabilities. In 2019, Molex was named a Derwent Top 100 Global Innovator.

Over the years, the company has remained an industry leader in the connector and cable assembly space. In 2022, Molex was ranked number three in total world connector sales and number two in the computer and peripheral, business and retail equipment, medical electronics, and consumer electronics connector market sectors. Molex offers products for all electronic markets and holds leadership positions in printed circuit boards (PCB), telecom, and rectangular connectors.

While growing its presence in key markets, such as medical, automotive and data communications, Molex has enhanced its long history of supporting customer needs through the development of innovative products. This is evident from customer evaluation surveys conducted by Bishop. In these surveys, Molex is consistently ranked at the top of the industry in terms of product quality, on-time delivery, and overall effectiveness in solving customer problems. They also are recognized for their easy-to-use website, making them a popular choice for engineers.

We thought it would be beneficial to visit Joe Nelligan, CEO of Molex, to get his insight into the transformation that Molex has made over the past decade, along with his thoughts and comments on what the future holds for Molex.

Joe Nelligan is Chief Executive Officer of Molex, based in Lisle, Ill. He is responsible for leading the company's strategic direction and growth as it continues to expand globally in both new and existing markets. He assumed the role in 2018.

Prior to his role as CEO, Joe served as President and Chief Operating Officer, responsible for leading the company's Global Sales & Marketing Division and four Global Product Divisions that serve the data communications, consumer electronics, medical, industrial, and transportation markets. He also oversaw the company's Manufacturing and Supply Chain Operations.

Joe started his career with Molex as an engineering intern in 1984 before joining as a Product Development Engineer in 1986. He held several roles with progressive responsibility in Engineering, Product Management, and Sales and Marketing throughout his career before being named President of the Global Commercial Products division in 2012.



Bishop: Koch Industries has owned Molex for a decade. How was the transition from a public to a private company? Did joining Koch and going private bring benefits?

Nelligan: When Koch Industries acquired Molex in 2013, they guided us in transitioning from public to private. In particular, Koch's [Principle Based Management](#) framework, a holistic business philosophy based on the principles of human progress, was key to helping us think and act differently as a private company. This principle-based approach empowers organizations and individuals to succeed long-term by creating value for others. Not only did applying this framework and these principles help guide us in critical decision making, it also has helped us transform our culture, take an extended view of the market, and enabled Molex to deliver greater long-term value to customers, partners, and employees worldwide.

Being part of Koch gives Molex access to additional capabilities that have helped us better serve our customers around the world. Our ability to grow organically and through strategic acquisitions has strengthened considerably. We have access to companies and capabilities across Koch, especially across the industrial sector, which enable us to knowledge share on new technologies and accelerate learning and innovation. We appreciate Koch's long-term focus, which aligns with our goal of enabling technology that improves people's lives by making the world a better, more connected place.

Bishop: How is Molex currently structured? Are you organized around market sectors, geographies, product types, or technologies?

Nelligan: Molex is organized around a global market structure with four operating divisions: transportation, consumer and commercial, data communications, and medical. We believe this structure best positions us to support our customers.

As our customers face increased challenges with power, speed, and density, we are seeing technology convergence across our divisions and end markets. Interestingly, increased opportunities for cross-divisional collaboration facilitate new levels of customer engagement during times of unprecedented transformation across our target markets. For instance, many of Molex's microminiature products typically found in mobile devices and sold by our consumer and commercial division are finding their way into automotive and data applications. Our consumer, automotive and data communications teams increasingly share learnings to leverage their collective expertise to drive compelling innovation for our customers.

Bishop: Artificial Intelligence (AI) is all about bandwidth and speed. This creates significant demand for high-speed copper and fiber optic interconnects. Molex presently has a strong product line in high-speed, PCB and fiber optic connectors. Do you believe your current product offering is up to the challenge of AI? Are you investing in new or additional opportunities to address this market?

Nelligan: You are right about AI creating significant demand for high-speed copper and fiber optic interconnects. Molex is well positioned to meet escalating demand with our broad line of high-speed copper connectors and cables, along with active optical transceivers and passive optical connectivity solutions. Meeting the need for faster transmission speeds — between and inside next-generation data centers — requires improved signal integrity, reduced electromagnetic interference (EMI), and more efficient thermal management. Our decades of experience in these areas are key to helping our customers effectively resolve the performance bottlenecks and network design challenges associated with generative AI and next-gen data centers applications.

A great example of innovation in this area is Molex's [224G product portfolio](#), which includes a broad portfolio of next-gen backplane connectors and cables, board-to-board connectors, near-ASIC connector-to-cable solutions, and high-speed I/O connectors & cables. We are aggressively investing in R&D, our people, and new capacity for both industry-standard and custom product designs for this rapidly emerging category. It has been rewarding to see our teams collaborating closely with our customers to solve problems and move with tremendous pace and agility to meet their rapidly changing needs and increasing demand.

Bishop: Years ago, Molex considered automotive as an opportunistic market, it was not a core part of Molex's overall strategy. That is not the situation today. Today, Molex is stressing automotive including vehicle connectivity. What has caused this shift in focus and how is this shift affecting or playing a role in the future of Molex?

Nelligan: Actually, Molex has been a major player in the automotive industry for nearly 30 years. We have always believed it is important to have a significant position in what is arguably the largest market in the connector industry — and represents the largest market for Molex. We have a leading portfolio of core automotive connector and cable products, and we continue to innovate to best serve our automotive customers in times of tremendous disruption.

Our commitment to creating a broad and compelling product portfolio across the entire automotive ecosystem has resulted in solutions for automotive high-speed networking, vehicle antenna systems, electrification, Advanced Driver-Assistance Systems (ADAS), and vehicle-to- everything communications (V2X). In addition to our internal R&D efforts, some of these solutions came through acquisitions, including the 2018 acquisition of Laird Connected Vehicle Solutions. This enabled us to deliver connected mobility and antenna offerings to the market.

We also delivered Molex's Percept Road Noise Cancellation (RNC) Sensors, which use accelerometers and microphones to capture and cancel unwanted road noise to enhance driver comfort and safety.

In May of this year, we announced Molex's MX-DaSH family of data-signal hybrid connectors that unify power, signal and high-speed data connectivity in a single connector system. These innovative wire-to-wire and wire-to-board connectors support the transition to zonal architectures and address the full range of emerging applications requiring reliable data transmission, including autonomous driving modules, camera systems, GPS and infotainment devices, LiDAR, and more.

We recognize there is an ongoing opportunity to embrace disruptive technologies that are altering the automotive landscape. To address the need, we will continue to grow capability and add capacity to offer advanced engineering, supply chain flexibility and large-scale production to our customers. In addition to product innovations, we recently increased our production capacity in late 2022 by opening a second state-of-the-art automotive connector manufacturing facility in Guadalajara, Mexico.

Bishop: Healthcare is a new focus for Molex. The purchase of Phillips-Medisize makes Molex one of the largest manufacturers of insulin pens. This effectively makes Molex a contract manufacturer. Is this a one-off venture or does Molex anticipate expanding into the contract manufacturing business? How do you envision growing and expanding the healthcare business within Molex?

Nelligan: Molex has supplied innovative connectors and cabling solutions to the healthcare industry for many years. As you mentioned, we began offering contract design, development and manufacturing services following the 2016 acquisition of Phillips-Medisize.

In collaboration with our customers, we have expanded the design and development of innovative drug-delivery devices to include insulin pens, auto injectors, insulin pump technology, and non-invasive continuous glucose monitoring (CGM) platforms in collaboration with customers. We envision continued growth across our medical business, leveraging the expertise and experience of the Phillips-Medisize team.

To that end, Molex increased its manufacturing capacity last November with the opening of a new campus in Katowice, Poland, to support our European medical customers. This plant will also allow us to produce electric vehicle and electrification solutions for Molex's automotive customers. We see an ever-expanding role for Molex and Phillips-Medisize to support human- centered healthcare to improve people's lives.

As with our other businesses, cross-functional collaboration will be leveraged wherever possible. For MedTech devices, this could mean tapping into our consumer device expertise to support the ongoing miniaturization of electronic components in wearables. It could also manifest in leveraging our data communications capability to support wireless connectivity in next-gen medical devices. Phillips-Medisize has an exciting pipeline of new projects

across drug delivery, diagnostics and MedTech applications, and we plan to continue build capability organically or through acquisitions to capitalize on these exciting opportunities.

Bishop: We recorded 15 acquisitions since Koch purchased Molex. Connectivity, wireless solutions, and fiber optics appear to be common threads. Will you continue to acquire new businesses? What will be the emphasis?

Nelligan: From an M&A point of view, we always start by identifying the best growth opportunities in areas where Molex has demonstrated capabilities that can add value, with a focus on adding new capability that will enable us to best support our customers. In some cases, it makes more sense to build a capability organically. Other times, a strategic acquisition might offer the best path forward. In addition to Laird and Phillips-Medisize, other significant acquisitions include Oplink Communications, a provider of optical communication solutions acquired in 2014; BittWare, developers of FPGA accelerators acquired in 2018; and Fiberguide, a manufacturer of customized optical fiber solutions acquired in 2020.

Looking ahead, we will continue to monitor our markets and customers carefully to identify emerging pain points and then seek solutions with the greatest potential, evaluating each opportunity carefully for fit and profitability.

Bishop: As mentioned above, Molex has not lost its customer focus. The Bishop customer opinion surveys clearly show customers like Molex. Keeping the organization focused on the customer during the ownership transition must have been difficult. How did you manage that?

Nelligan: We have never lost sight of the fact that without our customers, Molex does not have a business. They are the reason we exist. Koch's vision, its Principle Based Management framework, and its core values are rooted in the principle of mutual benefit, which really reinforces the need to create value for our customers. As a result, keeping the organization focused on our customers during the ownership transition to Koch was straightforward as both companies shared a customer-first mindset. Every day we look for ways to bring value to our customers in mutually beneficial ways.

We constantly look for new and innovative ways to support our customers. For example, we are investing in new digital tools and processes across the organization to transform the customer experience and streamline internal operations. The goal is always the same: Deliver more value and better outcomes for everyone.

Bishop: Describe Molex in 10 years. What kind of company do you foresee?

Nelligan: There will be so many exciting changes taking place over the next 10 years as more and more electronics become embedded into products that improve how we live, work and play. We see significant transformation and convergence occurring across every industry we serve, and we are working hard to ensure our customers continue to choose Molex as their preferred partner.

Over the next 10 years, it will be vital to not only stay current with ever-changing technology but anticipate the evolution of entire industries and be first to deliver highly differentiated solutions. We feel fortunate at Molex, being private and part of Koch Industries where the shareholders reinvest 90% of the earnings back into the business. This enables us to invest in innovation to proactively support our customers.

To accomplish this, we need to collaborate, share knowledge and leverage our cross-functional capabilities to provide products and solutions that anticipate our customers' needs. This, in turn, will allow us to accelerate future growth and drive mutual benefit for our customers and for Molex.