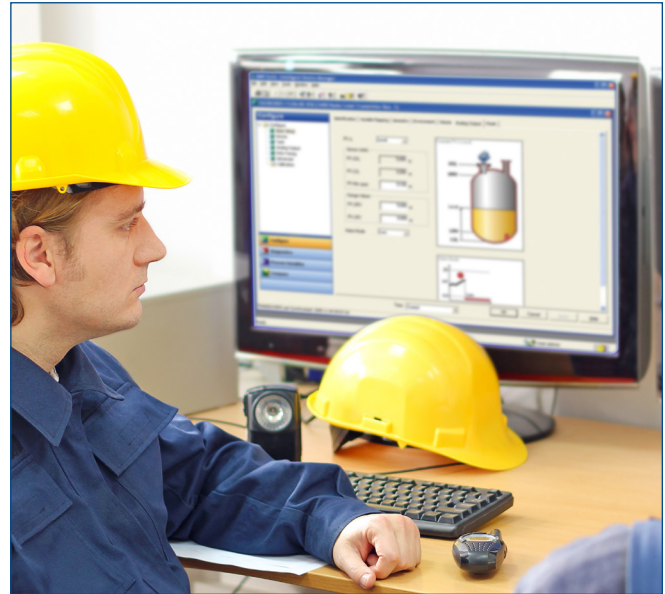


# AMS Device Manager

- Fully implement predictive diagnostics to improve plant availability and reduce maintenance costs
- Configure and calibrate all your devices using one software application
- Identify, troubleshoot, and resolve device issues remotely and efficiently
- View device health, calibration status, and project tracking from anywhere with browser-based AMS Device View
- Automatically synchronize field changes from AMS Trex with asset database



*AMS Device Manager provides predictive diagnostics, simplifies field device configuration and calibration, and automatically documents your assets.*

## Predictive Maintenance for Instruments and Valves

AMS Device Manager reduces commissioning and maintenance expenses while improving reliability and product quality. In process industries where lost production from slower startups and longer downtimes can cause millions of dollars in lost revenue, plant personnel need accurate, real-time information.

AMS Device Manager saves you time and money by delivering valuable diagnostic information already contained within your plant in a clear, meaningful way. This means you can act before the process is affected by poor quality, or worse, a costly shutdown.



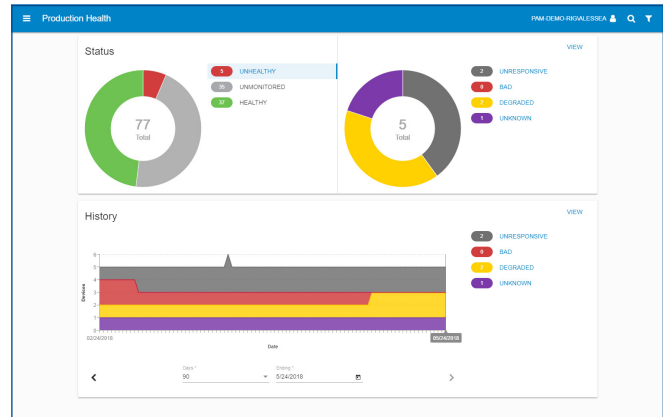
## AMS Device Manager Core Capabilities

### Diagnostics

Quickly check the health of any connected wired or wireless device by viewing its status using the diagnostics and monitoring capabilities in AMS Device Manager. With broad asset coverage, AMS Device Manager provides predictive diagnostics to deliver a more comprehensive account of the health of your field devices.

In addition, a powerful, proactive method of diagnosing potential device problems is provided by the Alert Monitor. The Alert Monitor summary screen provides an overview of all device alerts, regardless of protocol, and gives you the ability to access additional device information for more details.

AMS Tag	Count	Time	Severity	Description	Device Group	Plant Location	Station	Manufacturer	Device Type	Device Revision	Protocol	Acknowledged
VT-101	1	2/23/2018 12:52:21	Warning	Flow Valve Fail	Rig Unit Equip.	AmPartService	Roomount	644 Wireless Tempe.	1	HART		X
VT-101	32	2/23/2018 12:52:21	Failed	Sensor 2 Bias Fa.	Rig Unit Equip.	AmPartService	CS1	CS1 9420	4	HART		X
VT-101	4	2/23/2018 12:52:21	Failed	Sensor 2 Bias Fa.	Rig Unit Equip.	AmPartService	Roomount	644 Wireless Tempe.	1	HART		X
VT-101	2	2/23/2018 12:52:21	Failed	Sensor 2 Bias Fa.	Rig Unit Equip.	AmPartService	Roomount	644 Wireless Tempe.	1	HART		X
TT-100W	249	2/23/2018 12:52:21	Warning	High Voltage F.	Rig Unit Equip.	AmPartService	Roomount	644 Wireless Tempe.	1	HART		X
TT-100W	249	2/23/2018 12:52:21	Warning	High Voltage F.	Rig Unit Equip.	AmPartService	Roomount	644 Wireless Tempe.	1	HART		X
TT-100W	249	2/23/2018 12:52:21	Warning	High Voltage F.	Rig Unit Equip.	AmPartService	Roomount	644 Wireless Tempe.	1	HART		X
TT-100W	249	2/23/2018 12:52:21	Warning	High Voltage F.	Rig Unit Equip.	AmPartService	Roomount	644 Wireless Tempe.	1	HART		X
TT-101	18	2/23/2018 12:52:21	No Communication	Flow Valve Fail	AmPartService	Roomount	3144		4	HART		X
PAM001	3	2/23/2018 12:52:21	Warning	Field Device Flow	Rig Unit Equip.	AmPartService	Roomount	Smart Wireless Gate.	5	HART		X
PAM001	20	2/23/2018 12:52:21	Warning	Single Network J.	Rig Unit Equip.	AmPartService	Roomount	Smart Wireless Gate.	5	HART		X
PAM001	23	2/23/2018 12:52:21	Warning	Open Connection	Rig Unit Equip.	AmPartService	Roomount	Smart Wireless Gate.	5	HART		X
PAM001	3	2/23/2018 12:52:21	Warning	Maintenance req.	Rig Unit Equip.	AmPartService	Roomount	Smart Wireless Gate.	5	HART		X
PAM001	16	2/23/2018 12:52:21	Warning	Subdevice M ch.	Rig Unit Equip.	AmPartService	Roomount	Smart Wireless Gate.	5	HART		X
TT-100W	1	2/23/2018 12:52:21	No Communication	Flow Valve Fail	AmPartService	Roomount	644 Wireless Tempe.	1	HART			
FC-105	1	5/11/2018 10:19:23	Warning	Performance Da.	Rig Unit Equip.	PAM-DEMORIG	Fisher Corolla Inter.	DVC620 HW2	1	HART		
FC-105	1	5/11/2018 10:19:23	Warning	Performance Da.	Rig Unit Equip.	PAM-DEMORIG	Fisher Corolla Inter.	DVC620 HW2	1	HART		
FC-105	1	5/11/2018 10:19:23	Warning	Performance Da.	Rig Unit Equip.	PAM-DEMORIG	Fisher Corolla Inter.	DVC620 HW2	1	HART		
FC-105	1	5/11/2018 10:19:23	Warning	Performance Da.	Rig Unit Equip.	PAM-DEMORIG	Fisher Corolla Inter.	DVC620 HW2	1	HART		
PT-702	16	5/23/2018 12:34:51	Warning	Temperature Alert	Rig Unit Equip.	PAM-DEMORIG	Roomount	3051	7	HART		X
FC-105	4	5/23/2018 12:34:51	Warning	Travel Deviation	Rig Unit Equip.	PAM-DEMORIG	Fisher Corolla Inter.	DVC620 HW2	1	HART		
FC-105	4	5/23/2018 12:34:51	Warning	Supply Pressure	Rig Unit Equip.	PAM-DEMORIG	Fisher Corolla Inter.	DVC620 HW2	1	HART		
PT-702	16	5/23/2018 12:34:51	Warning	Temperature Alert	Rig Unit Equip.	PAM-DEMORIG	Roomount	3051	7	HART		X
PT-401	12	5/23/2018 12:34:51	Warning	Hot Backup Active	Rig Unit Equip.	PAM-DEMORIG	Roomount	3144	5	HART		
PT-702	16	5/23/2018 12:34:51	Warning	Temperature Alert	Hot Unit Equip.	PAM-DEMORIG	Roomount	3051	7	HART		X
PT-702	16	5/23/2018 12:34:51	Warning	Temperature Alert	Hot Unit Equip.	PAM-DEMORIG	Roomount	3051	7	HART		X
PT-701	16	5/23/2018 12:34:51	Warning	Temperature Alert	Hot Unit Equip.	PAM-DEMORIG	Roomount	3051	7	HART		X
PT-701	16	5/23/2018 12:34:51	Warning	Temperature Alert	Hot Unit Equip.	PAM-DEMORIG	Roomount	3051	7	HART		X
PT-604	16	5/23/2018 12:34:51	Warning	Temperature Alert	Rig Unit Equip.	PAM-DEMORIG	Roomount	3051	6	HART		X
PT-704	15	5/23/2018 12:39:10	Warning	Temperature Alert	Hot Unit Equip.	PAM-DEMORIG	Roomount	3051	7	HART		X



The Alert Monitor provides notification of alerts and status information so you can prevent process upsets.

Extend your asset management program with mobile-friendly device health dashboards.

Alert latching allows you to identify new alerts and keep track of existing ones. Alerts can also be easily filtered so you can quickly see the information you need.

### Configuration

AMS Device Manager makes configuration of devices simple, easy, and user-friendly. Using configuration management you can change, store, compare, and transfer device configurations. WirelessHART® devices can be easily configured using the drag and drop provisioning capability. Simply connect the wireless device via a HART® modem and then drag and drop it onto the wireless gateway. The network ID and join key are automatically written to the device.

AMS Device Manager enables you to perform device self-tests and loop tests, and automatically documents the results.

With FOUNDATION™ fieldbus devices, commissioning and replacing devices can be done quickly and easily without the need for user interaction with the software, getting you up and running sooner and more efficiently.

When your intelligent devices are online with AMS Device Manager, you will know of problems occurring as they happen, not when they have already affected your process and the quality of your product.

### Device Health Overview

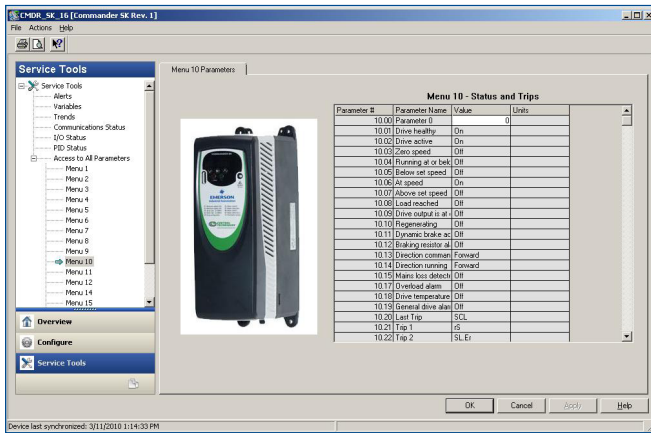
Configuration information is read from any device, allowing you to make multiple changes simultaneously, compare configurations of like devices, or historical configurations on the same device. Setting up a new device configuration is as easy as a couple of clicks. Simply transfer the existing database configuration into the new device and you are up and running. Digital valve controllers, flow devices, multivariable transmitters, and wireless devices are configured quickly and easily with AMS Device Manager.

Imagine knowing everyday with glance how your instrument maintenance program is doing. Are there hidden problems in your instruments that could cause a shutdown? Are you relying on instruments that are overdue for calibration? Are your commissioning, shutdown, outage, and turnaround projects on track for completion?

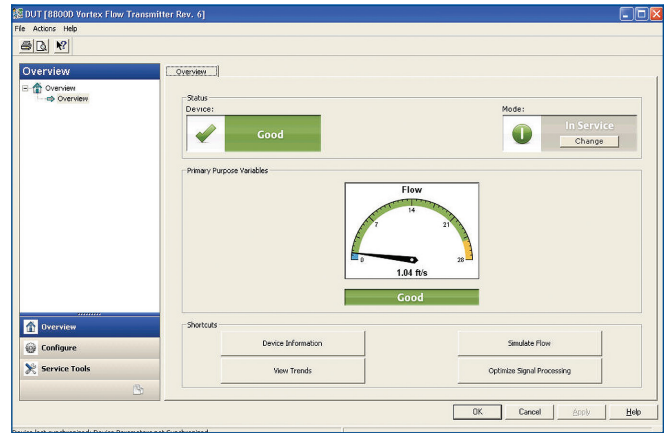
AMS Device View extends your AMS Device Manager system by delivering device health, calibration status, and project information through a browser-based interface. With AMS Device View, you can quickly see which devices need maintenance and can view recommended actions – from any place that there is a browser connection.

Device configuration can also be done via DTM through the DTM Launcher Application. If your devices require the use of DTMs for advanced configuration or diagnostics, AMS Device Manager can handle both DDs and DTMs.

Through intuitive dashboards and focused alerts, technicians can quickly access the data needed to respond quickly. And when additional work is needed, AMS Device View can launch the full AMS Device Manager system.



Even for a complex device, asset information is organized and easily accessed.



View process variables, monitor device status, and detect alert events within any device connected to your host system.

### Faster Commissioning with Configuration Templates

Before commissioning field devices, you can create templates to make the process more efficient. Define parameters for multiple devices and set configurations to follow a pre-defined standard. Templates can also be used to assign plant location, alert monitor group, HART tag, descriptor, message, ranges, and units. By using templates to configure devices in bulk, commissioning can be completed in a fraction of the time that is required with traditional methods. Typical savings range from 80-90% less time required — with fewer configuration errors.

### Documentation

AMS Device Manager saves time and money by automating documentation around device tasks. For instance, when you make a configuration change to a device, the Audit Trail will capture when the change was made and who made it. In addition, manual entries can be created to document events not automatically captured, such as a lightning strike at the plant.

Each device is also provided with a Drawings and Notes field, used to create dynamic links to your custom documents and websites. User manuals, installation guides, P&IDs, and technical contact information can be kept right at your fingertips where you need it, not in a filing cabinet in another location.

Additional documentation capabilities include the ability to create reports, perform database searches, and export data into a different format.

### Calibration

AMS Device Manager supports the definition of device test schemes, device calibration scheduling, and the management of device calibration data. Test schemes are defined by the calibration interval, test point and accuracy requirements, and set-up and clean-up instructions. Design calibration test schemes for individual devices or groups of instruments. Then, drag and drop the transmitter icons onto your test scheme to assign devices.

There are calibration solutions for every level of need – from getting started with calibration to advanced use that requires compliance with regulations like 21 CFR Part 11.

### Maintain Accurate Data

AMS Trex uses Auto Sync technology to maintain the data integrity of your AMS Device Manager database — without any technician intervention. Every change made in the field is automatically recorded and time-stamped.

Changes are updated in real-time if WiFi connection is enabled and a technician is in a hot spot. Or changes are cached on the Trex communicator and applied to the database when the communicator detects a WiFi signal or USB cable connection.

The Trex communicator logs and timestamps changes as they occur, delivering an accurate audit trail of device changes in AMS Device Manager.

## Improve Device Security with Lock/Unlock Ability

AMS Device Manager allows you to lock devices using system-based write protection. Choose how to apply, including to all devices, critical devices, SIS devices, by location, and more. If you need to make changes to devices, they can be unlocked for a set time and then automatically locked again for added security. Set permissions by user or user group.

## Online or Offline

### Online

Using AMS Device Manager online enables access to the full power of your intelligent field devices. You can remotely view the process variables, monitor device status, detect alert events, and configure any device connected to your host system, including DeltaV™, Ovation™, OpenEnterprise™, RS3™, and PROVOX™. Interfaces are also available to help you easily integrate with new technology and equipment from other vendors. Interface options include:

- ABB System 800x A
- FOUNDATION fieldbus High Speed Ethernet
- HART Multiplexer
- HART over PROFIBUS
- Kongsberg Maritime
- Wireless

Other third party solutions provide specific I/O cards for some PLC and DCS systems to emulate a HART multiplexer.

### Offline

Working offline means you have access to the historical device information in the plant database, and can communicate to one device at a time using a HART modem. Device configuration and troubleshooting can be performed offline in the shop or at a termination panel.

## SNAP-ON™ Applications

AMS Device Manager SNAP-ON applications are recommended to gain enhanced information and diagnostic functionality for a device or group of devices. SNAP-ON applications available with AMS Device Manager include:

- AlertTrack™
- AMS ValveLink™
- AMS Wireless
- Calibration Assistant
- DCMLink™
- MV Engineering Assistant
- Meter Verification
- QuickCheck™
- FFPowerAlert
- Masoneilan Valve
- Flow Serve Valve Analysis
- Smar Valid

## Lifecycle Services

Get off to a strong start with your technology investment. Use Emerson's Lifecycle Services to ensure you are effectively employing AMS Device Manager. Emerson experts can help you use the diagnostics from your smart devices to full advantage. Our experts will install the application and complete your initial configurations. Emerson can help you implement re-engineered maintenance tasks to optimize your use of AMS Device Manager. Integrate data with your enterprise asset management system to enable measurement of improvement to your facility's bottom line.

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