

MetaXpress

High-content image acquisition and analysis software for 2D, 3D, and time-lapse cellular assays in high-throughput screening.

<https://example.com/1762583716453>

Overview

MetaXpress® High-Content Image Acquisition and Analysis Software by Molecular Devices is a comprehensive, integrated solution designed for high-content screening (HCS) infrastructure. It serves as the core platform for controlling image acquisition on ImageXpress HCS systems and for performing powerful, elegant image analysis.

Key Features and Capabilities

The software provides a tightly orchestrated workflow from image capture to data management, built on the foundation of the industry-leading MetaMorph® Software. It is optimized for high-throughput environments and complex biological questions, including 3D cell models.

2D and 3D Analysis: Supports acquisition and volumetric analysis of complex samples like spheroids, microtissues, cells in a 3D matrix, and small organisms.

Modular Toolbox: Features a portfolio of turnkey application modules for common HCS assays, such as Micronuclei, Neurite Outgrowth, Angiogenesis Tube Formation, Mitotic Index, and Cell Cycle.

Custom Module Editor (CME): An interactive, step-by-step editor that allows users to create custom, multi-step analysis routines for proprietary or challenging assays, including object-within-object identification and morphometric classifiers.

Intelligent Segmentation: Application modules utilize proprietary adaptive background correction algorithms for robust image segmentation on both label-free and fluorescently labeled images.

High-Speed Processing: The optional **MetaXpress PowerCore™** software component leverages parallel processing across multiple clients/servers to dramatically accelerate image analysis speed (up to 40x faster) in high-throughput environments.

Data Management: Includes **MDCStore™ Data Manager** for organizing images, experimental information, and analysis data in a secure, scalable database (Microsoft SQL Server or Oracle).

Target Users and Use Cases

MetaXpress is primarily targeted at research institutions, pharmaceutical, and biotechnology companies engaged in drug discovery and basic research. Its use cases include:

High-Content Screening (HCS)

3D Cell Model Quantification (Organoids, Spheroids)
Live Cell Imaging and Kinetic Assays
Cell Painting and Multiplexed Phenotypic Screens
Compound Screening and Toxicity Assays
Cellular Imaging and Analysis for various biological functions.

Key Features

- 2D and 3D Image Acquisition and Analysis
- Custom Module Editor (CME)
- Modular Application Toolbox for HCS Assays
- Intelligent Segmentation and Adaptive Background Correction
- MDCStore Data Management Solution
- MetaXpress PowerCore Distributed Analysis (Optional)
- Time-Lapse and Kinetic Assay Support
- Integration with ImageXpress HCS Systems

Pricing

Model: enterprise

Pricing is not publicly disclosed and requires a quote from Molecular Devices. Licensing is controlled via a SafeNet Sentinel USB hardware key (single or multi-license network key). Optional modules (e.g., PowerCore, application modules) require separate licenses.

Target Company Size: medium, enterprise

Integrations

Molecular Devices ImageXpress HCS Systems, MDCStore Data Manager, AcuityXpress High-Content Informatics Software, Microsoft SQL Server, Oracle

Compliance & Certifications

FDA 21 CFR Part 11

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