

Leica Microsystems – the brand for outstanding products

Leica Microsystems' mission is to be the world's first-choice provider of innovative solutions to our customers' needs for vision, measurement, lithography and analysis of microstructures.

Leica, the leading brand for microscopes and scientific instruments, developed from five brand names, all with a long tradition: Wild, Leitz, Reichert, Jung and Cambridge Instruments. Yet Leica symbolizes innovation as well as tradition..

Leica Microsystems – an international company with a strong network of customer services

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|-------------------------|-----------------------|------------------------|------------------------|
| Australia: | Gladesville | Tel. +61 2 9879 9700 | Fax +61 2 9817 8358 |
| Austria: | Vienna | Tel. +43 1 486 80 50 0 | Fax +43 1 486 80 50 30 |
| Canada: | Richmond Hill/Ontario | Tel. +1 905 762 2000 | Fax +1 905 762 8937 |
| Denmark: | Herlev | Tel. +45 4454 0101 | Fax +45 4454 0111 |
| France: | Rueil-Malmaison | Tel. +33 1 473 285 85 | Fax +33 1 473 285 86 |
| Germany: | Bensheim | Tel. +49 6251 136 0 | Fax +49 6251 136 155 |
| Italy: | Milan | Tel. +39 0257 486.1 | Fax +39 0257 40 3273 |
| Japan: | Tokyo | Tel. + 81 3 5421 2800 | Fax +81 3 5421 2896 |
| Korea: | Seoul | Tel. +82 2 514 65 43 | Fax +82 2 514 65 48 |
| Netherlands: | Rijswijk | Tel. +31 70 4132 100 | Fax +31 70 4132 109 |
| People's Rep. of China: | Hong Kong | Tel. +852 2564 6699 | Fax +852 2564 4163 |
| Portugal: | Lisbon | Tel. +351 21 388 9112 | Fax +351 21 385 4668 |
| Singapore | | Tel. +65 6779 7823 | Fax +65 6773 0628 |
| Spain: | Barcelona | Tel. +34 93 494 95 30 | Fax +34 93 494 95 32 |
| Sweden: | Sollentuna | Tel. +46 8 625 45 45 | Fax +46 8 625 45 10 |
| Switzerland: | Glattbrugg | Tel. +41 1 809 34 34 | Fax +41 1 809 34 44 |
| United Kingdom: | Milton Keynes | Tel. +44 1908 246 246 | Fax +44 1908 609 992 |
| USA: | Bannockburn/Illinois | Tel. +1 847 405 0123 | Fax +1 847 405 0164 |

and representatives of Leica Microsystems
in more than 100 countries.

The companies of the Leica Microsystems Group operate internationally in four business segments, where we rank with the market leaders.

• Microscopy Systems

Our expertise in microscopy is the basis for all our solutions for visualization, measurement and analysis of microstructures in life sciences and industry. With confocal laser technology and image analysis systems, we provide three-dimensional viewing facilities and offer new solutions for cytogenetics, pathology and materials sciences.

• Specimen Preparation

We provide comprehensive systems and services for clinical histo- and cytopathology applications, biomedical research and industrial quality assurance. Our product range includes instruments, systems and consumables for tissue infiltration and embedding, microtomes and cryostats as well as automated stainers and coverslippers.

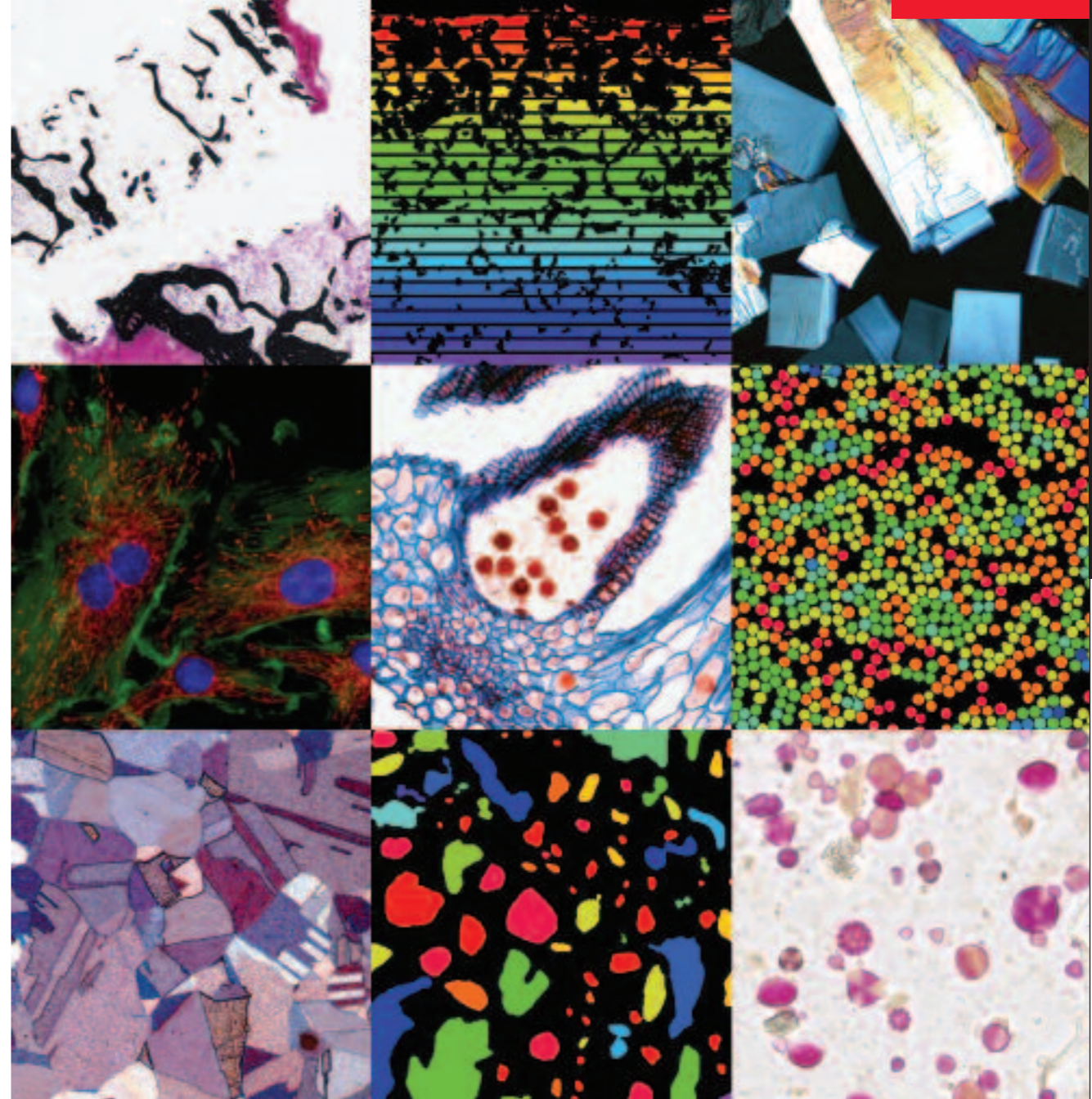
• Medical Equipment

Innovative technologies in our surgical microscopes offer new therapeutic approaches in microsurgery.

• Semiconductor Equipment

Our automated, leading-edge measurement and inspection systems and our E-beam lithography systems make us the first choice supplier for semiconductor manufacturers all over the world.

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Leica QWin and Imaging Workstations

Image Processing and Analysis Software
Application Solutions for Quantitative Microscopy

Leica QWin Image Processing and Analysis Software

The Complete Imaging Solution

Leica QWin for Quantitative Microscopy

Leica QWin image processing and analysis software provides superior solutions for quantitative microscopy. The modular and scaleable nature of Leica QWin is such that its capability ranges from simple interactive image measurements to automatic, multi-parameter measurements of an immense number of features. Leica QWin is available in five editions from Runner to Professional to meet your performance requirements and budget.

Application Solution Development

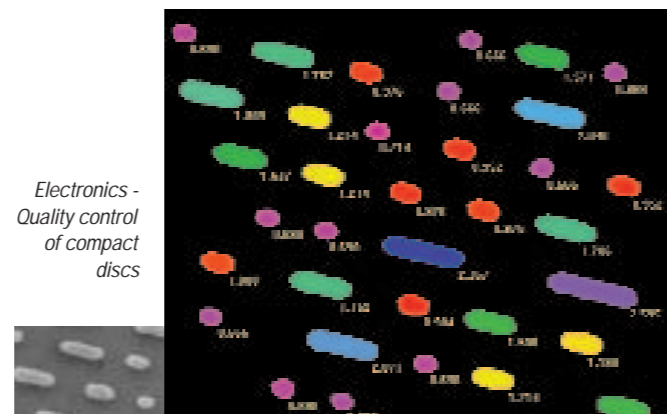
The QUIPS feature within Leica QWin makes customising and automating QWin for your specific application simple. This interactive macro-programming function offers benefits for optimising routine tasks and provides capabilities for developing more complex research solutions.

Integration and Automation

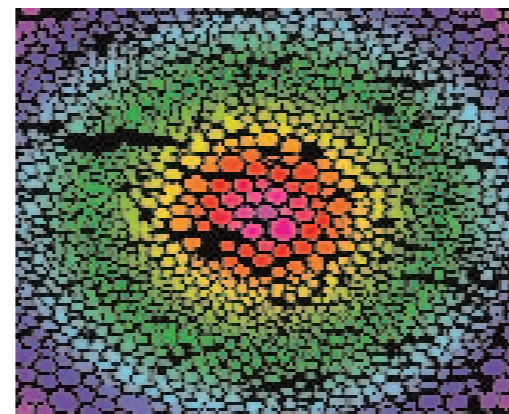
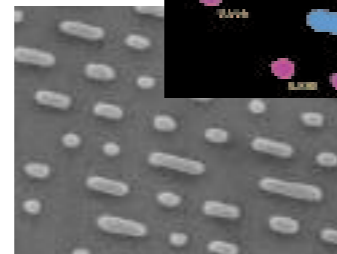
Leica QWin combines with Leica Digital Cameras and Microscopes to offer a totally integrated imaging solution. The complete solution offers unrivalled performance particularly in applications requiring fast analysis, high sample throughput and unattended operation. Automation brings added benefits to the solution for improved laboratory productivity and using automatic microscopes, gives control of the stage, focus, lamp brightness, filter block and shutter.

Reliable Image Storage and Retrieval

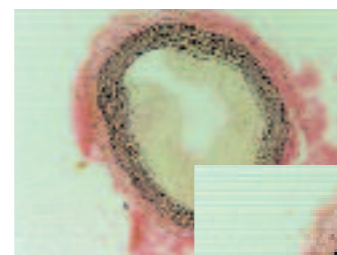
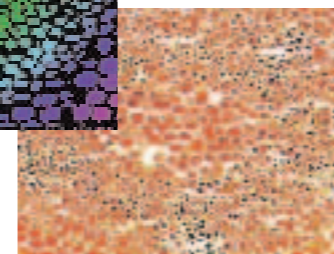
Leica IM1000, working in conjunction with Leica QWin, is an impressive image database and archiving option for maintaining, searching, documenting and storing images and data.



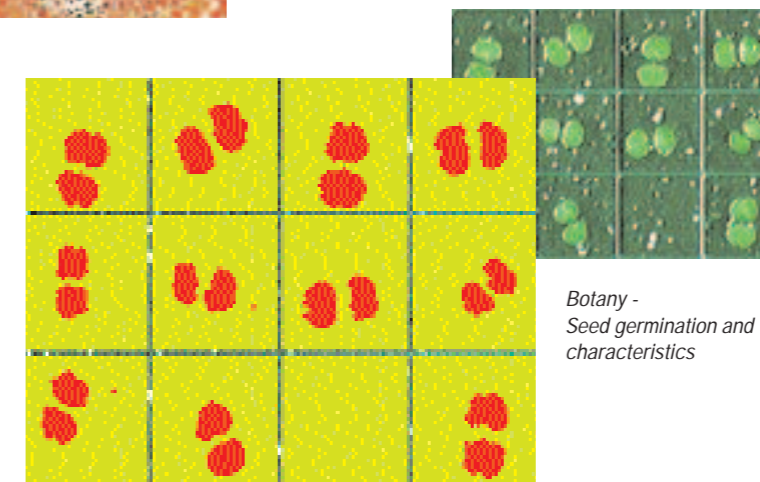
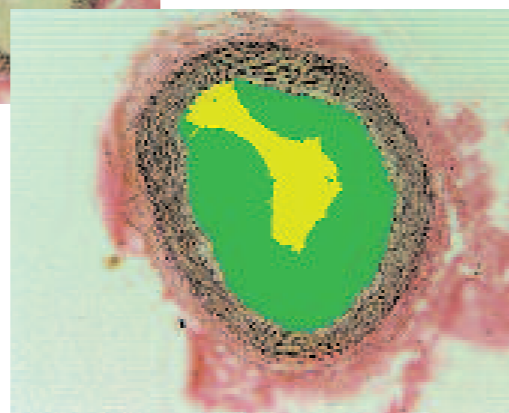
Electronics -
Quality control
of compact
discs



Cytology -
Radial size distribution
assessment



Artery Cross Section -
Calculation of percentage restriction



Botany -
Seed germination and
characteristics

Diverse Specimen Range

Specimens can be analysed from a diverse range including, cell monolayers, plant sections and seeds, tissue sections, natural and processed food products, in-situ hybridization of stained tissue sections, protein crystals, synthetic and forensic fibres, polished and etched metals, embedded and sectioned minerals, semiconductor wafer defects, abrasive powders and carbon black components.

Leica QWin is:

- Optimised for quantitative microscopy to solve a diverse range of life science and industrial applications.
- Integrated as a complete system solution, giving single supplier assurance.
- Unrivalled in its richness of image processing and measurement functions.
- A versatile and adaptable application solving a wide range of tasks from interactive to totally automated.
- Highly effective in creating solutions to new and demanding applications using the QUIPS macro programming language.

A Software Suite to Match Your Needs

Rapid Application Solutions

The power of Leica QWin is made readily accessible to the widest range of potential users through its carefully structured software editions, which build on each other's capability.

Leica QWin Runner

- An environment for running QUIPS and Applets routines.
- Image gallery and image annotation.

Leica QWin Lite

- For interactive feature measurements - draw directly on the screen using the mouse.
- Image annotation with arrows, text and calibration scale.
- Image printing and documentation.
- Storage and image review with Leica QGallery.
- Draw and edit complex regions.
- Measure image brightness, histograms and profiles.

Leica QWin Plus

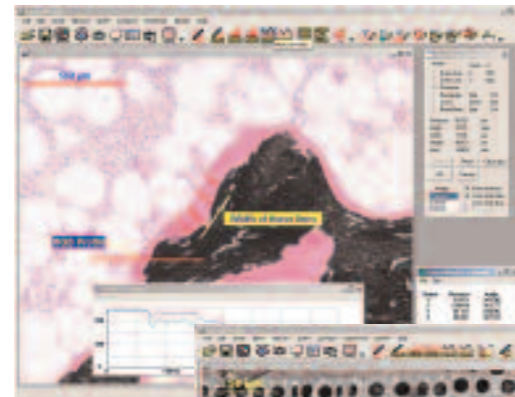
- For automatic measurement of multiple image features.
- Colour, grey and binary image processing.
- Image editing and automatic detection.
- Results in histogram, scatter-gram and statistical formats.

Leica QWin Standard

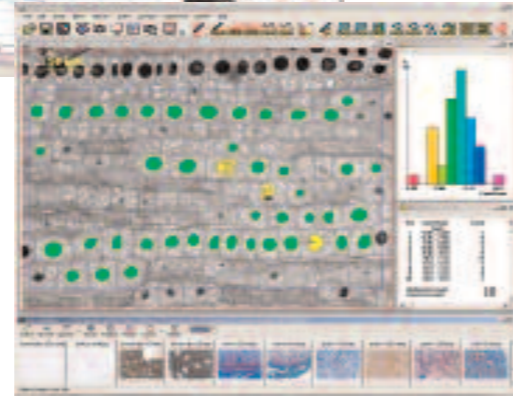
- Repeatable measuring routines by QUIPS macros.
- Application library of macros.
- Customised interface by Leica QForm.
- Advanced QUIPS for turn-key application development.

QWin Professional

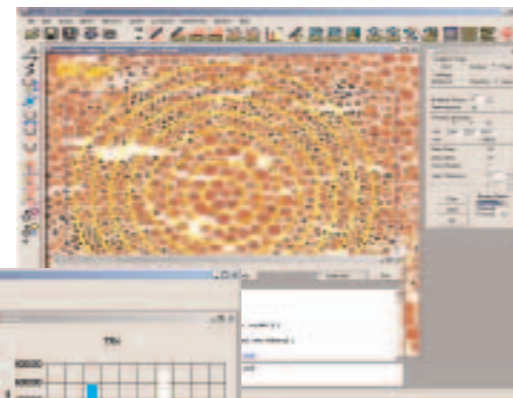
- Fast Fourier Transformation with Leica QFFT.
- Image visualisation and data interpretation through Leica QFAB.
- Viewing feature data in a gallery with relocation.
- Specimen map image overview.
- Editing, sorting and classification of individual features.



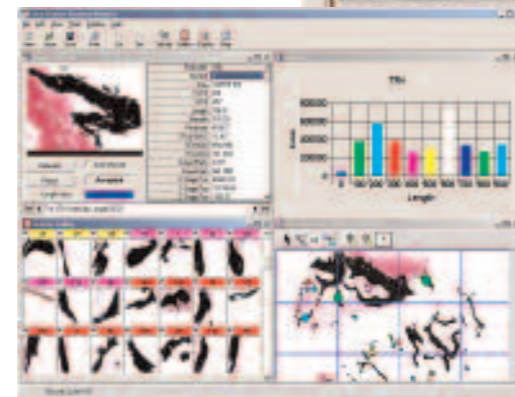
Leica QWin Lite



Leica QWin Plus



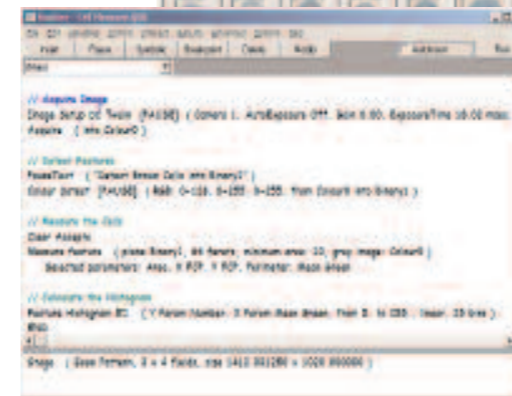
Leica QWin Standard



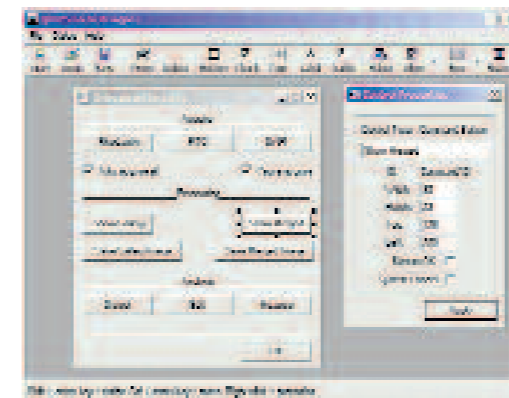
Leica QWin Professional



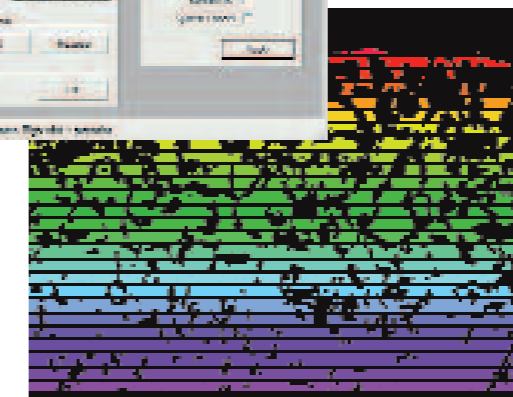
Leica QGallery



Leica QUIPS



Leica QForm



Layer Thickness

The scalable nature of Leica QWin means that it may be customised exactly to meet your needs in terms of image resolution, image memory and computer power. It can be readily upgraded should your needs change.

Leica QGallery

Leica QGallery provides the user with a convenient method for viewing images acquired either directly through Leica QWin, or imported from alternative sources. Images can be displayed as thumbnails or zoomed to cover the entire screen, with associated image information immediately accessible in adjacent windows.

Leica QUIPS for Automatic Routine Operation

Leica QUIPS is an interactive macro-programming facility of Leica QWin Standard, which enables the user to create fully automatic routines for any repetitive or user intensive analysis task, with the steps automatically memorised to minimise the typing required. The resulting one click, routine operation reduces human error, without diminishing the authority of the operator.

Application Modules

Optional application modules are available for extended focus, time lapse, multi-site imaging for use with all editions of Leica QWin.

Customised Application

Advanced modules with Leica QWin Standard include Leica QForm, and Advanced QUIPS, which allow the user to design customised dialogs for specific applications and extend the capability for turnkey software development.



Application Modules

Optional modules are available that implement popular additional functions. These are operated from a dialog dedicated to the task and have the added advantage of being extendable by the full range of QUIPS instructions.

Time Lapse - this module acquires images directly to the hard drive at intervals that you can define and replay as required. Analysis and measurement of the images can be performed by the extensive facilities of Leica QWin.

Extended Focus - used to acquire images at different Z-positions and to combine these into a single image representing the in-focus points. A corresponding depth-map is produced and the surface profile can be displayed from this. Normally used with a microscope with motorised Z-axis.

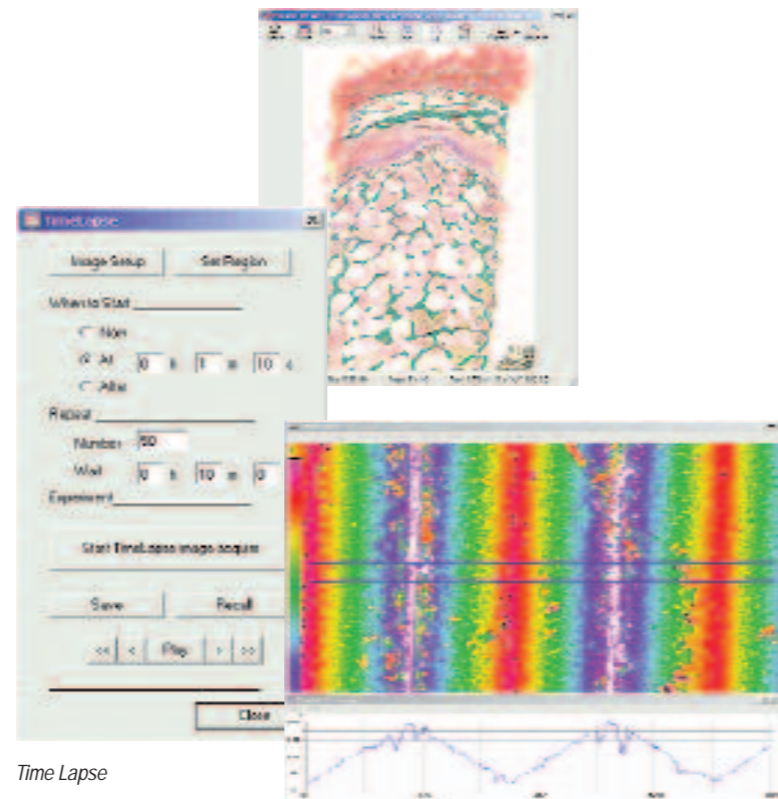
Image Overview - takes images from a stage scan pattern and stitches these into an overview or mosaic image. This image can be analysed by the Leica QWin facilities or used to relocate to regions of interest for further analysis.

Multi-site Imaging - this module allows you to define multiple sites as a rectangular grid e.g. multi-well plates. Images are automatically collected from each site and displayed in a gallery. Further customisation is of course available using QUIPS.

Point Counting - this module is used for manual analysis of specimens with multiple phases and estimates the composition of material by volume. Combined with motorised microscopes, it offers semi automatic operation.

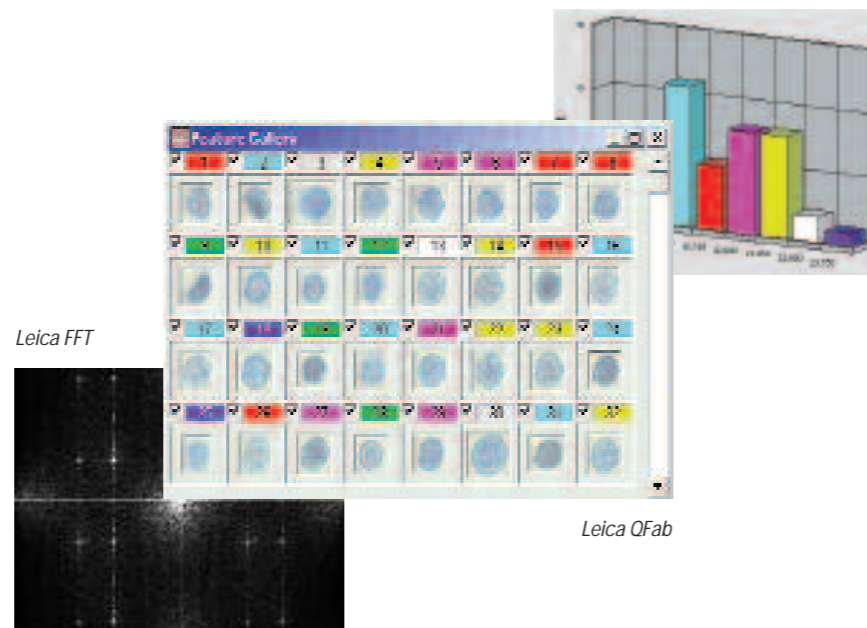
Leica QFab Feature Analysis Browser - Leica QFab can be used to process, interpret and report on raw data obtained through analysis in Leica QWin. Data views include tabular, pie chart, specimen map, feature gallery and feature detail, within which, editing, sorting and classification of individual features assist in statistical summarising.

Leica QFFT - Leica QFFT is integrated with Leica QWin to perform both forward and inverse Fast Fourier Transformation.



Time Lapse

Extended Focus



Leica FFT

Leica QFab

Leica Imaging Workstation Integrated Solutions

Integration and Automation

Leica QWin uses Leica digital, video and specialist cameras, in colour or monochrome, to acquire high definition digital images. Interesting features from acquired images can be automatically selected by colour, or contrast, making measurements of size, number, shape, position or orientation, possible. Selection can also be semi-automatic, using the mouse as a drawing device.

Optical microscopes are the most often used imaging device, using different forms of illumination (incident, transmitted, polarised, Normarski, fluorescent, dark field or interference contrast). Images for analysis can also be derived from photographs, negatives, desktop scanners, digital cameras, video recorders, slides and radiographs, objects directly imaged, electron microscopes and Leica confocal microscopes.

Naturally the capabilities of a particular system depend on the configuration and options selected.

Leica DFC Digital FireWire Cameras

Our digital camera range is optimised for use with Leica QWin. In addition to high resolution and superb quality images, the cameras are even more responsive due to their fast acquisition modes. This makes automatic acquisition of 8 and 16 bit images a simple procedure.

Leica Digital and Stereo Microscopes

Leica QWin can control all functions of the Leica DM range of upright and inverted Compound Microscopes and Motorised Stereomicroscopes and Macroscopes.

