SARTURIUS

Product Datasheet

Connectivity Solutions for a Modern Bioprocessing Facility



BioPAT® MFCS software provides a suite of features for reliable data acquisition, supervisory control, advanced automation of bioprocesses, and integration into your data and IT landscape.

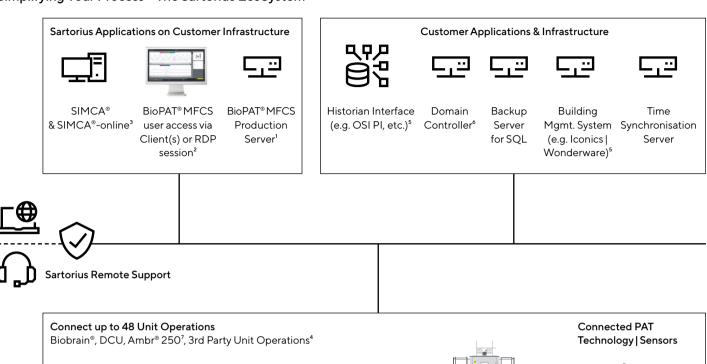
It is designed to seamlessly integrate into your organization to ensure maximum control of your process while at the same time help you unlock the potential value of the data your process generates with a range of connectivity options to meet your needs.

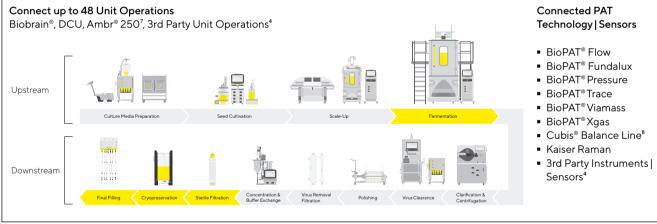
 BioPAT® MFCS is designed and optimized to integrate into your bioprocessing facility to help meet your data processing strategy

- Native integration of Sartorius equipment allows for rapid startup and reduced validation effort for new or expanding facilities
- Support of open communication standards, such as Open Platform Communications (OPC)®, allows BioPAT® MFCS to integrate with bioprocessing equipment and process analytical technologies (PAT) systems from any compatible supplier
- Utilization of common applications, such as Microsoft® SQL and Active Directory, allow for integration into existing network infrastructure
- BioPAT® MFCS supports integration with SIMCA® |
 SIMCA®-online, third-party data historians, or other
 platforms to help unlock your data for enhanced control
 or analytics

Relevant Applications

Simplifying Your Process - The Sartorius EcoSystem





- ¹ BioPAT® MFCS server application deployed on a customer hosted virtual server
- ² BioPAT® MFCS client deployed on customer PC's or accessing server by Remote Desktop
- ³ SIMCA® | SIMCA®-online connected using SimApi (part of MFCS core)
- ⁴ BioPAT® MFCS needs OPC® UA client module

- ⁵ BioPAT® MFCS needs OPC® UA server module
- ⁶ BioPAT® MFCS needs user managent module
- ⁷ Ambr[®] 250 needs Kepware OPC[®] UA server
- 8 Cubis $^{\circ}$ balance line via OPC $^{\circ}$ DA server (part number VF4844)

BioPAT® MFCS Can Be Scaled to Support Your Specific Needs Through:

- OPC® Unified Architecture (UA) server module to publish data where you need it
- OPC® UA and classic clients to connect to data sources, whether these are process units, sensors or other PAT systems (Sartorius or third-party)
- Monitor your process where you need it through desktop virtualization or thick clients of our application
- Microsoft® SQL Server embedded or as part of your managed database environment to give you confidence that your data is secure and backed up
- User Management Module that can connect to your domain controller and leverage Active Directory to simplify your user management experience
- SimApi to provide connectivity to SIMCA® and | or SIMCA®-online for multivariate data analysis or real-time process intelligence
- Choose whether you deploy on a premium PC from Sartorius or into a virtual server environment to increase reliability and process robustness

Technical Specifications

OPC® UA Server Module

The OPC UA server allows you to publish all relevant process data, alarms, conditions and batch related data from BioPAT® MFCS to a customers preferred superordinate systems.

The ability to communicate with super-ordinate systems, such as data historian software (e.g., OsiSoft PI) or alarm systems (e.g., Alarmworks), means you can unlock your data for wider use within your organization. This could be for data analytics or ensuring that your operators can access alarm events 24/7 from wherever they are.

OPC UA and Classic Client Module

This module provides the required interface to connect Biobrain® instruments, Ambr®, or additional sensors and analyzers to BioPAT® MFCS.

This interface can potentially connect third-party process units, sensor, or systems with a compatible OPC client, such as Kaiser Raman instruments.

Sartorius Interfaces

DCU-based controllers utilizing proprietary interfaces have native integration with BioPAT® MFCS, which allows for rapid startup and reduced validation effort, thus enabling monitoring and control of these systems.

Our latest Biobrain® controller- based systems utilize OPC UA (which eases integration into any supervisory system) but are tested and validated with BioPAT® MFCS to give confidence and speed of implementation directly out of the box.

User Management Module

This module enables to add user managed in a centralized domain.

SimApi

The SimApi software interface for BioPAT® MFCS enables SIMCA® and | or SIMCA®-online software to retrieve data from executed batches of BioPAT® MFCS.

Data is one of your company's most valuable assets. Hidden in everyday process data and experimental results are the answers you need to reduce waste, increase revenue, and spot new business opportunities—but only if you can make sense of the complexity. With an advanced data analytics solution like SIMCA®, you and your teams can tackle ambitious omics projects, model complex systems, and gain the deep process understanding needed to drive growth.

SIMCA® is not just for data scientists. With SIMCA®, you don't need a doctorate in statistics or programming to do your own data mining, multivariate calibration, and predictive modelling.



Software

BioPAT® MFCS Core Software

Additional Software Modules for BioPAT® MFCS

- OPC Client (R/W, Classic, and UA)
- OPC Server (Classic and UA)
- User Management
- SimApi

Germany

August-Spindler-Strasse 11 37079 Goettingen Phone +49 551 308 0

USA

Sartorius Stedim Biotech GmbH Sartorius Stedim North America Inc. 565 Johnson Avenue Bohemia, NY 11716 Toll-Free +1 800 368 7178



⊕ For more information, visit

www.sartorius.com