

System 1[®] Version 6.x

Optimization and Diagnostics Software



Description

System 1 Software is a patented, modular machinery management platform for process and equipment optimization, condition monitoring and event diagnostics. The client/server-based architecture is both scalable and flexible. This allows you to focus on your most critical needs and then continue to expand your system by adding new application packages and system extenders. System 1 software integrates all of this into a single system, with a single display environment and common database structure.

The System 1 platform enables operators, equipment engineers, process engineers, instrument technicians, and other plant personnel to quickly identify, evaluate, and respond to important events to optimize the business impact. This increases equipment availability and reliability, and reduces maintenance costs.

A growing suite of specially-designed application packages exists to meet the needs of individual plant equipment and users. These packages supplement System 1 Platform and support high-resolution data acquisition, trending, alarming, exception reporting, and user notification.

The highly modular architecture of the System 1 software facilitates the expansion of data acquisition capabilities and the addition of machinery/asset management tools. These tools provide connectivity to the Snapshot[™] for Windows[®] CE portable data collector, TDXnet[™], TDe and TDI communications processors, 1701 FieldMonitor[™] system, NetDDE, OPC, Modbus[®] devices, and the Dynamic Scanning Module for the Trendmaster[®] Pro system.

System 1 software also provides a suite of System Extender[™] applications to complement and expand the capability of the system. These applications include options for CMMS Interfaces (SAP PM and MRO Maximo[®] interfaces), Data Exporters (OPC A&E, OPC DA, DDE, and OLE Automation), Event Relay Card Software, Smart Notifier, State-Based Analysis and The Bearing Expert[™] software. In addition, the Decision Support Studio with Rule Logic Results allows users to embed their domain knowledge into the system. This permits the system to evaluate real-time data, generate sophisticated alerts and alarms, and produce intelligent advisories that deliver Actionable Information[®] data to select users.

The System 1 platform employs Microsoft Server technology for data acquisition and Decision Support functionality. It also uses a specialized Microsoft SQL database design for fast data storage, event capture and history, equipment properties and configuration information. The system provides a variety of industry standard interfaces to integrate with control and automation applications. System 1 software has been developed specifically for the Microsoft Windows[®] XP/2000 operating systems, offering users with a familiar interface and significant installed base of these industry standard operating systems.

Table 1: The System 1 Application Packages

Application Name	Function
Turbo Machinery	Advanced on-line condition monitoring and diagnostic software package for critical rotating machinery applications. Features sophisticated vibration diagnostics capabilities.
Hydro Machinery	Advanced on-line machine condition monitoring and diagnostic software package for hydro turbines and generators. Included specialized diagnostics tools and measurement support.
Electrical/Multilin Assets	Advanced on-line electrical equipment condition monitoring and diagnostic software package for motors, generators, and transformers.
Wind Turbines	Advanced on-line machine condition monitoring and diagnostic software package for wind turbines.
Reciprocating Compressors	Advanced on-line mechanical and performance condition monitoring and diagnostic software package for critical reciprocating machinery applications. Includes sophisticated Pressure-Volume analysis capabilities.
Performance Visualization	Provides plots associated to thermodynamic performance data (note: the Performance Visualization Application Package does not include the calculation of thermodynamic data). Optional pre-engineered calculation templates (Bently PERFORMANCE™ software) are available for machines such as gas turbines, compressors, pumps, steam turbines, and generators.
Portable Data Collector	Portable walk-around application supporting the Snapshot family of portable data collectors. This includes a two-channel, one-channel IS, and PDA portables for operator rounds.
Trendmaster Pro	Bently Nevada® Trendmaster Pro online scanning system intended for managing essential and balance-of-plant machinery.
Static Data Management	Provides a suite of plots to manage static data collected using industry standard protocols, as well as from Bently Nevada protection systems.

Table 2: The System 1 System Extender™ Applications

Application Name	Function
CMMS Interfaces (MAXIMO and SAP)	Provides an interface to select Computerized Maintenance Management Systems. Includes ability to link to CMMS assets, view work history, Manual work request, and Automated work request.
Rule Logic Results	Decision Support rules use inputs and generate outputs (events, calculations, etc.). In order for rules to be processed, Rule Logic Results must be available in the system. This provides scalable real-time rule processing.
State-Based Analysis	State-based monitoring provides more sophisticated diagnostics of machines, with the ability to define machine states that can control data storage, filter plot data, and help correlate process data with machinery data.
Smart Notifier	Smart Notifier is a stand-alone application that filters events much like Notification Plans but collects them in one place where each user can check on events for which he or she is responsible.
Event Relay Card and Software	The Event Relay Notification component can trip a relay in response to an event of a specified type, severity and asset location. Works with the Decision Support Application.
The Bearing Expert	Enhances configuration of machines with rolling element bearings by providing a bearing database. Identifies key parameters based on Manufacturer, model or dimension of the bearing. Software works with System 1 Configuration. Install on the Configuration computer.

Table 3: The System 1 Data Importers

Type	Function
TDI Transient	Provides dynamic, static, transient and steady state data from a 3500 TDI channel. There is no need to purchase a separate TDI Enabler. Applies to all TDI channels with a waveform enabled for transient data collection. (Exceptions are for channels used in Reciprocating Compressor and Hydro applications – see below.)
TDI Steady State	Provides dynamic, static, transient and steady state data from a 3500 TDI channel. There is no need to purchase a separate TDI Steady State Enabler. Applies to all TDI channels with a waveform enabled for steady state data collection. (Exceptions are for channels used in Reciprocating Compressor and Hydro applications – see below.)
TDI Recip Steady State	Provides dynamic, static, transient and steady state data from a 3500 TDI channel used in Reciprocating Compressor applications. There is no need to purchase a separate TDI Enabler. Applies to all TDI channels on the 3500/70M, 72M and 77M monitors.
TDI Hydro	Provides dynamic, static, transient and steady state data from a 3500 TDI channel used in Hydro applications. There is no need to purchase a separate TDI Enabler. Applies to TDI channels on the 3500/46M that have waveforms enabled.
TDe Transient	Provides dynamic, static, transient and steady state data from a 3300 TDe channel. There is no need to purchase a separate TDe Enabler. Applies to all TDe channels with a waveform enabled for transient data collection
TDe Steady State	Provides dynamic, static and steady state data from a 3300 TDe channel. There is no need to purchase a separate TDe Steady State Enabler. Applies to all TDe channels with a waveform enabled for steady state data collection.
Portable Data Collector Points	Provides dynamic and static data from portable data collector devices.
Trendmaster Pro Points	Provides dynamic and static data from a Trendmaster Pro system.
DCS/Historian Tags	Provides data from OPC, DDE/NetDDE and Modbus devices.

Bently Nevada Monitor Static Channels	Provides static data from channels on Bently Nevada monitors which do not have a waveform enabled.
Dynamic Channels (Non TDI/TDe)	Provides dynamic and static data from communications processors other than 3500 TDI and 3300 TDe. Applies to channels that have waveforms enabled.
Electrical/Multilin Devices	Provides all static and dynamic data (if dynamic data is applicable) collected from a Multilin device. Supported Multilins include: G60 Generator Management Relay™, 489 Generator Management Relay®, 269Plus Motor Management Relay®, 369 Motor Management Relay®, 469 Motor Management Relay®, M60 Motor Management Relay®, Power Quality Meter (PQM), T60 Transformer Management Relay™, T35 Transformer Management Relay™, 745 Transformer Management Relay™, and 750 Transformer Management Relay™ products.

Table 4: The System 1 Data Exporters

Type	Function
Data Exporters	Exports real-time data from System 1 to the DCS, Historians, etc. Includes OPC A&E, OPC DA, DDE, and OLE.
Yokogawa PRM	Exports real-time data from System 1 to Yokogawa's Plant Resource Manager (PRM) software via OPC interface.

Table 5: Additional System Components

Application Name	Function
Data Acquisition	Communicates and acquires data from many sources.
Database (SQL Server)	Stores all historical machinery data, asset information, system hardware, and enterprise configuration.
Display and Configuration	Displays all data on any connected data acquisition or database station. Configures the system hardware and software.
Web Server	Provides internet or intranet connection to a System 1 enterprise. (Requires MS Internet Information Server [IIS])
File Based Configuration	Allows rapid configuration of large number of points by importing/exporting to Microsoft Excel.

Application Name	Function
System 1 Management Console	Provides system administration and system health & performance functionality.

The System 1 client/server architecture allows you to locate Display (client) stations anywhere within your plant's Local Area Network (LAN), Wide Area Network (WAN), or Remote Access Server, providing the ability to display and share data with one or more data acquisition (server) stations.

System 1 software can share data with plant control and automation systems using OPC, DDE, or OLE Automation protocols. Trendmaster Pro DSM can export to control and automation systems using Modbus. Data exporters that provide formatted output of all static variables and status data support a network interface. System 1 software supports time-synchronization with other systems (e.g. process control or machine control systems) using appropriate computer peripherals and software available from GE.

Specifications

System

Minimum Computer Requirements

For demanding online DAQ (Data Acquisition) installations, we strongly recommend that you use an approved and tested server grade computer. For a list of approved servers, please contact your local Sales and Service representative.

For limited online, portable, or Display/Configuration installations, the following requirements are the recommended minimum for the System 1 software to operate. If these requirements are not met, the performance of the application may not be acceptable, and in some cases the software will not run properly. We strongly recommend that you contact your local Sales and Service representative for a list of

tested and approved workstations.

800 MHz Pentium® III processor

256 MB RAM

9 GB hard disk drive

3.5" floppy disk drive or USB

24X CD-ROM drive

8 MB video card

Operating System

Data Acquisition; Database (MS® SQL Server 2000™¹¹ or MS SQL Server 2005™^{12,13}) Software

MS Windows® 2000 Server Service Pack 4

MS Windows Server 2003

Note: System 1 Data Acquisition does not support MS Windows NT.

Display; Configuration; Data Acquisition (Small Snapshot Only) Software

MS Windows 2000 Professional Service Pack 3

MS Windows XP

MS Windows 2000 Server Service Pack 4

MS Windows Server 2003

Note: System 1 Client Software does not support MS Windows NT.

Number of simultaneous Display/Configuration clients for Data Acquisition /SQL Server Station

MS Windows Server 2003

Virtually unlimited simultaneous clients

MS Windows 2000 Server

Virtually unlimited simultaneous clients

MS Windows 2000 Professional / MS Windows XP

10 simultaneous clients

Note: When ordered from GE, server operating systems come with 5 Client Access Licenses (CALs).

Supported Hardware

Systems may support the following hardware depending on the ordered Application Packages. System limitations are listed below.

Supported Monitor Systems and Communication Processor Types:

3500, 3300, 2201, 1701
TDI, TDXnet, TDIXconnX, TDe

Supported Portable/Scanning Types:

Trendmaster Pro DSM
Snapshot Portable
Portable IS
Snapshot Clipboard via PDA

Note: See Snapshot Clipboard data sheet, part number 162458-01, for additional devices.

Maximum number of Communications Processors (CP)/ Equivalent FieldMonitor™ units per data acquisition station:

12

Maximum number of TrendMaster® Pro DSMs per data acquisition station:

150

Maximum number of Modbus® devices per data acquisition station:

150

Maximum number of FieldMonitor™ units per data acquisition station:

36 (3 FieldMonitor units = 1 TDXnet CP)

Maximum number of Snapshot devices per data acquisition station:

Unlimited

Note: 1 Snapshot DAQ per Enterprise

Maximum number of configurable machine trains:

Unlimited

Maximum number of configurable portable points per data acquisition station:

20,000 portable points

Maximum number of configurable online/scanning points (includes Trendmaster Pro and communication processor points) per data acquisition station:

2500 total combined online/scanning points

Maximum number of configurable points per enterprise:

45,000 (Limited only by the maximum number of points per data acquisition station)

Data Historian Maximum Limits (Process Data Only)

Mid-Range Server

5,000 configured tags/DAQ server
2,000 events/second/DAQ server

SQL Server on Mid-Range Server

5000 events/second

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**High Range
Server (requires
4GB RAM)**

25,000 tags/DAQ server
10,000 events/second/DAQ server

**SQL Server on
High Range
Server (requires
4 GB RAM)**

25,000 events/second

**Maximum trend file
length**

Unlimited; dependent on available
system hard drive space.

**Maximum number of
system/alarm events
per data acquisition
station**

Unlimited; dependent on available
system hard drive space.

**Maximum number of
concurrent viewable
events**

10,000 events viewable within
event list.

Network Support

Ethernet

**Network Transport
Protocols**

TCP/IP

Display Plots

You can select the following plots from stored data, Alarm Event Data, or Baseline Data. You can also configure Display to show only the applicable plots for any given application package.

- Current values
- Bargraph
- Machine train diagram
- Alarm/System event list
- Trend / Multivariable trend
- Tabular list

- Timebase (with option for superposition of baseline data)
- Orbit / Timebase (with option for superposition of baseline data)
- Orbit (with option for superposition of baseline data)
- Shaft average centerline
- Spectrum / Full spectrum (with option for superposition of baseline data)
- X vs. Y
- Waterfall / Full waterfall
- Polar/Acceptance region
- Bode
- Cascade / Full cascade
- Reciprocating compressor plots
- Rod position
- Crank angle waterfall
- Compressor maps
- Exhaust gas temperature (EGT)
- Performance map
- Rotor stator profile
- Rotor shape
- Hydro air gap
- Phasor
- Histogram
- Octave

Languages

System1 clients – Display, Configuration, Smart Notifier and DAQ Connection manager – have been translated into 7 non-English languages. A language license is per Enterprise. The supported operating system for non-English translations is the English version of Microsoft Windows. The Online Help system is available only in English.

- Chinese (Simplified)
- Japanese
- Korean
- Spanish (European)
- German
- French (France)
- Russian
- Italian

Ordering Information

Step 1

3060/00 System 1

3010/00-AXX

A: Order Type

- 0 1** New order (CD, key, binder, Microsoft Excel)
- 0 2** Expansion order (license key)
- 0 3** Core System 1 CDs (CDs and binder)
- 9 8** Replacement licenses (key)
- 9 9** Update (CD)

Note: A new order includes the following manuals: the System 1 Software User's Guide, System 1 Software Installation Quick Start Guide, and System 1 Software Operations Quick Start Guide.

Step 2 (Software)

3060/01 System 1 Software and Licenses

3060/01-AXX-BXX-CXX-DX-EXX-FXX

A: Order Type

- 0 1** New order (CD, key, binder, Microsoft Excel)
- 0 2** Expansion order (key only)
- 0 3** Core System 1 CDs (CDs and binder)
- 9 8** Replacement licenses (key)
- 9 9** Update (CD)

Note: Option A is for information only and is the value chosen under Step 1.

B: License Protection Type

- 0 0** None
- 0 1** USB key disk
- 0 2** Floppy key diskette

C: Customer Type

- 0 1** Non-OEM
- 0 2** OEM

D: Quantity

- XX** Number of new Enterprise orders, from 1 to 10.
Example: 0 1 = 1 order
1 0 = 10 orders

Note: Option D determines the quantity of new Enterprise orders (sets of CDs, binders, and Microsoft Excel) and is applies only to the Option A -01 option.

E: Training Accessories

- 0 0** None

- 0 1** Machine Library CBT
- 0 2** Data Acquisition CBT
- 0 3** Machine Library and Data Acquisition CBT

F: Training Voucher

- XX** Number of training vouchers, from 1 to 10.
Example: 0 1 = 1 voucher
1 0 = 10 vouchers

3060/10 Enterprise Application Packages

3060/10-AXXX-BXXX-CXXX-DXXX-EXXX-FXXX-GXXX-HXXX-IXXX

A: Turbo Machinery

- XXX** Number of new licenses, from 0 to 100.
Example: 0 0 0 = 0 licenses
1 0 0 = 100 licenses

B: Hydro Machinery

- XXX** Number of new licenses, from 0 to 100.
Example: 0 0 0 = 0 licenses
1 0 0 = 100 licenses

C: Electrical/Multilin Assets

- XXX** Number of new licenses, from 0 to 100.
Example: 0 0 0 = 0 licenses
1 0 0 = 100 licenses

D: Wind Turbines

- XXX** Number of new licenses, from 0 to 100.
Example: 0 0 0 = 0 licenses
1 0 0 = 100 licenses

E: Reciprocating Compressors

- XXX** Number of new licenses, from 0 to 100.
Example: 0 0 0 = 0 licenses
1 0 0 = 100 licenses

F: Performance Visualization

- XXX** Number of new licenses, from 0 to 100.
Example: 0 0 0 = 0 licenses
1 0 0 = 100 licenses

G: Portable Data Collectors

- XXX** Number of new licenses, from 0 to 100.
Example: 0 0 0 = 0 licenses
1 0 0 = 100 licenses

H: Trendmaster Pro

- XXX** Number of new licenses, from 0 to 100.

Example: 0 0 0 = 0 licenses
1 0 0 = 100 licenses

Example: 0 0 0 = 0 licenses
1 0 0 = 100 licenses

I: Static Data Management
XXX Number of new licenses, from
0 to 100.
Example: 0 0 0 = 0 licenses
1 0 0 = 100 licenses

F: Yokogawa PRM
00 None
01 Custom
02 Yokogawa PRM

3060/12 Display

3060/12-AXXXXX-BXXXXX

A: Number of Diagnostic Display Client Access Licenses
XXXXX Number of licenses, from
0 to unlimited
Example: 0 0 0 0 = 0 licenses
9 9 9 9 8 = 99998 licenses
9 9 9 9 9 = Unlimited licenses per
Enterprise

B: Number of Web-based Display Client Access Licenses
XXXXX Number of licenses, from
0 to unlimited
Example: 0 0 0 0 = 0 licenses
9 9 9 9 8 = 99998 licenses
9 9 9 9 9 = Unlimited licenses per
Enterprise

3060/13 Data Export

3060/13-AXXX-BXXX-CXXX-DXXX-EXXX

A: OPC A&E
XXX Number of licenses, from 0 to
100.
Example: 0 0 0 = 0 licenses
1 0 0 = 100 licenses

B: OPC Legacy
XXX Number of licenses, from 0 to
100.
Example: 0 0 0 = 0 licenses
1 0 0 = 100 licenses

C: OPC Legacy to A&E Upgrade
XXX Number of licenses, from 0 to
100.
Example: 0 0 0 = 0 licenses
1 0 0 = 100 licenses

D: DDE
XXX Number of licenses, from 0 to
100.
Example: 0 0 0 = 0 licenses
1 0 0 = 100 licenses

E: OLE
XXX Number of licenses, from 0 to
100.

3060/14 DAQ

3060/14-AXXX

A: Data Acquisition Licenses
XXX Number of licenses, from 0 to
500, up to 10 per Enterprise
Example: 0 0 0 = 0 licenses
5 0 0 = 500 licenses

3060/15 Data Importers

3060/15-AXXXXX-BXXXXX-CXXXXX-DXXXXX-EXXXXX- FXXXXX-GXXXXX-HXXXXX-IXXXXX-JXXXXX-KXXXXX-LXXXXX

A: TDI Transient Channel Licenses
XXXXX Number of licenses, from
0 to 99998
Example: 0 0 0 0 = 0 licenses
9 9 9 9 8 = 99998 licenses

B: TDI Steady State Channel Licenses
XXXXX Number of licenses, from
0 to 99998
Example: 0 0 0 0 = 0 licenses
9 9 9 9 8 = 99998 licenses

C: TDI Recip Steady State Channel Licenses
XXXXX Number of licenses, from
0 to 99998
Example: 0 0 0 0 = 0 licenses
9 9 9 9 8 = 99998 licenses

D: TDI Hydro Channel Licenses
XXXXX Number of licenses, from
0 to 99998
Example: 0 0 0 0 = 0 licenses
9 9 9 9 8 = 99998 licenses

E: TDe Transient Channel Licenses
XXXXX Number of licenses, from
0 to 99998
Example: 0 0 0 0 = 0 licenses
9 9 9 9 8 = 99998 licenses

F: TDe Steady State Channel Licenses
XXXXX Number of licenses, from
0 to 99998
Example: 0 0 0 0 = 0 licenses
9 9 9 9 8 = 99998 licenses

G: Portable Data Collector Channel Licenses

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XXXXX Number of licenses, from 0 to 99998
Example: **00000** = 0 licenses
99998 = 99998 licenses

H: Trendmaster Pro Channel Licenses

XXXXX Number of licenses, from 0 to 99998
Example: **00000** = 0 licenses
99998 = 99998 licenses

I: DCS/Historian Tag Licenses

XXXXX Number of licenses, from 0 to 99998
Example: **00000** = 0 licenses
99998 = 99998 licenses

J: Bently Nevada Monitor Static Channel Licenses

XXXXX Number of licenses, from 0 to 99998
Example: **00000** = 0 licenses
99998 = 99998 licenses

K: Dynamic Channel (non-TDI/TDe) Licenses

XXXXX Number of licenses, from 0 to 99998
Example: **00000** = 0 licenses
99998 = 99998 licenses

L: Electrical/Multilin Device Licenses

XXXXX Number of licenses, from 0 to 99998
Example: **00000** = 0 licenses
99998 = 99998 licenses

3060/16 System Extenders

3060/16-AXX-BXX-CXX-DXX-EXX-FXXXXX-GXX-HXX

A: CMMS MAXIMO Links

- 00** None
- 01** 20 links
- 02** 50 links
- 03** 100 links
- 04** 250 links
- 05** 500 links
- 06** Unlimited links per Enterprise

B: CMMS SAP PM (pre-Version 4.7) Links

- 00** None
- 01** 20 links
- 02** 50 links
- 03** 100 links
- 04** 250 links
- 05** 500 links
- 06** Unlimited links per Enterprise

C: CMMS SAP PM (Version 4.7) Links

- 00** None
- 01** 20 links
- 02** 50 links

- 03** 100 links
- 04** 250 links
- 05** 500 links
- 06** Unlimited links per Enterprise

D: Rule Logic Results

- 00** None
- 01** 50 results
- 02** 150 results
- 03** 250 results
- 04** 500 results
- 05** Unlimited results per Enterprise

E: State-Based Analysis Machine Trains

- 00** None
- 01** 5 machine trains
- 02** 10 machine trains
- 03** 20 machine trains
- 04** 40 machine trains
- 05** 80 machine trains
- 06** 100 machine trains
- 07** Unlimited machine trains per Enterprise

F: Smart Notifier

XXXXX Number of client accesses, from 0 to unlimited
Example: **00000** = 0 licenses
99998 = 99998 licenses
99999 = Unlimited accesses

G: Event Relay

- 00** None
- 01** Relay software
- 02** Relay software and hardware

H: The Bearing Expert (REB Database) Licenses

XXXXX Number of licenses, from 0 to 99998
Example: **00000** = 0 licenses
99998 = 99998 licenses

Note: The Bearing Expert software works with System 1 Configuration and is sold on a per user rather than concurrent user basis. A single license for The Bearing Expert software may not be shared or used concurrently on different computers. Each user must have their own license. Please refer to The Bearing Expert License Agreement for further details.

3060/36 Decision Support

3060/36-AXX

A: Edition
 01 Studio Developer

3060/65 Data Manager 2000 Migration

3060/65-AXX-BXX

A: Order Type
 01 Vibration Data Only
 02 Vibration & Process Data

B: Licensing
 XX Number of communications processors, up to 12
Example: 1 2 = 12 comm. processors

3060/90 System 1 Languages

3060/90-AXX-BXX-CXX-DXX-EXX-FXX-GXX

Notes: No language order is required if the desired System 1 language is English.
 The supported Operating System is the English version of Microsoft Windows.
 The Online Help system is available only in English.

A: Order Type
 01 New order (CD, key, binder, Microsoft Excel)
 02 Expansion order (key only)
 03 Core System 1 CDs (CDs and binder)
 98 Replacement licenses (key)
 99 Update (CD)

B: License Type
 00 None
 01 USB key disk
 02 Floppy key diskette

C: Customer Type
 01 Non-OEM
 02 OEM
Note: The customer type is not a selectable option.

D: 1st Language
 00 None
 01 Chinese
 02 Japanese
 03 Korean
 04 Spanish
 05 German
 06 French
 07 Russian
 08 Italian

E: 2nd Language
 00 None
 01 Chinese
 02 Japanese

03 Korean
 04 Spanish
 05 German
 06 French
 07 Russian
 08 Italian

F: 3rd Language
 00 None
 01 Chinese
 02 Japanese
 03 Korean
 04 Spanish
 05 German
 06 French
 07 Russian
 08 Italian

G: 4th Language
 00 None
 01 Chinese
 02 Japanese
 03 Korean
 04 Spanish
 05 German
 06 French
 07 Russian
 08 Italian

System 1 Software Platform

Note that all on-line systems require MS SQL Standard, which you may order through the 3010/11 C option. You will need one Client Access License (CAL) per client computer.

Any computer with a System 1 client, DAQ, or Web Display Server software connecting to a System 1 database running on SQL Server Standard or Enterprise editions must have one Client Access License (CAL) each.

3010/11 System 1 Software Platform

3010/11-AXX-BXX-CXX-DXX-EXX-FXX-GXX-HXX-IXX-JXX-KXX-LXX-MXX-NXX-OXX

A: System 1 Workstation/Platform (No Monitor Included)
 00 No workstation/platform
 01 Professional workstation (no monitor)²
 02 Mid-range server DAQ (tower, no monitor)^{3,9}
 03 Mid-range server DAQ (rack, rack keyboard/drawer, no monitor)^{3,4,9}
 04 High-performance server DAQ (tower, no monitor)^{3,7,9}
 05 High-performance server DAQ (rack, rack keyboard/drawer, no monitor)^{3,4,9}

	06	Mid-range server DAQ (rack, rack keyboard only, no monitor) ^{3, 5, 9}	01	Dual port NIC (for servers only) ⁸	
	07	Mid-range server DAQ (rack, no keyboard/drawer, no monitor) ^{3, 9}	02	Single port NIC (for workstations only) ¹⁰	
	08	High-performance server DAQ rack, rack keyboard only, no monitor) ^{3, 5, 7, 9}	03	Modem (for servers only) ⁸	
	09	High-performance server DAQ (rack, no keyboard/drawer, no monitor) ^{3, 7, 9}	04	Dual port NIC and Modem (for servers only) ⁸	
B: Monitor	00	No monitor	H: Redundant Components (for servers only)⁸	00	None
	01	17" XGA monitor		01	Redundant power supply
	02	19" TFT flat panel monitor		02	Redundant cooling fan kit
	03	20" TFT flat panel monitor		03	Redundant power supply and cooling fan kit
C: Microsoft SQL Server (for servers only)⁸	00	None	I: Uninterruptible Power Supply (UPS)	00	No UPS
	01	Standard SQL 2000 – 5 CALs ¹¹		01	110V 1440VA rack 2U (North America)
	02	Standard SQL 2000 – 10 CALs ¹¹		02	110V 1440VA tower (North America)
	03	Standard SQL 2005 embedded – 5 CALs ¹²		03	220V 1500VA tower (international)
	04	Standard SQL 2005 embedded – 10 CALs ¹²	J: Second Processor Card (for servers only)⁸	00	No second processor card
	05	Standard SQL 2005 – 5 CALs ¹³		01	Second processor card for mid-range DAQ integration platform
D: Printer	00	No printer	K: Sound Adapter and Speakers	00	No sound adapter and speakers
	01	110V laser (duplex, parallel, and USB)		01	Sound adapter and speakers
	02	220V laser (duplex, parallel, and USB)	L: Backup Device / Drives (for servers only)⁸	00	No backup device
	03	110V laser (duplex, parallel, USB, and Ethernet)		01	Internal tape backup
	04	220V laser (duplex, parallel, USB, and Ethernet)		04	Internal 3.5" floppy drive
	06	220V color laser (USB)		05	Internal tape backup and 3.5" floppy drive
	07	110V color laser (USB, and Ethernet)	M: Event Relay (for servers only)⁸	00	No event relay hardware
	08	220V color laser (USB, and Ethernet)		01	Event relay hardware
E: Time Synchronization	00	No time synchronization	N: Addition Memory (for servers only)⁸	00	No additional memory
	01	Client software (1 license)		01	1 Gbytes additional memory
	10	Client software and NTP time server		02	2 Gbytes additional memory
	20	IRG-B time card	O: Remote Access (for servers only)^{7, 8}	00	No remote access offering
F: Serial Communication Card (for servers only)⁸	00	No serial communication card		01	Citrix™ starter kit (w/ 5 users)
	01	RS232 serial communication card		03	Citrix™ CAL 5 users
	02	RS232/RS485 serial communication card		05	Microsoft TS CAL 5 users
G: Network Interface Card (NIC) / Modem⁸	00	No network interface card	<hr/>		

System 1 Technical Support Plan

3010/20-AXX-BXX

A: Supporting Services

Note: Bronze level is included in initial purchase for one year of support.

- 00** None
- 01** Bronze level
- 02** Silver level
- 03** Gold level

B: Number of Years

Note: One year of Bronze level support is included with the initial product purchase so ordering this option with the initial order will provide additional year(s) of support.)

- 01** One (1) Year
- 02** Two (2) Years
- 03** Three (3) Years
- 04** Four (4) Years
- 05** Five (5) Years

For Decision Support Studio ordering information, see part number 174591-01.

Footnotes:

- ¹ When ordering the additional network card, note that the mid-range and high-end servers provide 4 available network ports. Ordering an additional card will provide 6 network ports and is not supported on the same purchase order line item.
- ² This workstation can be ordered for Snapshot systems with 2000 or fewer points, or for a Display or Configuration workstation.
- ³ When ordering a server computer, you must determine whether the mid-range or high-end computer will be appropriate. If the

- system will have more than 6 Communication Processors or more than 1500 online or scanning points you need to order the high-end server option.
- ⁴ The 'Rack Keyboard/Drawer' option should be ordered for the rack mount server when using the integrated keyboard/drawer and adjustable rail rack option kit in a non-Bently Nevada cabinet.
- ⁵ The 'Rack Keyboard only' option should be ordered for the rack mount server when using the standard keyboard with built-in mouse in a Bently Nevada cabinet.
- ⁶ You cannot order Citrix when ordering the workstation computer. If Citrix is ordered with the high-performance server, you must also order at least one additional GB of RAM (Option N -01 or -02 options).
- ⁷ When ordering the high performance server to run DAQ and Remote Access, the server will only support up to 6 Communication Processors and no more than 1500 online or scanning points.
- ⁸ 'For Servers Only' options are not supported in the workstation computer.
- ⁹ Note that there is only one free PCI-X slot for accessory cards in the high-performance and mid-range servers. The other available PCI-X slot is used for the modem, which come standard with the server.
- ¹⁰ 'For Workstations Only' options are not supported in the server computers.
- ¹¹ Standard SQL 2000 CALs (Client Access Licenses) should be ordered for System 1 versions 6.1 and earlier.
- ¹² Standard SQL 2005 Embedded CALs (Client Access Licenses) can only be ordered with a System 1 Server platform. These should be ordered for System 1 versions 6.12 and greater.
- ¹³ Standard SQL 2005 CALs (Client Access Licenses) is the Retail licensing version and should be ordered when ordering SQL Server software without a System 1 Server platform. These should be ordered for System 1 versions 6.12 and greater.

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