

Microarray Scanner MArS

The easy to use fluorescence scanner saves lab time by running up to **4 slides in one scan job**.

The **one-mouse-click operation** for routine applications is based on predefined scan protocols including data analysis algorithms; optionally **triggered by barcode reading**.

Maximum flexible scan protocols provide high quality and efficiency for your individual research applications.

The stand alone system is fitting in every lab due to it's small size - and also offers **high value for a really affordable price**.

MArS system specifications

Excitation

- » Two solid-state lasers (standard)
- » 532 nm and 635 nm for Cy3, Cy5 and similar fluorescence labels
- » Peltier-cooled laser modules for enhanced signal stability

Emission

- » Up to 6 emission filters; motorized filter wheel
- » Standard 580 and 680 nm bandpass (for Cy3, Cy5 and similar fluorescence labels), others upon request
- » Greyfilter for barcode reading (1D and 2D)

Detection

- » Low-noise Photomultiplier with highest sensitivity for optimal signal-to-noise ratio
- » "Quantum efficiency-independent PMT-gain control"
- » 16-bit dynamic range; linear over 4 decades
- » Two data channels for up to 20-bit dynamics in one run

Scanning

- » Triaxial, motorized X/Y/Z-Scan mechanics
- » Pixel resolution adjustable 10 to 100 μm
- » Automatic focus adjustment
- » One wavelength per scan for lowest crosstalk (Cy5 vs. Cy3-scan)

Flexibility

- » Scanning up to four slides simultaneously
- » „Force-free“ loading of slides

ISO Slide Standard

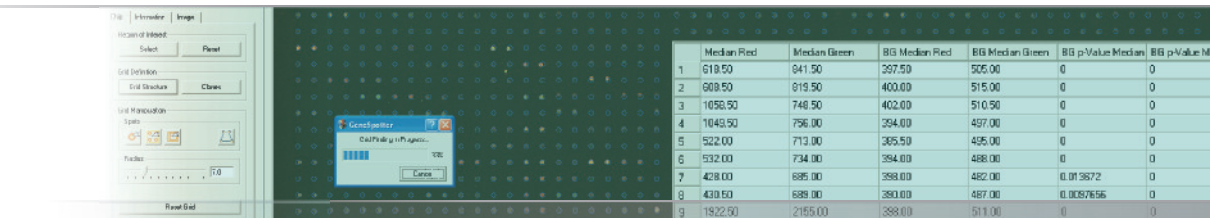
- » Width: min. 24.9 mm, max. 25.4 mm
- » Length: 75-76 mm
- » Scanning field: 23 x 76 mm
- » Glass- or plastic slides

Dimensions & weight

- » W-H-D: 395 - 305 - 595 mm
- » Weight: 22 kg

Software

- » Basis software „SpotScout“
- » Analysis software „SpotScout Pro“



„SpotScout Pro“

Enables the automatic evaluation of a wide range of biochip formats

- » Quantifying and evaluating image data from biochips
- » Powerful algorithms for automatic grid finding
- » Reliable and efficient quality control

Daily tasks become significantly easier and are performed much faster due to intuitive interfaces, efficient session management and comprehensive reporting.

Fully automatic grid finding avoids individual errors and affords reproducibility of results at all times.

Quality control

SpotScout comes with reliable quality assurance functions, such as spot position evaluation, artefact detection and saturation checks.

- » Objective evaluation of the overall quality of a chip
- » Objective evaluation of the individual quality of each spot
- » Avoidance of costly misinterpretation due to experimental artefacts
- » Documentation of each evaluation step

Compatible with a broad range of biochip formats

- » Image formats from microarray scanner MArS and all standard scanners
- » Import of all GAL files





MArS Verification Kit

To allow **routine quality checks** of MArS according to the 'IVD-Directive' 98/79 EG the Verification Kit offers the test modules:

- » Gain Verification
- » Focus Verification
- » Slot geometry
- » Red-Green Alignment
- » Autofluorescence
- » Background Verification
- » Laser Noise
- » Electronic Noise

To afford easiest handling and to avoid individual mistakes the „Verification Wizard“ guides the user through the testing process.

Testing results

Required corrective actions are executed automatically. The results are documented in a comprehensive Verification Report.

The Verification Kit consists of:

- » Software module ‚Verification Wizard‘
- » Corresponding verification slides (geometric & verification slide), individually barcoded and tracked by the software
- » Motorized lens cleaning tool

To get more details about the technology

please go to www.ditabis.de/mars to watch the demo clip and see additional information about the operation of the scanner system and the Verification Kit.



Microarray Scanner MArS for all biochip applications

DITABIS AG - Digital Biomedical Imaging Systems AG
Freiburger Str. 3
75179 Pforzheim (Germany)

Telefon: +49 7231 / 29 863 00
Telefax: +49 7231 / 29 863 01 / -02
E-Mail: sales@ditabis.de

