

# i-Control | The Scalable Control System

- Cost effective
- Off-the-shelf standard solution
- Robust industrial solution

i-Control is an easy to operate bioreactor control system and utility console. This scalable control solution is used to control processes in bioreactor systems from laboratory scale to pilot plant and production scale saving time and money during scale-up. The i-Control is available in a Single, a Dual bioreactor set-up as well as in a Quad (4 bioreactors) configuration. This standard control solution can be supplied with Allen Bradley or Siemens PLC's. Basic functionality includes advanced process control for numerous parameters, fully automatic sterilization and Clean-in-place routines. The off-the shelf system is supplied pre-configured and ready to use.

## Features

- Reliable control platform (Allen Bradley and Siemens hard- and software)
- Supplier independent solution based on industry standard hardware
- Local Control and local display
- Integrates with any factory automation system
- Fully documented supply eases validation
- Can be used in a 21CFR part 11 compliant system

## Applications

- Microbial and Cell cultivation
- Batch, Fed-Batch, Perfusion and Continuous cultivation
- Single-use Bioreactor processes
- Steam-in-place



## Specifications

<b>Sensors</b>	
<b>pH Sensor</b>	Traditional electrochemical * *Single-use sensor options, redundant options available
<b>DO sensor</b>	Traditional Polarographic *Single-use sensor options, redundant options available
<b>Redox</b>	Optional
<b>Temperature</b>	Pt-100, measurement Range: 0-150 °C accuracy 0,1°C
<b>Foam/level</b>	Resistive based measurement
<b>Weight</b>	Balances and/or Load cells
<b>Optional</b>	Biomass (Capacitance or optical density), offgas measurements, pressure
<b>Additional I/O</b>	Configurable
<b>Actuators</b>	
<b>Gas</b>	Up to 8 MFC's with solenoid valves or up to 8 rotameters with solenoid valves
<b>Liquids</b>	Up to 4 internal variable speed pumps / 2+ external variable speed pumps
<b>Stirring</b>	0-2000 rpm
<b>Temperature</b>	Heating blanket or external Temperature Control Unit (TCU)
<b>TCU options</b>	Thermoflex Neslab, Lauda, GWK, Polyscience
<b>Control</b>	
<b>Control Hardware and Software platform</b>	Siemens or Allen Bradley / Siemens, Allen Bradley, iFix, DeltaV
<b>Certifications</b>	CE certified, GAMP compliant
<b>21 CFR part 11 compatible</b>	Yes
<b>Communication &amp; SCADA</b>	Lucillus PIMS, BioXpert W10, DeltaV Applikon OPC server available

## Related products

- Autoclavable bioreactors
- Single-use bioreactors
- Sensors
- Lucillus software
- V-Control software
- iFix software

