Data Sheet

Operate IT
Process Portal
Version B1.1

Highlights

The Operate^{IT} ™ Process Portal version B1.1 software product is a Windows®-based web-enabled Human System Interface (HSI) providing an object-oriented approach for information integration and user navigation within a uniform window environment. Adherence to industry standards such as ActiveX®, Dynamic HTML, OLEDB and OPC® enables these HSI products to run in an integrated environment with other ABB Industrial^{IT} applications as well as third-party applications.

The base set of software covers all areas of traditional HSI functionality including event/ alarm management, custom graphic displays, faceplate and tuning displays, trending, and reporting. Process Portal embraces the use of Aspect Objects™ to provide integrated information sharing, intuitive navigation, and efficient engineering. Employing a true client-server architecture enables those users with proper security rights to access all required server functions. A scalable offering is provided allowing users to select only those functions needed to meet their needs for the required system I/O size and number of workplaces. This allows the best price performance relationship to be deployed in every system.

Due to the openness of ABB´s HSI solutions, Process Portal can be used in conjunction with new Industrial IT controllers (AC 800F), traditional OCS system controllers from ABB (MOD 300™, Symphony™ /Harmony, Symphony/Melody, Freelance 2000™, and Contronic P®), and OPC aware third-party controllers. Process Portal can be used in new system installations or as an expansion to existing OCS systems from ABB. In existing ABB systems, Process Portal can be used side-by-side with many existing HSI products.

Performance Characteristics

Capacities

Feature	Characteristic/Value
Tags per system	Up to 60000 tags in one system
Historian atoms per system	Up to 20000 atoms in one system
Tags per real time data server (RTDS)	Options for 50, 100, 250, 500, 1000, 2500, 5000, or 10000 (20000 and 30000 optional for Symphony/Harmony; 50, 100, 250, and 10000 not available for Contronic P).
Atoms per Historical trend data collection server	Options for 50, 100, 250, 500, 1000, 2500, 5000, 7500, or 10000. Time capacity of storage is limited only by hard disk size.
Event / alarm list	All unacknowledged or active alarms

Feature *(continued)*	Characteristic/Value *(continued)*
Historical event collection server	One redundant pair or non-redundant Historian event collection server per system. (Can be installed on same node with Historian trend data collection server.) Events can be collected by the historian with a configurable filter. Events matching the filter are stored in SQL database with size limited by hard disk only
Historian data storage rate	Up to 100 atoms per second per Historian
Event rate	Sustained event rate of 40 events per second. An event burst of 800 events over a 10 second period (i.e. 80 events per second). A minimum time between event bursts of 2 minutes.
OPC server rate	Up to 200 atoms per second per OPC server. Refer to Event Rate (above feature) for OPC AE server rate.
Reports	Number of configured reports and templates are not limited. Generated reports can be stored in the historian with stored reports limited by hard disk size only
Process areas, function units, equipment structures	Unlimited
Alarm priorities	Up to 16
Saved workspace	6 per Operator
ADP (hardware support)	Up to four 32 key hardware panels per node. The keys can be individually defined per node.
ADP display	Multiple ADP displays can be configured with 32 keys and can be activated as part of profile settings or through operator navigation. Multiple ADP displays can be shown at the same time dependent on profile settings (default one)
Security	Unlimited levels with selective assignment per user

Display System

Feature	Characteristic/Value
Predefined display types	Group, point, faceplates, operating parameters
Custom configured displays	Unlimited configurable graphic displays within system
Group displays	Supports up to 8, 12, or 16 faceplates per display dependent on faceplate size
Total process displays/screen	Configurable in profile settings (default up to 4 per screen)
Total screens/node	1, 2, 3, 4
Total frames / screen	Configurable in profile settings (13 available with default settings for available display classes.)
Trend displays	Multiple trend displays configurable with up to 8 traces. (Combined real time and historical trend display)
XY plot displays	Representing historical and real time data of up to four pairs of tag.atoms with configurable background images.
Event / alarm bar	Configurable as a permanent display 2 types: Event group bar and event sequence bar. Multiple event bars can be configured with associated event filter and can be activated as part of profile settings or through operator navigation.

Feature *(continued)*	Characteristic/Value *(continued)*
Real-time event / alarm list display	Multiple displays with configurable filter settings
Event historian review display	Multiple displays with configurable filter settings
Total configurable displays in a system	The number of configured displays is limited only by the hard disk storage capacity.
Profile settings	The user interface can be adjusted by a combination of project, machine, and user profiles defining startup displays, window management behavior (number of displays, stacking order, etc.), menu, and tool bar settings.

Architecture

Feature	Characteristic/Value
Structure	Client / Server
System (servers and / or clients)	60 nodes maximum (only one configuration server per system)
Client Support	Up to 60 clients per system maximum
Non-auxiliary (or full) clients	Up to 30 per system
Auxiliary clients	Up to 60 per system; recommend all clients be installed as Auxiliary Clients
Primary RTDS nodes	Up to 15 per system
Primary historian nodes	Up to 5 per system
RTDS applications/tag capacity per node	Up to 3 RTDS applications or 30000 tags maximum (Maximum type of RTDSs per node are 1 each for Harmony, Melody, Contronic P, and Mod 300 and 3 for Freelance 2000/AC 800F and/or OPC)
RTDS redundancy	One-to-one per RTDS (optional)
Historian server redundancy	One-to-one per historian (optional)
Open data connection	OPC server interface for real time data and alarm and event access, and OLEDB interface for historical data access.
3rd Party controller connectivity	OPC standard client interface (optional) (OPC DA Spec 1.0 and 2.0.3, and OPC AE Spec 1.0)
OPC RTDS tag capacity per server	Options for 50, 100, 250, 500, 1000, 2500, 5000, or 10000. Depending on the tag type, multiple OPC items can be represented by one tag.
ONet connection	IEEE 802.3 Ethernet™, TCP/IP protocol
RTDS connection to Symphony / Harmony	RTDS/semAPI coupler to C-Net using INICI03, INICI12, INPCI01, INPCI02, and the Harmony Network Coupler (INFI-NET® and PLANTLOOP)
RTDS connection to Symphony / Melody	Up to three CCO/CMC70-coupler which works on an Ethernet based protocol can be connected to one RTDS for Symphony / Melody
RTDS connection to Freelance 2000/AC 800F	IEEE 802.3 Ethernet
RTDS connection to MOD 300	Real Time Accelerator Board (RTAB), PCI version
RTDS connection to Contronic P	SCSI interface via CKS Coupling Unit
Graphics system	Sherril Lubinski™ Graphics Modeling System, (in addition, any document that can be shown in Internet Explorer can be shown as a display in Process Portal)
Mirror sites	Up to 30 per system

Supported System Software Levels

System	Version Levels
Freelance 2000/AC 800F	Version 6.2 Engineering Tools: Control Builder for AC 800F Version 6.2 (English) and Control Builder Version 7.1 (English and German) based on Windows 2000
Melody	Version 1.45 and 1.51 Compatible with CCO and CMC70 Engineering Tools: Composer for Melody Version 1.45 and 1.51 based on Windows NT® 4.0 SP6 and 1.51 SP2 based on Windows 2000 SP2
Contronic P	Version 7.1x, 7.2x, 8.0x Engineering Tools: Hazeltine Emulation Client/-Server with ConLink NT file transfer based on Windows NT 4.0 SP6
Symphony / Harmony	Compatible with INICI03, INICI12, Harmony Network Coupler A1.0, INPCI01, and INPCI02 Engineering Tools: Composer for Harmony Version 3.0 and 3.1
MOD 300	MOD 300 V 14R6 and Engineering Tools: AdvaBuild® V3.2 (NT based) with Profibus support; AdvaBuild V3.1 (NT based) or AdvaBuild 2.9 (UNIX based) without Profibus support
OPC	Data Access (DA): version 1.0 and version 2.0.3 Alarm / Events (AE): version 1 Tested OPC server data transmission rate: Steady state - 1500 exception reports/second Burst - 5000 exception reports/second (40% CPU)

NOTE: Different OPC servers will incur varying loads on the system, and performance results will vary. Contact the OPC server vendor for performance details.

Supported Software

Characteristics	Requirements
Operating System	Windows 2000 with Service Pack 2, Professional or Server as required
Defragmentation application	Diskeeper (either running on a scheduled basis or manually started)
Spreadsheet application (for custom reports)	MS Excel 2000 or XP
Virus scanner	McAfee Virus Scan

Operating System Requirements

Application	No. of Nodes in System	Windows 2000 Server	Windows 2000 Professional
RTDS	10 or less		x
	> 10	x	
Historian	10 or less		x
	> 10	x	
Mirror Sites	3 nodes or less per mirror site		x
	>3 nodes per mirror site	x	

NOTE: Where indicated, Windows 2000 Professional is the minimum requirement.

Recommended Hardware Configuration

General PC Requirements

Characteristics	Requirements
Network connector	Ethernet™ (IEEE 802.3) compliant (TCP/IP); best performance achieved with 100Mbps requiring 100BaseT (required for all new installations); 10 Mbps acceptable with 10BaseT or 10Base2
Ethernet addressing	Fixed IP address required
CD-ROM reader	2X minimum
Video adapter	4 Mbyte recommended Resolution: 1280x1024 preferred, 1024x768 min.
Ports	2 serial, 1 parallel
Mouse	2-button mouse; 3-button preferred
Floppy disk drive	3.5 in., 1.44 Mb
Accessories, options	Adaptec® SCSI adapter model 2940/ AU required for SCSI INICI03 interface
	Dual monitor video cards used in Process Portal must support the display of a single window across both monitors with a resolution of 2560 x 1024. Matrox Millenium G400 or G450 MAX 32 MB AGP Video Card and software required for Dual Monitor Support - identified RAM in the PC Loading section is for a single monitor; add 96 MB of RAM for every additional screen.
	Hardware Machine ID Dongle (ABB P/N WMID011)
	MOD 300 interface board (ABB P/N 3BSE013062R1) - PU514 Real-time Accelerator (RTA) board including CS502V1 dual DCN communication module and 16 Mbyte RAM with two 15-pin female Dsub connectors
	L700972A2 serial hardware key for ICI03 required for each INICI03 used

PC Requirements

PC Requirements for Process Portal Applications are intended for new system purchases or expansions to existing systems. Operate IT B0 workstations will successfully execute Process Portal B1.0 and Process Portal B1.1 software but performance improvements will only be seen if the workstation is upgraded to comply with Process Portal requirements. the following set of notes apply to all the Process Portal Applications.

NOTES

1. One other server application, the Function Block Server, is optionally available for installation in the system. This server application should be installed in nodes that have the RTDS application installed. Redundant Function Block Server applications should be installed in nodes that have the Redundant RTDS application installed. Only one Function Block Server application is needed per system. Recommendations for RTDS nodes are unaffected by the inclusion of the Function Block Server application on the same node.

2. Other ABB applications such as Produce IT Batch and Inform IT as well as third party applications may apply additional load on the PC requiring additional PC resources (CPU speed, RAM, hard disk capacity, etc.). Refer to literature on these products to determine what, if any, additional PC resources are required.

3. Maximum number of RTDS' that can be installed on a single node is 3 with a combined maximum total of 30000 tags. Add 256 Mbyte RAM for each additional RTDS installed after the first one on a PC.

4. Where shown Windows 2000 Professional is a minimum requirement. Refer to the Operating System Requirements table for system size and architecture dependencies that may require the use of Windows 2000 Server.

5. Listed hard disk size for the historian is nominal; actual hard disk size will vary depending upon the amount of historical data and event collection required. This is a function of storage rate and length of time before archival. Tools for calculating the required hard disk space size are included on the installation CD and in the Sales Kit.

6. Unless stated differently in the tables below, the hard disk sizes must include 1 Gbyte free space on the OS partition and 1 Gbyte free space on the Process Portal partition.

7. Composer Server can never be installed on the same PC along with Process Portal RTDS and should not be installed on the same PC along with Process Portal Historian Server.

Single Process Portal Application on a PC

Application	Software/Servers	Requirement
Client	PC CPU	450 MHz minimum, 1 GHz or faster recommended
	Hard Disk	10 Gbyte; 650 Mbyte free space on OS partition
	Memory	384 Mbyte
	OS	Windows 2000 Professional
RTDS	PC CPU	1 GHz or faster
	Hard Disk	10 Gbyte
	Memory	384 Mbyte <= 20000 Tags for RTDS
		512 Mbyte > 20000 Tags for RTDS
		Max RTDS Tags = 30000
	OS	Windows 2000 Professional

Application	Software/Servers	Requirement
Historian	PC CPU	1 GHz or faster
	Hard Disk	2 Physical SCSI drives - 9 Gbytes on each
	Memory	512 Mbyte minimum
		512 Mbyte <= 2000 atoms for Historian
		768 Mbyte <= 5000 atoms for Historian
		1 Gbyte <= 10000 atoms for Historian
	OS	Windows 2000 Professional
Configuration Server	PC CPU	1 GHz or faster
	Hard Disk	10 Gbytes
	Memory	512 Mbyte minimum
	OS	Windows 2000 Server

Single Process Portal Server Application Installed along with a Client on a PC

Application	Software/Servers	Requirement
Historian and Client	PC CPU	1 GHz or faster - Dual Processor required
	Hard Disk	2 Physical SCSI drives - 9 Gbytes on each
	Memory	512 Mbyte minimum
		512 Mbyte <= 2000 atoms for Historian
		768 Mbyte <= 5000 atoms for Historian
		1 Gbyte <= 10000 atoms for Historian
	OS	Windows 2000 Professional
RTDS and Client	PC CPU	1 GHz or faster
	Hard Disk	10 Gbyte
	Memory	512 Mbyte minimum
		Max RTDS Tags = 30000
	OS	Windows 2000 Professional
Configuration Server and Client	PC CPU	1 GHz or faster - Dual Processor required
	Hard Disk	10 Gbytes
	Memory	512 Mbyte minimum
		Dual processor and SCSI drives are to improve client performance during configuration
	OS	Windows 2000 Server

Two Process Portal Server Applications on a PC

Application	Software/Servers	Requirement
Historian and RTDS	PC CPU	1 Ghz or faster - Dual Processor required
	Hard Disk	2 Physical SCSI drives - 9 Gbytes on each
	Memory	640 Mbyte minimum
		640 Mbyte <= 2000 atoms for Historian
		1 Gbyte <= 5000 atoms for Historian
		5000 Max atoms for Historian
		Max Tags 2500 for RTDS
	OS	Windows 2000 Professional
Configuration Server and RTDS	PC CPU	1 Ghz or faster - Dual Processor required
	Hard Disk	10 Gbytes
	Memory	640 Mbyte minimum
		Max Tags 2500 for RTDS
	OS	Windows 2000 Server
Configuration Server and Historian	PC CPU	1 Ghz or faster - Dual Processor required
	Hard Disk	2 Physical SCSI drives - 9 Gbytes on each
	Memory	640 Mbyte minimum
		640 Mbyte <= 2000 atoms for Historian
		1 Gbyte <= 5000 atoms for Historian
		5000 Max atoms for Historian
	OS	Windows 2000 Server

Two Process Portal Server Applications with a Client on a PC

Application	Software/Servers	Requirement
Historian, RTDS, and Client	PC CPU	1 Ghz or faster - Dual Processor required
	Hard Disk	2 Physical SCSI drives - 9 Gbytes on each
	Memory	768 Mbyte minimum
		768 Mbyte <= 2000 atoms for Historian
		1 Gbyte <= 5000 atoms for Historian
		5000 Max atoms for Historian
		Max Tags 2500 for RTDS
	OS	Windows 2000 Professional
Configuration Server, RTDS, and Client	PC CPU	1 Ghz or faster - Dual Processor required
	Hard Disk	2 Physical SCSI drives - 9 Gbytes on each
	Memory	768 Mbyte minimum
		Max Tags 2500 for RTDS
	OS	Windows 2000 Server

Application	Software/Servers	Requirement
Configuration Server, Historian, and Client	PC CPU	1 Ghz or faster - Dual Processor required
	Hard Disk	2 Physical SCSI drives - 9 Gbytes on each
	Memory	768 Mbyte minimum
		768 Mbyte <= 2000 atoms for Historian
		1 Gbyte <= 5000 atoms for Historian
		5000 Max atoms for Historian
	OS	Windows 2000 Server

Three Process Portal Server Applications on a PC

Application	Software/Servers	Requirement
Configuration Server, Historian, and RTDS	PC CPU	1 Ghz or faster - Dual Processor required
	Hard Disk	2 Physical SCSI drives - 9 Gbytes on each
	Memory	1 Gbyte minimum
		Max 1000 tags for RTDS
		Max 200 atoms for Historian
	OS	Windows 2000 Server

Three Process Portal Server Applications with a Client on a PC

Application	Software/Servers	Requirement
Configuration Server, Historian, RTDS, and Client	PC CPU	1 Ghz or faster - Dual Processor required
	Hard Disk	2 Physical SCSI drives - 9 Gbytes on each
	Memory	1 Gbyte minimum
		Max 1000 tags for RTDS
		Max 200 atoms for Historian
	OS	Windows 2000 Server

Process Portal Applications with Composer for Harmony on a PC

Application	Software/Servers	Requirement
Process Portal Client and Composer Server	PC CPU	450 MHz minimum, 1 Ghz or faster recommended - Dual Processor required
	Hard Disk	10 Gbyte
	Memory	384 Mbyte minimum
		Dual processors to improve client performance during configuration
	OS	Windows 2000 Professional

Application	Software/Servers	Requirement
Configuration Server and Composer Server	PC CPU	1 Ghz or faster
	Hard Disk	9 Gbyte for operation + 9 Gbyte for storage 2 Physical SCSI drives
	Memory	640 Mbyte minimum
	OS	Windows 2000 Server
Configuration Server and Composer Workstation	PC CPU	1 Ghz or faster
	Hard Disk	9 Gbyte for operation + 9 Gbyte for storage 2 Physical SCSI drives
	Memory	640 Mbyte
	OS	Windows 2000 Server
RTDS and Composer Client	PC CPU	1 Ghz or faster
	Hard Disk	10 Gbyte
	Memory	512 Mbyte <= 20000 Tags for RTDS
		640 Mbyte > 20000 Tags for RTDS
		Max RTDS Tags = 30000
	OS	Windows 2000 Professional
RTDS, Process Portal Client, and Composer Client	PC CPU	1 Ghz or faster
	Hard Disk	10 Gbyte
	Memory	640 Mbyte minimum
		Max RTDS Tags = 30000
	OS	Windows 2000 Professional
Historian, Process Portal Client, and Composer Client	PC CPU	1 Ghz or faster - Dual Processor required
	Hard Disk	9 Gbyte for operation + 9 Gbyte for storage 2 Physical SCSI drives
	Memory	640 Mbyte minimum
		640 Mbyte <= 2000 atoms for Historian
		896 Mbyte <= 5000 atoms for Historian
		1.128 Gbyte <= 10000 atoms for Historian
	OS	Windows 2000 Professional
Configuration Server, Process Portal Client, and Composer Client	PC CPU	1 Ghz or faster - Dual Processor required
	Hard Disk	9 Gbyte for operation + 9 Gbyte for storage 2 Physical SCSI drives
	Memory	640 Mbyte
		Dual processor and SCSI drives are to improve client performance during configuration
	OS	Windows 2000 Server

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