

ENERGY INDUSTRIES

How to sell ABB T-MAC Plus

Sales tips and tactics



Reasons to call



Customer challenges

- Integrating subsystems and field devices in the terminal.
- Ensuring regulatory compliance by including new safety and security requirements in terminal management system.
- Modernizing terminals with low levels of automation and hard, inflexible architectures.
- Interfacing with IT solutions such as ERP, tax agencies, etc.
- Reducing operating costs.
- Managing inventory from delivery through dispatch.



Value of ABB T-MAC Plus

- Reduces operating costs by integrating all subsystems and devices into one platform, thereby requiring less operators.
- Saves engineering time by enabling operators to replicate the application in different installations by simply changing settings.
- Improves and accelerates decision making by providing the right information at the right time to the right people via remote supervision, e-mail or SMS.
- Reduces loading time, increases productivity and improves profits with advanced functionalities such as automatic bay allocation, kiosk, optimized loading sequence and more.
- Enhances personnel and plant safety to ensure reliable operations in hazardous environments.
- -Manages all operations carried out in loading terminal from product delivery to dispatch as well as product inventory and balance.

Elevator pitch



Value proposition summary

ABB T-MAC Plus terminal management system includes hardware and software elements to execute data management tasks efficiently, effectively and profitably by integrating multiple subsystems and devices into one platform. More operations can be completed with fewer operators, and applications can be replicated with simple adjustments. Operations are optimized and decision making is accelerated and improved by delivering the right information at the right time.



Next-steps statement

T-MAC Plus can be integrated with your existing control system to simultaneously increase productivity and reduce labor costs.

Unique selling points

T-MAC Plus is a scalable and flexible solution with everything from control systems to terminal management software.



The One ABB approach gives customers one vendor to work with for process, management and electrical supply.



T-MAC Plus allows customers to supervise and control several terminals operations remotely or from a centralized control room.



ABB T-MAC Plus is based on more than 30 years of experience in the terminals business.



Terms and Definitions

The following terms are commonly used in the Terminal business:

A

Access Control: A system which is used to verify the driver and truck identification and order numbers. The identification can be done using a card, RFID technology or entering manually the data through a keyboard/display.

Additization: Means the addition of additive to gasoline or post-refinery component for quality or fiscal purposes.

B

Balance: Product balance tracks all the product that enters or exits in each tanks, regardless of delivery or dispensing activity. Then, automatically collects information from electronic and mechanical meters and gives you accurate delivery and balance reports on a shift-by-shift basis.

Bill of Lading: A bill of lading (abbreviated as BOL) is a document issued by the Terminal (automatically by the TMS or manually by an operator) to denote that product has been physically loaded onto a truck or shipping vessel. There is no standard format of this document and is customized per each project.

Blending: It is the process of mixing two different products (e.g., alcohol and diesel) to generate a different product (e.g.: bio diesel). This process may be performed in a tank or during the loading process.

Bulk Plant: A terminal or depot that receives, stores, and dispenses refined hydrocarbon or chemical products via tanker trucks, rail tankers, vessels or pipelines.

E

Enterprise Resource Planning (ERP): ERP is business management software usually a suite of integrated applications – that a company can use to store and manage data from every stage of business, including product planning, cost and development, manufacturing, marketing and sales,

inventory management, shipping and payment. ERP provides an integrated real-time view of core business processes, using common databases maintained by a database management system. ERP systems track business resources cash, raw materials, production capacity and the status of business commitments like purchase orders, deliveries, etc. ERP share the data across various departments for their action, information and alerts.

H

Hand held: device (such as smartphone or tablet) that can be used in the hand and intended as interface between the operator and the Terminal Management System when the operator is on site.

I

Inspection: involves the process to verify parameters of the truck, tanker or driver according to a check list defined by the terminal procedures or legal regulations.

Inventory: Tank Inventory tracks all the product stored in each tank and gives you accurate inventory reports on a shift-by-shift basis.

K

Kiosk: Device (such a PC) where the truck driver can perform in advance the loading disposal process (i.e.: distribution of products and quantities among the different compartments in the truck).

L

(Un)Loading arm: each of the hoses that connects the product pipes to the truck tankers or vessels in order to (un)load product.

Loading bay: location in the terminal where the (un)loading process takes place.

Loading skid: A framework, constructed of pipes, instruments (such as valves, meters, transmitters) mechanical components and support structures for the Loading bay.

P

Preset Controller: An electronic metering device used in an industrial environment to provide totaling volumes, correcting volumes to reference conditions, and controlling the loading operation at the (un)loading bay.

R

Rebrand: The reclassification of a product that may include transfer between product tanks, the dispatch of a product as another, and change of product classification on a tank without any physical movement.

S

Seals: They are mechanisms used to seal shipping containers in a way that provides tamper evidence and some level of security.

T

Tank Gauging System (TGS) or Automatic Tank Gauging (ATG): A system, whose basic function is to monitor the product level in the tank on a real time basis. TGS provides various tank related information such as product level, product quantity (volume and mass), product density, tank pressure, product temperature, tank leakage, etc., for monitoring and control purposes.

Tank Farm: group of tanks located in the terminal where the products are stored.

TAS (Terminal Automation System): A process automation system comprised of a Process Control System, an Emergency Shutdown System and subsystems which are utilized to control and supervise the loading, unloading, delivery and receipts of products in terminals.

TMS (Terminal Management System): An automation system that is utilized to supervise and control the loading, unloading, delivery and receipts of products in Bulk Plants as well as to manage the executing product delivery orders to customers that initiated from Enterprise Resource Planning (ERP) System.

W

Weighbridge: A weighbridge or railroad scale is a large set of scales, usually mounted permanently on a concrete foundation that is used to weigh entire rail or road vehicles and their contents. By weighing the vehicle both empty and when loaded, the load carried by the vehicle can be calculated.

How to sell

Discovery questions should be used to determine your customer's level of automation and integration:

- What is the loading time in your terminal?
- How do you identify trucks and drivers in your terminal?
- What happens when there is an alarm message in the loading bay?
- How many operators are needed in your control room?
- How do you receive orders and send back information to customers or ERP?
- How often do you need to change your procedures and how long does it take?
- How do you currently monitor and control your terminals? Do you have a central control room? Can you do it remotely?

If customers says:

"The identification of drivers and trucks is done in the control room by operators. They also open and close valves manually."

"I already have a control system. But I have several operator workstations in control room to supervise the control system and other subsystems."

"Every change in the law means to install new equipment and implement new procedures. It takes very long time to adapt my terminal."

"The company owns several terminals with different terminal management systems and different procedures."

He or she has:

Low level of automation

Offer: Customer needs both a control system and terminal management system. ABB can provide a complete solution.

Lack of integration

Offer: T-MAC Plus integrates your separate systems so well they function as one.

Burden of regulatory compliance.

Offer: T-MAC Plus is flexibility and easy to configure, so you'll have a system that can easily and quickly respond to new legal or safety and security requirements.

A solution that's not unified. Customer has a variety of geographically dispersed terminal facilities with different software applications, field devices, subsystems and procedures.

Offer: T-MAC Plus is a unified solution that can be monitored and controlled from a remote operations center.

Features



Integration

Data from control system, orders management or planning systems are integrated in a single platform to enable agile responses to unanticipated changes.



Remote monitoring and control

Several terminals can be monitored and controlled from a central control room or using mobile devices.



Scalability

T-MAC Plus can be scaled up to manage more functionality or assets as required by your terminal necessities.



Configurability

Ease of product configuration enables operators, without specialized training, to comply with new legal requirements.

Who to target

Prospects

- Logistic companies in Oil & Gas midstream, chemicals or hydrogen and transportation
- Product (Oil, gas, chemicals or hydrogen) owners

Job functions

- Operations management
- Maintenance manager
- Automation manager

Market Segmentation and ABB offerings

The starting point with each customer depends on their level of automation and terminal management experience.

Greenfield

Supply a complete a solution:

- Terminal Management System T-MAC Plus.
- Instrumentation and field devices (flow computers).
- Electrification.
- Telecommunication.
- ABB Automation: DCS, ESD, F&G System.
- ABB Management solutions: Process Power Management, Alarm Lifecycle Management.

When there is a lack of integration or burden of regulatory compliance:

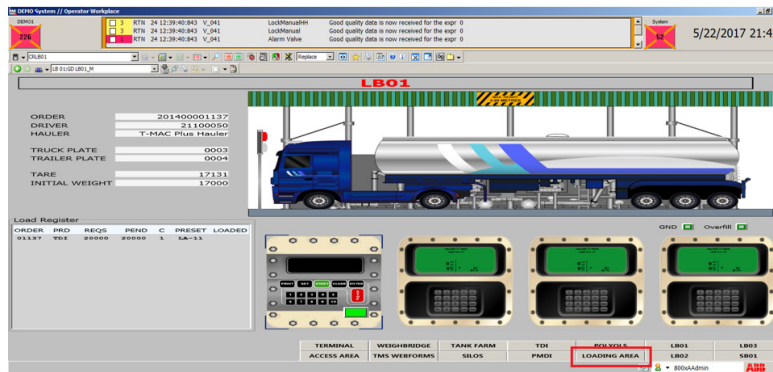
- Terminal Management System T-MAC Plus and its capabilities to integrate third-party systems.
- When there is not a unified solution:
- Terminal Management System T-MAC Plus.
- Instrumentation and field devices (flow computers).
- ABB Automation: MultiSystem Integration features.

Brownfield

When there is a low level of automation:

- Terminal Management System T-MAC Plus.
- Instrumentation and field devices (flow computers).
- ABB Automation: DCS, ESD and F&G System.

Detailed view of a loading bay



Objection handling

Objection	Talking points
T-MAC Plus is expensive	<p>T-MAC Plus provides the tools to increase the efficiency of your terminal and at the same time reduce the operational costs.</p> <p>It gives the opportunity to reduce the number of needed operators in the control room and reduce the loading times.</p>
Other terminal automation solutions are better	T-MAC Plus is more than just an automation solution. It is a complete management system based on a relational database that handles all data transactions in the terminal, from field elements to ERP.
I don't have an ABB Automation system in my terminal	T-MAC Plus has embedded most of the functionalities of 800xA. So T-MAC Plus takes advantage of the capabilities to integrate with third-party PLC or DCS.
My terminal has functionalities not covered by T-MAC Plus	T-MAC Plus has an extensive number of modules that cover most of the operations performed in a terminal. If the functionality required is not among these modules, ABB will offer the services to develop the customized functionality needed in the specific project.
It can't support all my field devices and subsystems	There is a list of field devices and systems supported by T-MAC Plus. If any of yours is not included in the list, we offer ad-hoc services for the integration developments.

Offers based on buying stage

Customer buying stage	Customer needs	Customer offer/CTA
Awareness	Customer is learning about terminal management systems (ABB T-MAC Plus)	Brochure / Data sheet
Consideration	Customer is considering multiple vendors for a terminal management solution	Success story / Customer presentation
Proposal	Customer is identifying short list of solution providers	Live demo
Negotiation	Scope reconciliation	BID
Purchase	Ready for implementation of solution	Schedule and training materials

Available modules on T-MAC Plus

- Receipt / dispatch by truck
- Receipt / dispatch by ship
- Receipt / dispatch by rail wagons
- Receipt / dispatch by pipeline
- Access control
- Inspections
- Kiosk functionality
- Automatic bay/berth allocation
- Sealing
- Blending in loading arm / in tank / in line
- Additive in loading arm / in line

- Automatic tank farm control
- Movements scheduling
- App for mobile devices
- Self-consuming
- Product balance
- Multi-operator management
- Rebranding

You can find description of each module in the “T-MAC Plus Product Guide” 3AED720001-801.

Communication protocols

T-MAC Plus has a dynamic list of available protocols that is constantly adding new references and protocols:

- Accuload 3 preset
- Accuload 3X preset
- Accuload 4 preset
- Honeywell Fusion preset
- Danload 6000 preset
- Contrec preset
- Vega II preset
- RotorK valve system
- Bernard valve system
- Enraf Tank gauging system
- SAAB Tank gauging system

- E+H Tank gauging system
- Precia Molen Weigh bridge
- Toledo Weigh bridge
- SPEC Card reader
- HID Card reader
- STAHL Card reader
- Blendpack injection system
- Gatepack injection system
- Biometric TBS fingerprint system
- FMC Microload
- Scully Intellitrol

... Additional protocols required can be developed

Compatibility

T-MAC Plus is compatible with the following systems/versions:

- 800xA V6.1.1 (and the corresponding HW)
- MS Windows Server 2019 operating system

- MS Windows 10 Enterprise (for clients)
- MS SQL Server 2019 Standard/Enterprise edition

Virtualization & Cloud

It is possible to virtualize T-MAC Plus using VMware® or Hyper-V® solutions. The virtualized system can be installed in a redundant configuration using separate servers for virtual machines.

A cloud based solution for T-MAC Plus is available, using Microsoft Azure® Cloud or proprietary cloud.

Architecture

T-MAC Plus architecture includes: workstations, engineering stations, servers, printers and communication with field elements like: presets, card readers, weighbridge or tank gauging system. It is also possible to interface with ERP, besides DCS, ESD or F&G.

Connectivity with the following systems can be provided:

- Honeywell TDC3000 and Experion
- Emerson RS3, Provox and DeltaV
- Siemens Teleperm M, WinCC and PCS7
- Invensys Foxboro I/A and Foxboro EVO

Other connectivity is also possible using PLC Connect feature.

T-MAC Plus supports redundant and non-redundant configurations. The redundant configuration can be achieved in different ways:

- Fault tolerant: based on Stratus® technology, provides an availability of 99,99999%
- Redundant solution: uses two redundant Aspect Servers, two redundant Connectivity servers and application and/or domain servers redundant if required. This solution provides an availability of 99,99%

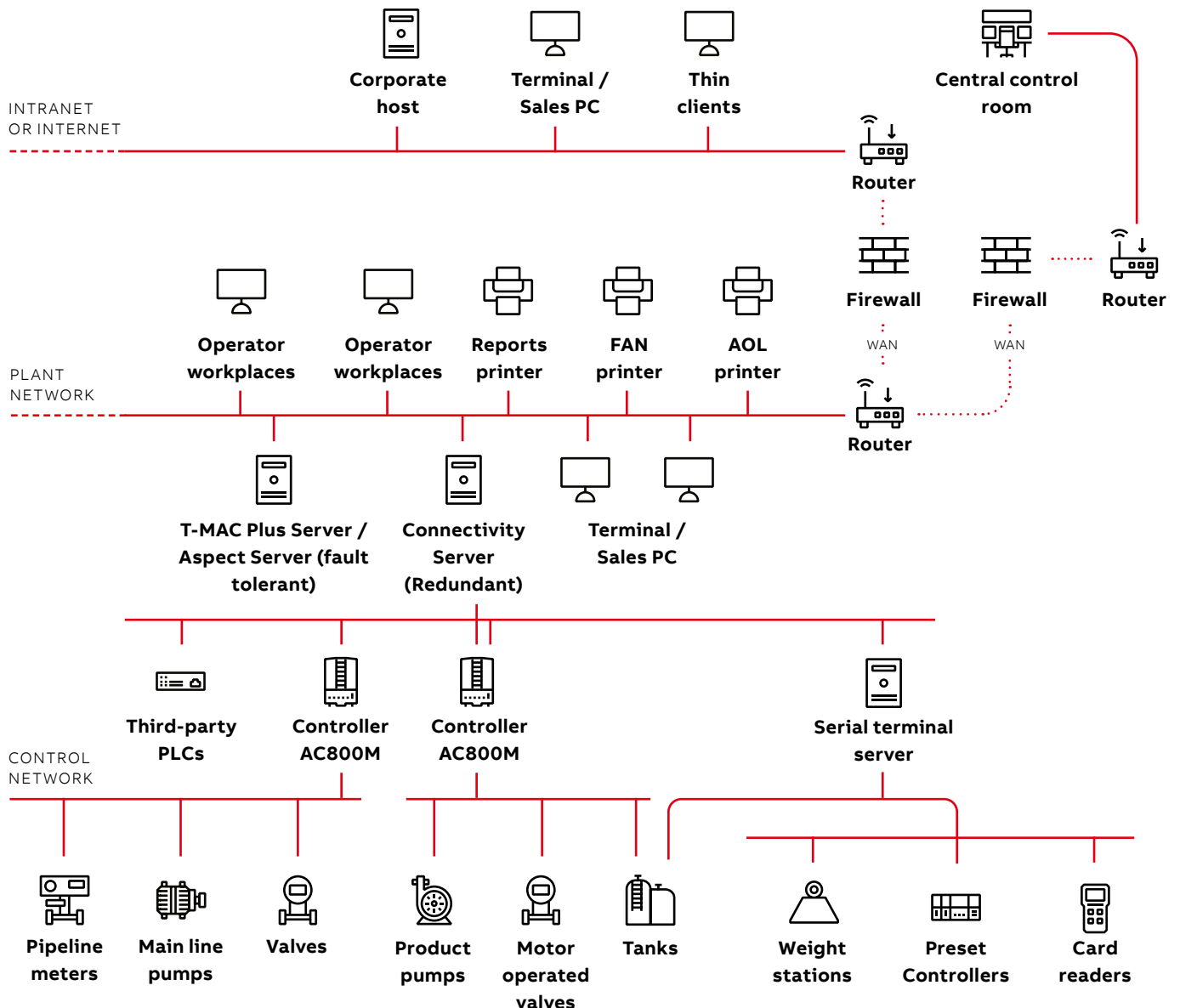




ABB Spain

Energy Industries

Madrid, Spain

Phone: +34 915819393

E-mail: terminals.automation@es.abb.com