

VTW

Tank Gauging System

MHT Technology Ltd's Tank Gauging Software

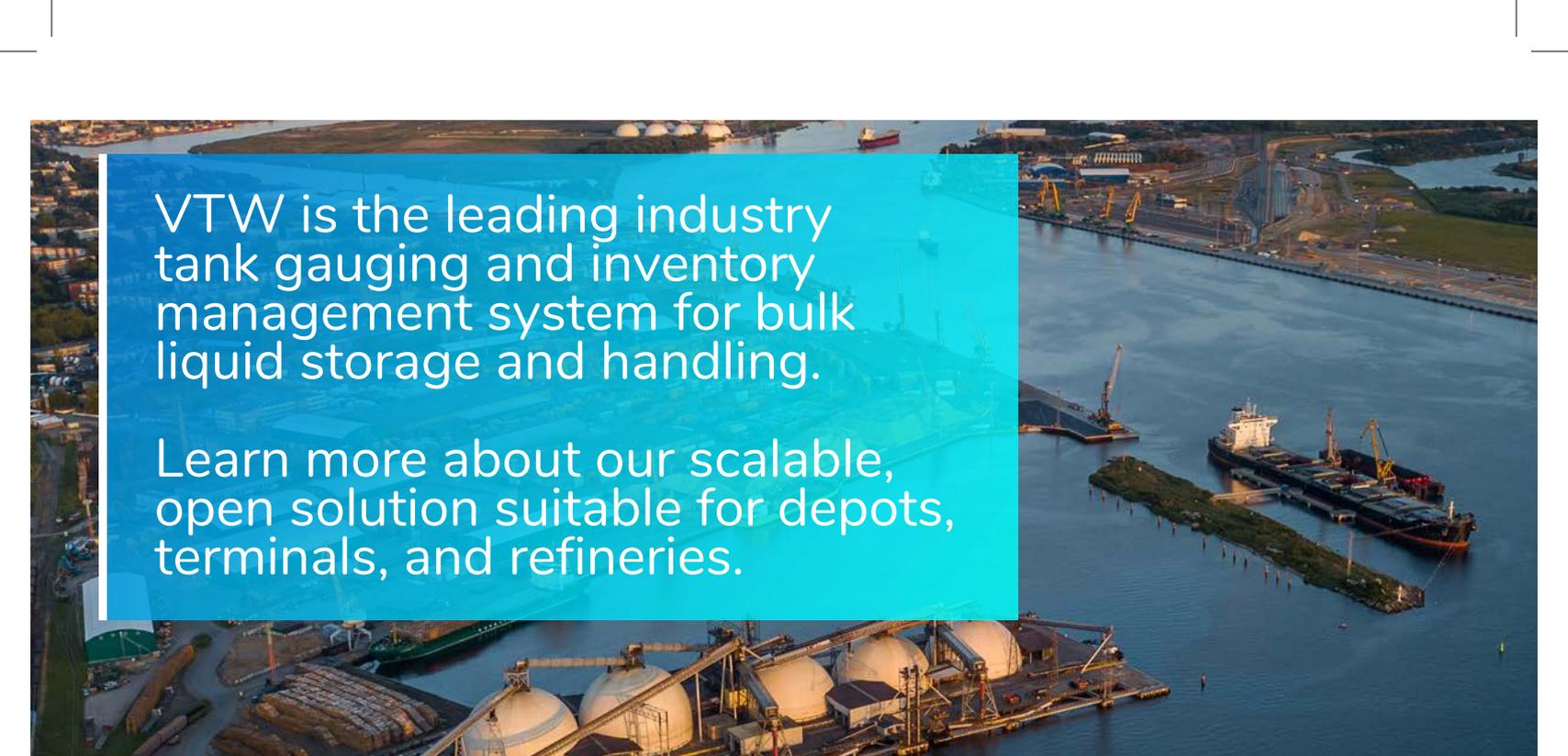


MHT Technology Ltd
Digital Transformation with Human Design

+44 1748 828820

www.mht-technology.co.uk

sales@mht-technology.co.uk



VTW is the leading industry tank gauging and inventory management system for bulk liquid storage and handling.

Learn more about our scalable, open solution suitable for depots, terminals, and refineries.



Launched in 1994



Trusted by customers for over 20 years



Over 600 systems installed worldwide



Supports sites of up to 1,500 tanks

Overview

MHT Technology Ltd's VTW software is a scalable tank gauging and inventory management solution designed to adapt to any site requirement regardless of size or budget.

The launch of VTW in 1994 was a landmark achievement for the industry, arriving as the first Windows-based tank farm system. We continue to develop the software in-house, digitally transforming sites, saving our customers money, and improving safety.

Our tank gauging system is scalable, customisable and compatible with major vendors' level gauges; including Honeywell Enraf, Emerson/Saab, Varec, Whessoe and Endress+Hauser.

From the very start, VTW was designed with the specific intention to be device and gauge vendor-independent. This means that both existing and newly purchased instruments, regardless of vendor, can be seamlessly integrated into a single solution.

With over 600 installations worldwide, our customers vary from independent bulk liquid storage companies to refineries, to networks of manned and unmanned oil depots.

VTW Tank Gauging Software gives operators the tools they need to ensure the safe storage and movement of products, whilst optimising the use of tank capacity and improving efficiency.



Key Features



Real-Time and Historical Data

The intuitive Homepage is designed to present an overview of the entire tank farm with key data and events associated with each tank past and present.



Reports On Demand

A wide variety of built-in reports can be customised. Automatically save, email or upload reports at specified intervals.



Redundant Systems

Automatically protects against hardware or operating system failures regardless of the system size. Be reassured you have a backup in case something goes wrong.



SCADA Designer

Create custom single tank or multiple tank screens. Integrated control of pumps and valves and includes custom graphics and animations.



Alarm Management

Configure alarms for level, temperature, density, flow, leaks, theft and have eight user-defined alarms. Options to annunciate alarms via Radio, SMS or email.



Radio Annunciation of Alarms

Keep informed whilst out on-site, prioritise the severity of alarms annunciated and incorporate alarms from other systems, alarms annunciated after any voice traffic.



Movements package

Plan, track and analyse movements from a central user interface. Calculate the estimated time of completion, flow rates and movement data available for analysis.



Business Information Server

Provide staff with the ability to view VTW data away from site and reconcile data back to head office on any device. The BIS can be deployed on a different network to the tank gauging system.



Our Software and Digital Transformation

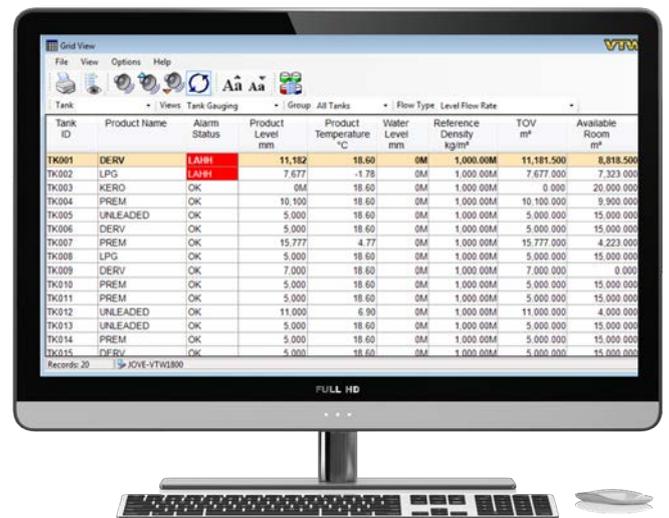
VTW has undergone a process of continual innovation over 25 years, often incorporating feedback and requests from the customers that use it. All our software is designed, developed, and tested in-house by a team of bulk liquid storage and handling experts.

The latest version of VTW includes the core features of a homepage overview and grid view, data trending, movements, security and data integrity, SCADA screens, alarm/event viewer, audit trails, and the new Business Information Server.

1 Homepage Overview and Grid View

VTW provides a comprehensive overview of the whole tank farm, with individual windows for each tank. They display a configurable summary of all its data with associated icon shortcuts of all features.

The Grid View provides a more traditional spreadsheet overview, displaying a tabular view of data for all tanks. The rows in the grid represent individual tanks and the columns represent data. Standard templates are provided, although additional views can be easily configured.



Tank ID	Product Name	Alarm Status	Product Level mm	Product Temperature °C	Water Level mm	Reference Density kg/m³	TOV m³	Available Room m³
TK001	DERV	LAHH	11,182	18.60	0M	1,000.00M	11,181.500	8,818.500
TK002	LPG	LAHH	7,677	-1.78	0M	1,000.00M	7,677.000	7,323.000
TK003	KERO	OK	0M	18.60	0M	1,000.00M	0.000	20,000.000
TK004	PREM	OK	10,100	18.60	0M	1,000.00M	10,100.000	9,900.000
TK005	UNLEADED	OK	5,000	18.60	0M	1,000.00M	5,000.000	15,000.000
TK006	DERV	OK	5,000	18.60	0M	1,000.00M	5,000.000	15,000.000
TK007	PREM	OK	15,777	4.77	0M	1,000.00M	15,777.000	4,223.000
TK008	LPG	OK	5,000	18.60	0M	1,000.00M	5,000.000	15,000.000
TK009	DERV	OK	7,000	18.60	0M	1,000.00M	7,000.000	0.000
TK010	PREM	OK	5,000	18.60	0M	1,000.00M	5,000.000	15,000.000
TK011	PREM	OK	5,000	18.60	0M	1,000.00M	5,000.000	15,000.000
TK012	UNLEADED	OK	11,000	6.90	0M	1,000.00M	11,000.000	4,000.000
TK013	UNLEADED	OK	5,000	18.60	0M	1,000.00M	5,000.000	15,000.000
TK014	PREM	OK	5,000	18.60	0M	1,000.00M	5,000.000	15,000.000
TK015	PREM	OK	5,000	18.60	0M	1,000.00M	5,000.000	15,000.000

2 Data Trending

All live and calculated data is continuously trended based upon a user-defined strategy. This provides the operator with both a real-time and historical view of individual gauge activity. The information can be viewed in graphical format or exported to Excel if required.

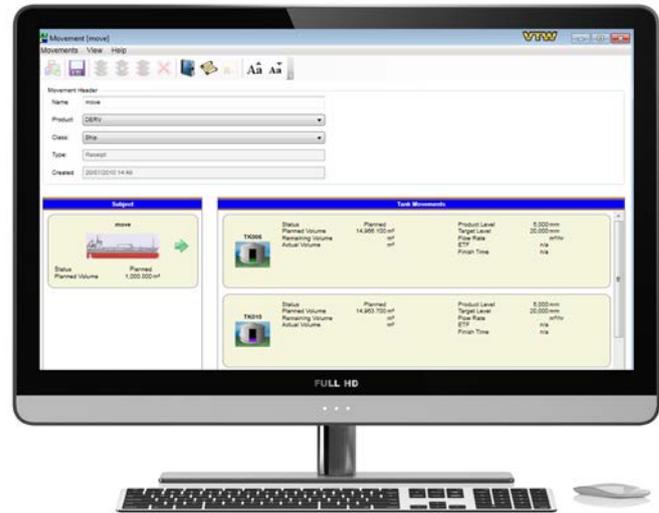
The graphical trend viewer allows trends to be overlaid on top of each other either to compare values from the same source or to compare data from different sources. The trend feature is ideal for analysing historical events or incidents, and can also be used for other tasks such as leak detection or checking tank movements.



3 Movements

The movements package provides operators with the tools necessary to manage the safe movement of product between locations. Movements are configured according to site policies, for example, maximum/minimum safe operating levels, predetermined flow rates, and user permissions. Operators can then set up and safely perform a product movement, confident that it will comply with site operating policy.

During the movement the operators can monitor the progress via site customisable displays showing tank flow rate, estimated finish time, remaining and actual volumes, while the system will generate alarms at specifically configured levels. All movement data is recorded within the database and can be visualised in reports and certificates.



4 Security and Data Integrity

The system is protected by a comprehensive and adaptable security model that is designed to comply with specific security measures in use on different sites. Usernames and passwords are assigned to each user, and users are assigned a user group with a set of privileges.

VTW allows you to carry out complex tasks with the reassurance of high security standards.

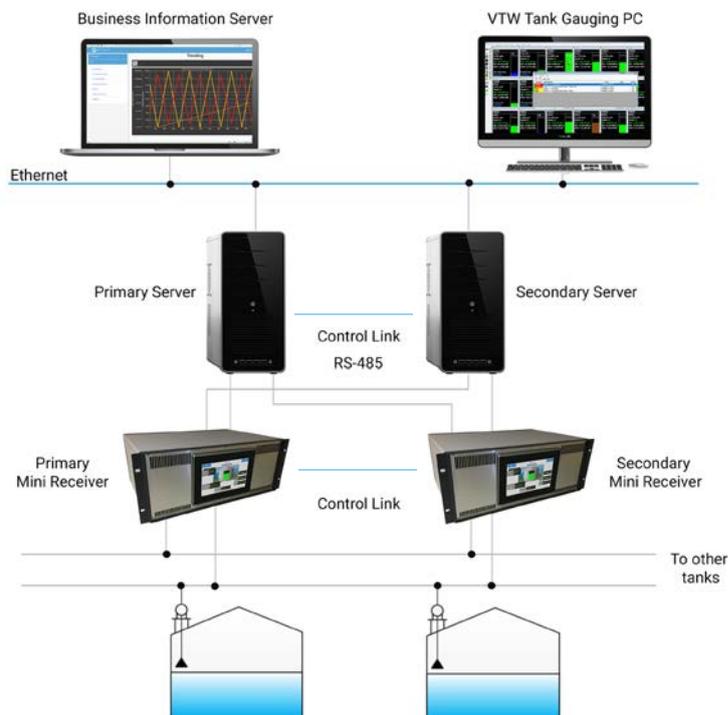


- The system administrator can determine which features of the system a particular group has access to and the degree of access they are authorised.
- Backup scheduling facility: providing backups of SQL databases, registry settings and files, configured at scheduled intervals as required.
- Redundancy can be synchronized, regardless of the system size. Whether a simple redundant operator station for small systems or a pair of redundant servers for client-server architecture, we can provide a system with high availability.

5 SCADA Screens

SCADA screens can be customised to incorporate simple process and plant control, for example, the interrogation of a pump and valve control.

The close link of these systems lends itself to more secure and integrated control functions, mirroring real-life visualisation with operational management within VTW.



6 Redundant Systems

The use of a redundant system automatically protects against hardware or operating system failure. Redundancy is available at the server, data concentrator and ethernet level.

A redundant system allows operators to continue working without interruption and the need to seek immediate technical support.

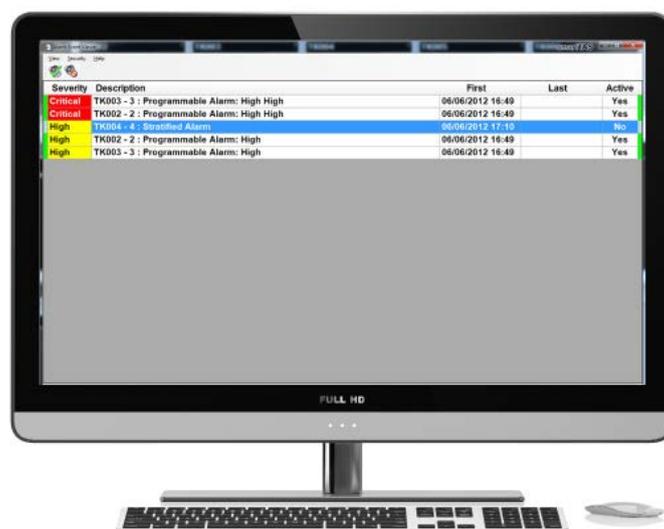
7 Alarms, Event Viewer and Audit Trails

Each alarm in VTW is configurable with designated severity levels and auditory annunciations. In the event of an emergency, you will be warned well in advance to avoid any costly and dangerous incidents.

VTW alarms can be further customised to suit the particular requirements of the site, for example, 'critical' alarms may require a logged reason before acknowledgement, whereas 'low' alarms can be silenced with only a visual indication.

All alarms are customisable through a graphical user interface, allowing names, descriptions, and annunciation of the messages to be tailored depending on the terminology used at each site.

The alarm summary screen is clear, concise, and ideal for handover periods between operators. All alarms are logged to the database, detailing the cause, date/time, and the user that acknowledged it.



The audit trail automatically records all changes that occur to the system and all activities are recorded allowing managers to ensure that correct operating procedures are being followed. This is invaluable for analysis and determining the status of the system pre and post-incident.



8 Business Information Server

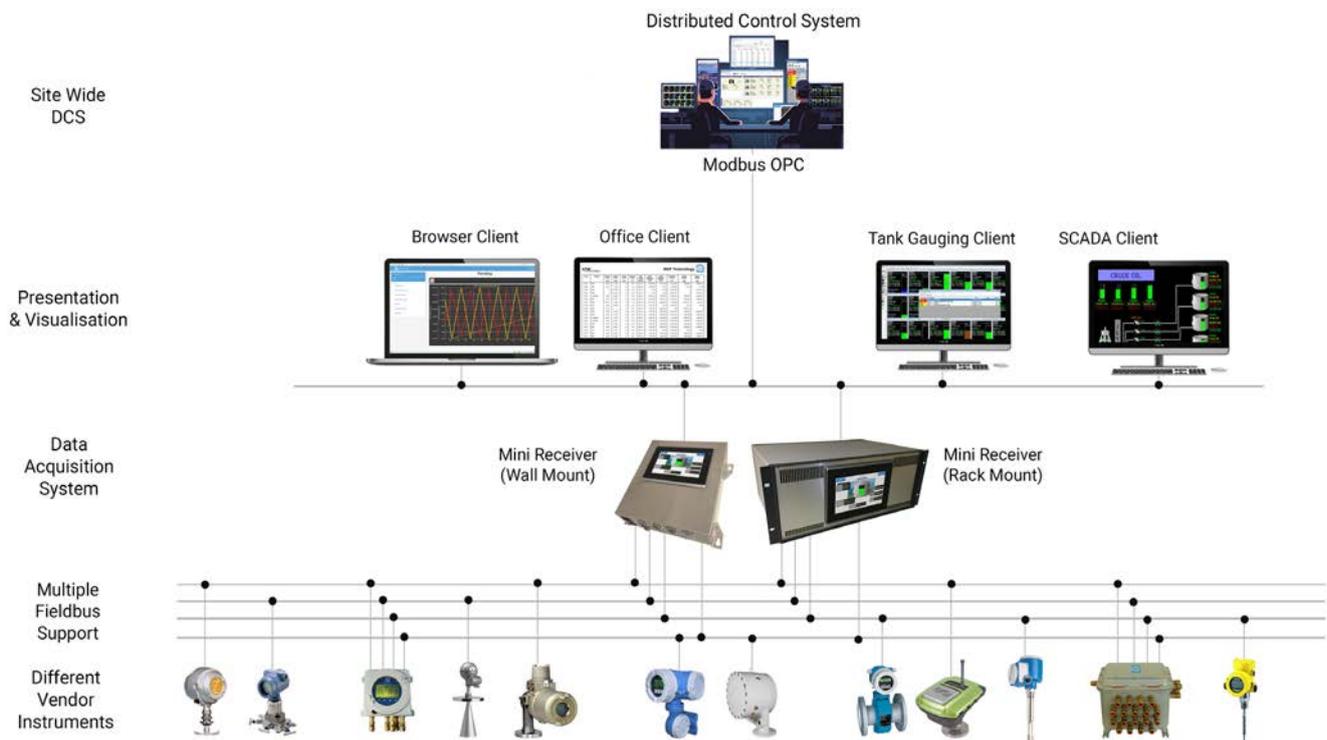
Site managers now have the ability to view data away from their site, allowing business decisions to be made instantly across multiple devices.

It provides staff with a secure log-in which allows tank gauging data to be viewed using a standard web browser and provides the ability to reconcile data back to head office. The BIS can be deployed on a different network to the tank gauging system.

System Architecture

VTW can be configured for a range of system architectures, including standalone operator stations, distributed systems, and fully redundant client/server applications.

- Standalone station
- Client-Server system
- Distributed multi-site systems
- Modbus and OPC interfaces to sitewide distributed control systems and other business systems
- Fieldbus and device-independent



PC Requirements

Operating system:	Windows 10 Windows Server 2019
Platform:	Microsoft.NET Core
Database:	Microsoft SQL Server
Disk space:	Minimum 80 GB
Memory:	Minimum 8 GB
Processor:	2 GHz Dual Core Processor
Resolution:	1920 x 1080
Core functionality:	Homepage, Grid View, Single & Multi-Tank Overview, Movements, Trending, Reports, Alarm Configuration, Alarm Summary, Inventory Calculator, Audit Trails, Device Commands, Manual Data, Tank Characteristics and Tank Capacity Tables



Talk to us about out how VTW can benefit your site