BRUKER

Data Management Solutions

Acquifer HIVE

Centralized Data Storage and Computing

Acquifer HIVE

Specialized Big Data Management

Bruker's Acquifer HIVE is a big data management system for handling large amounts of scientific data, such as microscope image series, screening results, or omics data. This centralized data storage and computing solution provides high-speed data transfer, safe storage capacity, and parallel data processing for multiple users with intuitive processing and analysis workflows.

Acquifer HIVE enables greater efficiency in collecting, writing, and processing data, making it ideal for (not only) biology-focused scientists and research facilities dealing with large datasets from various instruments, like microscopes, screening platforms, and many other systems. Its CPU and GPU capabilities ensure reliability with all major imaging software, and its high-speed RAID architecture, firewall, and uninterruptible power supply guarantee secure storage.

Scalable, user-friendly, and with silent technology, Acquifer HIVE is a preferred computing solution for both laboratory and office environments.
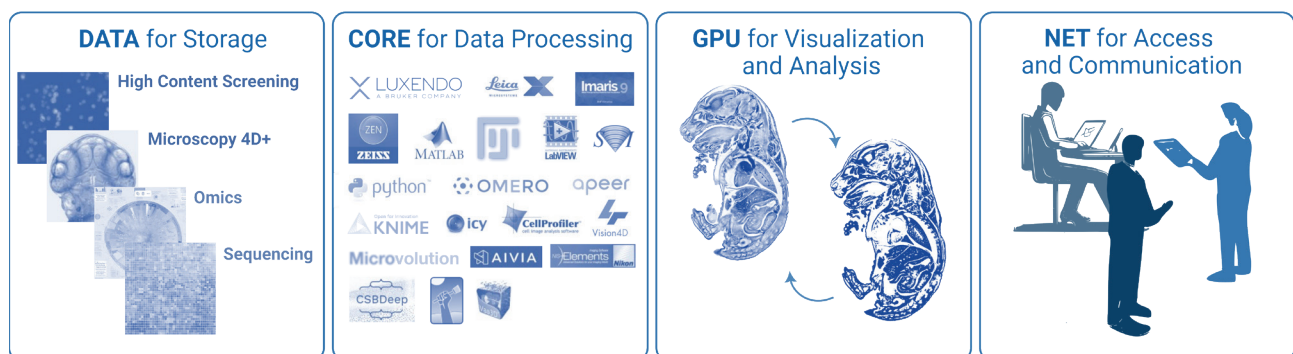
Core Modules: Acquifer HIVE is a modular system with each module suited for computation, storage, or networking.

Key benefits of Acquifer HIVE include:

- Customizable configurations with plug-and-play extensions
- Multi-user environments and remote access
- Proven software integration for advanced microscopy applications
- Compatibility with advanced microscopy and numerous other scientific computing applications

Optimized Acquifer HIVE modules include:

- **DATA** for fast and secure storage
- **CORE** for processing
- **GPU** for visualization, processing, and machine learning
- **NET** for communication; up to 200 Gbit/s connection to your microscopes

Superior Flexibility for Your Data Needs

Centralized Data Storage and Processing

Acquifer HIVE is ideal for big image data management, as processing and storage are achieved in one unit. This eliminates the need for data copying, duplicating, and transferring. Data is also kept safe with RAID systems, Firewall, and UPS (Uninterruptible Power Supply).

Multi-User System

Acquifer HIVE facilitates connectivity and efficient teamwork across multiple locations. This ensures accessibility and productivity in a collaborative environment. The system is equipped with a dedicated high-bandwidth network, has the ability to manage data input from multiple microscopes, and supports the centralized use of software licenses.

Intuitive Setup and Maintenance

Acquifer HIVE delivers uncommon ease of use to researchers, requiring no special expertise in software or hardware for its setup, use, and maintenance. Packaged in stackable units, the system is environmentally friendly with low energy consumption and silent technology.

Perfected for Image and Non-Visual Data Analysis

Acquifer HIVE runs Windows Server 2022 operating system, and is specifically designed for multi-user, high-throughput, and computationally demanding analysis. It is compatible with a wide range of software packages, including:

- Luxendo LuxBundle
- Fiji/ImageJ
- Leica LAS X
- Python
- SVI Huygens
- Zeiss Zen
- Bitplane Imaris
- arivis Vision 4D

Image   **Processing**   **Data**
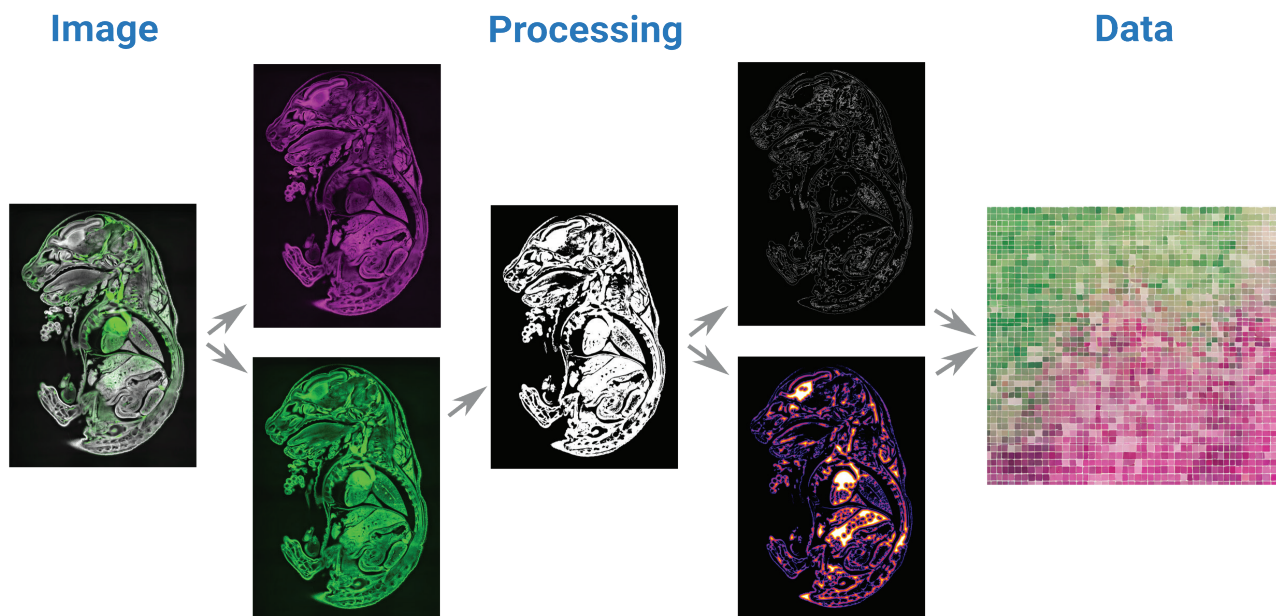
From Images to Knowledge: Acquifer HIVE allows big data image analysis. Original image courtesy of Montserrat Coll Lladó, European Molecular Biology Laboratory, Barcelona, Spain.

Acquifer HIVE Specifications

Data Processing	2.2. GHz 12-core processor up to 2.6 GHz 2 x 64-core 128 GB to 2 TB ECC memory - NVIDIA © professional graphics cards with high-performance CUDA GPU with up to 48 GB memory
Scalable High-Speed Storage	- Data collection rates of at least 800 MB/s - Internal data transfer rates of at least 3 GB/s - RAID 5 controlled primary storage of 10 TB SSD - RAID 6 storage of 52 to 234 TB DATA, can be combined to more than 1 PB
GPU processing	- Up to four dual slot GPUs per GPU module - PCIe x16 multiplexed - Up to three transparent HIVE extensions
Secure Project Management	- Latest generation 2048-bit encryption - Built-in DHCP server - Personalized access to a project, directory, and individual levels
System Compatibility	- Products and software from 3i, Andor, Arivis, Bitplane, FEI, Fiji, Glencoe Software, Leica, Luxendo, Matlab, Nikon, SVI Huygens, and more - All microscope providers (Bruker, Zeiss, Leica, Olympus, Miltenyi, Nikon, etc.) - Virtual Machines (VM) and Linux solutions are available upon request

Acquifer HIVE is made to order based on your requirements. Later extensions and upgrades are easily implemented.

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