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IDT And CERN Openlab Mark Milestone For Data Acquisition And Data Center Analytics Applications Used For Large Hadron Collider

■ Engineers Successfully Port CERN's Analytics and Event Building Application at Line Rate with 100 ns Latency RapidIO Interconnect Hardware Platform

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SAN JOSE, Calif., June 22, 2016 /PRNewswire/ -- Integrated Device Technology, Inc. (IDT®) (NASDAQ: IDTI) announced today that CERN's data-processing framework has successfully been ported to a RapidIO[®]-enabled low-latency network that features multiple x86 CPU nodes, a world first in the high-performance computing

market. The development comes during the first phase of IDT's collaboration with CERN (the European Organization for Nuclear Research), part of a multi-year project announced last year that is designed to speed and improve data analytics at CERN's Large Hadron Collider (LHC) and data center.



During this groundbreaking work, standard x86 servers in the CERN data center were equipped with 20 Gbps RapidIO network interface controller (NIC) cards and connected with a 0.75 Tbps RapidIO top of rack switch appliance designed by Prodrive Technologies. Leveraging this hardware architecture, CERN openlab researchers successfully ported CERN's ROOT framework for data processing and analytics, as well as the LHCb experiment's DAQPIPE event-building emulator, which is used to evaluate high-tech interconnects intended to be used in the collider event-building network. Full hardware line rates were sustained, and link utilization rates were competitive relative to other industry options, which is a key to more efficient data center workload optimization.

CERN openlab is a unique public-private partnership that accelerates the development of cutting-edge solutions for the worldwide LHC community and wider scientific research. The collaboration with IDT is working to improve overall data acquisition and analysis for the massive volumes of data collected by the experiments on the LHC, the world's largest and most powerful particle accelerator. The LHC produces millions of collisions every second in each detector, generating approximately one petabyte of data per second. This data is important to CERN's quest to answer fundamental questions about the universe.

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