



**2013 COMPANY OF THE YEAR AWARD**  
SMT Automatic Optical Inspection



F R O S T & S U L L I V A N



**50 Years** of Growth, Innovation & Leadership

## COMPANY OF THE YEAR AWARD

### SMT Automatic Optical Inspection North America, 2013

#### Frost & Sullivan's Global Research Platform

Frost & Sullivan is in its 50th year of business with a global research organization of 1,800 analysts and consultants who monitor more than 300 industries and 250,000 companies. The company's research philosophy originates with the CEO's 360-Degree Perspective™, which serves as the foundation of its TEAM Research™ methodology. This unique approach enables us to determine how best-in-class companies worldwide manage growth, innovation and leadership. Based on the findings of this Best Practices research, Frost & Sullivan is proud to present the 2013 North American Company of the Year Award in SMT Automatic Optical Inspection to MIRTEC Co. Ltd.

#### Significance of the Company of the Year Award

##### Key Industry Challenges

The electronics industry is rapidly transitioning toward smaller and more compact products. This, in turn, has led to shrinking component sizes, reduced printed circuit board sizes, and complicated circuitry. As a result, there is increasing demand for high-quality inspection at the electronics assembly and finished goods testing stages. The surface mount technology (SMT) automatic optical inspection (AOI) equipment market is currently encumbered by severe price competition. In a market where technology is reaching maturity, especially for 2D technology, companies are depending on pricing strategies to provide competitive differentiators.

Frost & Sullivan has observed an increasing drive for advanced technology innovation as companies focus on 3D AOI product lines. While price is a key factor, customers are seeking AOI equipment that can provide accurate inspections at higher speeds, with few false call rates, high-quality detection, increased throughput, and faster cycle times. For true differentiators, AOI equipment manufacturers have to focus on research and engineering elevation, anticipate customer requirements, and foster long-term strategic partnerships. Frost & Sullivan's research indicates that distinctive product innovation, dedication to customer service, and a strong support network are vital for success in this space. Frost & Sullivan's research also shows that MIRTEC has successfully distinguished itself through technical leadership, versatility of its product line, and superior customer service.

## Key Benchmarking Criteria for the Company of the Year Award

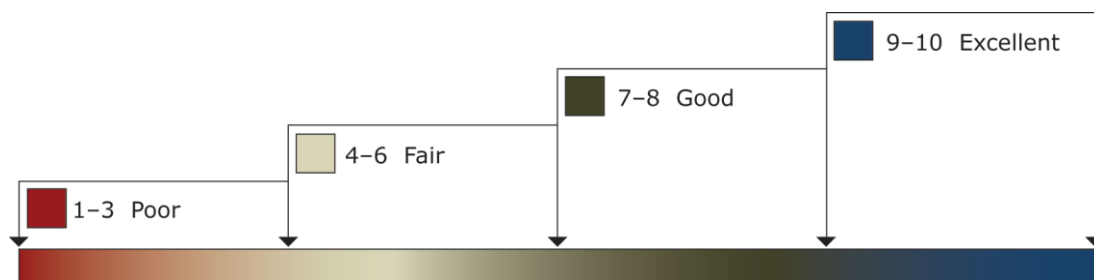
For the Company of the Year Award, the following criteria were used to benchmark MIRTEC Co. Ltd's performance against key competitors:

- Growth Strategy Excellence
- Growth Implementation Excellence
- Degree of Innovation with Products and Technologies
- Leadership in Customer Value
- Leadership in Market Penetration

## Decision Support Matrix and Measurement Criteria

To support its evaluation of best practices across multiple business performance categories, Frost & Sullivan employs a customized Decision Support Matrix (DSM). The DSM is an analytical tool that compares companies' performance relative to each other with an integration of quantitative and qualitative metrics. The DSM features criteria unique to each Award category and ranks importance by assigning weights to each criterion. The relative weighting reflects current market conditions and illustrates the associated importance of each criterion according to Frost & Sullivan. Fundamentally, each DSM is distinct for each market and Award category. The DSM allows our research and consulting teams to objectively analyze each company's performance on each criterion relative to its top competitors and assign performance ratings on that basis. The DSM follows a 10-point scale that allows for nuances in performance evaluation; ratings guidelines are shown in Chart 1.

**Chart 1: Performance-Based Ratings for Decision Support Matrix**



This exercise encompasses all criteria, leading to a weighted average ranking of each company. Researchers can then easily identify the company with the highest ranking. As a final step, the research team confirms the veracity of the model by ensuring that small changes to the ratings for a specific criterion do not lead to a significant change in the overall relative rankings of the companies.

## Best Practice Award Analysis for MIRTEC Co. Ltd.

The Decision Support Matrix, shown in Chart 2, illustrates the relative importance of each criterion for the Company of the Year Award and the ratings for each company under evaluation. To remain unbiased while also protecting the interests of the other organizations reviewed, we have chosen to refer to the other key players as Competitor 1 and Competitor 2.

**Chart 2: Decision Support Matrix for Company of the Year Award**

<i>Measurement of 1–10 (1 = lowest; 10 = highest)</i>	Award Criteria					
	Growth Strategy Excellence	Growth Implementation Excellence	Degree of Innovation with Products and Technologies	Leadership in Customer Value	Leadership in Market Penetration	Weighted Rating
Relative Weight (%)	20%	20%	20%	20%	20%	100%
MIRTEC Co. Ltd.	9	9.5	9.5	9.5	9	9.3
Competitor 1	8	7.5	8	7	9	7.9
Competitor 2	7	7	7.5	7.5	6	7.0

### Criterion 1: Growth Strategy Excellence

MIRTEC is a technology-driven company. Its focus on innovation has led the company to a strong competitive position with an unrivaled reputation for cutting-edge product and technology innovation within the automatic optical inspection (AOI) market. MIRTEC is regarded as a pioneer in 2D/3D AOI technology and its ability to leverage its product features to address ever-evolving complexity within electronics assembly clearly distinguishes it from its competitors. MIRTEC's success also stems from its ability to educate customers regarding the latest developments in AOI technology and offer the most innovative solutions before they become mainstream. The ability to provide innovations ahead of the competition has allowed the company to command premium prices, which is commendable in a highly price-conscious market. MIRTEC's annual revenue for 2012 grew over 15 percent, and the company is expecting to exceed that growth in 2013. In a market environment, where Tier 1 competitors are struggling to post growth, MIRTEC has definitely set itself apart.

## Criterion 2: Growth Implementation Excellence

Frost & Sullivan's research on the AOI market shows that competition has risen significantly in the last three years. These competitors are focusing on pricing strategies in an attempt to spark customer interest and retain their market share. In contrast, MIRTEC has positioned itself through best-in-class technology leadership and this has enabled the company to maintain premium prices where competitors are cutting prices and contending with shrinking margins.

MIRTEC's choice of customer is also integral to its growth strategy. The company's customer base ranks product quality, inspection speeds, reduced false call rates, and increased throughput ahead of price. MIRTEC's products cater to diverse vertical markets providing unparalleled value to its customers. The company's products offer substantial return on investment along with a sterling brand reputation and unmatched quality assurance for its customers.

Despite increasing competition and new entrants, MIRTEC has been able to record impressive growth and acquire key accounts from its competitors, especially in the automotive industry.

## Criterion 3: Degree of Innovation with Products and Technologies

The electronics industry is transitioning toward smaller components such as 030015s, micro ball grid arrays, and other miniaturized components. MIRTEC has focused on embracing new technologies that impact electronics assembly, creating novel solutions to further position itself ahead of its competition.

MIRTEC is at the forefront of technology, especially when it comes to its AOI product line. No other competitor can match the features and technology behind MIRTEC's AOI equipment, especially when it comes to their advanced 2D/3D inspection technology.

A major strength and competitive differentiator for MIRTEC is the fact that the company designs and manufactures cameras for their AOI and SPI product lines in-house. Headquartered in the USA, MIRTEC's Camera Division, ISVI Corp, is a leading supplier of High-Speed, High-Resolution Industrial Camera Systems servicing a wide range of applications such as Microscopy, Machine Vision, Factory Automation, Robotics, Medical, and more. Customers include O.E.M.'s, system integrators, end-users, researchers, and developers. The company's state-of-the-art cameras are based on CoaXPress technology. CoaXPress (CXP) is a high-speed, point to point, serial communication standard for the transmission of video. This interface technology combines the simplicity of coaxial cable with state-of-the-art high speed serial data technology. The combination of these two highly desirable features – standard coaxial cable plus high speed – provides a revolutionary leap forward in high speed image and data transmission. Recently, ISVI introduced a 25-megapixel CoaXPress camera that was designed for the AOI market to meet specific inspection demands (increased inspection speed and high inspection quality).

Frost & Sullivan firmly believes that the technology roadmap that MIRTEC offers its customers, coupled with its ability to embrace and inspect the latest electronics technology, are major advantages. In reality, there are limited choices to revive a maturing technology such as AOI, but MIRTEC has been quite successful in its endeavors. The company is among the first to pioneer successful 3D AOI equipment, and through its camera innovations, the company has been able to address challenges related to low speed with its 3D AOI equipment.

#### **Criterion 4: Leadership in Customer Value**

Another important factor driving success for MIRTEC is its ability to tie in product development excellence with customer needs. The company's ability to provide best-in-class solutions is made possible by its instinctive understanding of its customers' dynamic needs. The company has also outperformed its peers by delivering superior-quality service and support. MIRTEC has strategic partnerships around the world and it fosters strong relationships with manufacturing representatives in North America.

The company's focus is on three important factors: the drive to (1) develop the absolute best inspection equipment in the industry, (2) dynamically address customer needs, and (3) enhance customer service with a strong sales and support network. The company's underlying philosophy revolves around the fact that even the best of technologies will fail without a strong sales and support network. Plus, in such a highly competitive environment, the ability to understand and anticipate customer needs and invest in research and engineering are vital elements to success.

The above-mentioned factors have helped make MIRTEC successful. Furthermore, Frost & Sullivan research has shown that customers clearly appreciate the robustness of MIRTEC's products and the confidence of support through the lifetime of their ownership. Customer service is not just a department at MIRTEC, it is clearly the very foundation of the company's philosophy.

#### **Criterion 5: Leadership in Market Penetration**

As previously mentioned, MIRTEC is a key market participant in today's global AOI market. Frost & Sullivan fully expects that the quality, reliability, and flexibility of MIRTEC's AOI equipment will help the company benefit from the increasing demand for 3D and 2D-3D combination technology. Its product lines are well suited for high volume as well as low-to-medium volume manufacturing. This makes MIRTEC's equipment perfect for a wide range of markets.

The company's growth has been further strengthened by increased penetration into the automotive industry. A case in point, the company recently won a five-year contract from Tier 1 automotive customer Bosch. The company has been steadily capturing market share from other competitors, further bolstering its growth.

## Conclusion

Frost & Sullivan's independent analysis of the North American SMT Automatic Optical Inspection space shows that MIRTEC's impressive growth can be directly attributed to its unparalleled product innovation and acute focus on providing best-in-class customer service. The company has demonstrated an unrivaled ability to understand the complexity of electronics assembly as well as key customer needs, propelling the company's growth and success. Based on these reasons, Frost & Sullivan recognizes MIRTEC Co. Ltd. with the 2013 North American Company of the Year Award in SMT Automatic Optical Inspection.

## The CEO 360-Degree Perspective™ - Visionary Platform for Growth Strategies

The CEO 360-Degree Perspective™ model provides a clear illustration of the complex business universe in which CEOs and their management teams live today. It represents the foundation of Frost & Sullivan's global research organization and provides the basis on which companies can gain a visionary and strategic understanding of the market. The CEO 360-Degree Perspective™ is also a “must-have” requirement for the identification and analysis of best-practice performance by industry leaders.

The CEO 360-Degree Perspective™ model enables our clients to gain a comprehensive, action-oriented understanding of market evolution and its implications for their companies' growth strategies. As illustrated in Chart 3 below, the following six-step process outlines how our researchers and consultants embed the CEO 360-Degree Perspective™ into their analyses and recommendations.

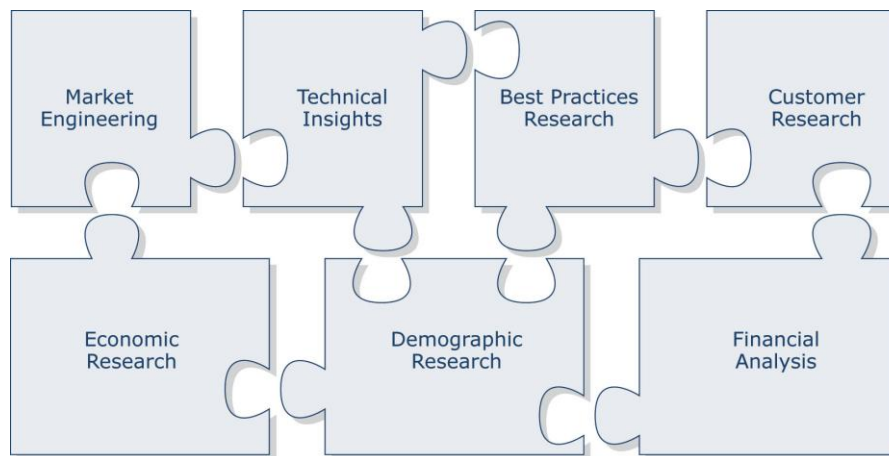
**Chart 3: How the CEO's 360-Degree Perspective™ Model Directs Our Research**



## Critical Importance of TEAM Research

Frost & Sullivan's TEAM Research methodology represents the analytical rigor of our research process. It offers a 360-degree view of industry challenges, trends, and issues by integrating all seven of Frost & Sullivan's research methodologies. Our experience has shown over the years that companies too often make important growth decisions based on a narrow understanding of their environment, leading to errors of both omission and commission. Frost & Sullivan contends that successful growth strategies are founded on a thorough understanding of market, technical, economic, financial, customer, best practices, and demographic analyses. In that vein, the letters T, E, A and M reflect our core technical, economic, applied (financial and best practices) and market analyses. The integration of these research disciplines into the TEAM Research methodology provides an evaluation platform for benchmarking industry players and for creating high-potential growth strategies for our clients.

**Chart 4: Benchmarking Performance with TEAM Research**



## About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, enables clients to accelerate growth and achieve best-in-class positions in growth, innovation and leadership. The company's Growth Partnership Service provides the CEO and the CEO's Growth Team with disciplined research and best-practice models to drive the generation, evaluation and implementation of powerful growth strategies. Frost & Sullivan leverages 50 years of experience in partnering with Global 1000 companies, emerging businesses and the investment community from more than 40 offices on six continents. To join our Growth Partnership, please visit <http://www.frost.com>.