

# SmartProcess® Terminal Management Solutions



# Experience Reduces Project Risk



*Terminals can be complex and comprise many field devices and systems. Few single-source vendors understand the operations well enough to integrate all terminal subsystems as a packaged offering.*

Emerson's SmartProcess® Terminal Management Solutions can be customized to encompass assessment of terminal operation, conceptual automation design, detail engineering, procurement, project management, configuration, and commissioning.

Emerson's expertise in terminal automation enables us to provide fully engineered comprehensive solutions.

## **Operations expertise**

With more than 25 years of experience and over 200 Terminal Management System (TMS) installations, Emerson can engineer efficient new facilities or analyze and improve your existing operations.

Site audits help identify potential incremental or break-through improvements in your terminals, then quantify the potential payback of those improvements.

## **Project engineering and integration**

Our project engineering and integration services streamline the implementation ensuring quick, accurate, and efficient specification of facility components, avoiding the inefficiency of working with multiple suppliers and reducing project implementation time and complexities.

Equally as important as selecting the right components and sub-systems is having them all work together effectively. Emerson's integration services experts ensure that your terminals operate as efficient, productive systems.



*Project experience,*



### **Award-winning service**

Emerson's SmartProcess Terminal Management Solution gives you access to the vast Emerson service and support network. Our goal is to deliver results that consistently meet or exceed your expectations. By providing comprehensive solutions with local resources, we deliver project continuity and ongoing support to your terminal operations.

### **Worldwide support**

Support is a telephone call away to one of Emerson's Terminal Management Service Centers, located throughout the world. These centers provide a 24-hour-a-day help line, 365 days a year. Often, a modem connection can be used to diagnose and resolve TMS problems remotely. If onsite support is needed, the centers can access a worldwide network of dedicated field service engineers, who can be onsite within hours.



### **Operator training**

Emerson knows that training is the key to accessing its systems' full potential. TMS operator training courses are available at Emerson global offices or at the customer's site.



# Proven Technology



*Part of the SmartProcess Terminal Management Solution is a comprehensive system for the management of bulk marketing terminals. Our systems allow complete and easy integration with administrative or business systems while interfacing with the terminal's other automation products. Operations become simpler, safer and more secure.*

## Open environment with industry standards

A powerful relational database management system (RDBMS), running under the Microsoft Windows operating system, is an open environment providing industry-standard communications protocols and database access for your administrative computers. SmartProcess Terminal Management Solutions provide much higher availability than other systems. If your administrative computer is not available, the system operates in standalone mode. Optional parallel redundant servers are also available.

Standard, off-the-shelf DCS and Electronic Preset Batch Controllers are used to support liquid product distribution at the terminal.

TMS features include:

- Centralized view of terminal operations
- Communications with the administration computer
- Secure access control
- Traffic management
- Slot booking
- Internet access
- Automated inventory management
- Automated form and report generation

## Integrated terminal management

SmartProcess Terminal Management Solutions can be integrated with the terminal's tank gauging system to maintain comprehensive information on tank levels, volumes and inventory. Using data obtained automatically from the tank gauging system, optional customization features provide stock reconciliation. All product movements are recorded, and a complete view of inventory is maintained at all times. Reports are generated for each product group at the end of the day, or on demand.


The SmartProcess Terminal Management Solution includes a scalable system for terminal process control that centralizes all control operations. The system can consolidate multiple control applications onto a single, more cost-effective platform, with OPC used for system integration. Fieldbus-compatible devices are plug-and-play, reducing commissioning and maintenance costs. Asset optimization can be used to trend operations and provide increased predictive maintenance.



# Scalable

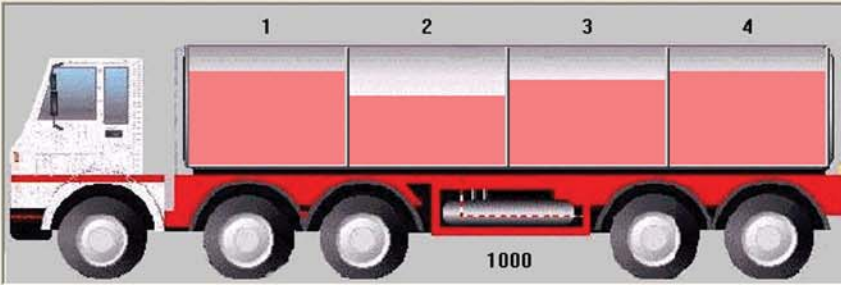
view

Gantry



	PRESET1	DL-2	DL-3	DL-4
Amount	1,000	1,000	1,000	1,000
Volume	814	601	740	816
Volume	814	613	740	816
	375	386	339	393

GAN1 Side A



Compartment Data		Batch Data	
Number	1	81 % Full	Preset ID PRESET1
Capacity	1,000	Blend	111
In Compartment	814	Quantity	1,000
		Loaded	814



*able, centralized control*

# Terminal Management Benefits



*Emerson's SmartProcess Terminal Management Solution delivers major benefits such as:*

- *Improved cash flow*
- *Paperless operations*
- *Single point of data entry*
- *Optimized hardware*
- *Reduced loading times*
- *Reduced operations costs*

## **Efficiency**

Integrated automated terminals operate at a significantly higher efficiency, with faster loading, higher throughput, and greatly reduced operating costs.

Pre-scheduling of trips makes the maximum use of a driver's schedule, with less time spent waiting at the loading island for receipt of any documentation.

SmartProcess TMS greatly reduces administration costs. Documents and reports are generated automatically, eliminating the tedious, time-consuming and error-prone collection and correlation of individual meter tickets.

Integrated automation allows inventory and accounting information to be exchanged automatically and electronically with accounting applications at remote headquarters, so data transfer is more timely and accurate.



# Secure, automated load



## Accountability

Automated batch control, using modern, high-accuracy flow measurement with temperature compensation, minimizes and helps to identify any product losses.

Integration with terminal-wide product movement automation gives operators the clear picture of terminal throughput - vitally important in effective loss control.

Every significant event or transaction in the terminal is recorded on a dedicated audit-trail printer and stored on disk for future reference.

## Safety

The automated loading operation is made safer by interlocks, which prevent loading from taking place under potentially dangerous conditions: if the vehicle is not correctly grounded, for example, or if the loading arm is not in the correct position.

## Environment

TMS automated terminals can better manage vapor recovery units (VRUs) and minimize spillage by using overfill protection and compartment-size checking for a cleaner and safer environment. Additionally, the historical data maintained by the system can provide information needed to help satisfy the environmental reporting so frequently required by local regulatory organizations.

## Flexibility

The modern market demands rapid changes, and TMS can adapt to these demands quickly and easily. Internet access allows carrier companies to reserve product and loading times. In addition, the slot-booking option reduces peak traffic at the terminal and can optimize the number of loading rack requirements and the number of shifts.

## Security and accuracy

Security is a major concern. Integrated terminal management systems maximize security by controlling terminal access and product allocation. Access control at the terminal entrance and at the loading islands identifies vehicles or drivers. It controls dispensing of products according to predefined order details or customer limits.

Trip advice notes and bills of lading are generated automatically, ensuring that the customer is billed correctly for products actually loaded.

# The Emerson Advantage



Emerson offers a turnkey SmartProcess Terminal Management Solution, with management and integration of the complete system. We have engineering facilities in every world area to provide face-to-face contact. This gives you reduced engineering costs and lowers the risk for your project. We offer you a project team to manage multiple suppliers with goods and services from multiple sources. This is of real value for customers who may have reduced their own capabilities in this area. You get the confidence that comes from working with a solid, proven supplier of comprehensive solutions—from initial planning through complete project management, commissioning, and ongoing support.

Put these capabilities to work for your terminal business. Contact your local Emerson sales office or representative today.

**Emerson Process Management**  
T: +1 403.258.6200  
email: [heic-cgy@emersonprocess.com](mailto:heic-cgy@emersonprocess.com)  
[www.EmersonProcess.com/solutions/service/TMS](http://www.EmersonProcess.com/solutions/service/TMS)



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