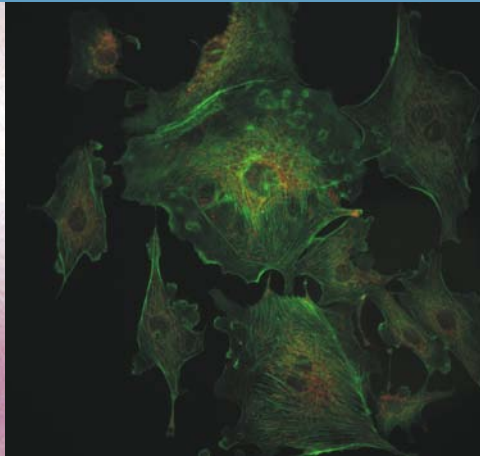
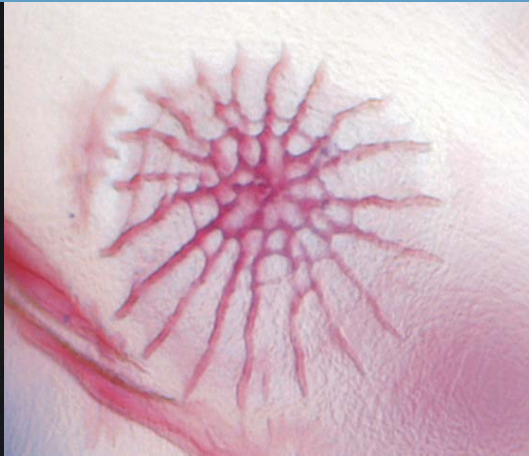
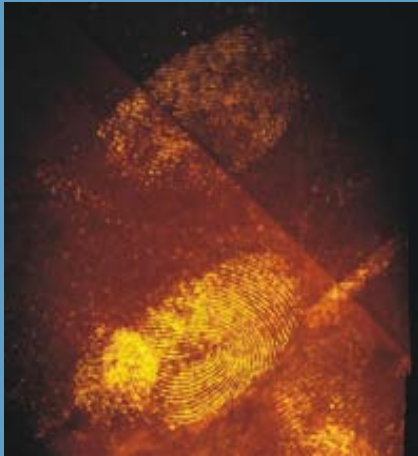
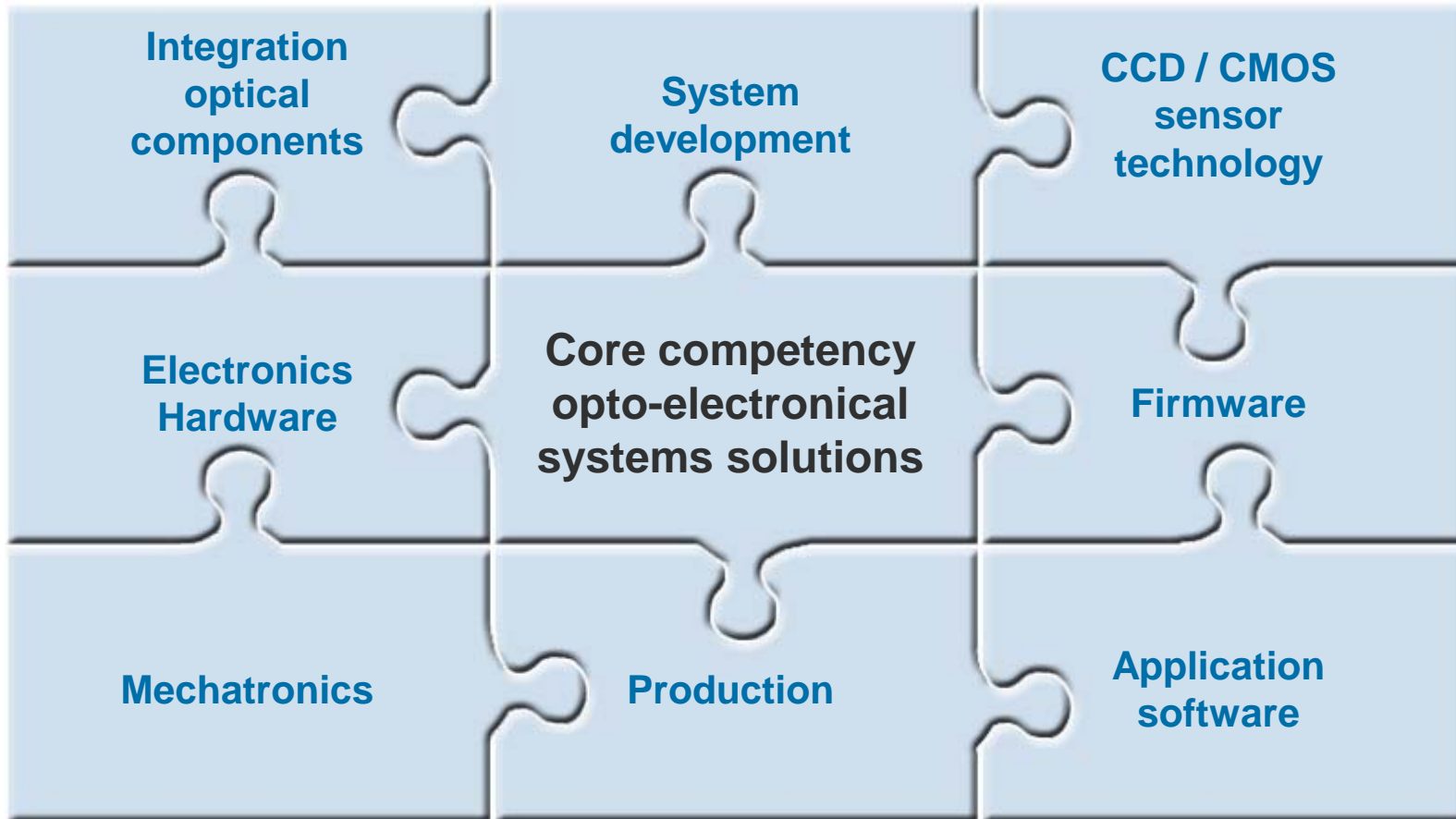
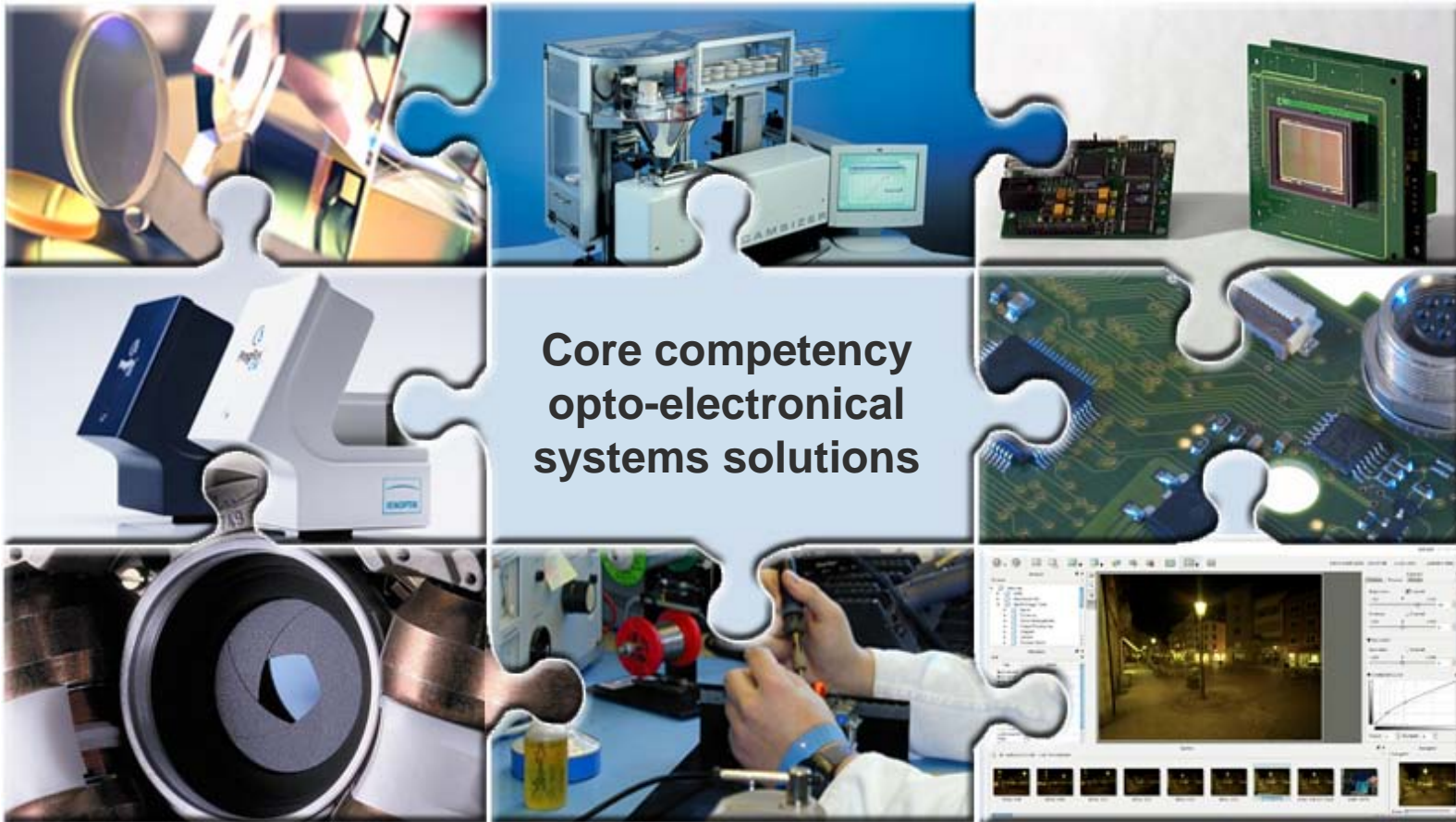




Business Unit Digital Imaging







Digital Imaging

Market segments and products



Photography

- Imaging moduls
- Camera moduls
- Digital backs



Digital imaging in microscopy and macroscopy

- ProgRes® Cameras
- ProgRes® CapturePro Software
- Imaging moduls



Industrial Applications

- Particle measuring technology
- Camsizer
- Integrated optical modulators
- Light modulators

Features:

- Compact digital range-viewfinder system camera
- Active sensor surface: 24 x 36 mm
- Sensor resolution: 5270 x 3516 pixels (18,5 million pixels)
- Exposure times: 1/4000 ... 32 sec., 'B'
- Picture series:
App. 2 pictures per second, series of 8 pictures
- ISO-sensitivity: 160 ... 2500
- Integrated DNG- and JPEG-processing
- 2.5 inch display (color-TFT-LCD)
- Storage medium: SD / SDHC



Digital Imaging

ProgRes® digital imaging for microscopy & macroscopy



Benefits:

- Excellent image quality
- Highest color reproduction
- High sensitivity and fast live image
- Programmable Resolution up to 12.5 Megapixels
- Comfortable capture software for MS WIN, MAC

- SDK (MS WIN, MAC, LINUX)
- Easy adaptation to any light microscope
- Standard connection to any computer via FireWire/ USB
- Compatible with many analysis software packages
- Excellent price/ performance ratio

Applications:

- Life science, Fluorescence microscopy
- Material science, Forensics
- Quality control
- Biology, medicine, diagnostics



Digital Imaging OEM modules for imaging systems



Benefits:

- Dedicated imaging modules with a variety of sensors and according to special requirements of our partners
- Digital camera modules for professional photography, microscopy, traffic monitoring, security, industrial applications
- Easy integration in application specific imaging systems
- Software development kits for MS WIN, MAC, LINUX
- Fast live image
- Highest color reproduction, excellent image quality
- Programmable Resolution

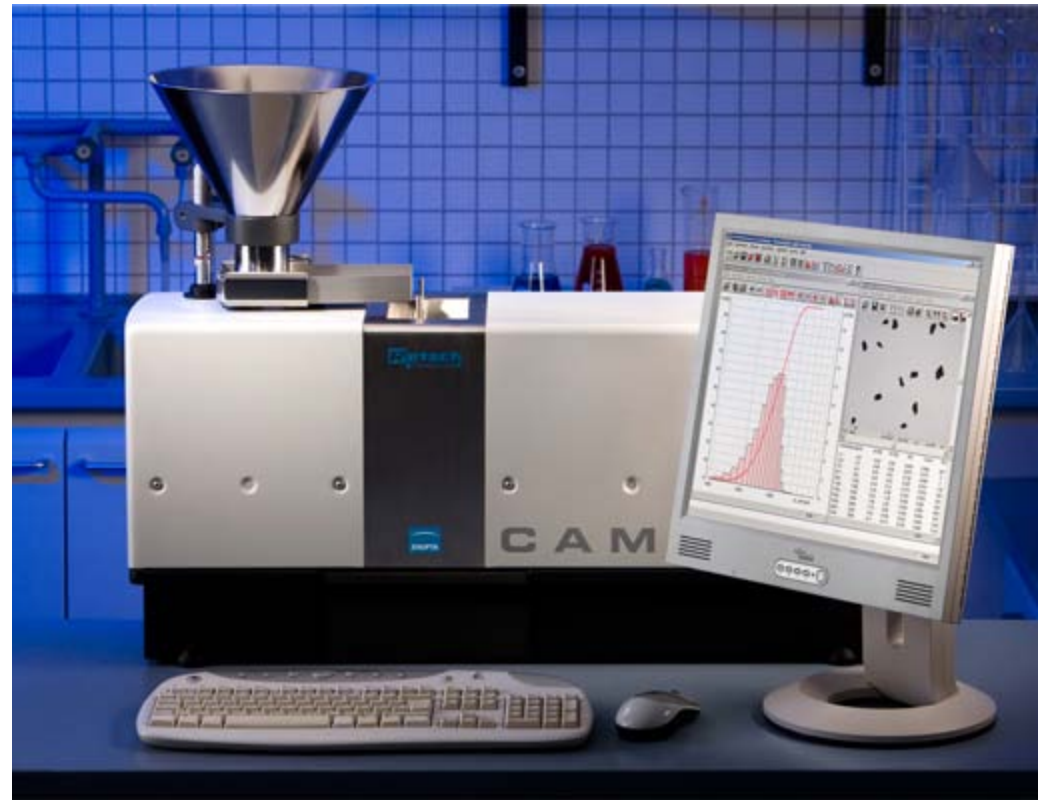


Advantages:

- Dual CCD-camera concept
- High precision 30 micron to 30 mm
- Realtime Measurement
- Fully automatic operation
- Easy to use

Applications:

- Food industry
- Chemical Industry



The Integrated Optical Amplitude Modulator is a compact fiber-coupled electro-optical modulator that works based on MgO:LiNbO₃ and LiNbO₃ crystals.

Advantages:

- Applications in the VIS or IR spectrum
- High modulation frequencies
- Single mode fiber coupling
- Low modulation voltage

Applications:

- Short laser pulse generation
- Photo finishing
- Laser scanning microscopy
- Interferometric metrology



Digital Imaging Light Modulators | Liquid Crystal Spatial Light Modulators



- Based on the electrical control of the optical properties of a nematic liquid crystal layer, phase, amplitude and polarization state of light energy are controllable.
- The Light Modulators are available with 320 or 640 separately controllable strips or custom-made.

Advantages:

- suitable for VIS and NIR range
- large active area allows for modulation of high power lasers
- high resolution of LC driving voltage (12 bit)
- integrated ADC-Port e.g. for feedback pulse optimization
- applicable in transmissive and reflective mode

Applications:

- pulse shaping of high power and ultra short lasers
- multiphoton microscopy
- short time spectroscopy
- wave front correction of optical systems





Thank you for your attention!

