



Entis Pro Inventory Systems

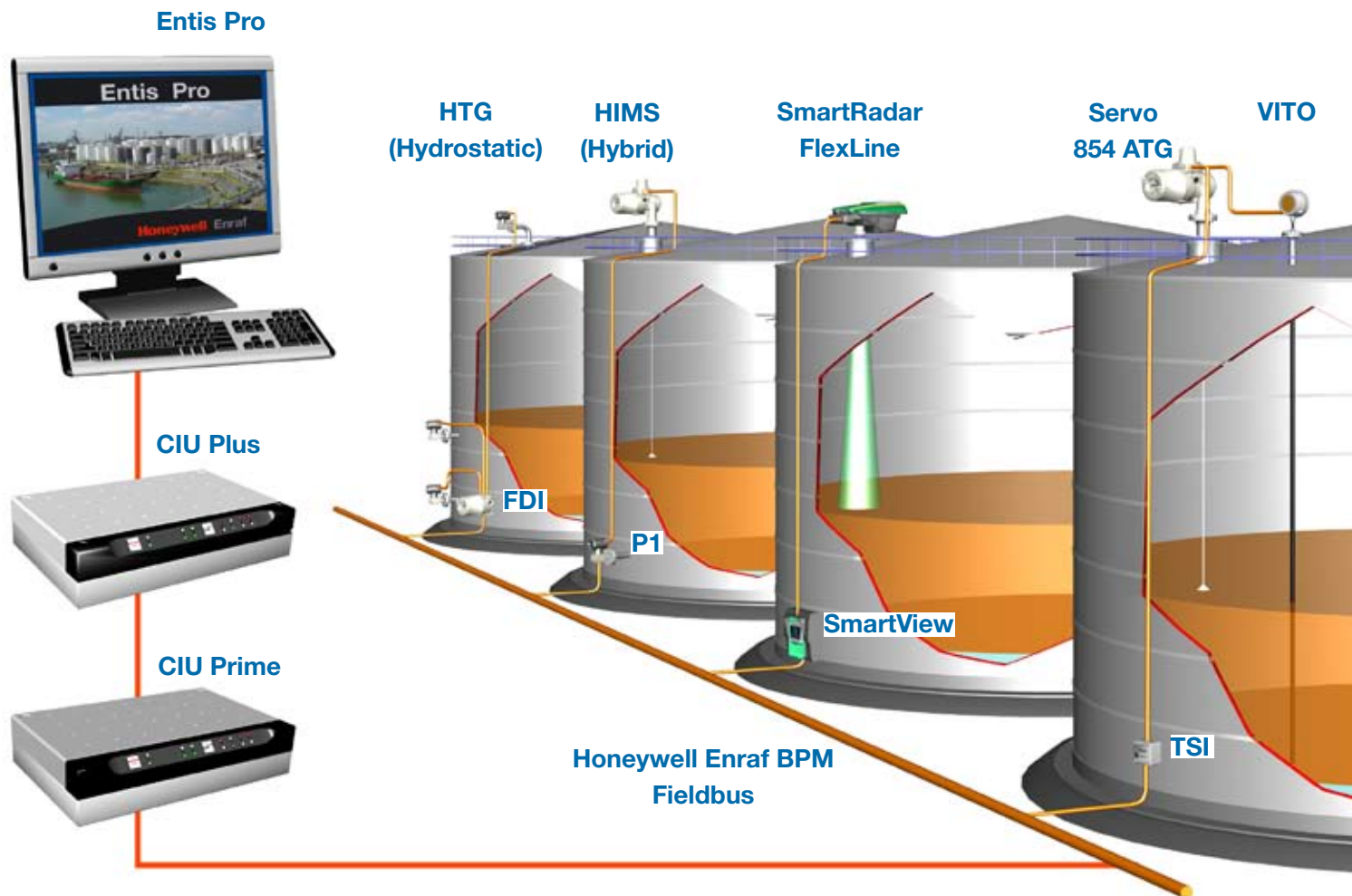


Honeywell Enraf provides an integrated solution to meet all terminal management needs, however large or small.



Honeywell Enraf provides an integrated solution that delivers value from conception to implementation for all types of distribution and bulk terminals, such as refinery off-sites, biofuel storage and distribution, petrochemical storage and loading facilities, and marine, rail and truck loading terminals. Honeywell Enraf's solutions are totally integrated and scalable, so whether you are building a new facility, or expanding or upgrading an existing one, Honeywell Enraf can help reduce overall project risk, accelerate production schedules and improve your business performance through solutions that drive safety, reliability and efficiency.

The modular automation approach to manage your liquid inventory



With over 2,000 installations worldwide and 50 years of tank gauging and inventory management experience, Honeywell Enraf offers unmatched industry expertise and support. As part of Honeywell Enraf's inventory monitoring solutions, Entis Pro can radically improve tank inventory management.

Part of a flexible, layered system architecture, Entis Pro offers a wide range of tasks and modules, as well as an intuitive interface and displays that can be customised to fit the user's needs. Entis Pro can easily integrate into a plant network and communicate with other systems. Redundancy support can protect data in the event of a network failure.

Entis Pro can help improve safety with a reliable alarm system, leak detection mode and other features that protect people, assets and the environment. Other benefits of the modular Entis Pro system include reduced installation and maintenance costs, higher accuracy to reduce inventory uncertainties, and simple and reliable SCADA integration.

An easy, safe and flexible system

Open Architecture

Entis Pro is a unique tank inventory management system originally developed for Windows and is available for Windows XP.

Entis Pro is the top level of our three-layer (CIU Prime, CIU Plus and Entis Pro) flexible system architecture. Every level covers specific tasks such as scanning, calculations and monitoring, and provides an open interface to communicate with other systems. Entis Pro itself provides connectivity via open database connectivity (ODBC) and object linking and embedding (OLE) to third-party software.

Real Time Inventory

Entis Pro is a native multi-tasking Windows application. Data is retrieved via dedicated Communication Interface Units (CIU Prime and CIU Plus) and processed through to the open Entis Pro inventory database. A myriad of different screens are available for inventory management including bar graphs, tabular details, iconized tanks and a whole range of optional modules such as trending, report printing and a tank calculator.

Numerical & Graphical Displays

Both numerical and graphical displays are available. All the data shown in the numerical displays is of high resolution and accuracy. The numerical displays can be customised to suit your particular needs. These displays can be either tank or group related. The graphical displays provide a quick overview of tank status. Several graphical interfaces are also available, and the tank images can be customised per tank, if required.

Intuitive Operation

With Entis Pro there is no need to take time-consuming courses or to read through piles of manuals. Entis Pro has a logical, self-explanatory user interface. A change of color in the tank display immediately informs the operator whether the tank is being filled or emptied. Whether you are a novice or an experienced user, the system is highly user-friendly and simple to operate.



Tank Inventory Management Knowledge and Experience

- Local support and centralised specialists
- More than 2,000 installations worldwide
- Over 50 years experience in tank gauging and inventory management
- Best-in-class tank management and custody transfer
- Partnerships with best-in-class product and service suppliers

Benefits of the Entis Terminal Inventory System

- Increase operator efficiency with user interfaces presenting the required information in an orderly way, and reducing manual inputs with integrated automated processes
- Increase safety of people, installation and environment
- Increase return on investments by reducing installation and maintenance costs and an extended lifecycle program
- Reduce inventory uncertainties with higher accuracy
- Reduce product losses with reductions in spills
- Integration with Supervisory Control and Data Acquisition (SCADA) packages is now extremely simple and reliable, offering you a wealth of control possibilities
- With just one click of the mouse you can receive all the information when you need it

CIU Prime and CIU Plus

The sophisticated and reliable CIU Prime and intelligent CIU Plus provide real-time inventory data. Inherent network segregation risks, common in client-server applications, are eliminated by high performance data common throughout the network. CIU Prime collects the field data and the CIU Plus calculates the received data for tank volume and mass.

Networking

The excellent network facilities of Windows allow you to integrate Entis Pro into your plant's network. Local and wide-area networking is possible via Ethernet or Tokenring. Use of standard Transmission Control Protocol/Internet Protocol (TCP/IP) and NetBIOS Extended User Interface (NetBEUI) makes hardware selection and installation easy and affordable. Even wireless and fiber optic communication can be seamlessly integrated.

Reliable Alarm System

In addition to the alarm contacts in the field instruments, Entis Pro provides an array of programmable alarm set points. Users can create their own alarms for all measured or calculated data in order to make their work easier to plan and safer to schedule. Alarms pop up when they occur. Alarm avalanches, where just one failure leads to an inundation of annoying messages, are prevented to increase operating safety.

Leak Detection

During inactive periods, tanks can be put into a leak detection mode. This leak alarm uses the temperature-corrected volume to make sure that temperature variations do not mislead the system and therefore increase plant safety and reduce operating costs.

Historical Trending

Alarms and acknowledgments, together with all tank information, are recorded and stored for future review and traceability. Operators easily can check tank usage to increase efficiency.

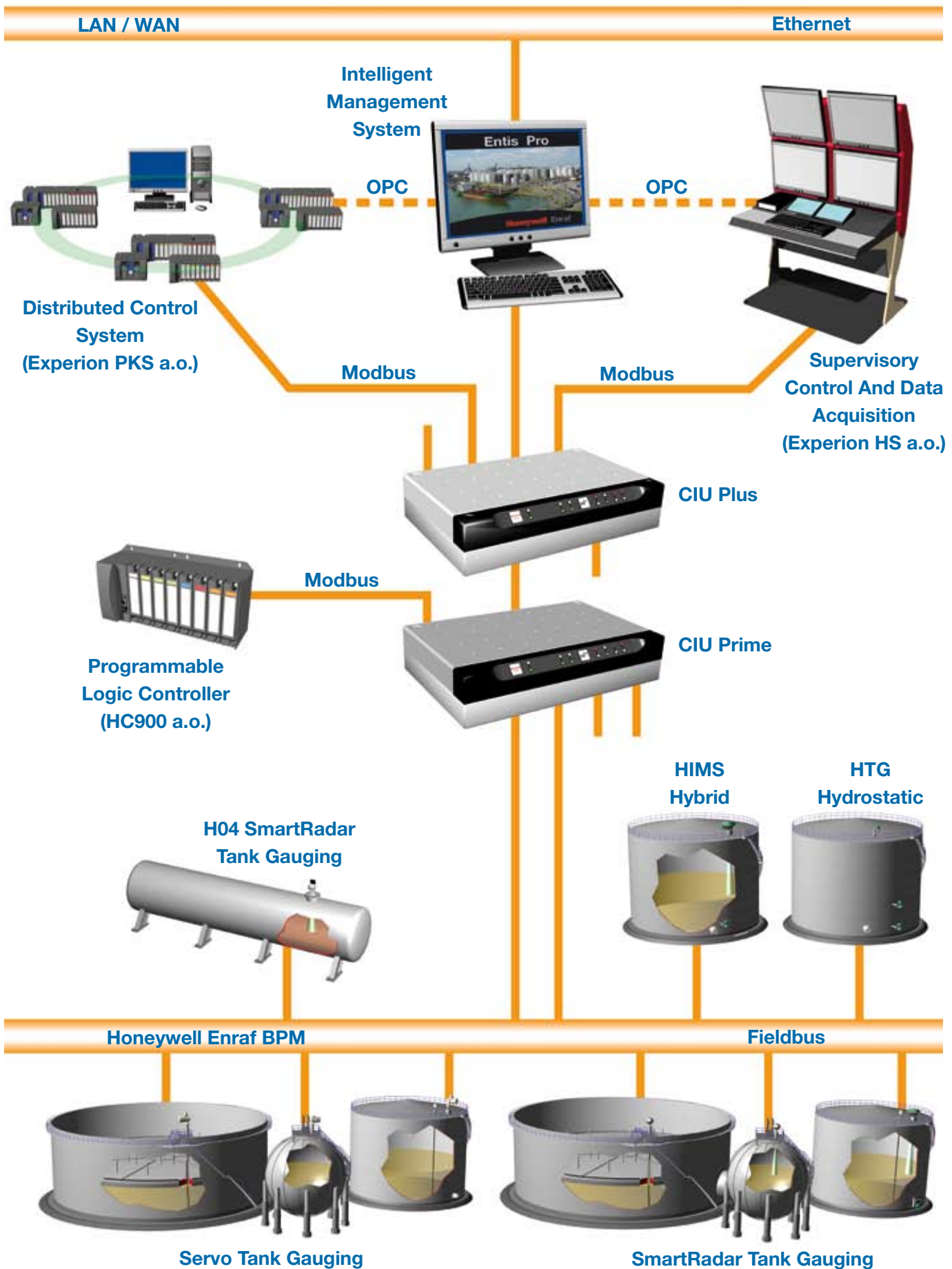
Hot Standby & Redundancy Support

The Entis Pro system can be designed with hot standby and redundancy support for your critical applications. Redundancy support can even cover the unlikely event of a network failure. After a network error occurred the second system will automatically start and take over the lost functionality providing sustained and reliable data to the management system. To ensure integrity of retrieved data and system status during the automatic start, all field instruments are rescanned and data recalculated.

Custody Transfer

The Entis Pro system has been developed in a modular way. Entis Pro contains the required functionality and is able to provide the required status information to be used in applications for custody transfer. Entis Pro has been approved by official weights and measures authorities to use for accounting and in custody transfer.

Complete inventory management



High performance reliable architecture

Compliant Inventory Calculations

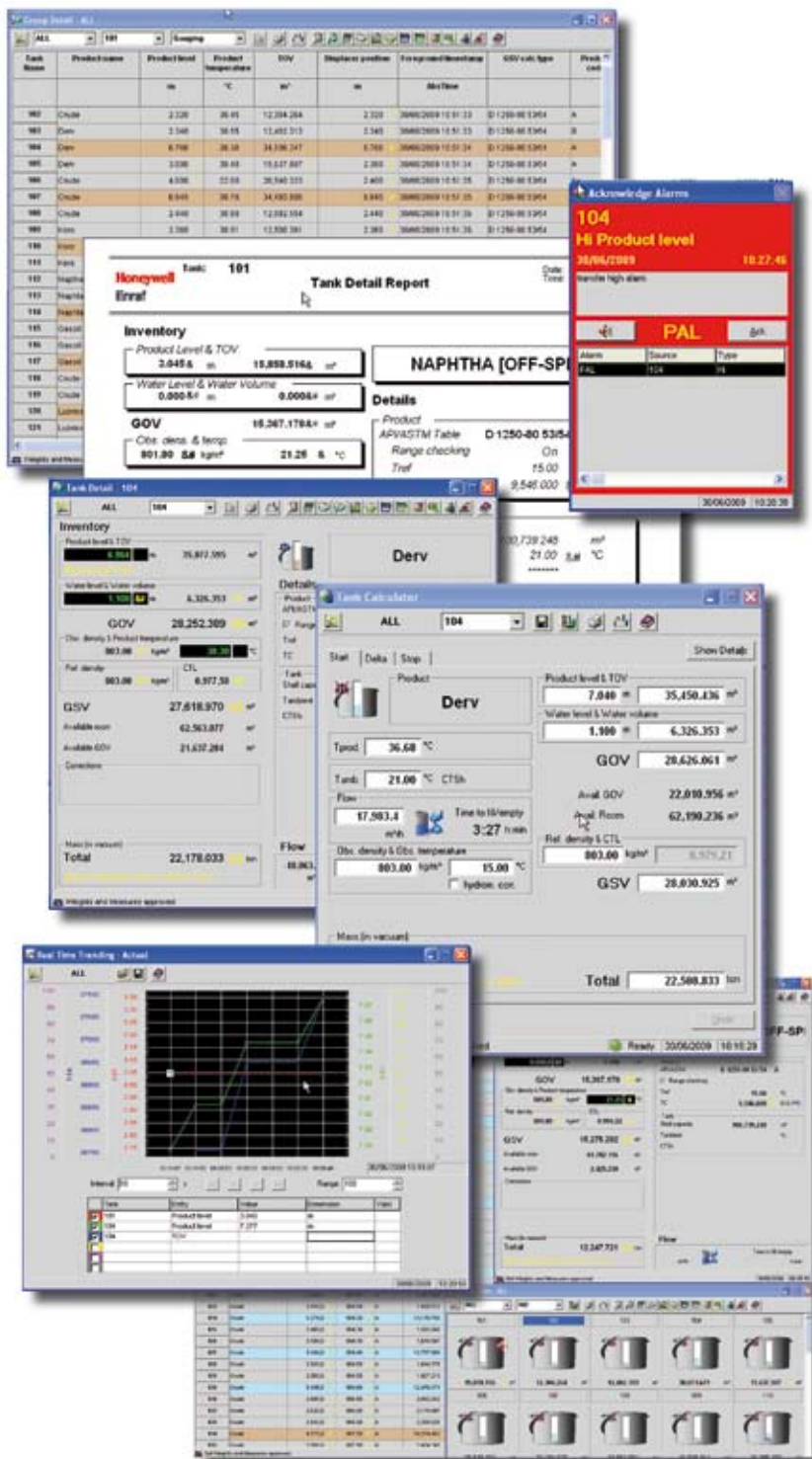
Entis Pro provides accurate and reliable data. All inventory calculations are fully API and ASTM compatible. The implemented calculation procedures have been verified by weights and measures authorities as being correct and providing accurate data.

50 Years of Tank Gauging Experience

Entis Pro has been developed by Honeywell Enraf, a company with 50 years experience in reliable and accurate tank gauging systems. Entis Pro is compatible with all existing Honeywell Enraf instruments. This means that you can simply migrate and upgrade the system to meet your requirements.

Entis Pro Tasks and Options

Entis Pro offers a set of standard tasks and options. Beyond the standard tasks and options individual tasks can be developed additionally on customer request and specifications.



Customer Specific Tasks (Examples)

Roof Immersion Compensation

To compensate changing weight due to heavy rain/snow on floating roof

Roof Monitoring

To monitor floating roofs to float freely and announce when one tends to get jammed preventing serious damage to tank and environment

Remote Data Retrieval

To enable global access to site data providing an easy way to manage multiple sites

Entis Pro tasks and options

Tasks



About Tasks



Alarm Pop-up



Alarm Type Profile



Bar Graph View



Define View



Gauge Commands



Gauge Display



Group Detail



Group Setup



Group View



Hot Standby

Tasks



Log on



Manual Overwrite



Master Clock



Set Alarm



Tank Access Profile



Tank Detail



Tank Explorer



Tank View



Toolbar



User Access

Options



Change Dimensions



Group Totalizer



Historical Trending



Host 45E



Logging



Real Time Trending



Report Manager



Scheduler



Tank Calculator

For More Information

To learn more about Honeywell Enraf's solutions, contact your Honeywell Enraf account manager or visit www.honeywellenraf.com.

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