



**CTS Corporation: Recipient of the  
2006 North American Frost & Sullivan Award for  
Product Quality Leadership**



*From left to right: Donald R Schroeder, , CTS Electronics Manufacturing Solutions, Executive Vice President, CTS Corporation & President of CTS EMS, Greg Caressi, Frost & Sullivan, Vice President Healthcare & Life Sciences*

*“Partnering with clients to create innovative growth strategies”*

## 2006 North American Frost & Sullivan Award for Product Quality Leadership

### Award Description

The 2006 Frost & Sullivan Award for Product Quality Leadership is bestowed upon the company that has demonstrated superior quality control over their existing competitors in product manufacturing. Quality control is an essential element of satisfying customers, increasing repeat buying behavior, and assuring long-term market survival.

### Research Methodology

To choose the Award recipient, the analyst team tracks all products and research and development projects within the industry. This is accomplished through interviews with all market participants, end users, distributors, and extensive secondary and technology research.

### Measurement Criteria

In addition to the methodology described above, there are specific criteria used to determine final competitor rankings in this industry. The Award recipient has excelled based on one or more of the following criteria:

- Lowest defect percentage per batch of units produced by suppliers in current base year.
- Product ability to fulfill customer needs, in terms of functionality and user friendliness
- Number of breakdowns or services required per year
- Degree of connectivity
- Level of product support end-users receive from their vendors or suppliers



The recipient of the 2006 North America Frost & Sullivan Product Quality Leadership Award in the EMS aerospace and defense (A&D) market is CTS Corporation. The company has been recognized for its track record of enhancing product quality and increasing product ownership for its customers. CTS Corp's unerring efforts at meeting and surpassing the stringent quality requirements of the A&D industry have helped the company win this award.

CTS Corp. is a major market participant within the A&D industry. In addition to this, the company also serves other industries such as automotive, communications, medical, networking, industrial, and personal computing. Its capabilities include design services, manufacturing, supply chain operations with services including sourcing, procurement, logistics and distribution, and manufacturing.

For CTS Corp, low-volume high-mix manufacturing in an ultra-high quality, ultra-high reliability, and long incubation environment is an inherent part of its culture. The company's increasing value in a relatively stable market can be directly attributed to its long standing contracts with A&D OEMs. This has helped it to decrease any detrimental effects that could be caused by the downturn of any of the traditional EMS markets thus ensuring longevity for its shareholders. The company ascribes this fact to its consistent focus in its product quality, without losing focus on implementing growth strategies.

## **Achieving Excellence Through Quality**

Quality is considered as the vital link to success. CTS Corp. has undertaken a comprehensive journey on the path of lean and other quality systems such as the kaizen and has been successful in emulating the Toyota model, for which the company has received commendation.

Most market participants employ lean and six sigma principles to ramp up their existing levels of quality. For CTS Corp., lean and six sigma are not just integral to its success but imbedded in its business model. It is the company's way of doing business rather than just another means to keep up with competition. Another differentiator for CTS Corp is its ability to trace component failure in the field. Its root cause analysis is among the best within the industry, which allows the company to identify the failure and its cause to prevent further similar failure repeats.

Moreover, CTS Corp has differentiated itself by its unique implementation of quality systems such as six sigma and lean as well as certifications such as ISO 9000I, AS9000, MIL-SPEC standards to increase productivity and boost internal as well as customer-faced quality levels. As a result, the company has benefited from repeat customer contracts. The company's business grew by 25 percent over the last two years.

In an industry where the best-in-class practices have only been cemented for resolving product-quality issues, this company differentiates itself by being proactive. The company strives to prevent quality issues in the early stages of design and during the transition to manufacturing. This ultimately reduces scrapping and the resulting need for rework. For a low-medium and high-mix manufacturing, this is an essential tool, as EMS providers do not have the ability to rework while at the same time reduce cost and deliver on time.

Though the lead-free regulation complicated product quality issues in other industries for EMS providers, its effect within the A&D industry has been less significant as a direct result of waivers for OEMs. However, the lead-free regulation translated to parts obsolescence and component traceability issues. CTS Corp's lot traceability capability allows the company to overcome the challenge. In order to solve the issue, the company works with its customers to prepare them for the introduction of lead-free regulation and ensuing parts obsolescence challenge at the design stage. This has increased overall quality of the products, while reducing cost of materials.

CTS Corp. has its quality systems and benchmarks externally certified and measured. In addition to this, the company carries out quarterly quality reviews with its customers and the parameters in the matrix are individually checked. It also has internal benchmarks to avoid any quality non-conformance issues.

## **Collaborating for Quality- The Journey to Excellence**

Fostering relationships with customers is the key to CTS Corp's success and this has helped the company retain its competitive advantage in the industry.

It has a complete design centre and it partners with its customers to provide high-complexity designs to ensure a uniform quality at the manufacturing end. It also collaborates with customers to ensure end of lot buys into the pipeline in the design stage itself, keeping in mind the parts obsolescence issue, thereby securing the market for the OEMs and itself.

In addition to ensuring unflinching quality in the manufacturing process, CTS Corp's emphasis on high levels of quality is also extended to its supplier and distributor network. The company also shares a strong relationship with its suppliers and distributors. This decreases the occurrence of counterfeit components as well as ensures high-quality levels right from the initial stage of the process. Ensuring

high-quality levels throughout the supply chain requires a strong integration within internal business units as well as with customers. This success has transformed the company's supply-chain expertise from an enabler to yet another differentiator.

For CTS Corp. its value proposition stems not from establishing quality systems and meeting measurements. The company's quality performance is achieved with the aim to enhance the value proposition for its customers. Its 'journey to excellence' philosophy has paid dividends and at present it has established for itself, a heightened market prominence.

Sustainable quality is imperative for any EMS provider wishing to gain and retain market share in the A&D industry. The ability of CTS Corp. to translate its philosophy of providing products and services of the highest quality and turning them into business gains has acquired for itself the differentiating position among its competitors. In recognition for the company's perseverance and dedication to achieving total quality and enhancing customer experience, Frost & Sullivan presents CTS Corp., the 2006 North America Product Quality Leadership Award in the EMS aerospace and defense (A&D) market.



#### **About Frost & Sullivan**

Frost & Sullivan, a global growth consulting company founded in 1961, partners with clients to create value through innovative growth strategies. The foundation of this partnership approach is our Growth Partnership Services platform, whereby we provide industry research, marketing strategies, consulting and training to our clients to help grow their business. A key benefit that Frost & Sullivan brings to its clients is a global perspective on a broad range of industries, markets, technologies, econometrics, and demographics. With a client list that includes Global 1000 companies, emerging companies, as well as the investment community, Frost & Sullivan has evolved into one of the premier growth consulting companies in the world.

Frost & Sullivan • Stacie Jones  
+1 210.247.2450 • stacie.jones@frost.com  
www.awards.frost.com

CTS Corporation. • Sarah Martin  
+1 44.1698.505.003 • sarah.martin@is.ctscorp.com  
www.ctscorp.com