Data acquisition market on the rise

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World data acquisition hardware and software market to exceed $1.8 Billion in 2018.

The total world data acquisition hardware and software market generated $1.20 billion in revenue in 2011 and has an estimated compound annual growth rate (CAGR) at 6.4 percent from 2011-2018. However, the contribution of the hardware segment to the overall market revenues dropped to 87.1 percent in 2011 while the share of the software segment increased to 12.4 percent.

The adoption of Ethernet is accelerating with growing confidence around interoperability and ease of integration, which is driving demand for data acquisition hardware and software. Many opportunities are resulting from the increasing use of Ethernet in the market. With Ethernet comes a desire for increased speed of networks (Gigabit) and ease of recording and retrieval. Many IT departments are expected to adopt Gigabit Ethernet (IEEE 802.3ab) as the basis of their networks systems over the next five years.

Moreover, Frost & Sullivan foresees a major change in the next five years for the data acquisition (DAQ) market in which there will be an increasing adoption of wireless data acquisition systems. Technically, wireless applications will allow companies to differentiate themselves in the market with the continuous monitoring of data acquisition remotely for the control of electrical, mechanical and acoustical signals. Although, there are still security challenges to overcome in order for the successful adoption of wireless in DAQ.

Other factors expected to drive market growth include the proliferation of open software standards, as well as opportunities and new leads coming from Asia Pacific. Specifically, Australia, China, India and Korea are expected to provide growth opportunities during the forecast period. In addition, protocol, smart sensors and data loggers are growing in the field of DAQ. Suppliers and end-users are also moving to hybrid approaches for a total solution that includes both, PCI eXtensions for instrumentation express (PXIe) and VersaModular Euro eXtensions for instrumentation (VXI), primarily due to cost considerations.

The Ethernet market held the largest market share in 2011, followed by universal serial bus (USB), PXI and VXI and is the fastest growing segment in the world data acquisition hardware and software market.
World Data Acquisition Hardware & Software Market:
Revenue, 2011, 2014 and 2018
CAGR: 6.4%

Note: All figures are rounded. The base year is 2011. Source: Frost & Sullivan analysis

From an end-user perspective, aerospace and defense (A&D) held the largest market share in terms of sales revenue, followed by the power energy segment and the automotive segment, although Frost & Sullivan foresees that the majority of new leads and sales will come from the energy sector. There are increased areas of development in the smart grid sector, including renewable or conventional energy. Furthermore, the market leaders are seeing the cost-value and importance to focus on green energy, such as solar energy in hybrid cars. This is translating into the need to acquire data and therefore new demand for data acquisition systems.

From a technological perspective, mobile and cloud are areas of interest for the future. “Integrating DAQ systems with cloud and mobile technologies represents a future direction of the market,” said Todd Dobberstein, National Instruments Manager of data acquisition technologies. “Working seamlessly with the cloud provides DAQ companies the opportunity to differentiate themselves from the competition and gives the user the ability to access their data from anywhere. End-users are also expecting data acquisition systems to interface well with mobile tools for remote visualization.”

Overall, the increasing adoption of advanced wireless applications in the next decade will contribute significantly to the growth of the DAQ hardware and software market. Frost & Sullivan believes that there will be sustained growth in the world DAQ hardware and software market, resulting in moderate single-digit growth during the next few years.

About the author
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