

## MEMS-based Spectral Sensors



Our sister company SPECTRAL ENGINES provides MEMS-based spectral sensors that use the patented Fabry-Perot interferometer. It can be delivered as:

- **Sensor**, including light sources, NIR sensor and integrated intelligence.
- **Handheld-device**, including battery, Bluetooth connection and electronics.
- **Smart material sensing solution** like the SPECTRAL ENGINES' NIRONE anti-counterfeit solution for pharmaceuticals.

## Spectrometers



The spectrometers of our sister company AVANTES are the perfect basis for measurement and analysis applications, e.g. chemical composition, quantification, color and radiometry.

- **CompactLine**: For all applications where size matters.
- **StarLine**: Versatile, for most general applications.
- **SensLine**: For highest performance such as fluorescence and Raman.

## Five steps to success with m-u-t!



### 1. Your Idea

Finding solutions for multifaceted and complex requirements.



### 2. Concept Phase

Technical and economic development of the optimal solution.



### 3. Product & Process development

Feasibility studies and selection of manufacturing technology.



### 4. Series Production

Transfer of development to series production.



### 5. Service & Support

Customized service guarantees maximum availability.

## LIFE SCIENCE

Your strong OEM partner in laboratory automation & medical technology

## m-u-t GmbH - Who we are

m-u-t GmbH and further nine companies are part of the Nynomic group.

Together, we solve challenges in the field of optical measurement, control and automation technology.

In our life science division we are focused on the development, production and delivery of conformally validated series devices and components for better diagnostics and therapy through individual, technically high-quality analytic and automation solutions for OEM customers in medical technology.



## Do you have any questions?

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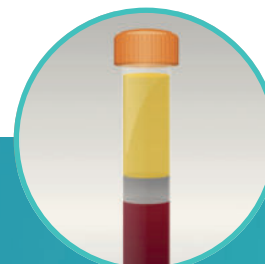
## Combined Re- & Decapper



Our new combined Re-/Decapper is the right basis for your development project. Why?

- **Flexible:** Suitable for a wide range of tubes or vials with different sizes.
- **Small:** It can be integrated into pipetting platforms or stand-alone.
- **Strong:** Our self-fixating grippers can hold the tube with a high torque of up to 5 Nm-enough for almost every sticky cap.

## Quality Check (HIL)



Our spectrometer-based concept for an early detection of abnormal samples can be easily integrated in your system.

- **HIL-Check:** Assessment of haemolytic, icteric and lipemic status of blood samples.
- **Gaps between labels** are not necessary. Our solution is successfully tested with up to 3 layers of paper label.
- **Other parameters** like fill rate, serum level or centrifugation status can be detected by our photometer.

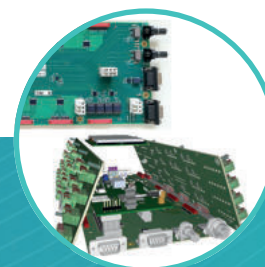
## Bulk Loader



Our high-speed and reliable bulk loader can be integrated in almost every preanalytic system.

- **Easy** sample input: Bulk loading of blood sample tubes.
- **Fast** available sample data like barcode information, tube type or cap color.
- **Reliable:** Made for running 24/7!

## Universal Embedded Controller



Our new controller platform is made for versatile environments and meets the requirements of all relevant standards.

- **Long-lasting life cycles** designed for efficient upgrades and obsolescence changes.
- **Customized interface** configured individually for your solution.
- **2 versions** "light" and "high-performance", freely programmable.