

Boost efficiency, increase ROI and meet regulatory demands

iBatch Overview

In today's competitive business environment, the pressure has never been higher to work faster, more efficiently and more consistently. Each batch run must be perfectly executed. Every aspect of production must be perfectly documented. And you must be able to repeat the "golden batch" time and time again. Meet these requirements and you'll achieve new levels of business and production success. Fail to meet these requirements and your business could suffer from lost customers, lost revenue and substantial penalties from regulatory agencies.

Delivering all the tools you need to build a complete monitoring and control solution for batch applications, iBatch from Intellution can help you to achieve new levels of efficiency, profitability and security throughout your entire production process. Through a robust set of tools, an open architecture and an easy-to-use graphical user interface, iBatch can help you to transform your production processes into a powerful competitive advantage.



iBatch™

Technical Data Sheet

iBatch: Power, flexibility and security

Helping you to create a more efficient and more consistent production environment, iBatch from Intellution is one of the most powerful and feature-rich batch automation solutions on the market today. Featuring a fully graphical and straightforward application development environment, iBatch delivers complete data collection, robust batch management, clear process visualization and powerful supervisory control capabilities for all of your batch production needs.

The batch application of choice for the world's leading pharmaceutical, food and beverage, chemical, specialty chemical and consumer packaged goods companies, iBatch empowers you to easily create efficient and effective solutions, custom-tailored to the specific requirements of your business. Add to this Intellution's iWorkInstruction™, an outstanding new operator workflow solution designed specifically for iBatch, and you have the functionality you'll need to meet the stringent demands of customers and regulatory personnel.

The end result: a more efficient production environment, a more consistent product and ultimately, a more profitable business.

iBatch Technical Features:

Batch Solution Development

Ensuring that the solutions you develop using iBatch are both effective and compliant, iBatch adheres to all the leading industry standards, platforms and technologies, including:

- ISA S88.01 (batch and terminology model)
- IEC 1131-3 Sequential Function Chart programming language
- Microsoft COM/DCOM
- Windows 2000 & Windows NT
- OLE for Process Control (OPC)

Utilizing the familiar and intuitive Intellution WorkSpace, development in iBatch is fast, simple and effective. You can model your plant floor equipment, add equipment paths, equipment priority and unit status, plus create and manage reusable recipe components, all using the S88.01 models. The workspace enables you to edit equipment and recipes, develop pictures, even

configure security and alarms. Using the iWorkInstruction add-on, you can also define operator workflow activities and do it all within the same batch record and in a manner consistent with the Food and Drug Administration's 21 CFR Part 11 regulation.

Further enhancing the versatility of iBatch, the application seamlessly integrates with any OPC-compliant SCADA, PLC or DCS system, allowing OPC browsing to establish connection and automatic creation of tags. You can also customize your iBatch-based solutions using our Batch Integration Services (BIS) – a Microsoft DNA model that enables you to integrate with a diverse array of third-party MES and ERP applications. Using BIS you can also create custom applications (such as campaign managers) in Visual Basic or C++, enabling you to extend the reach of your batch solutions to enterprise-level applications.

iBatch also features the industry's first OPC soft phase server, a tool that allows you to develop client/server-based soft phases for management operations. All of these development

capabilities are included within a full-featured GUI environment, complete with the industry's most comprehensive library of ActiveX controls, making iBatch a versatile and powerful addition to your automation infrastructure.

Batch Execution, Operations and Reporting

Rounding-out the outstanding development capabilities, iBatch offers an exceptional array of batch execution and operation functionality. Using iBatch, you can execute batches to produce a specified quantity of end product on any chosen line and do so according to specifications you define. Additionally, using Intellution's patented Active Binding feature, you can dynamically bind or re-bind equipment to unit procedures at any stage of production.

Facilitating a tighter integration between your plant-level and business-level systems, iBatch empowers you to manufacture products based on recipe and formula values from third-party MES applications or ERP systems. You can also provide users with real-time batch production information through the Active Journaling feature, enabling more timely and accurate business decisions. Your iBatch-based solutions can communicate with any OPC-compliant server, facilitating the exchange of data between the iBatch server engine and other plant floor systems.

iBatch also makes it easy to create, distribute and retain batch records and reports. Using Active Journaling, you can deliver access to real-time data for up-to-the-second reports on all facets of your operation – including material consumption, asset utilization, process errors and other critical aspects of your batch production run. The electronic batch records created by iBatch can also be stored and managed in any ODBC-compliant relational database.



Business Benefits:

Through the powerful yet easy-to-use iBatch application, you'll be empowered to:

- Improve production efficiencies**
 iBatch helps to maximize equipment utilization through Intellution's patented Active Binding feature, a technology that automatically selects and binds units at multiple stages in a recipe procedure's life cycle. iBatch also minimizes changeover time and helps to reduce batch cycle time, resulting in increased capacity and throughput.
- Simplify enterprise connectivity**
 iBatch enables information sharing across the entire enterprise, empowering you to download recipe and formula information from enterprise-level systems and upload electronic batch records and production actuals.
- Accelerate time-to-market**
 Using iBatch, companies can get new products to market faster than ever before by providing reusable recipe components, a common equipment model and process simulation capabilities.
- Address regulatory concerns**
 Designed specifically to address the complex yet critical demands of the FDA, the robust reporting, recording and security features inherent to iBatch and iWorkInstruction play a critical role in the development of your 21 CFR Part 11 compliance strategy. The regulatory-related features added to this application were created based upon exhaustive research and in-depth discussions with representatives from pharmaceutical, food and beverage, specialty chemical and consumer packaged goods executives, as well as former regulatory personnel and inspectors.
- Reduce costs & boost ROI**
 Because iBatch delivers a diverse array of development tools, communication options and compliance-enabling functionality, you'll be able to reduce life-cycle engineering and system maintenance costs. And through the enhanced connectivity options for business-level systems, your company will also be able to make better, more informed business decisions based upon real-time information.

The screenshot displays the iBatch software interface. At the top, a 'Batch List' table shows the following data:

Batch ID	Recipe	Recipe	Batch	Start Time	Elapsed	Failures	Batch
BATCH_ID	MAKE_TOOTH	TOOTHPASTE	WRUNNING	11/20/2001	1:0:04.03		O-AUTO

Below the table, the main interface shows a process flow diagram with steps: TRAC, BASE.1, ADDITIVE.1.STATE, FIBER.1, and P-AUTO. A 'Performed By [Operators]' dialog box is open, showing the following fields:

- Command: Change Parameter
- User Name: Operator1
- Password: [Redacted]

At the bottom, the 'Recipe Information' tab is active, showing a table of parameters:

Name	Low	Value	High	Eng. Units
FLUORIDE	0	23	100	GAL
BAKINGSOI	0	50	100	LBS
GUM_AMT	0	50	100	LBS
PH_AMT	0	50	100	LBS
WATER_AN	0	50	100	GAL

This image reflects the Batch List and SFC ActiveX controls as it appears within the iFIX® environment, showing the iBatch 21 CFR 11 Signature Dialog that appears when an operator is changing a parameter.

System Requirements

- Pentium III processor, 500MHz or better
- Windows NT 4.0 with Service Pack 6, or Windows 2000 with Service Pack 1
- 128 MB memory (client); 256 MB (server)
- 1 GB hard disk space
- 1024 x 768 display capabilities
- TCP/IP network protocol access

iBatch Technical Features: An overview

- Active Journaling
- Active Binding
- Integrated development environment using the Intellution WorkSpace
- Plug and Solve® architecture for COM/DCOM
- ISA S88.01 batch control systems models and terminology
- IEC 1131-3 Sequential Function Chart language support
- Batch Integration Services (BIS)
- OPC Data Access support
- Utilizes Windows 2000 and Windows NT security
- ActiveX Controls supporting for design time and runtime configuration
- SQL-based recipe storage
- Optional operator workflow components enhance 21 CFR Part 11 capabilities

Intellution Software Solutions

- iBatch.** S88-based production management software
- iDownTime.** Equipment availability monitoring and analysis
- iFIX.** Process visualization, data collection and supervisory control
- iHistorian.** Plant-wide data archiver and server
- iWorkInstruction.** Operator workflow software for batch manufacturing

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