ImageXpress Micro Confocal High-Content Imaging System

The confocal solution for your complex biology

KEY FEATURES

• Acquire statistically relevant data quickly with an advanced scientific CMOS detector, enabling >3 log dynamic range
• Improve visualization and quantitation with 3D assay models
• Achieve excellent image quality without sacrificing throughput using our unique optical path technology
• Expand your research capabilities with transmitted light, liquid handling, and environmental options

Higher quality images, faster throughput, and more powerful analysis

The ImageXpress® Micro Confocal High-Content Imaging System provides improved quantification for live or fixed cell assays. This versatile imaging system features a unique confocal technology which allows you to explore more physiologically relevant, complex three dimensional models including spheroids, tissues, and whole organisms and to generate publication quality images at high throughput for samples in slides or one to 1536-well microplates.

For researchers looking to expand their laboratory’s capabilities, the ImageXpress Micro Confocal system leverages large field-of-view optics to map macro-structures with minimal tiling. In addition, querying of large cell populations is accelerated, speeding up the characterization of highly heterogeneous samples or identification of rare subpopulations.

Combined with MetaXpress High-Content Image Acquisition and Analysis Software, the ImageXpress Micro Confocal system is a complete solution that enables you to interpret your images, understand your data, and explore new ideas – in both widefield and confocal modes.
Specifications

System
- High-speed laser autofocus with integrated image autofocus option
- Linear encoded voice coil driven X, Y, and Z stages with < 25 nm resolution
- 4-position automated objective changer*
- 5-position software selectable dichroic filter wheel*
- 8-position software selectable emission filter wheel*
- Sample compatibility: slides and one to 1536-well microplates, round or flat bottom, low to high profile, and trans-well plates

AgileOptix Optical Path
- AgileOptix™ technology enables the ImageXpress Micro Confocal system to deliver the sensitivity and throughput needed for demanding applications by combining a powerful solid-state light engine, high-quantum efficiency 16-bit scientific CMOS sensor and selectable unique confocal geometries.
- >3 log dynamic range in both widefield and confocal modes
- Large field of view (1.96 mm² at 10X) imaging to maximize collection of publication quality images and statistically relevant data

*user changeable

Option Feature

Environmental control
- Multi-day, live cell time-lapse imaging
- Provides appropriate atmospheric conditions (e.g. 5% or 10% CO₂)
- Mimics physiological environment (30–40 °C ± 0.5 °C)
- Controls humidity and minimizes evaporation (0.5 µL/well/hour for 96- or 384-well formats)

Phase contrast
- High contrast imaging where unstained cells are easily viewed or separated from background (4X–60X)
- Ideal for non-fluorescent histochemically stained samples
- Nikon 100W Pillar Diascopic Illuminator with TE-C ELWD Condenser
- 0.3 NA with 65 mm WD and PhL, Ph1, and Ph2 selectable phase rings
- Fluorophore-independent morphology visualization with fluorescent imaging overlay

Liquid handling
- Single-channel pipettor
- Dispense volumes from 3 µL to 200 µL (±1 µL; ±5%)
- Compatible with 96- or 384-well format FLIPR System pipette tips
- Holds two plates for compound addition or media exchange
- Optional plate heating
- Environmental control

Note: all options, filters, and objectives are available at point of sale or as after market upgrades. Configuration shown in this datasheet do not encompass all configurations available. Contact your sales and support team today to identify the system configuration most suitable for your applications.

Explore modifications with AWES
The Molecular Devices Advanced Workflow Engineering Solution (AWES) team has successfully tailored the ImageXpress Micro system for some customers to include a variety of light engines to address ultra violet (UV) to near infrared (NIR) applications, environmental control with gas mixers for CO₂ and Hypoxia, fluidics with simultaneous imaging and dispensing, as well as integration of other lab components such as incubators, liquid handlers, and robotics for a fully automated work cell. The AWES team is available to explore these modifications with you. Price, time to deliver, and specifications will vary based on mutually agreed technical requirements. Solution requirements may cause adjustment to standard performance. Purchase Terms available at www.moleculardevices.com/custom-products-purchase-terms.