System 1 represents 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.

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)

Industrial/Power Gen 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/Power Gen Packages Do Not Include
✓ Database Replication
✓ Performance Monitoring

General Industrial Perpetual Package
3071/70 System 1 for Industrials – Perpetual

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]

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]

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 mirroring S1 server on Plant Network
✓ Supports 80-90% of condition monitoring tasks

CC: Physical Installation Media
01 – No (Default)
02 – Yes

Performance Monitoring

3071/17–AA–BB–CC System 1 Performance

AA: Simplex Machines (Qty # – 1→n)
✓ Pump, Compressor, Steam Turbine, Fan, Expander, Generator, Heat Exchanger

BB: Complex Machines (Qty # – 1→n)
✓ Expander Recompressor, Gas Turbine, Side Stream Compressor

Counts per stage/casing

CC: S1 Servers with Performance (Qty # – 1→n)
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  
3072/70–AA–BB–CC–DD–EE

**AA:** Purchase Type

01 – **New** (First Time 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

---

### Power Generation Subscription Package

**3072/80** System 1 for Power Generation  

**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]

---

### System 1 Wind Subscription Package

**3072/84** System 1 for Wind  
3072/84–AA–BB–CC–DD

**AA:** Purchase Type

01 – **New** (First Time Purchase)  
02 – **Renewal**

**BB:** Term (Subscription Term in Years)  
## – **Numeric Entry** [1→20]

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† Navy, Container Ship, LNG Transport, FSRU, etc.  
**Not** applicable for FPSO, FSO, or FLNG type vessels.
CC: MW Output of Wind farm

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**Performace Monitoring**

3072/17–AA–BB–CC System 1 Performance

AA: Simple Machines (Qty # – 1→n)
- Pump, Compressor, Steam Turbine, Fan, Expander, Generator, Heat Exchanger

BB: Complex Machines (Qty # – 1→n)
- Expander Recompressor, Gas Turbine, Side Stream Compressor
- Counts per stage/casing

CC: S1 Servers with Performance (Qty # – 1→n)

---

**Database Replication**

3072/16–AA–BB–CC System 1 Replication

AA: License Value of Tx Server(s) (# – 1→n)

BB: Quantity of Rx Server Licenses (# – 1→n)

CC: Physical Installation Media
- 01 – No (Default)

---

**Get Connected**

**3500 Device Series**

3500 – Full Rack
- /22, /25, /32, /33, /40, /42, /44, /45, /50, /60, /61, /64, /65 – Standard & M series monitors
- ✓ 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
- ✓ 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 Bently 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

Analizers and data collectors with hazardous area approvals

- 2 and 4 Channel Models

---

## Stay Current – Software Maintenance and Support (M&S)

System 1 Maintenance and Support provides access to the latest platform upgrades through a simplified web portal interface.

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

System 1 version 6.x and Ascent Customers with active M&S qualify for an upgrade to the latest System 1 platform at no additional cost. To receive an upgrade, include product 3071/65.

## 3071/20 System 1 Maintenance & Support


<table>
<thead>
<tr>
<th>AA: M&amp;S Support Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 – Basic Support</td>
</tr>
<tr>
<td>02 – Essential Support</td>
</tr>
<tr>
<td>03 – Premier Support</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BB: M&amp;S Term</th>
</tr>
</thead>
<tbody>
<tr>
<td>## – Numeric Entry [1→20 years]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CC: System 1 Products Covered Under M&amp;S Agreement</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 – System 1 17.x (3071 Family)</td>
</tr>
<tr>
<td>02 – System 1 6.x (3060 Family)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DD: Total System 1 Software License Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software value at customer site to be covered by M&amp;S Agreement</td>
</tr>
<tr>
<td>## – Numeric Entry [In Local Currency]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EE: Customer Activation Number (CAN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>## – Text Entry [Ex: CAN1631]</td>
</tr>
</tbody>
</table>

---

## System 1 Software Platform Upgrade

3071/65 System 1 Software Platform Upgrade


<table>
<thead>
<tr>
<th>AA: Customer Activation Number (CAN)</th>
</tr>
</thead>
<tbody>
<tr>
<td>## – Text Entry [CAN#####]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BB: Software Package Upgraded</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 – System 1 v6.x</td>
</tr>
<tr>
<td>02 – Ascent 2015</td>
</tr>
<tr>
<td>02 – ADAPT.Wind</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CC: New Software Package</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 – Premium+ Package</td>
</tr>
<tr>
<td>02 – Premium Package</td>
</tr>
<tr>
<td>03 – Advanced+ Package</td>
</tr>
<tr>
<td>04 – Advanced Package</td>
</tr>
<tr>
<td>05 – Fundamental Package</td>
</tr>
<tr>
<td>06 – Power Generation Package</td>
</tr>
<tr>
<td>07 – Wind Package</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DD: Quantity of Display Clients</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 – Single Client Package</td>
</tr>
</tbody>
</table>
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]
    02 – No

GG: Qty of 3500 Devices – Turbomachinery
    ## – Numeric Entry [0→n]

HH: Qty of 3500 Devices – General Machines
    ## – Numeric Entry [0→n]

II: Qty of 3500 Devices – Recip Machines
    ## – Numeric Entry [0→n]

JJ: Qty of TDI Secure Devices
    ## – Numeric Entry [0→n]

KK: Qty of OPC DA Import Licenses (1 per server)
    ## – Numeric Entry [0→n]

LL: Qty of OPC DA Export Licenses (1 per server)
    ## – Numeric Entry [0→n]

MM: Total Plant/ Wind Farm Output (Power Gen and Wind Only)
    ## – Numeric Entry [1→n]

Specifications

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