

## **Frost & Sullivan Commends Optimal+'s IIoT Vision in Bridging the Data Silos within and between the Semiconductor and Electronics Industries**

*With its electronics operations platform, Optimal+ has pioneered the use of Big Data product analytics solutions in the semiconductor-electronics manufacturing ecosystem*

MOUNTAIN VIEW, California. — October 25, 2016 — Based on its recent analysis of the Big Data analytics market for the semiconductor and electronics industries, Frost & Sullivan recognizes Optimal Plus (Optimal+) with the 2016 Global Visionary Innovation Leadership Award. Optimal+ adopts a holistic approach to Big Data product analytics, wherein it collects, verifies, and manages product data to perform analytics and drive immediate and automatic action throughout the global supply chain. In addition, the company places significant emphasis on data integrity and governance by delivering an end-to-end data infrastructure that provides the extremely fast time-to-data for their customers. These advantages have attracted business from a variety of semiconductor companies and early adopters in the electronics manufacturing industry.

"The company obtains the data directly from the testers that reside on its customers' manufacturing lines and gathers the information in servers installed at all factories that supply parts to customers," said Frost & Sullivan Industry Director Jessy Cavazos. "It augments this data with information from other sources, including manufacturing execution system data and genealogy data. Its technology brings differentiated value to the concept of Industrial Internet of Things."

Optimal+'s eminence in the integrated circuit (IC) and multi-chip packages (MCP) space, coupled with its coverage of populated printed circuit boards (PCB), PCB rework data, and complete electronic systems, endow the company with a platform to provide the missing link between the electronics and semiconductor industries. Optimal+'s Big Data infrastructure serves as a common platform to connect the electronics supply chain to that of the semiconductor industry. This way, the company aggregates all test and process data collected from semiconductors in the same database as the product data from PCBs and electronic systems.

Optimal+'s inclusion of in-use data and reliability data for electronics will result in the ultimate Big Data product analytics solution for both semiconductor and electronics manufacturing. This solution, known as the suppliers quality network (SQN), addresses the need for a bi-directional data linkage between semiconductors and electronic systems. Although SQN is an integrated solution, Optimal+'s solutions for semiconductors and electronics are also available as standalone and fully self-contained solutions.

Another capability of Optimal+ available in both the semiconductor and electronics environments is data feed forward (DFF), which enables customers to leverage prior test results within a current test to screen out suspect devices from a good population. This screening helps spot issues such as excessive parametric drift between certain test results, which can be used to identify a good device that has passed all required tests but will probably fail prematurely.

"Optimal+ first stepped into the Big Data product analytics solutions market for electronics manufacturing with the release 6.5 of its software, developed in close partnership with NVIDIA," noted Cavazos. "It fostered another strategic partnership to tackle the heterogeneous test environment of the electronics manufacturing industry with National Instruments (NI), taking advantage of the common use of NI TestStand and LabVIEW in electronics manufacturing."

The company's key semiconductor solutions include Global Ops for Semiconductors, Escape Prevention, and Outlier Detection for addressing quality issues. Simultaneously, Optimal+ offers Global Ops for Electronics, which is at the core of its electronics operations platform, and the

company will soon be introducing its New Product Introduction (NPI) and yield ramp solution for electronics.

Optimal+ employs a number of data scientists who have developed many algorithms and rules for its solutions, providing a significant edge over competing solutions, both homegrown and commercial. The company's singular focus on products that deliver unique benefits to improve business performance makes it richly deserving of the 2016 Global Frost & Sullivan Award for Visionary Innovation Leadership.

Each year, Frost & Sullivan presents this award to the company that has demonstrated the ability to leverage global Mega Trends and integrate the vision into processes to achieve strategic excellence. The award recognizes the efficacy of the recipient's innovative process and the impact it has on business and society at large.

Frost & Sullivan Best Practices awards recognize companies in a variety of regional and global markets for demonstrating outstanding achievement and superior performance in areas such as leadership, technological innovation, customer service, and strategic product development. Industry analysts compare market participants and measure performance through in-depth interviews, analysis, and extensive secondary research to identify best practices in the industry.

#### **About Optimal+**

Optimal+ is a global provider of big data analytics software solutions, enabling semiconductor and electronics companies to quickly and easily aggregate, organize and act upon the fragmented manufacturing and product test data generated across their supply chains to measurably improve yield, quality and productivity. The company's real-time, Manufacturing Intelligence™ solutions are deployed in virtually every major foundry and OSAT currently serving the semiconductor-electronics ecosystem, processing over 50 billion ICs and PCBs every year on behalf of its customers and ushering in an era of unprecedented supply chain visibility and deep product analytics that delivers strong and measurable ROI. For more information, visit <http://www.optimalplus.com>

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

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