

Inform^{IT} Information Management Tenore

Product Data Sheet – Version 2.1



Industrial^{IT}
— enabled™



ABB

Inform^{IT} Information Management Tenore

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System Requirements for Servers

- Hardware
 - Minimum
 - Processor Intel Pentium 4 or later, 1 GHz
 - RAM 512 MB
 - Hard Drive 40 GB
 - Recommended
 - Processor Intel Pentium 4 or later, 1 GHz
 - RAM 1 GB
 - Hard Drive 40 GB
- Software
 - Recommended Operating System:
 - Windows 2000 Server
 - Other Supported Operating systems:
 - Windows 2000 Professional
 - Windows NT 4.0 Workstation
 - Windows NT 4.0 Server
 - Additional software required
 - Microsoft Excel if needed for reports

System Requirements for Clients

- Hardware
 - Minimum and recommended
 - Processor Intel Pentium 4 or later, 1 GHz
 - RAM 256 MB
 - Hard Drive 20 GB
- Software
 - Supported Operating systems:
 - Windows 2000 Professional
 - Windows 2000 Server
 - Windows NT 4.0 Workstation
 - Windows NT 4.0 Server

Features and Benefits at a Glance

Tenore Information Platform

- Client/Server architecture
- Multi-master redundancy
- Up to 130,000 tags per server
- Process monitoring and supervision
- Alarm management
- Analog and digital trending
- Parameter and event logging
- Windows® based platform
- ActiveX® controls
- *Aspect Objects*TM context-sensitive menu control
- System level diagnostic
- On-line documentation
- Multilevel security
- User profile recognition
- Off-line and On-line configuration

Tenore HMI Extensions

- Standard symbols libraries
- Animation
- Scalable objects
- Graphic object import
- International language support
- Quad monitor support
- *Wav* file alarm annunciation
- Intuitive point-and-click navigation
- Tool-tip support
- Symphony/Harmony, Infi90 and Network 90
- Freelance 2000 and Control^{IT} AC800F
- Control^{IT} AC800M

Tenore PIMS Extension

- Data historian and archiving
- Real-time/historical trending.
- SOE (Sequence of Events) support
- Excel Report generation
- E-mail integration
- DDE access
- OLE2/COMTM support
- TCP/IP, Ethernet protocols
- ODBC support
- OPC Server and OPC Client support
- HTML
- Internal Calculation Engine
- Log and Report Generation

Tenore SCADA Extensions

- Scanner suite for ABB and foreign protocols interfacing
- Web Extensions support
- Distributed Configuration Management
- Remote access security management
- Support for SCADA graphics



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Sizing Parameters

Category	Parameter or Feature	Min.	Default	Max.
Database				
Tags	Number of Analog Tags	100	5,000	65,000
	Number of Digital Tags	100	5,000	65,000
	Number of Database Tags	200	10,000	128,000
Eng. Units	Number of Descriptors	0	128	512
Logic States	Number of Descriptors	0	512	2,048
Alarm Comments	Number of Comments	0	100	1,024
Alarm Handling				
Tags	Number of Handled Alarms	N/A	N/A	Unlimited
	No. of Analog Alarm Levels	N/A	6	6
	No. of Rate of Change Levels	N/A	2	2
	No. of Deviation Levels	N/A	2	2
	Unacked Alarm Msg. Capacity	0	2	10
Groups	Number of Alarm Groups	0	272	1,024
Servers	Alarm Broadcasted Servers	0	4	64
Priorities	Number of Alarm Priorities	0	8	16
	Number of Alarm Colors	0	8	20
Tones	Number of Audible Tones	0	32	512
Calculations				
Tags	No. of Tags per Calc. Block	0	100	2,000
Blocks	No. of Calculation Blocks	0	100	10,000
Statements	Statement Length	N/A	256	256
Human Machine Interface				
Displays	Number of Displays	N/A	N/A	Unlimited
Pegboards	Number of Pegboard	0	100	500
Windows	Number of Operator Windows	1	32	32
	No. of Menu Items and Icons	N/A	500	1,000
Process Control	SP and CO Increment (%)	0	0.2	99.0
	SP and CO Fast Increment (%)	0	4.0	99.0
	Popup Time-out (m)	0	0	60
Security				
Users	Number of Individual Users	1	20	100
User Name	Number of Characters	1	18	18
Password	Number of Characters	1	18	18
Process Events				
SOE	Number of SOE Tags	0	0	256/SER 5,000/SEM
	Number of SOE Devices	0	2	10
Summaries				
Tags	Real Time Tag Summaries	N/A	N/A	Unlimited
	Tag Operating Parameters	N/A	N/A	Unlimited

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Sizing Parameters (continued)

Category	Parameter or Feature	Min.	Default	Max.
Historical Archiving				
Playback	Number of Playback Hours	1	24	24
	No. of Playback Snapshots	1	10	100
Trend Groups	Number of Trend Groups (Value includes historical, post trip and real-time groups)	0	100	1,000
	No. of Tags per Trend Group	1	60	512
	No. of Colors for Trend Curves	15	15	15
Chronological Alarms	No. of archived messages	N/A	10,000	Unlimited
Maintenance	Number of Digital Totalizations	0	100	1,000
Totalizations	Number of Analog Totalizations	0	100	1,000
Post Trips	Max Latency Days	1	7	10,000
	Max Number of Files	1	100	9,999
Long Term Archival				
	Number of Long Term Logs	N/A	N/A	Unlimited
Reports				
	Number of Unique Reports	0	50	1,000
Printing				
Printers	Number of Printers	0	N/A	99
External Interfaces				
Interfaces	Number of Unique Interfaces	N/A	N/A	Unlimited
Hardware				
Clients	Number of Clients Served by each Server	0	As licensed	16
Servers	Number of Servers	1	32	64

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Feature Details

Category	Parameter or Feature	Min.
Database		
General	Configuration	On-line and Off-line
Tags	Standard Format	Dbase III/IV or Excel (XLS)
	Compatibility to	WinTools, Composer (conversion to or from MDB file)
Engineering Units	Standard Format	Dbase III/IV, Excel (XLS) or CFG file
	Compatibility to	WinTools (CFG file)
Logic States	Standard Format	Dbase III/IV, Excel (XLS) or CFG file
	Compatibility to	WinTools (CFG file)
Alarm Comments	Standard Format	Dbase III/IV or Excel (XLS)
Alarm Handling		
General	Alarm Acknowledgement	Global (user restricted) Per Individual Tag Per Alarm Page (all tags displayed)
	Alarm Inhibit	Automatic per Individual Tag Manual per Individual Tag
	Alarm Action Program	Activation configurable per individual tag and per alarm condition. The Alarm Action Program must be provided by the user
Tags	Variable Alarm Levels	Configurable per individual tag
	Alarm Dead-band	Configurable per individual tag
	RTN as New Message	Configurable per individual tag
	Remove Alarm Message on Ack	Configurable per individual tag
Groups	Group Tree	Configurable. Default: 16 main groups and 16 sub-groups for each main group
Servers	Acknowledgment broadcast	Configurable (default NO)
Tones	Types of Audible Tones	Beep, Wave File (one shot or continuous), Horn (via controller)
	Audible on Alarm	Configurable per individual tag
	Audible on RTN	Configurable per individual tag
	Alarm Audible Silence	Global
	Disable Audible on Acknowledge	Configurable (default YES)
Pages	Alarm Display	Alarm Page per group and Unacknowledged Alarm Window.
	Alarm Filtering	Per Priority, per Alarm Group
	Alarm Summary	Summary always on view and One click to display
Message Format	Font Height and Weight of Message	Configurable
	Alarm Comments on Alarm Display	Configurable (default NO)
	Value Updated within Alarm Display	Configurable (default YES)
	Milliseconds within Date/Time	Configurable (default YES)

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Feature Details (continued)

Category	Parameter or Feature	Min.
Database (continued)		
	Time of Alarm Resolution	1 Millisecond
	Date and Time	Configurable Standard: dd-mmm-yy Alternate: dd-mm-yy (default).
	International Date	Configurable. Standard: dd-mm-yy (default) or International: mm-dd-yy
Calculations		
General	Configuration	On-line and Off-line
	Triggering	On event and On schedule
Statements	Statement Length	Configurable
Operators	Arithmetical Operations	+, - (prefix), - (infix), *, /, % (module), ^ (exponential)
	Logical Operators	AND, OR, NOT
	Relational Operators	<, ==, >, <=, !=, >=
Structures	Control Structures	IF-THEN-ELSE, WHILE-DO
Functions	Mathematical Functions	ABS, SIN, COS, EXP, LN, LOG10, MIN, MAX, SQR, etc.
	Tag Functions	GETINFO, GETTAG, SAVEVALUE, TEST_ALARM, TEST_QUALITY, FORCE_QUALITY, etc.
	File Functions	READFILE, WRITEFILE
	Time Functions	DAY, HOUR, DAYOFWEEK, DELTATIME, etc.
	Steam Functions	Specific Heat, Hentalpy, Entropy, Specific Volume, Water Viscosity, Water Conducibility, etc
	Gas Property Functions	Specific Heat, Enthalpy, Entropy, Molecular Weight of Gas
	Sea Water Functions	Specific Heat, Enthalpy, Density, Thermal Conducibility, Dynamic Viscosity of Sea Water
	Wet Air Functions	Specific Heat, Enthalpy, Entropy, Temperature, Humidity of Wet Air
	Fuel Combustion Functions	Specific Heat, Enthalpy, Entropy, Temperature of Fuel
	Historical Functions	COUNTER, DELAY, DERIV, FILT, GRAD, HIST_VAL, INTEG, etc.
Macros	Library of Macros	Thermal Power Plant and MSF Desalination Plant macros.

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Feature Details (continued)

Category	Parameter or Feature	Min.
Human Machine Interface		
General	Language	Multi-language supported. Default English or Italian. Other languages supported if translation files are provided.
Displays	Graphic Editor	SODG (via translation), Embedded Editor, Loox Maker
	Import Existing Mimics	SODG
	Update Frequency of Dynamics	Selectable 1 Sec. or 5 Sec
Pegboards	Structure (Pop-ups Allocation)	Configurable within 32 cells
	Standard Input Format	Dbase III/IV (DBF) or Excel (XLS).
Windows	Multi-screen	Configurable (default NO)
	Draggable Windows	Configurable (default NO)
	Process Control SP and CO Increment	Configurable (default 0.2%).
	SP and CO Fast Increment	Configurable (default 4%)
	Double Click to Select Popup	Configurable (default NO)
Security		
General	Access	Individual users
	Technology	Proprietary
Log In	Log In	Username and Password
	Username	No case sensitivity
	Password	Case sensitivity
	Default Log-in User	Configurable
	Log-in Display	Configurable
Log Out	Log Out	Manual on demand or Automatic on time-out
	Log-out Time-out	Configurable
	Log-out Display	Configurable
Process Events		
General	Sequence of Events	Standard and distributed
	Sequence of Events Resolution	1 Millisecond
Tags	Number of SOE Events	Configurable
	Duplication of SOE to Digital Inputs	Configurable (default YES).
Logs	Multiple SOE Logs	Kept individual or merged
Summaries		
Tags	Real Time Tag Summary	Multiple filtering criteria

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Feature Details (continued)

Category	Parameter or Feature	Min.
Historical Archiving		
General	Types of Data	Playback, Historical Trend Groups, Post Trip Groups, Chronological Alarm Messages
	Automatic Archiving on Time Basis	Playback, Historical Groups and Chronological Alarm Messages.
	Automatic Archiving on Event Basis	Post Trip Groups
Playback	Tags Archived on Playback	Configurable per Individual Tag, All Tags by Default.
	Playback Data Compression	Slope Band.
Trend Groups	Types of Historical Trend Groups	Instantaneous Value, Minimum, Maximum, Total, Count, Monitor and Ratio
	Trend Group Displaying Formats	Trend or Table
	Trend Group Time Displaying	Real Time or Historical
	Curve Highlight on Trend	Bolding of Selected Tag
	Tag Engineering Unit Scale on Trend	Default: 0 - 100 % or E.U. Scale of Selected Tag.
	Trend Curve Analysis	Pause real time trending, Zoom and Pan Functions, Drag Cursor
	Trend Group Configuration	On-line or Off-line
	Trend Group Display Configurability	On-line. Tag Scale, Curve Color and Display Coordinates.
	Statistic Data of Trend Curves	On Demand. Average, Minimum and Maximum, Time of Minimum and Maximum
Chronological Alarms	Alarm Summary	Multiple Filtering Criteria.
Post Trips	Latency on Disk	Configurable in term of days and number of files
Long Term Archiving		
General	Type of Data	Playback, Chronological Alarm Messages, Historical Groups, Post Trip Groups.
	Archival Storage	On-line, Remote
	Automatic Archiving on Time Basis	Configurable
	Manual Archiving	Supported
Media	Archive to ...	CD-ROM, Optical Disk, DAT Tape, Disk File.

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Feature Details (continued)

Category	Parameter or Feature	Min.
Reports		
General	Template Configuration	Scheduling: On-line and Off-line, Work-sheet: Off-line
	Logged Data	Real Time and Historical
	Triggering	On event or On schedule
	Latency on Disk	Configurable in term of days and number of files
Logs	Data Logging	Custom Excel Work-sheet
SOE	Sequence of Events Logging	Standard Text File, Custom Excel Work-sheet
Printing		
Alarms	Type of Printing	Automatic Single Line, Automatic Full Page, Manual on Demand.
	Alarms per Page	Configurable
	Enable/Disable Alarm Printing	Manual
	Alarm Printer Operation	Enable/Disabled at start-up time (default DISABLED)
	Alarm Page Header	Configurable
Reports	Timing	Automatically Scheduled, Manual on Demand
External Interfaces		
OLE	OLE/DDE Interface	DDE Functions
ODBC	ODBC Interface	Oracle, Access, dBase IV, Excel, MS SQL Server
OPC	OPC Interface	OPC Server and OPC Client
WEB	WEB Extensions	Internet and Corporate Intranet
Hardware		
Hosts	Architecture	Client/Server
	Host PC	Custom (Dell and Compaq suggested)
Clients	Client Switch-over to Server	Automatic or Manual
	Server List for Clients	Configurable
Servers	Redundancy	Multi-Master Servers
Field	Field Hardware.	Control ^{IT} AC800F, Control ^{IT} AC800M, Freelance 2000, Symphony, Infi 90, Network 90, Foreign Devices
Communications		
Standard	Supported	C-Net, Infinet, Plant Loop
Scanner Suite	Capability to Host Drivers for	Foreign Protocols. Suite provided for support
	Embedded Drivers for	Modbus Protocol Generic Serial Protocol Text Files Relational Database (OBDC) IEC 8070-5-101 Protocol IEC 8070-5-104 Protocol DCI System Six through DAS API



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