Honeywell’s Field Device Manager (FDM) is an award winning solution for managing smart devices. Tools like Field Device Manager help operations to be more proactive about maintenance and avoid costly failures. Experion® PKS – The Knowledge to Make it Possible.

Field Device Manager provides plant instrument engineers, technicians and maintenance personnel with an optimized environment that simplifies tasks and enables remote management of smart instruments.

With complete command and control of HART, PROFIBUS and Foundation Fieldbus smart instruments throughout the plant, FDM saves time and helps improve overall asset effectiveness.

**FDM Simplifies Maintenance Tasks**

FDM simplifies maintenance tasks by providing an intuitive user interface, which is optimized for use by instrumentation engineers and technicians. The user interface and its supported functions are the same regardless of whether the device is connected to the Experion HART and Foundation Fieldbus I/O, Safety Manager Universal Safety I/O and Universal Safety Logic Solver, HART hardware multiplexers, HART modems, or PROFIBUS networks.

FDM automatically highlights instruments that have faults or need diagnosis in a separate menu. Faults are identified and classified automatically, without the need for special setup.

**FDM Saves Time**

FDM provides the ability to perform common tasks on instruments remotely, thereby greatly reducing the number of field trips that would otherwise be required.

FDM also simplifies and reduces effort normally involved in plant debugging processes by providing clear and accurate status of the devices within the control room/maintenance shop.

Malfunctioning devices can be spotted easily as FDM displays them in special colors and groups them in a special menu.
With FDM, no point engineering or database building is required. Simply configure the communication parameters, and FDM automatically:

- Detects smart devices and adds them to the database
- Uses information accessed from the actual, connected HART, Foundation Fieldbus or PROFIBUS device to establish the database record and automatically assign the proper device template
- Saves time by eliminating the need to build templates and assign them to devices
- Historizes data, allowing maintenance personnel to compare:
  - Configuration of one device with another device, or
  - Historical configuration of the same device or another device.

In addition, FDM provides other features that aid maintenance, such as document linking and device diagnostic detail.

FDM simplifies startup by providing an easy-to-use interface for common tasks. Wizard-like menu-driven methods guide you through common tasks like loop tests, calibration procedures and range updates. FDM supports powerful and complex features like valve stroke tests of control valves, flow diagnostics, or drift analysis with the same ease as common tasks like loop tests or calibration procedures.

Open and Standards-Based
FDM supports Electronic Device Description Language (EDDL) and Field Device Tool/Device Type Manager (FDT/DTM) technologies, two open industry standards for device integration. It provides a solution that works with registered HART, Foundation Fieldbus and PROFIBUS devices available worldwide.

EDDL files represent the HART Communication Foundation standard for device integration. They are created by and are available from the device vendors. They describe all device functions and diagnostics, thereby providing full access to the smart device intelligence. FDM supports HART 5, 6 and 7 as well as the latest enhancements to EDDL for HART devices, including advanced graphical features, data storage and manipulation features and advanced window and data organization constructs.
FDM's HART host capabilities are based on the HART Communication Foundation's (HCF) reference host, SDC 625 standard, so any device registered with HCF works with FDM. FDM also comes preloaded with all the latest EDDL files available from HCF, and it can be brought up-to-date easily with newly available devices. FDM provides access to all common HART features and can also work when a DD file is not available.

FDM’s FDT/DTM (Field Device Tool/Device Type Manager) support enables the use of manufacturer-created specialized software (DTMs) for HART, Foundation Fieldbus and PROFIBUS devices as well as gateways. DTMs are created for complex devices, such as valves, to provide advanced functionality which might not be as easily managed via EDDL files. The FDT standard specifies the interface between the host software, like FDM, and the vendor-specific DTMs. A DTM can provide a rich graphical interface and simplify complex operations like valve diagnostics and flow meter curves. FDM provides the full benefit of this advanced vendor created software in the familiar FDM environment.

FDM supports easy addition of both EDDLs and DTMs into its library, eliminating the wait for a new software release when a new device or version is used. By supporting EDDL and FDT/DTM standards, FDM eliminates the need for multiple software tools.

**A Flexible, Secure Environment**

FDM provides a secure environment with password- and login-protection. FDM’s flexible role-based security environment allows system administrators to define user roles and privileges according to each plant’s specific procedures. FDM supports single sign-on based on the Windows login ID of the user.

To prevent disruptions caused by unauthorized access or human error, FDM provides a unique Device Access Control feature whereby write access to any device, set of devices, or entire network can be managed under password protection. This is especially critical for safety-connected devices. When used with Experion PKS, FDM can prevent changes from being made to devices that are on-process. Similarly, when used with Safety Manager Universal Safety I/O, FDM prevents changes from being made to devices that are under Safety Lock.

FDM’s powerful audit trail capability logs all device changes with the date and time, the identification of the person who made the change and the reason for the change.

**A Robust, Secure, Flexible Architecture**

The powerful FDM client-server architecture helps maintenance personnel spread client and communication interfaces, such as multiplexer networks, across the plant. The FDM Remote Communication Interface (RCI) component distributes the communications, providing broad geographic coverage and limiting the need for extensive local communication runs.

With FDM’s Multiple Server feature, there is essentially no limit to the size of an FDM project. Clients can be installed throughout the plant and connect to any FDM Server. FDM also has capacity limits to support any size project. This includes a generous number of Experion and non-Experion connections per FDM Server.

**Tight Experion Integration**

FDM tightly integrates with Experion HART-enabled I/O modules and Foundation Fieldbus Interface Modules (FIMs), conveniently connecting to the Experion server via Ethernet. It likewise connects with Safety Manager Universal Safety I/O or Universal Safety Logic Solver modules via Ethernet. No special termination panels, hardware multiplexers, or wiring are needed. Full redundancy is supported for both Experion and Safety Manager.

FDM enables the EDDL/DTM based detailed device views of HART devices and DTM based views of Foundation Fieldbus devices from within an Experion Flex Station, thereby providing seamless integration of information throughout the enterprise. Online changes made to FF device parameters from FDM through vendor-provided DTMs are logged in the Experion journal.
Flexible Third-Party Integration

FDM integrates with HART devices connected to any DCS or safety system through HART hardware multiplexers (MUXs). It provides the same functions and features as devices connected to Experion-connected HART-enabled I/O. The HART data and alarms from devices connected to MUXs as well as to Safety Managers can be integrated into Experion from FDM. This allows the Experion operator to be aware of any device problems. Additionally, FDM’s powerful export-import capabilities make migration of existing databases simple and less intensive.

Scalable and Powerful

FDM can scale from a single modem-connected device on the bench up to tens of thousands of devices in the plant. Combined with FDM’s multi-Server feature, it can cover some of the largest refineries in the world. Its ability to cover Experion, Safety Manager, third-party MUXs and more makes it one of the most powerful tools for instrument asset management.

Maximize the Benefits of Smart Instrumentation

FDM offers businesses these key benefits:

- **Versatility** — Supports all parameters and methods supported by smart instruments, contributing to better efficiency, higher productivity and simpler troubleshooting.
- **Accessibility** — Provides full access to device parameters, configuration and diagnosis procedures. Effective diagnostic information helps improve maintenance prioritization and plant reliability.
- **Predictability** — FDM helps predict problems early by unlocking the power of smart instrumentation and making it available to plant personnel. It mitigates plant incidents and trips by preventing unplanned instrument failures.

For More Information

Learn more about how Honeywell’s Field Device Manager R430 can manage smart devices visit our website www.honeywellprocess.com or contact your Honeywell account manager.

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