



# System 1\* v18.1 Industrial Package

## Product Datasheet

### Bently Nevada\* Machinery Condition Monitoring

## Overview

System 1\* represents GE Bently Nevada’s flagship condition monitoring solution that seamlessly integrates with our industry leading products including online and portable devices. System 1 provides scalability by adapting to the condition monitoring requirements at your facility, as well as flexibility by connecting to any Bently Nevada’s field devices. Our products are designed for diverse applications and equipment failure modes at industrial facilities. We offer flexible packages ranging from portable to comprehensive plant-wide condition monitoring. We recommend understanding your equipment and defining your operation and maintenance goals first. Then, choose the software package and field devices that help you achieve those goals.

### Keys to a Successful CM Program Bently Nevada Solution Scope



A successful condition monitoring program requires equipment knowledge including an understanding of failure modes and operational criticality, together with a cross functional team, process rigor, and enabling technologies. Bently Nevada offers flexible solutions ranging from product delivery and deployment services to supporting service agreements through which we partner with you to manage your condition monitoring program.



# Package Ordering (Perpetual License)

## General Industrial Perpetual Package

**3071/70** System 1 for Industrials - Perpetual  
3071/70-AA-BB-CC

**AA:** Industry Type

- 01 – Pulp and Paper
- 02 – Air Separation
- 03 – Sugar Production
- 04 – Wastewater
- 05 – Drilling Rigs
- 06 – Steel Production
- 07 – Food & Beverage
- 08 – Manufacturing
- 09 - Pharmaceuticals
- 10 - Marine Vessel\*

\*Navy, Container Ship, LNG Transport, FSRU, etc. NOT applicable for FPSO, FSO, or FLNG vessels

**BB:** Package Size

- 01 – Small Database
- 02 – Medium Database
- 03 – Large Database
- 04 – Extra Large Database

**CC:** Quantity of Server Licenses

## – **Numeric Entry** [1→25]

Package	Online Continuous CM	Scanning & Process CM	Portable CM
Premium+	✓	✓	✓
Premium	✓	✓	
Advanced+		✓	✓
Advanced		✓	
Fundamental			✓

Industrial Packages Include

- ✓ Premium+ license(s)
- ✓ Unrestricted device import (Limits based on server)
- ✓ Unrestricted process data import (OPC DA)
- ✓ Unrestricted process data export (OPC DA)
- ✓ Unlimited Display Clients

Industrial Packages Do Not Include

- ✓ Database Replication

## Power Generation Perpetual Package

**3071/80** System 1 for Power Generation - Perpetual  
3071/80-AA-BB-CC

**AA:** Package Option

- 01 – New Order
- 02 – Expansion Order

**BB:** Plant Output (MW)

## – **Numeric Entry** [1-30,000 MW]

**CC:** Quantity of Server Licenses

## – **Numeric Entry** [1→25]



# Package Ordering (Subscription License)

We offer subscription licenses that include support for and updates to System 1. Software functionality is identical for perpetual and subscription licenses. Key structural differences exist between these license types:

## Subscription License

- ✓ Smaller upfront investment (flat year-over-year OPEX)
- ✓ Subscription license fee includes support and updates.
- ✓ Software stops working if subscription is cancelled.

## Perpetual License

- ✓ Larger upfront investment (one-time CAPEX)
- ✓ Must purchase support and updates (M&S) separately (lower OPEX than subscription)
- ✓ Software license does not expire. Support and updates cease if M&S is cancelled.

## General Industrial Subscription Package

**3072/70** System 1 for Industrials - Subscription  
3072/70-AA-BB-CC-DD-EE

### AA: Purchase Type

- 01 – **New** (First Type Purchase)
- 02 – **Renewal**

### BB: Term (Subscription Term in Years)

## – **Numeric Entry** [3→5]

### CC: Industry Type

- 01 – Pulp and Paper
- 02 – Air Separation
- 03 – Sugar Production
- 04 – Wastewater
- 05 – Drilling Rigs
- 06 – Steel Production
- 07 – Food & Beverage
- 08 – Manufacturing
- 09 – Pharmaceuticals
- 10 – Marine Vessel †

† Navy, Container Ship, LNG Transport, FSRU, etc.

**Not** applicable for FPSO, FSO, or FLNG type vessels

### DD: Package Size

- 01 – Small Database
- 02 – Medium Database
- 03 – Large Database
- 04 – Extra Large Database

### EE: Quantity of Server Licenses

## – **Numeric Entry** [1→25]

## Power Generation Subscription Package

**3072/80** System 1 for Power Generation - Subscription  
3072/80-AA-BB-CC-DD-EE

### AA: Purchase Type

- 01 – **New** (First Type Purchase)
- 02 – **Renewal**

### BB: Term (Subscription Term in Years)

## – **Numeric Entry** [3→5]

### CC: Package Option

- 01 – New Order
- 02 – Expansion Order

### DD: Plant Output (MW)

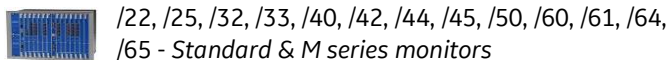
## – **Numeric Entry** [1-30,000 MW]

### EE: Quantity of Server Licenses

## – **Numeric Entry** [1→25]

## 3500 Device Series

### 3500 - Full Rack



- ✓ 14 monitor slots with simultaneous sampling
- ✓ 1 sec trend / 10 min waveform data capture
- ✓ High resolution alarm data capture
- ✓ High resolution startup/shutdown data capture

### 3500 - Mini Rack



Same monitors as Full Rack

- ✓ 7 monitor slots
- ✓ Same capabilities as Full Rack

### TDI Secure [/42E /45E /PV]



Recommended for monitoring machines that cannot be natively connected to System 1 via standard devices (3rd party HW, Cyber, etc.)

- ✓ 24 Vib + 24 Process points + 4 Tachs

## Distributed Device Series

### ADAPT 3701 /40 /44 /46



- ✓ 12 simultaneous monitoring points + 2 Tachs
- ✓ 1 sec trend / 10 min waveform data capture
- ✓ High res alarm and SUSD data capture

## System 1 Classic Connector

### System 1 Classic Connector

- ✓ Connect to legacy Bentley Nevada Devices, including TrendMaster, TDXNet, 1701 FMIM

## Condition Monitoring & Basic Protection

### vbOnline\* Pro Monitoring Device



- ✓ 12 simultaneous monitoring points + 2 tachs
- ✓ 30 sec trend / 10 min waveform data capture
- ✓ Simultaneous Alarm Snapshot (1 per 30 sec)

## 2300 Monitoring Device



- ✓ 2 simultaneous monitoring points + 1 tach
- ✓ 1 sec trend / 10 min waveform data capture

## Ranger Pro Device



- ✓ Single axis: 1 accel point + 1 temperature
- ✓ Triaxial: 3 accel points + 1 temperature point
- ✓ 10 min trend / 6 hour waveform data capture

## Process Data

### OPC DA Server Import



- ✓ Includes up to 6000 tags for a S1 Server
- ✓ 1 sec trend data capture

### OPC DA Server Export



- ✓ Includes up to 10000 tags for a S1 Server
- ✓ 1 sec data export rate

## Portables



Analyzers and Data Collectors

- ✓ 2 and 4 Channel Models
- ✓ Hazardous Area Approvals

## Database Replication

### 3071/16-AA-BB-CC System 1 Replication

**AA: Tx Server(s)** (License Value of Tx Server, # - 1 → n)

- ✓ Conduit to move data to the business network
- ✓ Contains config info and connection to devices

**BB: Rx Server(s)** (Qty # - 1 → n)

- ✓ Database that mirrors the S1 server on Plant Network
- ✓ Supports 80-90% of daily condition monitoring tasks

**CC: Physical Installation Media**

- 01 - No (Default)
- 02 - Yes



# Stay Current – Software Maintenance & Support

## Maintenance and Support (M&S)

**3071/20** System 1 Maintenance & Support  
3071/20-AA-BB-CC-DD-EE-FF-GG-HH

**AA:** M&S Support Level

- 01 – **Gold** Support
- 02 – **Platinum** Support

**BB:** M&S Term

## – **Numeric Entry** [1→20 years]

**CC:** System 1 Products Covered Under M&S Agreement

- 01 – **System 1 17.x** (3071 Family)
- 02 – **System 1 6.x** (3060 Family)

**DD:** Total System 1 Software License Price

## – **Numeric Entry** [In Local Currency]

**EE:** Customer Activation Number (CAN)

## – **Text Entry** [Ex: CAN1631]

**FF:** Software Contact Name

## – **Text Entry** [Ex: Bently Nevada]

**GG:** Software Contact Email Address

## – **Text Entry** [Ex: BentlyNevada@bhge.com]

**II:** M&S Order Type

- 01 – **New** Order
- 02 – **Renewal** Order
- 03 – **Expansion** Order

System 1 **Maintenance and Support** provides access to 24/7 technical support and several System 1 user and security focused releases annually.

System 1 software maintenance and support agreement provides access to the latest **updates** and **platform upgrades** through a simplified web portal interface.

Customers with System 1 version 6.x and Ascent\* qualify for a **FREE** upgrade to the latest platform (v17.2 release Nov 30, 2017). See 3071/65.

- ✓ 24/7 technical support (regional specialists)
- ✓ Access to the latest software releases
  - Operating system updates
  - Cyber security patches
  - User-driven feature additions

## Free System 1 & Ascent\* Platform Upgrade

**3071/65** System 1 Software **Free** Platform Upgrade  
3071/65-AA-BB-CC-DD-EE-FF-GG-HH-II-JJ-KK-LL-MM

**AA:** Customer Activation Number (CAN)

## – **Text Entry** [CAN#####]

**BB:** Software Package Upgraded

- 01 – **System 1** v6.x
- 02 – **Ascent 2015**

**CC:** New Software Package

- 01 – **Premium+** Package
- 02 – **Premium** Package
- 03 – **Advanced+** Package
- 04 – **Advanced** Package
- 05 – **Fundamental** Package
- 06 – **Power Generation** Package

**DD:** Quantity of Display Clients

- 01 – **Single** Client Package
- 05 – **Small** Package [6 Clients]
- 10 – **Medium** Package [11 Clients]
- 15 – **Unlimited** Clients

**EE:** Quantity of Server Licenses (DAQs)

## – **Numeric Entry** [1→n]

**FF:** Historical Data Migration

- 01 – **Yes** [System 1 v6.81+ & Ascent\* v2015] (v17.2)
- 02 – **No**

**GG:** Qty of 3500 Devices - Turbomachinery

## – **Numeric Entry** [1→n]

**HH:** Qty of 3500 Devices - General Machines

## – **Numeric Entry** [1→n]

**II:** Qty of 3500 Devices - Recip Machines (v17.2)

## – **Numeric Entry** [1→n]

**JJ:** Qty of TDI Secure Devices

## – **Numeric Entry** [1→n]

**KK:** Qty of OPC DA Import Licenses (1 per server)

## – **Numeric Entry** [1→n]

**LL:** Qty of OPC DA Export Licenses (1 per server)

## – **Numeric Entry** [1→n]

**MM:** Plant Design Output (Power Gen Package Only)

## – **Numeric Entry** [1→n]

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## Specifications

Refer to System 1\* Software Package Datasheet, document number **108M5214**, for specifications, product capabilities, server options, and language packs.

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