

# **MASTERLINK SOFTWARE: INTEGRATED METERING SOLUTION FOR GAS DISTRIBUTION OPERATIONS**

## Abstract / Introduction

Companies in the oil & gas industry are responding to low energy prices with a renewed focus on improving efficiencies and cutting costs. Industry leaders are citing the use of innovation and technology to deliver significant performance improvements.

Specifically, now is the time for natural gas distributors to embrace digital solutions to drive improved financial and operating performance, and emerge from the current economic downturn much stronger. Whether organizations are utilizing these technologies to better manage their assets, be more productive in the field, optimize production assets or handle predictive maintenance, the case is clear for digital innovation.

Honeywell's new MasterLink software encompasses a wide range of advanced capabilities like an intuitive user dashboard, automation of field notifications and a fleet of value-added services. Together, these features elevate traditional configuration and calibration software to an all-encompassing tool that enables important productivity gains and cost savings. This is a proven approach for gas distribution companies seeking to adapt to cutting-edge software and reap multifaceted benefits.



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## Introduction



The natural gas distribution system is one of the foundations of improved quality of life worldwide. In the United States alone, it serves more than 65 million households, more than five million commercial customers, and over 190,000 industrial and power generation customers. Almost all residential and commercial gas users rely on local distribution companies (LDCs) for their gas purchases and/or deliveries.

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There is growing pressure on gas industry organizations to deliver more energy, increase profitability and minimize financial losses. Many firms are in the process of reevaluating their opportunities to serve existing customers and to expand service to new customers in ways that make sense economically and can be developed under the umbrella of government and industry regulations

### Today's Industry Demands

Today's oil and gas industry is facing a variety of evolutionary changes that have created challenges for the existing infrastructure. Gas distribution companies, in particular, are finding it necessary to respond on a variety of fronts. They require solutions utilizing new systems and procedures that will enhance efficiencies while also improving operational quality

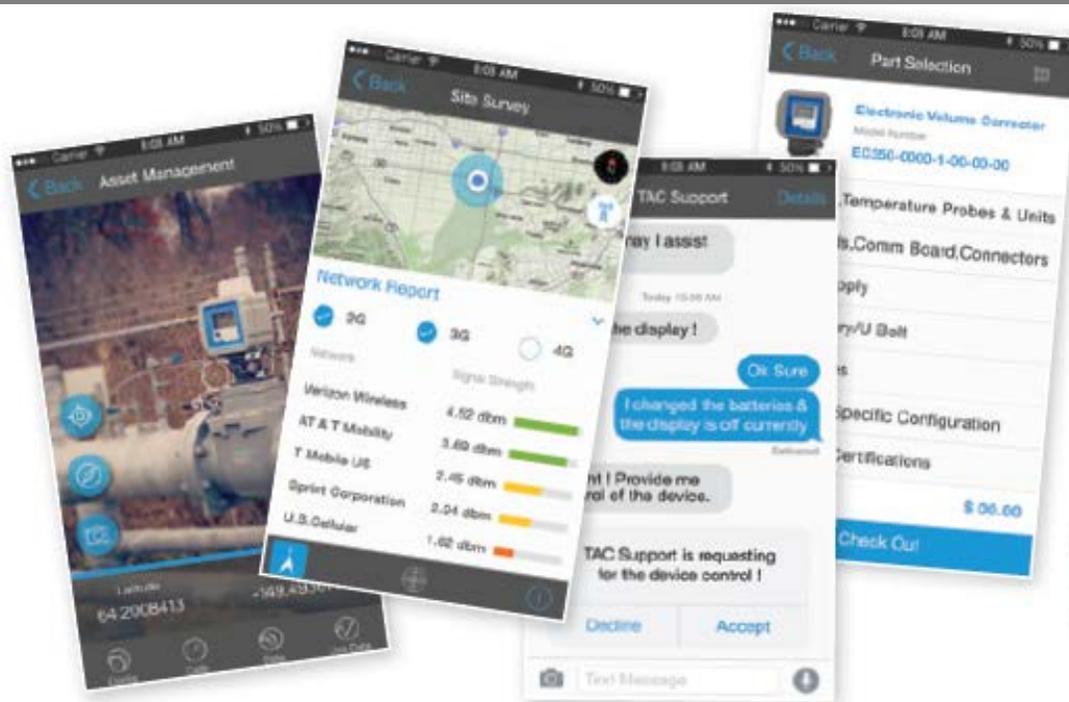
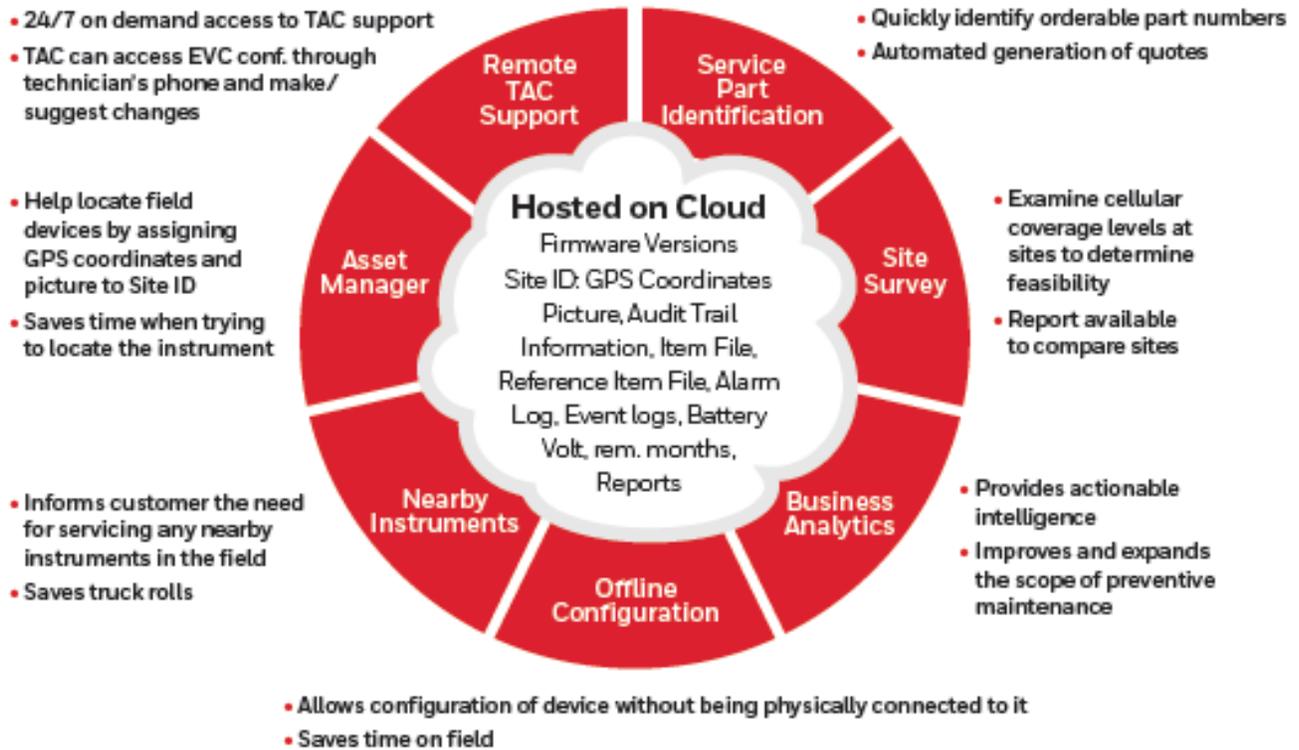
Utilities are seeking to implement processes that can automate data management toward increased accuracy, decreased man-hours, and accountability/audit trail compliance. Gas operators of all sizes are increasingly recognizing that investment in measurement data management applications can assist in addressing many of these challenges.

Gas metering data must be collected more frequently and in smaller increments. The trend towards smart metering has demonstrated the importance of meter data management (MDM) in realizing the full potential of advanced metering infrastructure (AMI).

It is clear that greater capital expenditures are necessary to ensure gas distribution system integrity and replace aging infrastructure. At the same time, companies must reduce operating expenses (OPEX) and tightly control capital expenses (CAPEX). Operators need modern, future-proof solutions supporting key industry trends such as digital innovation, Industrial Internet of Things (IIoT) applications and mobile technology.

### Latest Software Innovations

Leading automation suppliers like Honeywell provide end-to-end, smart metering solutions for everything from wellhead to burner tip applications in the natural gas industry. Their advanced technology and services help gas transmission and distribution companies increase operational efficiency, protect assets, increase uptime, save money, and safeguard the environment. They also enable superior performance and optimal maintenance that extends the life of critical investments.



Honeywell is recognized as a leader in integrated gas metering and billing data solutions in the North American market. The Gas Measurement and Data Management Solutions range from advanced electronic volume correctors and collaboration software, to robust meter data management systems turning operational data into valuable knowledge. Honeywell offers a best-in-class gas volume corrector coupled with an integrated radio, innovative MDM technology and fully revamped MasterLink software, which not only brings in automation and simplicity in configuration, but also delivers a host of value-added features to drive productivity benefits to the end user.

With Honeywell's integrated solution, gas industry companies can leverage the value of existing assets and reduce downtime affecting their performance. Firms gain greater visibility into problems that threaten asset reliability, and thanks to 24x7 organization-wide access to critical data, they can analyze the information needed to better plan for preventive maintenance. This enables a more proactive approach to ensuring operational excellence.

Honeywell's MasterLink provides a single software package to configure, calibrate and access data from gas electronic volume correctors (EVCs). The software was recently updated to enable a more fundamental way of executing everyday tasks and increasing their ease of use. For example, the MasterLink solution addresses the increasing adoption of mobile technology for functions like checking the health of field devices, downloading reports, calibrating instruments and other activities once performed exclusively on a personal computer (PC). The software also offers wireless connectivity and is compatible with the latest versions of both the iOS and Android operating systems.

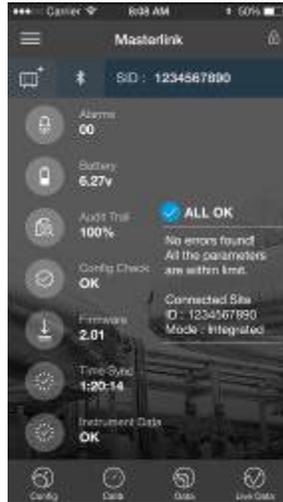
In addition, Honeywell's value-added services transform the MasterLink software from simply a configuration and calibration tool to a robust collaboration solution driving increased productivity throughout the instrumentation maintenance department. These services address crucial issues such as asset management cost savings, resource utilization and preventive maintenance.

## How the Solution Works

The MasterLink software has undergone a total redesign of its user interface to help improve the productivity of operators and technicians. It now offers compatibility with the latest operating systems across mobile and personal computer (PC) platforms, increased automation and powerful wizard support while retaining a configuration philosophy familiar to users. Key features include:

### Dashboard-based Design

The MasterLink software employs a dashboard-based design philosophy enabling users to get a one-shot status of connected devices. A gas industry first, the software can connect to the device using a choice of short-range wireless communication protocols. Its dashboard displays information about alarms, battery voltage, audit trail, configuration integrity, firmware status, time sync and live data. This helps the user understand the current condition of the connected device from a holistic point of view.



MasterLink's dashboard-based design enables users to get a one-shot status of connected devices.

### Asset Manager

With the MasterLink solution, users can take advantage of the global positioning system (GPS) functionality of their smart phone with an option to geo tag field devices with GPS coordinates. The GPS coordinates are linked to the site ID of the device and stored in a central database. New users can access the GPS information to easily find the physical location of any device he or she wants to

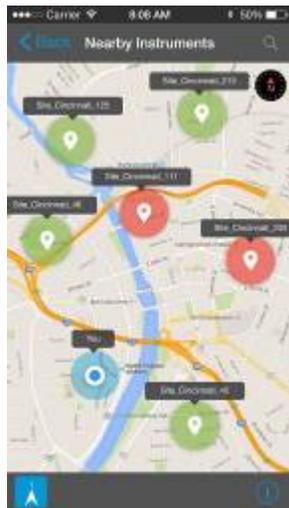
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visit—even if the site is in a new geographical area. The smart phone will help pinpoint the device with GPS information.



### Nearby Instruments

MasterLink includes a robust feature indicating if any nearby devices have alarms or routine maintenance requirements when the user is on a site visit. This feature can be set up to detect all devices within a certain radius and send notifications to field technicians if they are in the vicinity.



MasterLink indicates if nearby devices have alarms or routine maintenance requirements

### Remote TAC Support

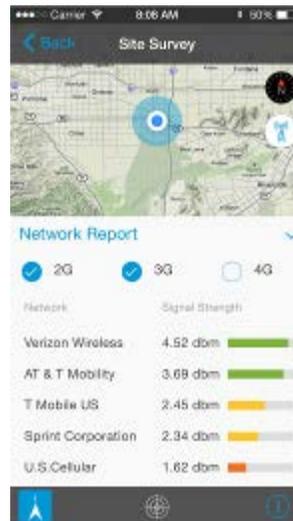
MasterLink utilizes instant messaging communication to provide on-demand, full-day expert support. Users can reach out to Honeywell's

global Technical Assistance Center (TAC) personnel while on site to resolve their problems. Technicians can also use the connection to access configuration and log files from the device, thereby eliminating the need to send these files to TAC separately.



### Site Survey

The Site Survey feature with MasterLink relies on a smart phone's antenna to receive cellular signals from all the transmission towers in a given area, and then provide a report (with time stamp) indicating the signal levels in decibels. This feature is useful in analyzing the feasibility of a site's cellular signal coverage before committing to any capital expense decision. Reports are generated at two different points in time to provide a comparison of signal levels or to understand changes in cellular infrastructure in the area.



Site Survey feature provides a report indicating cellular signal levels for a given location

## Analytics

The MasterLink software provides detailed analytics on the completeness and accuracy of billing data. It employs an advanced reporting engine, which has options to generate different types reports as per the user's needs. The solution also offers cloud support so information can be uploaded to cloud-based storage and made available to all authorized parties within the client organization.

## Benefits to End Users

With Honeywell's enhanced MasterLink software, gas transmission and distribution companies gain a modern, state-of-the-art device configuration and calibration solution, which is future-proof by incorporating the current industry trends of digital innovation, IIoT and workforce mobility.

The MasterLink software's intuitive dashboard enables users to quickly determine the overall health status of critical gas measurement equipment. Employing standardized terminology, it is easy to configure and calibrate instruments, import data, and generate reports and graphs—eliminating time-consuming manual effort.

With the MasterLink solution, end users benefit from:

- Automation of routine tasks by technicians in the field
- Increased productivity and cost savings
- Reduced time spent on instrument troubleshooting
- Ease of locating devices at unfamiliar sites
- Comprehensive site survey to eliminate uncertainty before CAPEX decisions
- Remote TAC support to minimize downtime and truck rolls

Integration with world-class MDM and cloud support solutions results in additional benefits related to billing data analytics and data management. Seamless integration across the gas supply chain also reduces blind spots, breaks down silos of responsibility, and makes the entire operation transparent and efficient.

## Conclusion

With the right choice of gas volume corrector software and the supporting eco-system, utilities supplying natural gas can increase their productivity, lower operating expenses and realize more value from investments. By becoming an early adopter of innovative solutions like MasterLink, they can also minimize their downtime, generate more return on installed assets, leverage current industry trends, and prepare their operations for a challenging future.

## For More Information

To learn more about Honeywell Gas Measurement and Data Management Solutions, visit [www.honeywellprocess.com](http://www.honeywellprocess.com) or contact your Honeywell account manager.

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WP-16-06-ENG

June 2016

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