

The DOTS Platform

Sensing & Controlling



Application- &
Vessel-specific Sensors



Multiparameter Sensors
(Future)



Actuators

Monitor Critical Process Parameters (CPPs) around the clock with modern sensors.

Data Transfer & Integration



Hubs & Gateways

Hubs and gateways collect all vital information and transfer it to the DOTS Software or allow for 3rd party integration.

Sensor Handling & Data Monitoring



DOTS Software

Visualize and control multiple sensors and experiments in parallel.

The Sensor Platform to Simplify Your Bioprocessing

DOTS is a combined network of sensors and actuators with a powerful software to provide actionable insights into your bioprocess where and when it matters most. Start monitoring every point of interest to connect the DOTS in your bioprocessing.



Applications

- ✓ **Strain development, screening, and characterization**
- ✓ **Bioprocess optimization**
- ✓ **Biomass-based feeding**
- ✓ **Media optimization**
- ✓ **Growth characterization (including toxicity tests, substrate-/product-inhibitions, and oxygen-limitations)**
- ✓ **Timing of workflows (such as inoculation, induction, sampling, feeding, or harvesting)**
- ✓ **Product characterization**
- ✓ **Scale up**
- ✓ **Quality control**

Current DOTS Sensors & Actuators



Cell Growth Quantifier (CGQ)

Non-invasive and real-time monitoring of biomass in shake flasks via backscattered light detection.



CGQ BioR

Non-invasive and real-time monitoring of biomass in bioreactors via backscattered light detection.



Liquid Injection System (LIS)

Automated and parallelized feeding of liquids in shake flasks.



Flow Cells

Continuous monitoring of pH and dissolved oxygen (DO) in flow loops via optical chemosensors.