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The Navigator for Enterprise Solutions

Tamron

The annual listing of 20 companies that are at the forefront of providing Machine Vision solutions and transforming businesses

TAMRON

THE GLOBAL LENS MANUFACTURER FOCUSED ON THE FUTURE

Even though machine vision's first shot to fame came from its application within industrial automation environments, the technology has now found its way outside of factory settings as well. For instance, machine vision is now increasingly being used for round-the-clock security monitoring and guiding autonomous vehicles, robots, and drones from one point to another.

But the extent to which machine vision can proliferate in the coming days is largely reliant on the innovations in the lens and sensor industry. After all, it is the lenses and sensors that determine the overall quality of the images captured by the up-and-coming machine vision solutions.

SO, WHERE IS THE HICCUP, ONE MAY THINK?

The challenge lies in the varying speeds of innovation between the two industries. While the sensor industry has been pacing its transformations from the very beginning, the lens manufacturing sector hasn't quite kept up with the developments. The machine vision companies, thus, are always on the lookout for capable lens manufacturers who can blend the ongoing advancements in the sensor industry with new types of lenses.

ENTER TAMRON.

With 70 years of rich history in lens manufacturing, Tamron has been evolving with the changing

paradigm of machine vision solutions and shoring up its technical competencies to meet new market demands. The company is currently playing a pivotal role in advancing lens technology beyond the current threshold and paving the path toward more enhanced machine vision technology. No wonder these competencies put Tamron ahead of its peers, making it one of the trusted names in the industry.

Tamron has all the proven human expertise and technical capabilities for handling every step of lens preparation with minimal outsourcing to partner companies. "We offer precision optics for commercial or industrial-use for machine vision solutions," says Gregg Maniaci, president and CEO of Tamron USA, Inc. From glass molding and grinding through fabricating molds and injection molding, Tamron performs all the lens production processes in its own facilities. "Our industry-leading injection molding plant can produce components with a tolerance as minute as seven microns," states Maniaci. "Moreover, we test each of our lenses meticulously before it leaves our facilities to ensure optimum performance," the CEO adds.

But what makes Tamron a true catalyst in the advancement of lens manufacturing, and in turn, machine vision technology is its close collaboration with leading sensor manufacturers. This comradery gives Tamron the ability to gauge new trends in the machine vision realm and align those developments in product offerings accordingly. Additionally, the sales and technology team of Tamron is proficient in identifying the needs of machine vision solutions from an optical, mechanical, and electronic engineering standpoint. "These attributes enable us to be very flexible in terms of what we offer and in making sure that we're addressing what's needed, not now but also for the future," underscores Maniaci.

For instance, Tamron developed the world's only 1/1.2 inch series of factory automation lenses. These lenses eliminate the requirement of utilizing more costly 1 inch optics on 1.2 inch sensors while also functioning flawlessly on 2/3 inch format sensors, thereby meeting two different needs with one lens. Such nimbleness offers wider usage of a single product, which ultimately helps reduce inventory loads.

While these innovative offerings definitely put Tamron a cut above the rest of its contemporaries, let's look at a recent case study to understand the prowess of Tamron better. During the early days of COVID-19, one of Tamron's clients utilizing a Tamron lens in their rapid testing device started adapting it to detect the coronavirus. As their client was classified as an essential business by the state, Tamron collaborated during the NY mandatory shutdown to supply these lenses in time.

With many similar success stories under its hood, Tamron has been integrating its innovations for photographic lenses into its industrial optics products. For example, Tamron developed a proprietary optical stabilizing technology for the photographic lens market considered one of the industry's most effective, and the company is now integrating that technology into many of its industrial optics products. Similarly, Tamron is also integrating technology garnered from its proprietary photographic lens multicoating processes. One example is Tamron's recently introduced FA lens series that functions flawlessly with the newest Sony® IMX537 fourth-generation sensors. These lenses render extremely high resolution, low distortion, and high contrast suitable for the most demanding FA applications. Their rigorous anti-vibration / anti-shock mechanism delivers excellent results even under adverse conditions.

Tamron remains steadfast in meeting new market demands by leveraging experience in each industry by applying its innovations in multiple applications, be it automotive, medical, heavy industries, or any of many other industrial applications. "In the future, we will continue to remove many more impediments and take machine vision technology to newer heights. We truly are focused on the future," concludes Maniaci. CR