

Features and Benefits

Power Generation Portal Platform

- Built on Tenore© technology
- Client/Server architecture
- Multi-master redundancy
- Up to 512,000 tags per server
- Process monitoring and supervision
- Alarm management
- Analog and digital trending
- Parameter and event logging
- Windows® and Linux® based platform
- ActiveX® controls
- System level diagnostic
- On-line documentation
- Multilevel security
- User profile recognition
- Off-line and On-line configuration
- OPC Server and OPC Client support
- Connectivity to ABB DCS (INFI90, Harmony, Freelance, 800XA, AC870P, Procontrol P13)
- Connectivity to SCADA protocols (IEC 101/103/104, Modbus, SPABUS, DNP 3.0)

Power Generation Portal HMI Extensions

- Standard symbols libraries
- Animation
- Scalable objects
- Graphic object import
- International language support
- Quad monitor support
- Wave file alarm annunciation
- Intuitive point-and-click navigation
- Tool-tip support

Power Generation Portal PIMS Extension

- Data historian and archiving
- Real-time/historical trending.
- SOE (Sequence of Events) support
- Excel® Report generation
- OLE2/COMTM support
- ODBC and OLE-DB support
- Internal Calculation Engine
- Log and Report Generation

Power Generation Portal SCADA Extensions

- Scanner suite for ABB and foreign protocols interfacing
- Web support, pure thin client
- Support for SCADA graphics
- SMS Integration

Highlights

The Power Generation Portal version 4.1 software product is a Windows® and Linux® 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®, OLE-DB and OPC® enables this HSI product 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, face-plate and tuning displays, trending, and reporting.

Power Generation Portal embraces the use of context sensitive aspect menus to provide integrated information sharing, intuitive navigation, and efficient engineering. Employing 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, Power Generation Portal can be used in conjunction with most ABB Industrial^{IT} controllers: SymphonyTM/Harmony, Freelance 800F, AC800M, AC870P, Procontrol P13 and in general any OPC aware third-party controllers. Power Generation Portal can be used in new system installations or as an expansion to existing OCS systems from ABB. In existing ABB systems, Power Generation Portal can be used side-by-side with many existing HSI products



Sizing Parameters

Category	Parameter or Feature	Max.
Database		
Tags	Number of Analog Tags per Server	256,000
	Number of Digital Tags per Server	256,000
	Number of Database Tags per Server	512,000
	Number of Database Tags per System: <ul style="list-style-type: none"> • 64 non redundant servers • 32 redundant servers • 20 triple redundant servers 	32 M 16 M 10 M
Eng. Units	Number of Descriptors	Unlimited
Logic States	Number of Descriptors	Unlimited
Alarm Comments	Number of Comments	Unlimited
Alarm Handling		
Tags	Number of Handled Alarms	Unlimited
	No. of Analog Alarm Levels	6
	No. of Rate of Change Levels	2
	No. of Deviation Levels	2
Groups	Number of Alarm Groups	Unlimited
Servers	Alarm Broadcasted Servers	64
Priorities	Number of Alarm Priorities	16
	Number of Alarm Colors	20
Tones	Number of Audible Tones	1023
Calculations		
Tags	No. of Tags per Calc. Block	2,000
Blocks	No. of Calculation Blocks	10,000
Statements	Statement Length	256

Category	Parameter or Feature	Max.
Human Machine Interface		
Displays	Number of Displays	Unlimited
Pegboards	Number of Pegboard	500
Windows	Number of Operator Windows	32
	No. of Menu Items and Icons	Unlimited
Security		
Users	Number of Individual Users	Unlimited
User Name	Number of Characters	18
Password	Number of Characters	18
Process Events		
SOE	Number of SOE Tags	256/SER 5,000/SEM
	Number of SOE Devices	10
Summaries		
Tags	Real Time Tag Summaries	Unlimited
	Tag Operating Parameters	Unlimited

Category	Parameter or Feature	Max.
Historical Archiving		
Playback	No. of Playback Snapshots	1000
Trend Groups	Number of Trend Groups (Value includes historical, post trip and real-time groups)	Unlimited
	No. of Tags per Trend Group	512
	No. of Colors for Trend Curves	20
Chronological Alarms	No. of archived messages	Unlimited ¹
Maintenance	Number of Digital Totalizations	1,000
Totalizations	Number of Analog Totalizations	1,000
Post Trips	Max Latency Days	10,000
	Max Number of Files	9,999
Long Term Archival		
	Number of Long Term Logs	Unlimited
Reports		
	Number of Unique Reports	1,000
Printing		
Printers	Number of Printers	99
Hardware		
Clients	Number of Clients per Server	32
Servers	Number of Servers in a System	64

¹ Each message requires 400 bytes of hard disk space

Feature Details

Category	Parameter or Feature	Notes	Base license
Database			
General	Configuration	On-line and Off-line	Yes
Tags	Standard Format	Dbase III/IV or Excel® (XLS), XML	Yes
Engineering Units	Standard Format	Dbase III/IV, Excel® (XLS) or CFG file, XML	Yes
Logic States	Standard Format	Dbase III/IV, Excel® (XLS) or CFG file, XML	Yes
Alarm Comments	Standard Format	Dbase III/IV or Excel® (XLS), XML	Yes
Alarm Management			
General	Alarm Acknowledgement	Global (user restricted) Per Individual Tag Per Alarm Page (all tags displayed)	Yes Yes Yes
	Alarm Inhibit	Automatic per Individual Tag Manual per Individual Tag	Yes Yes
	Alarm Action Program	Activation configurable per individual tag and per alarm condition. The Alarm Action Program must be provided by the user	Yes
Tags	Variable Alarm Levels	Configurable per individual tag	Yes
	Alarm Dead-band	Configurable per individual tag	Yes
	RTN as New Message	Configurable per individual tag	Yes
	Remove Alarm Message on Ack	Configurable per individual tag	Yes
Groups	Group Tree	Configurable	Yes
Servers	Acknowledgment broadcast	Configurable (default NO)	Yes
Tones	Types of Audible Tones	Beep, Wave File (one shot or continuous), Horn (via controller)	Yes
	Audible on Alarm	Configurable per individual tag	Yes
	Audible on RTN	Configurable per individual tag	Yes
	Alarm Audible Silence	Global	Yes
	Disable Audible on Acknowledge	Configurable (default YES)	Yes
Pages	Alarm Display	Alarm Page per group and Unacknowledged Alarm Window.	Yes
	Alarm Filtering	Per Priority, per Alarm Group	Yes
	Alarm Summary	Summary always on view and One click to display	Yes
Message Format	Font Height and Weight of Message	Configurable	Yes
	Alarm Comments on Alarm Display	Configurable (default NO)	Yes

Category	Parameter or Feature	Notes	Base license
Alarm Management (continued)			
	Value Updated within Alarm Display	Configurable (default YES)	Yes
	Milliseconds within Date/Time	Configurable (default YES)	Yes
	Time of Alarm Resolution	1 Millisecond	Yes
	Date and Time	Configurable according to the operating system settings	Yes
Calculations			
General	Configuration	On-line and Off-line	No
	Triggering	On event and On schedule	No
Statements	Statement Length	Configurable	No
Operators	Arithmetical Operations	+, - (prefix), - (infix), *, /, % (module), ^ (exponential)	No
	Logical Operators	AND, OR, NOT	No
	Relational Operators	<, ==, >, <=, !=, >=	No
Structures	Control Structures	IF-THEN-ELSE, WHILE-DO	No
Functions	Mathematical Functions	ABS, SIN, COS, EXP, LN, LOG10, MIN, MAX, SQR, etc.	No
	Tag Functions	GETINFO, GETTAG, SAVEVALUE, TEST_ALARM, TEST_QUALITY, FORCE_QUALITY, etc.	No
	File Functions	READFILE, WRITEFILE	No
	Time Functions	DAY, HOUR, DAYOFWEEK, DELTATIME, etc.	No
	Steam Functions	Specific Heat, Hentalpy, Entropy, Specific Volume, Water Viscosity, Water Conducibility, etc	No
	Gas Property Functions	Specific Heat, Enthalpy, Entropy, Molecular Weight of Gas	No
	Sea Water Functions	Specific Heat, Enthalpy, Density, Thermal Conducibility, Dynamic Viscosity of Sea Water	No
	Wet Air Functions	Specific Heat, Enthalpy, Entropy, Temperature, Humidity of Wet Air	No
	Fuel Combustion Functions	Specific Heat, Enthalpy, Entropy, Temperature of Fuel	No
	Historical Functions	COUNTER, DELAY, DERIV, FILT, GRAD, HIST_VAL, INTEG, etc.	No
Macros	Library of Macros	Thermal Power Plant and MSF Desalination Plant macros.	No
Human Machine Interface			
General	Language	Multi-language support based on Unicode. Default English. Other languages supported if translation files are provided by LBUs	Yes

Category	Parameter or Feature	Notes	Base license
Human Machine Interface (continued)			
Displays	Graphic Editor	Embedded Editor	Yes
	Import Existing Mimics	SODG	Yes
	Update Frequency of Dynamics	Selectable from 100 msec to 3600 seconds	Yes
Windows	Multi-screen	Configurable (default NO)	Yes
	Draggable Windows	Configurable (default NO)	Yes
	Process Control SP and CO Increment	Configurable (default 0.2%).	Yes
	SP and CO Fast Increment	Configurable (default 4%)	Yes
	Double Click to Select Popup	Configurable (default NO)	Yes
Security			
General	Access	Individual users	Yes
	Technology	Configurable, proprietary or according to operating system security	Yes
Log In	Log In	Username and Password	Yes
	Username	No case sensitivity	Yes
	Password	No case sensitivity	Yes
	Default Log-in User	Configurable	Yes
	Log-in Display	Configurable	Yes
Log Out	Log Out	Manual on demand or Automatic on time-out	Yes
	Log-out Time-out	Configurable	Yes
	Log-out Display	Configurable	Yes
Process Events			
General	Sequence of Events	Standard and distributed	Yes
	Sequence of Events Resolution	1 Millisecond	Yes
Tags	Number of SOE Events	Configurable	Yes
	Duplication of SOE to Digital Inputs	Configurable (default YES).	Yes
Logs	Multiple SOE Logs	Kept individual or merged	Yes
Summaries			
Tags	Real Time Tag Summary	Multiple filtering criteria	Yes
Historical Archiving			
General	Types of Data	Playback Historical Trend Groups Post Trip Groups Chronological Alarm Messages	Yes No No Yes
	Automatic Archiving on Time Basis	Playback Historical Trend Groups Post Trip Groups Chronological Alarm Messages	Yes No No Yes
	Automatic Archiving on Event Basis	Post Trip Groups	No

Category	Parameter or Feature	Notes	Base license
Historical Archiving (continued)			
Playback	Tags Archived on Playback	Configurable per Individual Tag, All Tags by Default.	Yes
	Playback Data Compression	Slope Band.	Yes
Trend Groups	Types of Historical Trend Groups	Instantaneous Value Minimum, Maximum or Total Count Monitor Ratio	No No No No No
	Trend Group Displaying Formats	Trend or Table	Yes
	Trend Group Time Displaying	Real Time and Historical	Yes No
	Curve Highlight on Trend	Bolding of Selected Tag	Yes
	Tag Engineering Unit Scale on Trend	Default: 0 - 100 % or E.U. Scale of Selected Tag.	Yes
	Trend Curve Analysis	Pause real time trending, Zoom and Pan Functions, Drag Cursor	Yes
	Trend Group Configuration	On-line or Off-line	Yes
	Trend Group Display Configurability	On-line. Tag Scale, Curve Color and Display Coordinates.	Yes
	Statistic Data of Trend Curves	On Demand. Average, Minimum and Maximum, Time of Minimum and Maximum	Yes
Chronological Alarms	Alarm Summary	Multiple Filtering Criteria.	Yes
Post Trips	Latency on Disk	Configurable in term of days and number of files	Yes
Long Term Archiving			
General	Type of Data	Playback Chronological Alarm Messages Historical Groups Post Trip Groups	Yes Yes No No
	Archival Storage	On-line, Remote	Yes
	Automatic Archiving on Time Basis	Configurable	Yes
	Manual Archiving	Supported	Yes
Media	Archive to ...	CD-ROM, Optical Disk, DAT Tape, Disk File, DVD.	Yes
Reports			
General	Template Configuration	Scheduling: On-line and Off-line, Work-sheet: Off-line	Yes Yes
	Logged Data	Real Time Historical	Yes No
	Triggering	On event or On schedule	Yes
	Latency on Disk	Configurable in term of days and number of files	Yes
Logs	Data Logging	Custom Excel® Work-sheet	Yes

Category	Parameter or Feature	Notes	Base license
Reports (continued)			
SOE	Sequence of Events Logging	Standard Text File, Custom Excel [®] Work-sheet	Yes
Printing			
Alarms	Type of Printing	Automatic Single Line, Automatic Full Page, Manual on Demand.	Yes
	Alarms per Page	Configurable	Yes
	Enable/Disable Alarm Printing	Manual	Yes
	Alarm Printer Operation	Enable/Disabled at start-up time (default DISABLED)	Yes
	Alarm Page Header	Configurable	Yes
Reports	Timing	Automatically Scheduled, Manual on Demand	Yes
External Interfaces			
OLE	OLE/DDE Interface	DDE Functions	No
OLE-DB	OLE-DB Interface	OLE-DB Access Functions	Yes
ODBC	ODBC (Server side)	Oracle, Access, dBase IV, Excel [®] , MS SQL Server	No
OPC	OPC (Server side)	DA 2.05 AE 1.02 HDA 1.1	No No No
WEB	WEB Extensions	Internet and Corporate Intranet	No
Architecture			
Hosts	Architecture	Client/Server	Yes
Clients	Client Switch-over to Server	Automatic or Manual	Yes
	Server List for Clients	Configurable	Yes
Servers	Redundancy	Multi-Master Servers	Yes
Connectivity			
ABB DCS	Harmony	INFINET via serial-line (INNIS01/INICT12) INFINET via SCSI (INNIS01/IMMPI01/INICT03A)	No
	Inf90, Inf90Open	INFINET via serial-line (INNIS01/INICT01) INFINET via SCSI (INNIS01/IMMPI01/ INICT03A)	No
	Network90	Plant Loop via serial-line (NLIM02/NBTM01/NLSM02, IMLIM03 /IMBTM01a/IMLSM02) Super Loop via serial-line (INLIS01/ INSSM01)	No
	Control ^{IT} AC800F, Freelance 800F, Freelance 2000	Supported versions up to 8.2. Requires AC800F OPC server, not provided with PGP. Refer to system requirements section	No

Connectivity (continued)			
	Compact Products 800 (AC800M family of controllers)	Support versions up to SV5.0. SP1. Requires AC800M OPC server, not provided with PGP. Refer to System Requirements – Connectivity section	No
	800xA Integrated System (AC800M family of controllers)	Support versions up to SV4.1. Requires 800xA Core System, not provided with PGP. Refer to System Requirements – Connectivity section	No
	AC870P	Support version 4.1. Requires AC870P Connectivity Server, not provided with PGP. Refer to System Requirements – Connectivity section. Limited release	No
	DCI System Six	All controller versions. Requires DCI System Six OPC Server, not provided with PGP. Refer to System Requirements – Connectivity section	No
	Procontrol P13	All controller versions. Requires Procontrol P13 OPC Server, not provided with PGP. Available January 2008	No
Turbine Control Systems	Siemens Teleperm	Siemens protocol on Ethernet TCP/IP	No
	General Electric Mark V/VI	GSM protocol (GE Standard Messages) on Ethernet TCP/IP	No
Standard protocols	Modbus	RS232, RS422, RS485	No
	Modbus RTU	RS232, RS422, RS485	No
	Modbus TCP	Ethernet TCP/IP	No
	OPC (client side)	DA 2.05 AE 1.02 Connect to 3 rd party OPC Server	No
	ODBC (client side)	Connect to 3 rd party ODBC Server	No
SCADA protocols	SPABUS	RS232, RS422, RS485	No
	IEC 870-5-101	RS232, RS422, RS485	No
	IEC 870-5-103 ²	RS232, RS422, RS485	No
	IEC 870-5-104	Ethernet TCP/IP	No
	DNP 3.0	Ethernet TCP/IP	No
Generic Interface	ASCII text	Input from ASCII file (configurable message format)	No

² Disturbance recording not supported in this version

System Minimum Requirements – Platform - Windows® System

Small systems (up to 2500 tags), server and client on same PC

- Hardware Requirements
 - Pentium 4 or later, 3 GHz
 - 512 MB RAM, 80 GB HD
- Software Requirements
 - Windows XP Professional
 - Excel® (for configuration or reports)

Medium and Large Systems

- Server
 - Hardware Requirements
 - XEON CPU or later, 3 GHz
 - 1 GB RAM for 8 client, 2 GB for 16 clients, 4 GB for 32 clients, 80 GB SCSI HD
 - Software Requirements
 - Windows 2003 Standard Edition
 - Windows 2003 Enterprise Edition
 - Excel® (for configuration or reports)
- Client
 - Hardware Requirements
 - Pentium 4 or later, 3 GHz
 - 512 MB RAM, 40 GB HD
 - Software Requirements
 - Windows XP Professional
 - Excel® (for client-based reports)

Front End Servers and OPC Servers

- Hardware Requirements
 - Pentium 4 or later, 3 GHz
 - 1 GB RAM, 80 GB HD
- Software Requirements
 - Windows XP Professional
 - Windows 2003 Standard Edition
 - Windows 2003 Enterprise Edition

Web Server

- Hardware Requirements
 - Pentium 4 or later, 1 GHz
 - 1 GB RAM, 80 GB HD
- Software Requirements
 - Windows 2003 Standard Edition
 - Windows 2003 Enterprise Edition
 - IIS

System Minimum Requirements – Platform - Linux® System

Small and Medium Systems

- Server
 - Hardware Requirements
 - CPU:1x Intel P4 3.2 GHz
 - Memory : 1GB / 512 MB DDR ECC
 - Hard disk : 1x 80 GB Sata
 - Video Controller: 4 output PCI express 16x mem 128/256MB
 - Ethernet controller : 2 ports 10/100MB
 - Software Requirements
 - Red Hat Enterprise Linux Advanced Server 4.0
- Client
 - Clients are always based on Windows, refer to Windows-based systems

Large Systems

- Server
 - Hardware Requirements
 - HP Server rx2620
 - HP Itanium2 1.3 GHz 3MB CPU
 - 8GB DDR memory Quad
 - 146GB 10K HotPlug Ultra320 LP disk drive
 - Software Requirements
 - Red Hat Enterprise Linux Advanced Server 4.0
- Client
 - Clients are always based on Windows, refer to Windows-based systems

System Requirements – Connectivity

Note 1: more system options and tools are available from the catalog. The following list refers exclusively to those component needed for PGP connectivity.

Compact Products 800

Compact Control Builder

- Catalog 3BSE040017/D
- Price Book 3BSE040018/B
- Item A030
Compact Control Builder
(one OPC Server license included)
- Article 3BSE040360R41
- Quantity 1
- Item A040
OPC server for AC800M
(additional licenses)
- Article 3BSE039914R10
- Quantity 1 for every PGP server

800xA Integrated System

800xA 4.1 System

- Catalog 3BSE037927/E
- Price Book 3BSE037928/E
- Item B010
xA Core System
- Article 3BSE034320R2
- Quantity 1
- Item B020-B040
Tags (only if required, refer to PGP for 800xA Manual)
- Article 3BSE031540R1
- Quantity As needed
- Item F010
100 AC 800M Control
Software Integration CLP:s
(as needed depending on controller logic configuration)
- Article 3BSE031598R1
- Quantity As needed
- Item K010-K030
Device Management using
Fieldbus Device Integration
(as needed depending on system configuration)
- Article 3BSE034313R2 (Hart)
- 3BSE034314R2 (Profi)
- 3BSE034315R2 (FF)
- Quantity As needed

Note 2: for information on minimum hardware and software requirements related to anyone of the components in the following list, please refer to the corresponding product documentation.

Harmony, INFI90, Network90

All necessary software components are distributed with PGP

Control^{IT} AC800F, Freelance 800F, Freelance 2000

Open Communication Package (DDE, OPC)

- Catalog 3BDD012380/D
- Price Book 3BDD012381/C
- Item G110
Article 3BDS008754R03
- Quantity 1

Control^{IT} AC870P

Composer for Melody

- Catalog 3BDD011781/G
- Price Book 3BDD011783/G

800xA 4.1 System

- Catalog 3BSE037927/E
- Price Book 3BSE037928/E
- Item B010
xA Core System
- Article 3BSE034320R2
- Quantity 1

DCI Systems Six

OPC Server for DCI 2.0

- Catalog 3BUR002580/H
- Price Book 3BUR002716/A
- Item C100
Permanent License
- Article 3BUR002718R01
- Quantity 1
- Item E100 – E180
OPC DA Server
functionality (select number of OPC Items)
- Article 3BUR002718R051-059
- Quantity As needed
- Item F100
Alarm and Event Option
- Article 3BUR002718R061
- Quantity 1

Global Lifecycle – Service and Support

Lifecycle support

ABB service and support throughout the lifetime of a plant ensures continuous operational efficiency. Support begins with installation and commissioning. It continues through the supply of spare parts and repairs. ABB support also comes into play when you are considering migration to a new system. ABB ensures long-term and predictable lifecycle support of products and systems through our lifecycle policy (active, classic, limited and obsolete phases). Our plans offer support for a minimum of 10 years after the active phase.

Evolution through enhancement

New generations of software and system components provide increased operating efficiency, lower cost and extended system life. ABB offers low-risk migration and upgrade strategies for a broad range of products and systems. We can assure maximum return on your investment, while enhancing your equipment availability and performance. Our customized upgrade planning, implementation and follow-up services ensure long-term benefits, and continued asset effectiveness.



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