



**INDUSTRY**

Data Management and Analytics

**WEBSITE**

www.exar.com

**COMPANY OVERVIEW**

AltraHD is part of Exar's data compression and security product line, offering high-performance advanced subsystem solutions for the data analytics, storage and networking markets.

**PRODUCT OVERVIEW**

Exar's AltraHD combines Exar's state-of-the-art software technology with its leading edge hardware compression accelerators to remove costly I/O bottlenecks and optimize the storage capacity for Hadoop applications. The hardware acceleration offloads the host CPU, maximizing cluster performance and optimizing system efficiency.

**SOLUTION HIGHLIGHTS**

- > Plug and Play
- > Automatically compresses and decompresses all files, including HDFS files and intermediate data
- > Up to 2x performance gain
- > Up to 10x increase in storage capacity
- > Cloudera certified

## Cloudera and Exar Deliver High-Performance Application-Transparent Compression for Hadoop

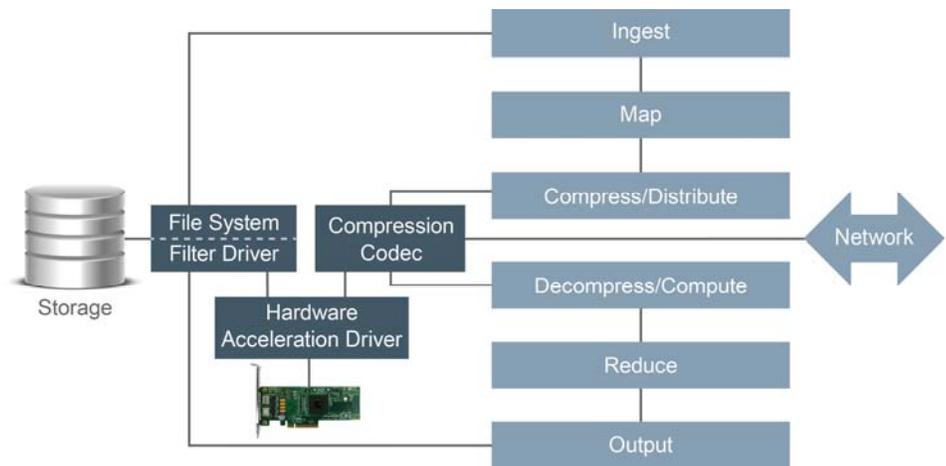
### Overview

Hadoop has revolutionized the data analytics industry, providing technology that enables the storage, processing and analysis of vast amounts of disparate types of data. Its ability to parse huge volumes of dissimilar data types has forever changed the way we manage and analyze data.

However, as the number of servers multiplies to meet the growing big data requirements, the system efficiency of Hadoop clusters becomes challenged as system bottlenecks emerge. The ability to store the massive amounts of data can become challenging, with additional servers sometimes being added just to address the need for more storage capacity.

Deploying Exar's Cloudera-certified AltraHD™ with CDH, Cloudera's open source distribution of Hadoop, provides a plug-and-play comprehensive compression solution which seamlessly integrates into the Hadoop stack and automatically and transparently compresses all files.

- Exar's application transparent file system filter driver, which sits below the Hadoop Distributed File System (HDFS), automatically compresses/decompresses all files, including HDFS files. This enables transparent compression for all modules that interface to HDFS, including MapReduce, Hive and HBase.
- Exar's family of compression codecs automatically compresses/decompresses intermediate data during the MapReduce phase of Hadoop processing.
- Exar's high performance PCIe-based compression acceleration card automatically accelerates all compression and decompression operations, maximizing throughput while offloading the host CPU. The acceleration optimizes workloads and delivers maximum system performance. A single card provides up to 5GB/sec of compression/decompression throughput using gzip, maximizing compression ratios without the costly CPU overhead of software-based gzip.



<p><b>Benefits of Cloudera</b></p> <ul style="list-style-type: none"> <li>• <b>Powerful</b> – Store, process and analyze all your data to drive competitive advantage</li> <li>• <b>Efficient</b> – Hadoop unifies compute and data to improve operational efficiency</li> <li>• <b>Open</b> – 100% open source: CDH is the world's most popular open source distribution powered by Apache Hadoop</li> <li>• <b>Simple</b> – Easy to deploy and operate with centralized administration</li> <li>• <b>Compatible</b> – Leverage your existing investments for rapid adoption and lower TCO</li> <li>• <b>Economical</b> – Rethink the economics of data management with an open source platform on industry standard hardware - up to 90% more cost effective than traditional solutions</li> <li>• <b>Enterprise Ready</b> – Equipped with critical capabilities to support mission-critical operations</li> </ul> <p><b>Benefits of Exar AltraHD</b></p> <p><b>Increased Performance</b></p> <ul style="list-style-type: none"> <li>&gt; Up to 2x performance increase</li> </ul> <p><b>Enhanced Storage Capacity</b></p> <ul style="list-style-type: none"> <li>&gt; Up to 10x increase in storage capacity</li> </ul> <p><b>TCO Reduction</b></p> <ul style="list-style-type: none"> <li>&gt; Reduces CAPEX and OPEX</li> </ul> <p><b>Fast, Easy Integration</b></p> <ul style="list-style-type: none"> <li>&gt; Integrates seamlessly into Hadoop stack for quick time to market</li> </ul> <p><b>Broad System Support</b></p> <ul style="list-style-type: none"> <li>&gt; Supports a wide range of Linux distributions</li> <li>&gt; Compatible with EXT3, EXT4 and XFS file systems</li> </ul>	<p><b>Major Benefits</b></p> <p>Exar's AltraHD addresses multiple issues with Hadoop clusters, delivering a multitude of benefits. The large amount of data processing that occurs with Hadoop can cause the system to become I/O bound, causing the CPU to wait for data to be retrieved from the storage or networking I/O subsystems and reducing system performance. In addition, the storage footprint can expand to a point where additional nodes are added to address the expanding storage requirements. AltraHD provides the following benefits to solve these problems.</p> <p><b>Increases Performance</b></p> <p>System performance is maximized by reducing or eliminating costly I/O bottlenecks, delivering up to a 2x performance increase.</p> <p><b>Increases Storage Capacity</b></p> <p>The storage capacity is improved in proportion to data compressibility, resulting in an optimized storage subsystem. Real-world customer systems have shown increases in storage capacity up to 10x, and the enhanced storage capacity can be even greater depending on the system data.</p> <p><b>Reduces Capital and Operating Costs</b></p> <p>The performance increase and storage optimization reduce the number of nodes required, as well as the associated power, cooling, and space requirements. This minimizes both CAPEX and OPEX, reducing the overall total cost of ownership (TCO).</p> <p><b>About Cloudera</b></p> <p>Cloudera is revolutionizing enterprise data management by offering the first unified Platform for Big Data: The Enterprise Data Hub. Cloudera offers enterprises one place to store, process and analyze all their data, empowering them to extend the value of existing investments while enabling fundamental new ways to derive value from their data. Founded in 2008, Cloudera was the first and is still today the leading provider and supporter of Hadoop for the enterprise. Cloudera also offers software for business critical data challenges including storage, access, management, analysis, security and search. With over 20,000 individuals trained, Cloudera is a leading educator of data professionals, offering the industry's broadest array of Hadoop training and certification programs. Cloudera works with over 1,400 hardware, software and services partners to meet customers' big data goals. Leading organizations in every industry run Cloudera in production, including finance, telecommunications, retail, internet, utilities, oil and gas, healthcare, biopharmaceuticals, networking and media, plus top public sector organizations globally. <a href="http://www.cloudera.com">www.cloudera.com</a></p> <p><b>About Exar</b></p> <p>AltraHD is part of Exar's data compression and security product line, offering high-performance advanced subsystem solutions for data analytics, storage, and networking markets. Exar Corporation designs, develops and markets high performance integrated circuits and system solutions for the industrial and embedded systems communications, high-end consumer and infrastructure markets. Exar's broad product portfolio includes analog, display, LED lighting, mixed-signal, power management, connectivity, data management and video processing solutions. Exar has locations worldwide providing real-time customer support. For more information, visit <a href="http://www.exar.com">www.exar.com</a>.</p>