BioPAT® MFCS
SCADA Software for Reliable Data Acquisition, Monitoring and Control
BioPAT® MFCS

BioPAT® MFCS/win is the world standard for supervisory bioprocess control and data acquisition. It is a feature-rich, GAMP category 4 software package – based on over 25 years of experience and more than 3,000 installations worldwide. This software is capable of supporting you in the most demanding research and production environments.
### Your Benefits:
- Reduced training efforts and improved data consistency
- Unique customization level and flexible investment costs
- Reliable and robust system performance
- Technologically and economically optimized solutions
- Full transparency and accessibility for advanced process control and understanding

### Product Features:
- Scalable software for almost all bioprocess applications
- Fully user configurable and upgradeable with specific modules
- Proven record over 25 years of software development
- Installation, configuration, validation & engineering services
- Central platform for realtime data and historians of process, analytical and sampling data

### Applications
- Reliable data acquisition, monitoring and control
- For upstream and downstream unit operations, e.g., BIOSTAT® and ambr® bioreactors, and Sartoflow® and FlexAct® systems
- Across all scales from early process development to commercial manufacturing
- Incorporating Sartorius and 3rd party systems
Your Choice for Customized Features

**Automation**
BioPAT® MFCS/win allows you to mirror each step of your process by selection of customized recipes complying to the ANSI/ISA-88.01 standard for computerized batch control. Semi or fully-automatic operations, state or time-dependent transitions enable organized and structured batch processing as well as flexible manufacturing.

**Chemometrics Toolbox**
The BioPAT® MFCS/win DoE module transfers your design into a specific recipe and thus allows a reliable and seamless integration of DoE procedures into existing control strategies. The BioPAT® MFCS/win MVDA module automatically pre-formats and transfers historical data sets of multiple batch processes to BioPAT® SIMCA which leads to a quick and reliable interpretation of batch results. The BioPAT® MFCS/win OPC HDA Server ensures real-time and historical data transfer to BioPAT® SIMCA-online for early fault detection and isolation.

**Connectivity**
BioPAT® MFCS/win provides flexible device connectivity, true interoperability with major third-party products and control features which are second to none. Besides user-programmable or customized synoptic interfaces BioPAT® MFCS/win fully supports the OPC technology. “Plug & play” communication to analytical instruments, real-time data input for MES systems or alarm & event notification on multimedia devices simplify your automation tasks.

**Training**
Sartorius provides different levels of trainings which are designed to ensure that each course participant has a proper understanding of the theoretical subject matter and acquires the necessary hands-on, practical skills. The ultimate aim and purpose is to enable, technicians and specialists working in R&D or production to perform their work safely and efficiently.
Service & Support
Our team of experienced service engineers has been involved in a number of successful projects world-wide. Expertise gained through long term cooperation with pharmaceutical and biotech companies has been used to develop and refine a comprehensive range of services including computer system validation (CSV) as well as qualification of automated process equipment.

Validation
BioPAT® MFCS/win supports all requirements to achieve full compliance with 21 CFR Part 11. That means that your process can be evaluated, reviewed, approved and archived without a single sheet of paper and without the possibility to falsify process data and signatures. However, if required, all information can be printed and signed handwritten.

DCU & MFCS
Our key platform to automation of fermentation and filtration systems is based on the use of the flexible Digital Control Unit (DCU), which is specifically tailored for bioprocess applications. When combined with BioPAT® MFCS/win this solution provides the most cost-effective and flexible platform for small to medium scale research and pilot plant applications.

Network
BioPAT® MFCS/win can easily be integrated with network security into an existing architecture by distributed operator workstations. If required the SCADA environment can also be isolated from your company's network. Not only the strong expertise of our IT engineers but also the use of the latest Windows® or Citrix® terminal server solutions allow for closing any security vulnerability.
Which software is right for me?

**BioPAT® MFCS 4**
The new BioPAT® MFCS 4 is our most recent software development for reliable data acquisition, effective trend monitoring and supervisory control of all Sartorius BIOSTAT®, Sartoflow®, Certomat® and FlexAct® instruments.

**BioPAT® MFCS/win 3.1**
In contrast the proven BioPAT® MFCS/win 3.1 is a feature rich, fully 21CFR-11 compliant software package with preconfigured modules enabling plug-and-play setup of advanced SCADA functionalities.

Learn more about the new BioPAT® MFCS and download a free demo version:

www.sartorius-stedim.com/biopatmfcs
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<tr>
<th>Features</th>
<th>MFCS 4</th>
<th>MFCS/win 3.1</th>
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<tr>
<td>Windows® 10 (32 bit</td>
<td>64 bit)</td>
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<tr>
<td>Windows® 8 SP1/8.1 (32 bit</td>
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<td>Windows® 7 SP1 (32 bit</td>
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<td>Windows® Server 2016 (64 bit)</td>
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<td>Windows® Server 2012 R2 (64 bit)</td>
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<td>Windows® Server 2008 R2 SP1 (64 bit)</td>
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<tr>
<td>Number of supported process units up to 24</td>
<td>up to 16</td>
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<td>Minimum data export interval 0.5 s</td>
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<tr>
<td>Database management Microsoft® SQL</td>
<td>Microsoft® Access</td>
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<tr>
<td>User interface languages EN, DE, ZH, FR, ES, IT</td>
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<tr>
<td>Data acquisition and storage</td>
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<td>Process value alarms</td>
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<td>Process value simulation</td>
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<td>Data export to Microsoft® Excel</td>
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<td>Advanced reporting</td>
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<td>Advanced charting</td>
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<td>Integrated Design of Experiments (DoE)**</td>
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<td>Integrated Multivariate Data Analysis (MVDA)**</td>
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<td>Recipe control according to ISA-88.01</td>
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<td>Replication manager</td>
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<td>21 CFR Part 11 compliance</td>
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<td>Multi User Client</td>
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<td>OPC DA server</td>
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<td>OPC AE server</td>
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<td>OPC HDA server</td>
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<tr>
<td>OPC DA client</td>
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<td>Validation support</td>
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<tr>
<td>Service &amp; support package</td>
<td>• (1st year)</td>
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<tr>
<td>Training</td>
<td>•*</td>
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* included  • optionally available  • available soon  ** powered by Umetrics™, now part of Sartorius Stedim Biotech
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