GASBOY

MDE-5414B

Fleet Solutions
SiteOmat360

Setup and Maintenance Manual

This document is based on Orpak's AVI Station Equipment Manual, P/N 817423748.

POWERED BY ORPAK

SAFETY CONSIDERATIONS

Carefully read all warnings and instructions, provided to help you install and maintain the equipment safely in the highly flammable environment of a gas station.

Disregarding these warnings and instructions could result in serious injury and property loss or damage. It is your responsibility to install, operate and maintain the equipment according to the instructions in this manual, and to conform to all applicable codes, regulations and safety measures. Failure to do so could void all warranties associated with this equipment.

Ensure that the installation is performed by experienced personnel, licensed to perform work in gas stations and in flammable environments, according to the local regulations and all relevant standards.

WARNING - EXPLOSION HAZARD

Use a separate conduit for intrinsically safe wiring. Do not run any other wires or cables through this conduit, since it may lead to an explosion hazard.

Use standard test equipment only in the non- hazardous area of the fuel station, and approved test equipment for the hazardous areas.

Installation and service must comply with all applicable requirements of the National Fire Protection Association NFPA-30 “Flammable and Combustible Liquids Code”, NFPA-30A “Automotive and Marine Service Station Code”, NFPA-70® “National Electric Code”, federal, state and local codes and any other applicable safety codes and regulations.

Do not perform metal work in a hazardous area. Sparks generated by drilling, tapping and other metal work operations could ignite fuel vapors and flammable liquids, resulting in death, serious personal injury, property loss and damage to you and other persons.

CAUTION - SHOCK HAZARD

Dangerous AC voltages that could cause death or serious personal injury are used to power the equipment. Always disconnect power before working on the equipment. The equipment may have more than one power supply connection point. Disconnect all power before servicing.

WARNING - PASSING VEHICLES

When working in an open area, block off the work area to protect yourself and other persons. Use safety cones or other signaling devices.

WARNING

Substitutions of components could impair intrinsic safety. Use of unauthorized components or equipment will void all warranties associated with this equipment.

CAUTION

Do not attempt to make any repair on the printed circuit boards that reside in the equipment, as this will void all warranties associated with this equipment.

PROPRIETY NOTICE

DISCLAIMER

This document is provided for reference only and while every effort has been made to ensure correctness at the time of publication, Gilbarco Veeder-Root assumes no responsibility for errors or omissions.

FCC COMPLIANCE STATEMENT

The FCC Wants You to Know:

This equipment has been tested and found to comply with the limits for a Class B & C digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

a) Reorient or relocate the receiving antenna.

b) Increase the separation between the equipment and receiver.

c) Connect the equipment to an outlet on a circuit different from that to which the receive is connected.

d) Consult an authorized dealer or service representative for help

FCC WARNING

Modifications not expressly approved by the manufacturer could void the user authority to operate the equipment under FCC Rules.

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1 – Introduction

1.1 General

This manual describes GVR's SiteOmat360 software application, and provides instructions on how to set up the various features offered by the application.

This manual is targeted towards authorized users of the SiteOmat360 Station Controller's web-based application (For example, gas station managers, gas company managers, fleet owners).

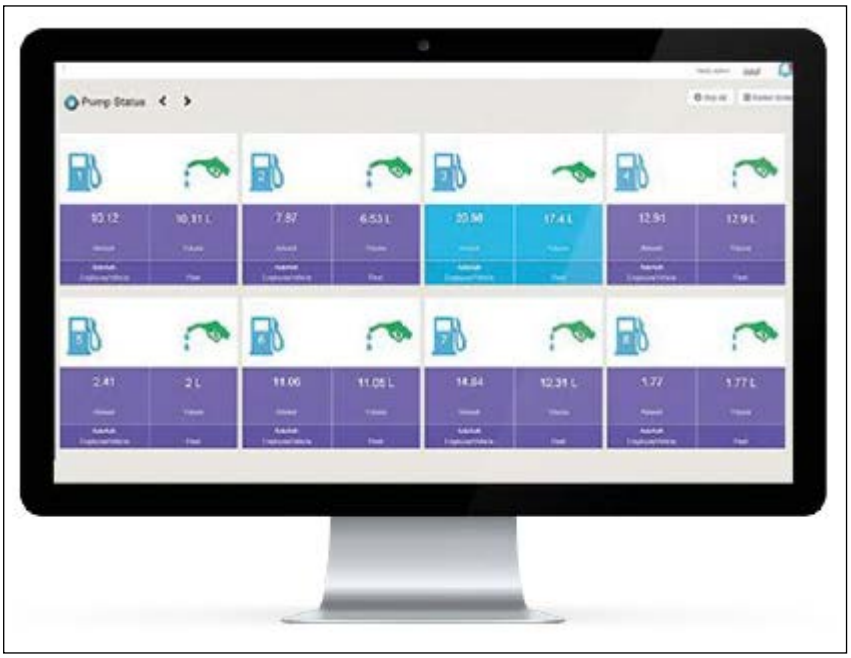
1.2 Solution Description

The GVR's SiteOmat360 software provides a complete and secure site automation, including managing dispensers, forecourt terminals, and fuel tanks through an enhanced and user-friendly web interface compatible with any browser via PC, tablet, or mobile.

The main features of the SiteOmat360 application are as follows:

- Controls and records all transactions
- Supports any configuration and business logic
- Enables various authorization options
- Offers real-time monitoring of refueling, tank levels, delivery, and inventory reconciliation
- Delivers an innovative reporting mechanism

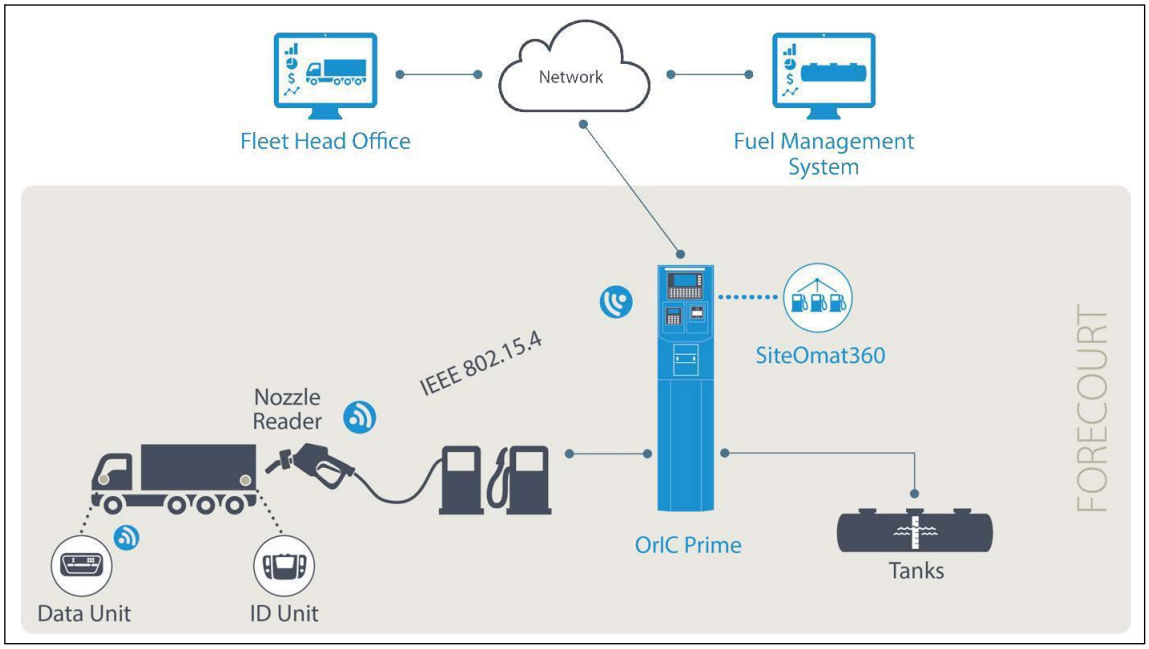
Figure 1: PRIME X



1.3 System Architecture

The Figure 2 shows a basic diagram of the PRIME X architecture:

Figure 2: PRIME X System Architecture



1.4 Manual Structure

This manual comprises of the following sections:

Section 1: Introduction

This section provides a general description of the fleet fueling system in general, and the SiteOmat360 Station Controller in particular. It also provides some examples of the system's workflows.

Section 2: Getting Started

This section provides the initial setup guidelines required to start using the SiteOmat360 application, including default IPs and HEX addresses.

Section 3: Admin

This section provides instructions for managing users, setting password policy as well as for running system commands.

Section 4: Setup Wizard

This section provides instructions for running the SiteOmat360 Setup Wizard.

Section 5: Global Settings

This section provides instructions for setting up station information, general and regional settings, customizing receipts, alarms, communication properties, and more.

Section 6: Forecourt Setup

This section provides setup instructions for Forecourt Controller peripherals and devices.

Section 7: Maintenance

This section provides general maintenance and troubleshooting guidelines, including system files location and logs collection.

1.5 Documentation Conventions

This manual includes comments within the text, in order to draw the reader's attention to important issues. The comments are accompanied by symbols for ease of reference. The following comment types are used:

⚠ WARNING

Warning notes contain information that, unless strictly observed, could result in injury or loss of life.

CAUTION

Caution notes contain information that, unless strictly observed, could result in damage or destruction of the equipment or long-term health hazards to personnel.

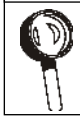
NOTES

Notes contain helpful comments or references to material not covered in the manual.

TIP

Best practice notes contain helpful suggestions.

EXAMPLES



Example notes contain additional information to illustrate a concept/procedure.

1.7 References

For additional and complementary information regarding Gasboy®'s home base solution, refer to the following manuals:

- *MDE-4815 WGT Outdoor Unit Installation Manual*
- *MDE-4821 Fleet Head Office System Installation and User's Manual*
- *MDE-4851 GASBOY Fuel Point PLUS Station Equipment Manual*
- *MDE-5411 ForeHB Islander Prime Installation Manual*
- *MDE-5415 ForeHB SiteOmat360 User Manual*
- *MDE-5568 CFN PLUS and Fuel Truck Controller PLUS nOrCU Retrofit Kit (M09680B167) Installation Instructions*
- *MDE-5623 Fleet Solutions Site PRIME Installation Guide*
- *MDE-5624 Fleet Solutions Truck PRIME Installation Guide*
- *Fuel & Drive Mobile Application User Manual P/N: 817400190*

1.8 Abbreviations and Acronyms

Term	Description
ATG	Automatic Tank Gauge
AVI	Automatic Vehicle Identification
BOS	Back-Office System
EMV	Europay®, MasterCard®, and Visa®
EOD	End of Day
FCC	Forecourt Controller
FHO	Fleet Head Office
FPOS	Forecourt Point of Sales
HO	Head Office
MWGT	Master Wireless Gateway Terminal
OPOS/ OLEPOS	Object Linking and Embedding for Point Of Sale
OPT	Orpak Payment Terminal
OrTR	Orpak Tag Reader
POS	Point of Sales
PPU	Price Per Unit
TLG	Tank Level Gauging
TR	Tag Reader
VIS	Vehicle Identification System
WGT	Wireless Gateway Terminal

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2 – Important Safety Information

Notes: 1) Save this Important Safety Information section in a readily accessible location.

2) Although DEF is non-flammable, Diesel is flammable. Therefore, for DEF cabinets that are attached to Diesel dispensers, follow all the notes in this section that pertain to flammable fuels.

This section introduces the hazards and safety precautions associated with installing, inspecting, maintaining, or servicing this product. Before performing any task on this product, read this safety information and the applicable sections in this manual, where additional hazards and safety precautions for your task will be found. Fire, explosion, electrical shock, or pressure release could occur and cause death or serious injury, if these safe service procedures are not followed.

Preliminary Precautions

You are working in a potentially dangerous environment of flammable fuels, vapors, and high voltage or pressures. Only trained or authorized individuals knowledgeable in the related procedures should install, inspect, maintain, or service this equipment.

Emergency Total Electrical Shut-Off

The first and most important information you must know is how to stop all fuel flow to the pump/dispenser and island. Locate the switch or circuit breakers that shut off all power to all fueling equipment, dispensing devices, and Submerged Turbine Pumps (STPs).

⚠ WARNING

The EMERGENCY STOP, ALL STOP, and PUMP STOP buttons at the cashier's station WILL NOT shut off electrical power to the pump/dispenser. This means that even if you activate these stops, fuel may continue to flow uncontrolled.
You must use the TOTAL ELECTRICAL SHUT-OFF in the case of an emergency and not the console's ALL STOP and PUMP STOP or similar keys.

Total Electrical Shut-Off Before Access

Any procedure that requires access to electrical components or the electronics of the dispenser requires total electrical shut off of that unit. Understand the function and location of this switch or circuit breaker before inspecting, installing, maintaining, or servicing Gilbarco equipment.

Evacuating, Barricading, and Shutting Off

Any procedure that requires access to the pump/dispenser or STPs requires the following actions:

- An evacuation of all unauthorized persons and vehicles from the work area
- Use of safety tape, cones, or barricades at the affected unit(s)
- A total electrical shut-off of the affected unit(s)

Read the Manual

Read, understand, and follow this manual and any other labels or related materials supplied with this equipment. If you do not understand a procedure, call the Gilbarco Technical Assistance Center () at 1-800-743-7501. It is imperative to your safety and the safety of others to understand the procedures before beginning work.

Follow the Regulations

Applicable information is available in National Fire Protection Association (NFPA) 30A; *Code for Motor Fuel Dispensing Facilities and Repair Garages*, NFPA 70; *National Electrical Code (NEC)*, Occupational Safety and Health Administration (OSHA) regulations and federal, state, and local codes. All these regulations must be followed. Failure to install, inspect, maintain, or service this equipment in accordance with these codes, regulations, and standards may lead to legal citations with penalties or affect the safe use and operation of the equipment.

Replacement Parts

Use only genuine Gilbarco replacement parts and retrofit kits on your pump/dispenser. Using parts other than genuine Gilbarco replacement parts could create a safety hazard and violate local regulations.

Federal Communications Commission (FCC) Warning

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

Safety Symbols and Warning Words

This section provides important information about warning symbols and boxes.

Alert Symbol

This safety alert symbol is used in this manual and on warning labels to alert you to a precaution which must be followed to prevent potential personal safety hazards. Obey safety directives that follow this symbol to avoid possible injury or death.

Signal Words

These signal words used in this manual and on warning labels tell you the seriousness of particular safety hazards. The precautions below must be followed to prevent death, injury, or damage to the equipment:

DANGER: Alerts you to a hazard or unsafe practice which will result in death or serious injury.

WARNING: Alerts you to a hazard or unsafe practice that could result in death or serious injury.

CAUTION with Alert symbol: Designates a hazard or unsafe practice which may result in minor injury.

CAUTION without Alert symbol: Designates a hazard or unsafe practice which may result in property or equipment damage.

Working With Fuels and Electrical Energy

Prevent Explosions and Fires

Fuels and their vapors will explode or burn, if ignited. Spilled or leaking fuels cause vapors. Even filling customer tanks will cause potentially dangerous vapors in the vicinity of the dispenser or island.

DEF is non-flammable. Therefore, explosion and fire safety warnings do not apply to DEF lines.

No Open Fire

Open flames from matches, lighters, welding torches or other sources can ignite fuels and their vapors.

No Sparks - No Smoking

Sparks from starting vehicles, starting or using power tools, burning cigarettes, cigars or pipes can also ignite fuels and their vapors. Static electricity, including an electrostatic charge on your body, can cause a spark sufficient to ignite fuel vapors. Every time you get out of a vehicle, touch the metal of your vehicle, to discharge any electrostatic charge before you approach the dispenser island.

Working Alone

It is highly recommended that someone who is capable of rendering first aid be present during servicing. Familiarize yourself with Cardiopulmonary Resuscitation (CPR) methods, if you work with or around high voltages. This information is available from the American Red Cross. Always advise the station personnel about where you will be working, and caution them not to activate power while you are working on the equipment. Use the OSHA Lockout/Tagout procedures. If you are not familiar with this requirement, refer to this information in the service manual and OSHA documentation.

Working With Electricity Safely

Ensure that you use safe and established practices in working with electrical devices. Poorly wired devices may cause a fire, explosion or electrical shock. Ensure that grounding connections are properly made. Take care that sealing devices and compounds are in place. Ensure that you do not pinch wires when replacing covers. Follow OSHA Lockout/Tagout requirements. Station employees and service contractors need to understand and comply with this program completely to ensure safety while the equipment is down.

Hazardous Materials

Some materials present inside electronic enclosures may present a health hazard if not handled correctly. Ensure that you clean hands after handling equipment. Do not place any equipment in the mouth

⚠ WARNING

In the event of inclement weather, including snow, ice, or flooding that makes driving conditions dangerous, please avoid servicing units. Always use available door stops to secure upper doors against unwanted/unexpected movement, especially during high winds. If necessary, reschedule service to avoid damage to the equipment. Weather may change unexpectedly; be aware of local weather conditions. During service, if conditions develop making service unsafe, close the unit(s) and proceed to a safe location.

⚠ WARNING

The pump/dispenser contains a chemical known to the State of California to cause cancer.

⚠ WARNING

The pump/dispenser contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Gilbarco Veeder-Root encourages the recycling of our products. Some products contain electronics, batteries, or other materials that may require special management practices depending on your location. Please refer to your local, state, or country regulations for these requirements.

In an Emergency

Inform Emergency Personnel

Compile the following information and inform emergency personnel:

- Location of accident (for example, address, front/back of building, and so on)
- Nature of accident (for example, possible heart attack, run over by car, burns, and so on)
- Age of victim (for example, baby, teenager, middle-age, elderly)
- Whether or not victim has received first aid (for example, stopped bleeding by pressure, and so on)
- Whether or not a victim has vomited (for example, if swallowed or inhaled something, and so on)

⚠ WARNING

Gasoline/DEF ingested may cause unconsciousness and burns to internal organs. Do not induce vomiting. Keep airway open.
Oxygen may be needed at scene. Seek medical advice immediately.

⚠ WARNING

DEF generates ammonia gas at higher temperatures. When opening enclosed panels, allow the unit to air out to avoid breathing vapors. If respiratory difficulties develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention.

⚠ WARNING

Gasoline inhaled may cause unconsciousness and burns to ls, mouth and lungs.
Keep airway open.
Seek medical advice immediately.

⚠ WARNING

Gasoline/DEF spilled in eyes may cause burns to eye tissue.
Irrigate eyes with water for approximately 15 minutes.Seek medical advice immediately.

⚠ WARNING

Gasoline/DEF spilled on skin may cause burns.
Wash area thoroughly with clear water.
Seek medical advice immediately.

⚠ WARNING

DEF is mildly corrosive. Avoid cont with eyes, skin, and clothing. Ensure that eyewash stations and safety showers are close to the work location. Seek medical advice/recommended treatment if DEF spills into eyes.

IMPORTANT: Oxygen may be needed at scene if gasoline has been ingested or inhaled. Seek medical advice immediately.

Lockout/Tagout

Lockout/Tagout covers servicing and maintenance of machines and equipment in which the unexpected energization or start-up of the machine(s) or equipment or release of stored energy could cause injury to employees or personnel. Lockout/Tagout applies to all mechanical, hydraulic, chemical, or other energy, but does not cover electrical hazards. Subpart S of 29 CFR Part 1910 - Electrical Hazards, 29 CFR Part 1910.333 contains specific Lockout/Tagout provision for electrical hazards.

3 – Getting Started

3.1 General

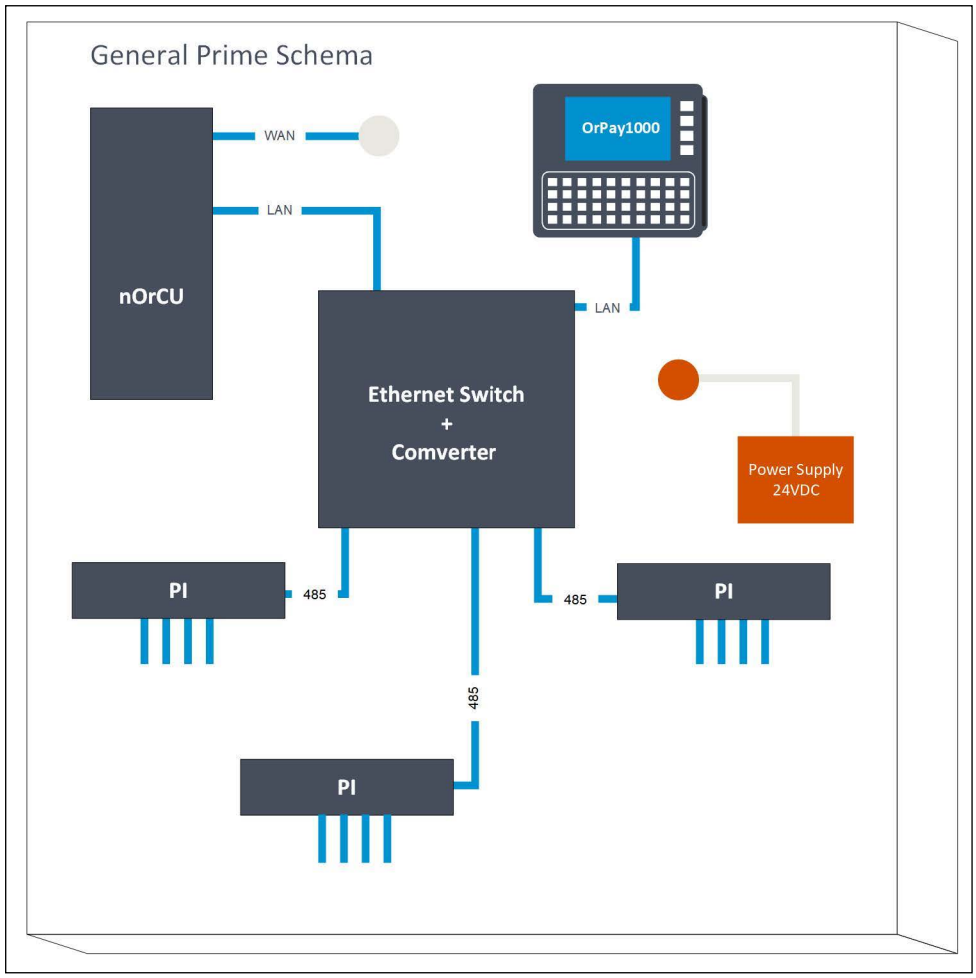
This section provides initial setup guidelines, including default IPs and HEX addresses.

The nOrCU Controller system is provided with the SiteOmat360 software that is already installed. The SiteOmat360 supports several communication protocols. Thus, the communication channels between Forecourt Controller and station's components is the initial step in setting up the system. And, then when defining the different station devices, you will link them to the relevant bus.

For security measures, it is highly advised that the external network will be using a Virtual Private Network (VPN), so it will not be exposed to the internet.

An example of address configuration is provided below (see Figure 1).

Figure 1: Station Settings - Example



3.1.1 Default IP Addresses

The following table lists the IP addresses for the internal devices in the Controller system (see Table 1).

Table 1: Default IP Addresses

Device	Default IP Address	Starting IP Address	Ending IP Address	TCP Ports
Ethernet 0 (nOrCU)	192.168.1.104	192.168.1.104		
Converter	192.168.1.111	192.168.1.111	192.168.1.130	3001-3012
WGT Standalone	192.168.1.170	192.168.1.170	N/A	N/A
WGT Embedded	192.168.1.211	192.168.1.211	192.168.1.230	3001-3008
OPT / OrPAY1000	192.168.1.211	192.168.1.211	192.168.1.230	3000
TR500	192.168.1.202	192.168.1.200	192.168.1.220	3000
Receipt Printer	192.168.1.211	192.168.1.211	192.168.1.230	3485

Where:

- Default IP is the IP addresses defined prior to delivery.
- Starting IP Address is the first IP number in the range allocated for the device.
- Ending IP Address is the last IP number in the range allocated for the device.

For example, the range to the OPT is 211 to 230 or a maximum of 20 OPT devices in the station.

Note: IP addresses can be modified according to the local network requirements.

3.1.2 Default Serial Addresses

The following lists the IP addresses for the internal devices in the Controller system (see Table 2).

Table 2: Default Serial (HEX) Addresses

Device	Default Address	Starting Serial Address	Ending Serial Address
TR500 (GVR Tag Reader)	3A	0x61	N/A
OPT (GVR Payment Terminal)	0x46	0x46	N/A
Receipt Printer	0x70	0x70	0x74
WGT (Wireless Gateway Terminal)	N/A	0x31	N/A

Note: The HEX address configured in the controller must match the device HEX address. Otherwise, the device is not loaded.

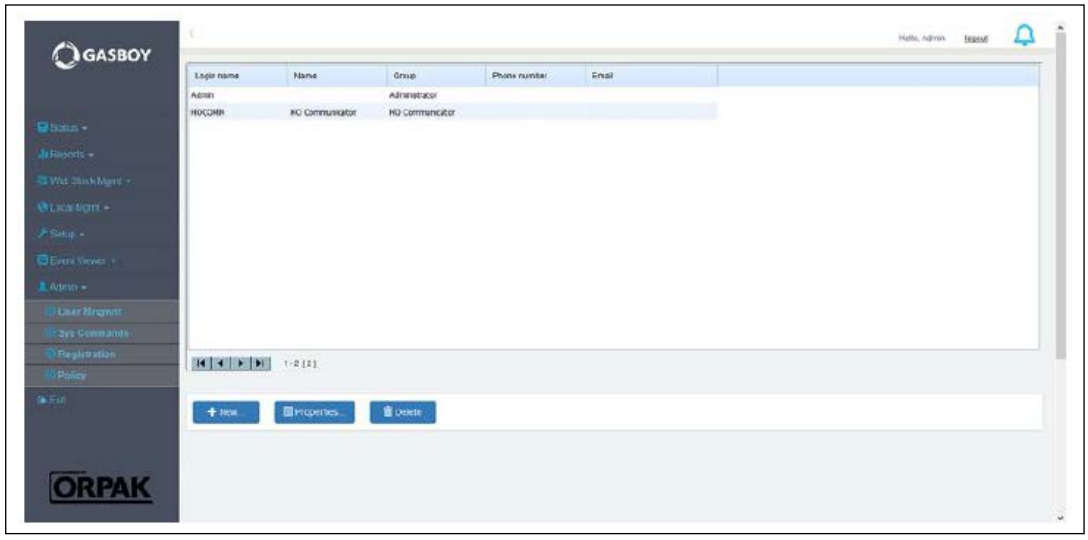
4 – Admin

4.1 General

This section provides instructions for administration tasks, such as managing users, setting password policy, registering Wireless Programmer systems, as well as running system commands.

To access the User Mngmnt page, click the **Admin** link in the navigation bar on the left-side of the SiteOmat360 application (see Figure 2).

Figure 2: Administration - User Management Page



4.2 User Management

The SiteOmat360 Forecourt Controller is designed to provide access to content in accordance with the user's access level.

Upon login request into the SiteOmat360 application, SiteOmat360 checks whether the user with these login credentials (username and password) exists. If the login credentials are not found in the user list, access to the SiteOmat360 application is denied.

If these login credentials are validated, the SiteOmat360 application opens with content suitable to the user's access level.

Note: The Administration section in the SiteOmat360 Forecourt Controller is only accessible by users with administrator access level.

The Administration link will only be displayed if you have administrator rights.

4.2.1 Access Levels

One of the following access levels can be associated to each user (see Table 3):

Table 3: Access Levels

Access Level	Access Rights
Administrator	The Administrator access level is meant for the system developers and administrative staff. Users with Admin access level have access to all data, including setup pages, user management, and model design.
External User	The External User access level enables the users to view SiteOmat360 Custom Reports and Status pages only.
Station Manager	The Station Manager access level provides all privileges except for the Setup and Admin pages.
Station Administrator	The Station Administrator access level provides all privileges except for the Setup page. The user cannot add an Admin group user.
HO Communicator	The HO Communicator access level is meant for a specific user required by the Head Office to communicate with the station. This user must be defined prior to connecting the Head Office to the station.
Administrator Translator	This access level is intended to enable the user to modify the translation of the GUI into the language that was previously set in the Global Parameters page in Setup.

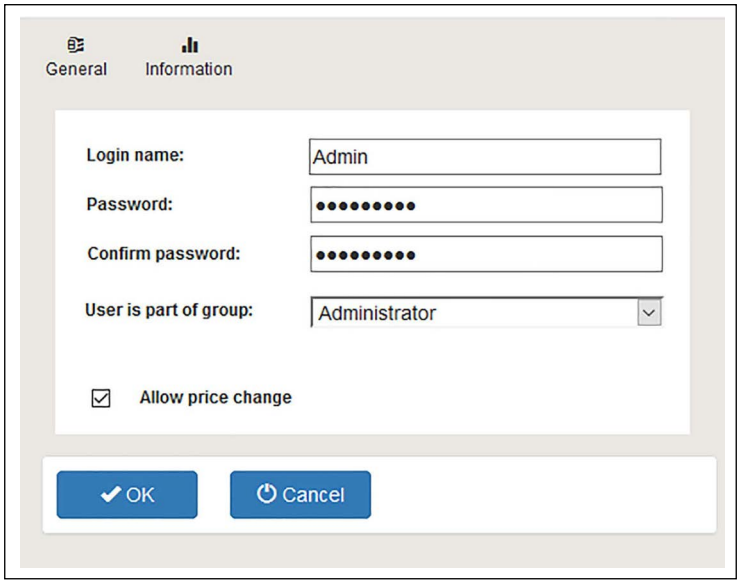
4.2.2 Adding a User

To add a new user to the list of authorized users, proceed as follows:

1 Click the **Admin** link in the navigation bar and then select the **User Mngmnt** link provided you have an Administrator access level.

2 Click **New**. The **User Properties** dialog box is displayed (see Figure 3).

Figure 3: User Properties Dialog



3 In the **Login name** field, enter a username. A user must be given a unique login name and it must be at least 6 characters long. The username is case-sensitive.

4 In the **Password** field, enter a password, which the user must enter in every login. The password must be at least 8 characters long. The password is case-sensitive.

5 Type the password again in the **Confirm password** field for confirmation.
Note: The password cannot be recovered, if forgotten. Contact Gasboy Technical Support at 1-800-444-5529 for assistance.

6 In the **User is part of group** drop-down list, select the appropriate group to associate the user with. The content that will be available to this user depends on the user group (see Table 3 on page 2).

7 (Optional) If the user needs to change prices, select the **Allow price change** check box.

8 Click the **Information** tab, and enter the user's additional information.

9 Click **OK**.

4.2.3 Deleting a User

To remove a user from the user list, proceed as follows:

1 Select the user from the **User List** in the User Mngmnt page.

2 Click **Delete**. A confirmation message is displayed.

3 Click **OK**.

The user is removed from the user list. Logging in using this user is no longer possible.

Note: The default Admin user cannot be deleted.

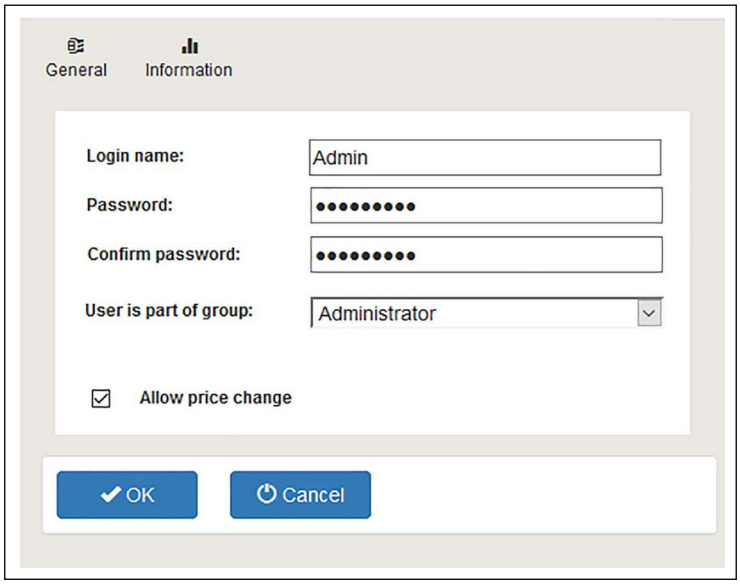
4.2.4 Updating a User

To update the credentials of an existing user, proceed as follows:

1 Select the user from the **User List** in the User Mngmnt page.

2 Click **Properties**. The User Properties dialog box opens with the user's current information in the **General** and **Information** tabs (see Figure 4).

Figure 4: User Properties Dialog



3 Change the user's information as necessary.
*Note: In case, when the password is changed, re-enter the password in the **Confirm password** field.*

4 Click **OK**.

4.2.5 Unblocking a User

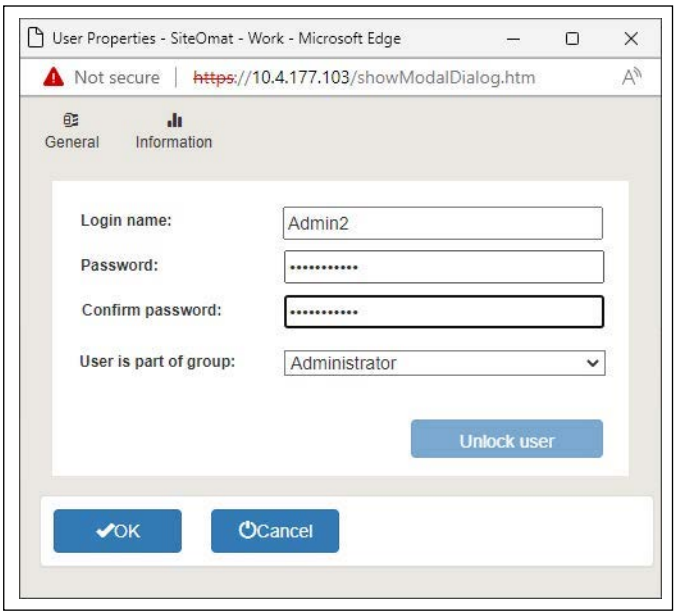
Users can have their access blocked due to inactivity or too many failed login attempts. To regain access the user will need to reset their password or the Admin can manually unblock their access.

To unblock a user, proceed as follows:

1 Select the user from the **User List** in the User Mngmnt page.

2 Click **Properties**. The User Properties dialog box opens with the user's current information in the **General** and **Information** tabs (see Figure 5).

Figure 5: Users Properties Dialog

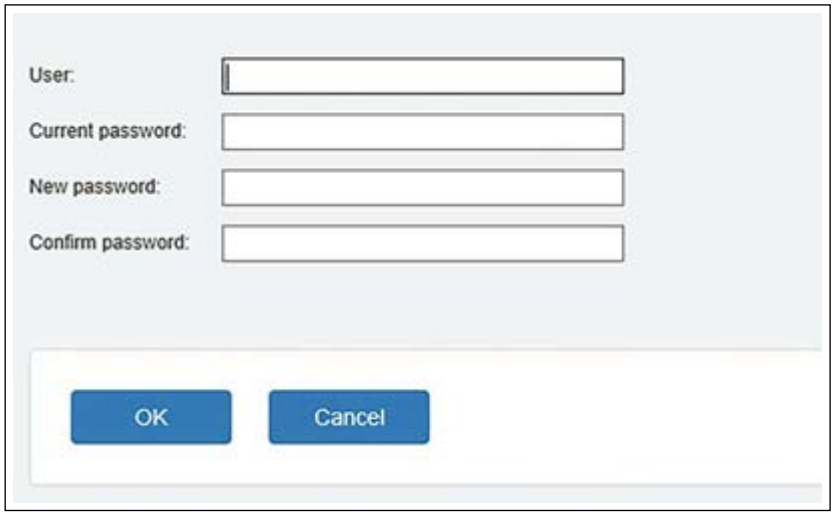


3 Click **Unlock user** and then **OK**. The user can now log in with their credentials.

4.2.6 Changing Password

To change the current user's password, click the **Change Password** link in the login page. The **Change Password** dialog box is displayed (see Figure 6).

Figure 6: Change Password Dialog



Enter the information in the **User**, **Current password**, **New password**, and **Confirm password** fields. Click **OK** to save the new password.

4.3 System Commands

The SiteOmat360 Sys Commands page includes several commands for controlling and operating the BOS and the FCC. This section describes the various administrative commands available on the SiteOmat360's Sys Commands page.

To access the Sys Command page, click the **Admin** link on the navigation bar and select the **Sys Commands** link (see Figure 7, Table 4).

Figure 7: Sys Commands Page

Table 4: System Commands

Command	Description
Start	Starts the FCC operation. Click **Start** to start FCC that was in stop state. *Note: If during the reload operation the power failed, the FCC may be in stop state after the power is back, click **Start** to start communication.*
Stop	Stops the operation of the FCC and all communication to peripheral devices. After using this command, the FCC does not start until either the Start or the Reload commands are run, even if the FCC computer is rebooted, it remains in stopped state.
Reload	Performs the functions Stop followed by Start and Reload.
Sys Init	Saves station setup changes, for example: • Installation of a new station, and definition of equipment setup • Setup modification (For example, defining a new pump or nozzle) • Operation The Reload command must also run subsequently.
Log Settings	Sets the log policy (see "4.3.1 Logging Settings" on page 8).
Reset Pumps	Resets the state of all pumps.
Reset Pump	Resets the state of a specific pump.
Sync FCC	This command must run after Sys Init in a recovery operation. The Reload command must be executed after the procedure.
End of day	Activates the EOD process (collects both tank levels and dispensers meters).
Activate	Launches the **Activate License** dialog box used to upload and activate a license file.

CAUTION

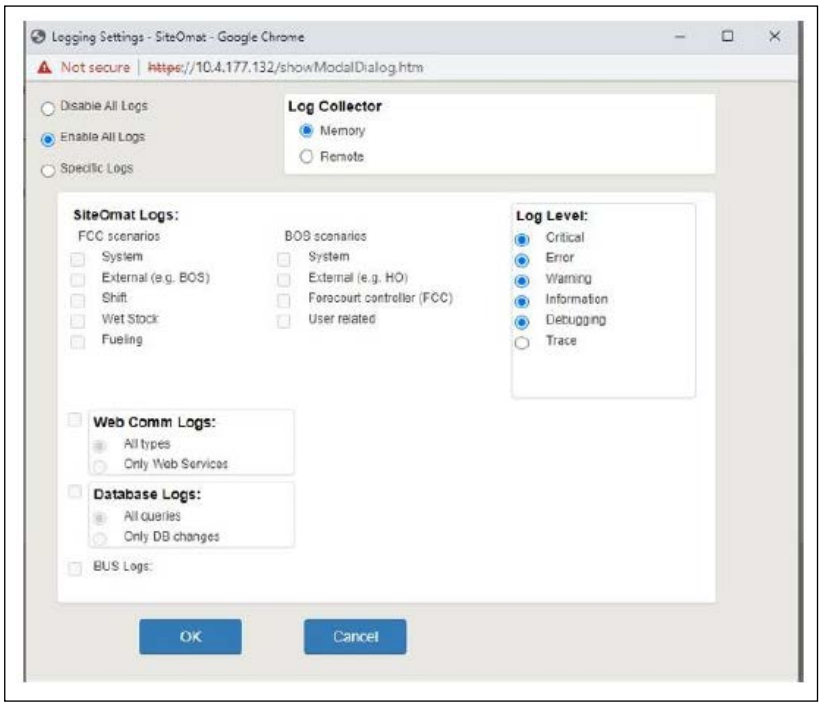
Reset pumps commands should only be used in extreme cases, where there are communications or other serious state problems between the FCC and the pump.

4.3.1 Logging Settings

Logger, the Log Server application provided by GVR, listens in on the UDP port, captures log information provided by SiteOmat360, and writes the log messages to files.

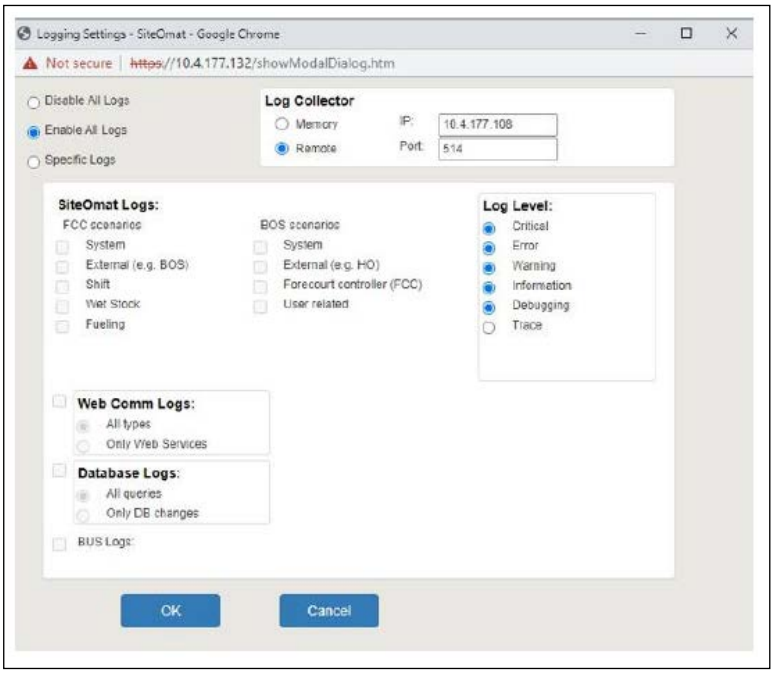
To define the log server and the log policy, click **Log Settings** in the Sys Commands page. The Logging Settings dialog box is displayed (see Figure 8).

Figure 8: Logging Settings Dialog Box



Click the **Remote** option, and enter the remote Log Server PC IP address and Port in the Log Collector section, in order to enable downloading log files from the Forecourt Controller to the remote PC (see Figure 9).

Figure 9: Logging Settings Dialog Remote Option



The system automatically starts sending UDP log messages to the specified port.

Set the log policy by selecting one of the following options:
- Disable All Logs
- Enable All Logs
- Specific Logs

In cases where the last option was selected, the followin.g filters are available:

a SiteOmat360 logs: Application logs (see Table 5 on page 10). The SiteOmat360 logs may also be filtered by Log Level (see Table 6 on page 10).

b Web Comm Logs:
- **All types:** Web Communication logs without extra filtering.
- **Only Web Services:** Web Services Client-Server communication logs.

c Database Logs:
- **All queries:** Database logs without extra filtering
- **Only DB changes:** Logs on Insert, Update, and Delete actions.

d BUS Logs: Communication to the peripheral devices.

The following describes each of the Application Logs (see Table 5):

Table 5: SiteOmat360 Logs

Log	Description
FCC – System	System startup, configuration reading, and cleanup, etc.
FCC – External	Commands from BOS, setup, stop, start, reload, and log level change.
FCC – Shift	Shift close/open related operations, including: totalizers reading, attendant management, batch receipt generation.
FCC – Wet Stock	Tank and ATG related operations, such as deliveries.
FCC – Fueling	All operations related to fueling transactions, authorization, and price update.
BOS – System	System startup, cleanup, etc.
BOS – External	Communication with HO.
BOS – Forecourt Controller (FCC)	Communication with FCC, including data reception and requests authorization.
BOS – User Related	All user actions, reports generation, and import/export.

The following describes each of the Log Levels (see Table 6):

Table 6: Log Levels

Level	Description
Critical	Information required for reconstructing transactions data, including authorizer and quantities.
Error	Abnormal system events causing wrong behavior (For example, Failed to open shift, Error writing transaction to DB).
Warning	Events that do not affect system functionality, but point out a problem (For example, Transaction already written which may indicate slowness of the system).
Information	Additional information which may help in clarifying the data flow or operational scenarios, without details on the specific operation.
Debugging	Information which may help in identifying relevant code segments to understand the logic of the system (For example, Print variable content of IF clauses, Print result of a function, and Print system error code).
Trace	Very detailed debug level to be used in cases where the total flow of code is required to analyze a problem (For example, Enter and Exit of each function).

Note: Log levels are arranged in ascending order. Any high level automatically includes all lower levels.

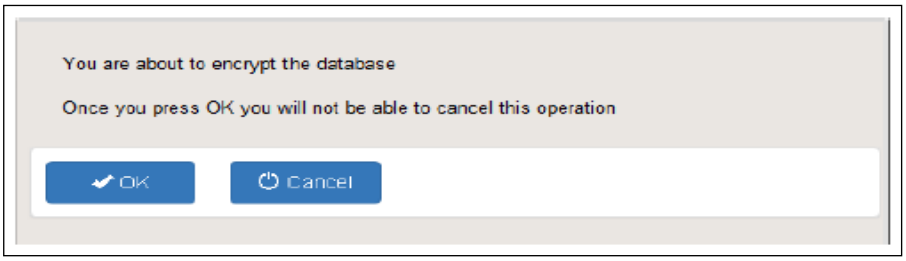
IMPORTANT INFORMATION

For detailed instructions on how to create log files, including an FCC debugging log, see “8.6.6 Collecting Log Files” on page 10.

To encrypt the database:

1. Click **Activate**. The following message is displayed (see Figure 10).

Figure 10: Database Encryption Message

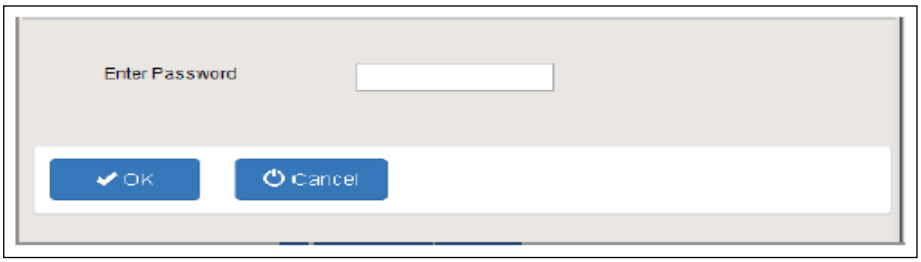


Note: Once the database has been encrypted, it cannot be reversed.

4 Click **OK**. The database is now encrypted.

5 To receive the database encryption key, click **Expose** Key. A popup window requesting the user to input the Admin's password will appear (see Figure 11).

Figure 11: Encryption Key - Password Prompt



6 Input the password and click **OK**. A pop-up displaying the database encryption key will be displayed (see Figure 12).

Figure 12: Database Key

7 Click **Copy to Clipboard** to receive the database encryption key. The window automatically closes after 10 seconds.

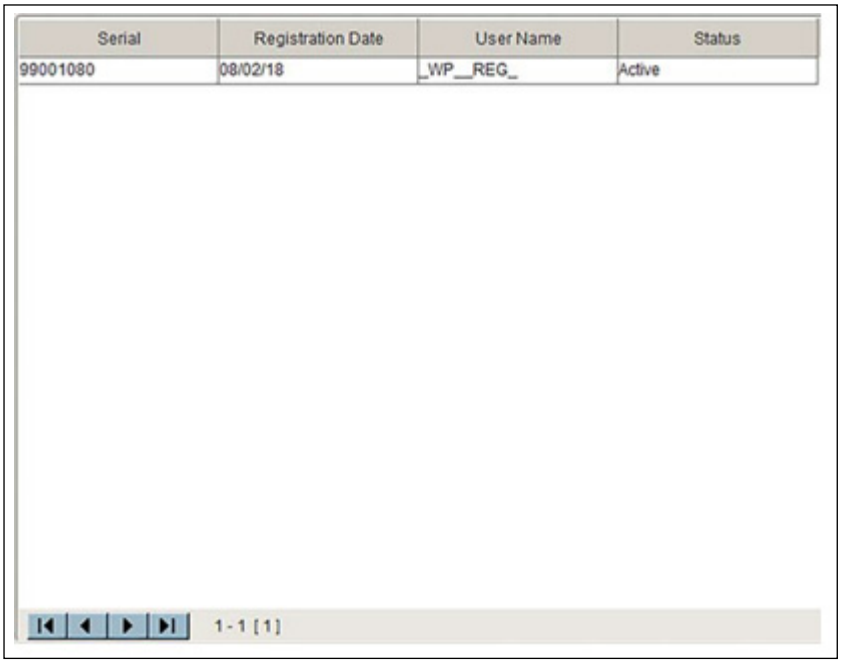
Note: Copy the database encryption key to a secure location for data recovery events. Without the key, the data is lost.

4.4 Registration

This page is intended for registration of the Wireless Programmer system, which is a part of the Fuel Point PLUS solution.

To access the Registration page, click the **Admin** link from the navigation bar, and then select the **Registration** link.

Figure 13: Registration Page



The installer establishes the appropriate communication between the Wireless Programmer and the SiteOmat360 to allow the flow of data between the vehicles installed units and the FCC.

Note: If a Fleet Head Office (FHO) session is running, then registration should be performed in the FHO. It is highly recommended that Fuel Point PLUS run with FHO.

4.4.1 Setting Up the System

Setting up the home-based system requires the installer to perform the following three procedures:

1 Install the Wireless Programmer Tunnel software.

2 Set up the communication between the Wireless Programmer and the FCC.

3 Program and configure the vehicle units.

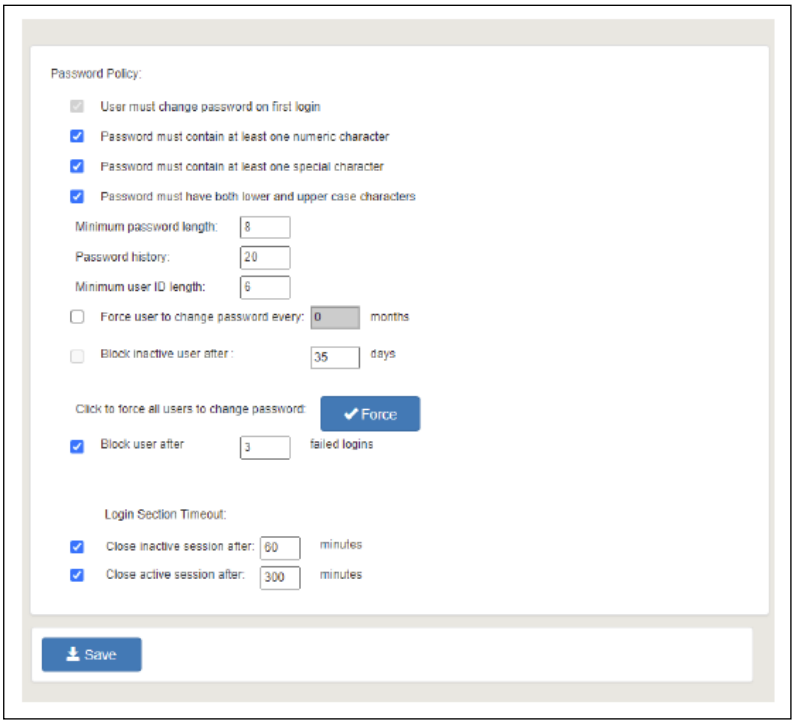
For more details, refer to Section 4 - Programming Vehicle Units of *MDE-4868G FUEL POINT PLUS Vehicle Installation and Configuration Manual*.

4.5 Policy

The system enables the Administrator to set the password policy and login session timeout properties. The default values for login session timeout are 6 minutes minimum - 8 minutes maximum.

To access the Policy page, click the **Admin** link from the navigation bar, and then select the **Policy** link (see Figure 14).

Figure 14: Policy Page



4.5.1 Password Policy Fields

The following password complexity requirements may be defined to meet the customer's security needs (see Table 7):

Table 7: Policy Fields

Field	Description
User must change password on first login	If this option is selected, the Password Policy forces all users to modify their password on first login.
Password must contain at least one numeric character	If this option is selected, passwords must contain at least one digit.
Password must contain at least one special character	If this option is selected, passwords must contain at least one special character (such as a comma, parenthesis, etc.)
Password must have both lower and upper cases	If this option is selected, passwords must contain at least one upper case letter and one lower case letter.
Minimum password length	Defines the least number of characters that a password for a user account may contain. (Default is minimum 8 characters).
Password history	Prevents users from using the same password multiple times. If password history functionality is enabled by entering a maximum password history count, the system checks a list of previously-used passwords. If the requested password is found, the system does not allow that password to be used.
Minimum user ID length	Defines the least number of characters that a User ID for a user account may contain (Default is minimum 6 characters.).
Force user to change password every X months	If this option is selected, the system forces the user to change the password after the defined time interval has elapsed (the default is 3 months). The time interval is measured from the last time the password was changed.
Force	By clicking this button, the system forces all users to modify their password at the next login.
Block User after X failed logins	If this option is selected, the user will be blocked from the system after the defined number of attempts made to log in with incorrect credentials (the default is 3 attempts).
Required to change at least X characters	If this option is selected, the user is required to change the defined number of characters when changing their password.
	Login Session Timeout
Close inactive session after X minutes	If this option is selected, the login session will close automatically after the defined amount of time has elapsed without user input. The default values are 5 minutes minimum - 60 minutes maximum.
Close active session after X minutes	If this option is selected, the login session will close automatically after the defined amount of time has elapsed, even if the system detects user input. The default values are 60 minutes minimum - 300 minutes maximum.

Click **Save** to apply the changes.

5 – Setup Wizard

5.1 General

The Setup Wizard is a Standalone program that helps the technician to set up the station, guiding the user through the process and initializing most of the system's setup parameters automatically. Once the Wizard is finished, most standard stations are ready for fueling and no additional settings are required.

The wizard also allows selection of predefined templates for fully configuring the system according to stations with similar characteristics. If a predefined template is selected, the wizard consists of pages that contain specific station data only.

After the Wizard is finished, the **Forecourt Setup** screen is displayed, enabling the user to complete the process, or to change to the Advanced Mode in order to define more complex forecourt configurations.

Re-running of the wizard is allowed; however, the existing setup data is overwritten (fueling data such as transactions are not deleted). In such cases, the user is provided with a proper warning.

The **Cancel** button in each screen enables the user to cancel the process and return to the main **Forecourt Setup** screen. In this case, no data is saved, and no changes are made to the system. The user is alerted that all changes are lost if the process is canceled in the middle.

In cases where the configuration is done without the wizard, first define the **Global Settings** (see "Global Settings" on page 1) and then define the **Forecourt Setup** according to the process order detailed in Forecourt Setup.

Notes:1) The W&M dongle can only be supported when the region is set to US. If the Installation Wizard fails to connect to SiteOmat360, it needs to be manually closed and restarted. There is currently no Installer for the Wizard. Unzip the file and edit the relevant IP in the Wizard.exe.config file (line 30). The default IP is 192.168.1.104. Application works best when Prime SiteOmat software version V7.2.16.1 or higher is installed. It is advised to always load the most current version of software available.

2) In cases where the wizard is re-run after the settings were changed from SiteOmat Setup screens, the wizard may not reflect the changes made (For example, settings not supported by the wizard).

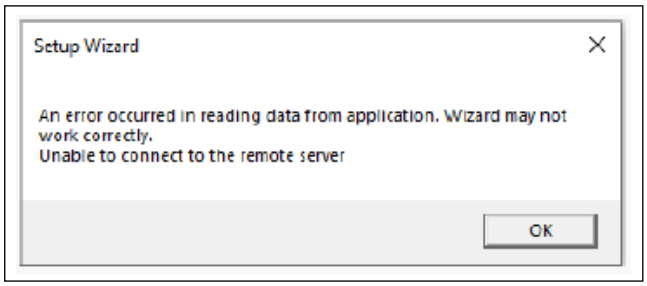
3) The latest Wizard version can be downloaded at ftp.gilbarco.com. Wizard Compatibility - Windows 10 or higher.

The Setup Wizard process includes the following:

- Welcome
- Global
- Forecourt Controller Type
- Forecourt Settings
- Products
- TLG and Tanks
- Pumps
- Payment
- Printer
- Finalizing the Wizard

Note: If the Setup Wizard fails to connect to SiteOmat360, the following message will be displayed (see Figure 15).

Figure 15: Setup Wizard: Error Message

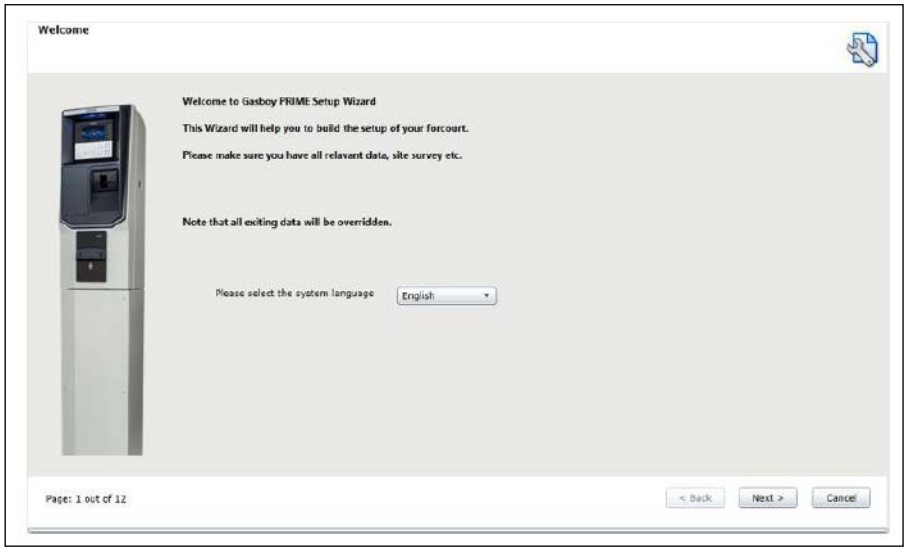


Close the Setup Wizard and restart it to try again.

5.2 Welcome

Unzip the Wizard package to a local folder on the PC. To launch the Setup Wizard, open **Wizard.exe**. The **Welcome** screen is displayed (see Figure 16).

Figure 16: Setup Wizard: Welcome Screen



To launch the Setup Wizard, proceed as follows:

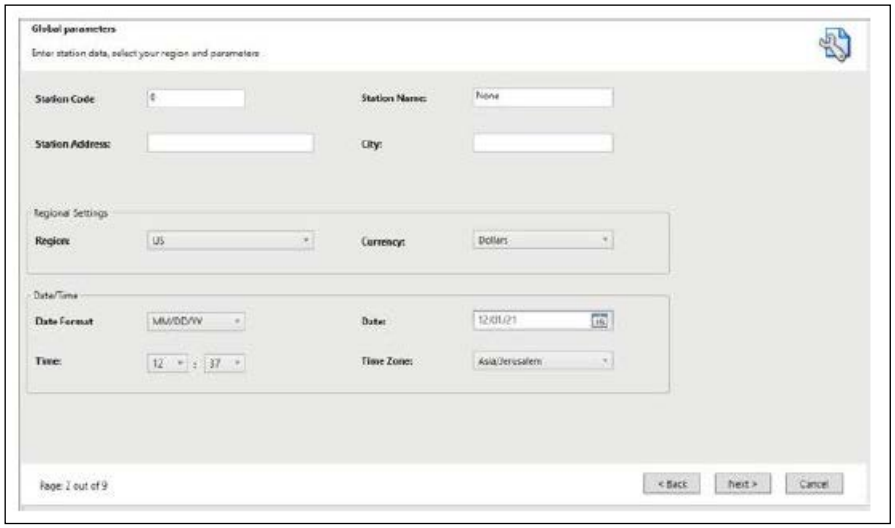
1 Select the system language to use from the drop-down list.

2 Click **Next** to continue.

5.3 Global

In this page, enter station and regional data (see Figure 17).

Figure 17: Setup Wizard: Global Screen



To set up global parameters, proceed as follows:

1 Enter the **Station Code**, **Station Name**, **Station Address**, and **City**.

Note: If the station is part of a network, Station Code must be unique across the network. This code is used to uniquely identify the station in the Head Office.

2 Select the **Region** and the **Currency** to be used from the corresponding drop-down lists.

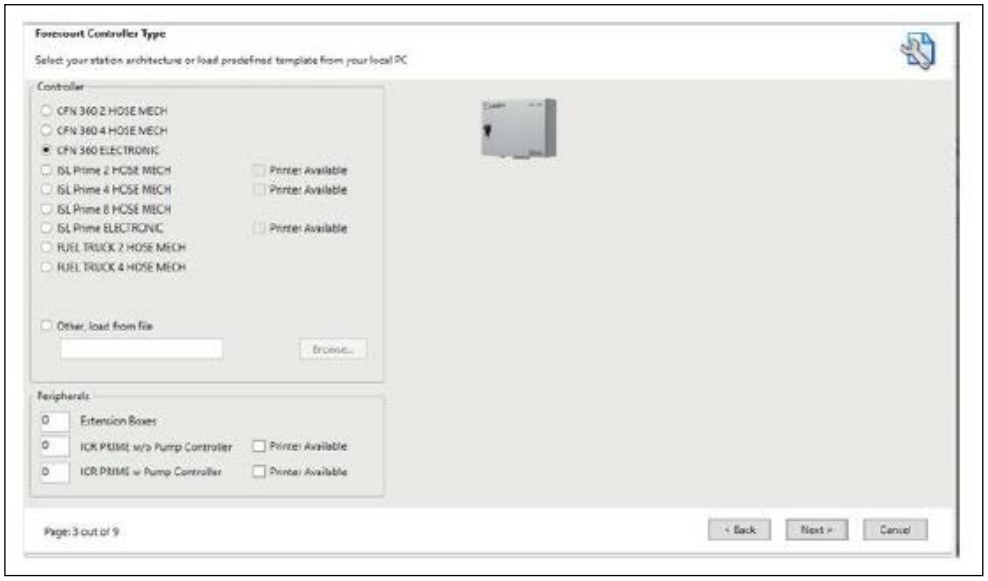
3 Select the **Date**, **Date Format**, **Time**, and **Time Zone**.

4 Click **Next** to continue.

5.4 Forecourt Controller Type

In this page, the user can define the forecourt controller type as well as additional peripherals (Extension Boxes or ICR+ units). The users can also define if a printer is available for each selected pedestal (see Figure 18).

Figure 18: Setup Wizard: Forecourt Controller Type Screen



For **Site PRIME** controllers, select from the following controller models:

Controller Model	Site PRIME Type
CFN 360 2 HOSE MECH	Site PRIME (1/2 cards)
CFN 360 4 HOSE MECH	Site PRIME (3/4 cards)
CFN 360 ELECTRONIC	Site PRIME

For **Truck PRIME** controllers, select from the following controller models:

Controller Model	Truck PRIME Type
FUEL TRUCK 2 HOSE MECH	Truck PRIME (1/2 cards)
FUEL TRUCK 4 HOSE MECH	Truck PRIME (3/4 cards)

To set up forecourt controller type settings, proceed as follows:

1 Select the Controller model option from the **Controller** section.

2 Select the **Printer Available** check box, if the pedestal includes a printer.

3 In the Peripherals panel, select the number of Extension Boxes or ICR Prime units (if any) and select the **Printer Available** check box, if the ICR Prime pedestal includes a printer.

Note: The Wizard application supports a maximum of 10 peripherals. If a higher number is entered, the text box is marked in red and the Wizard displays the following error notification: ***Controller numbers cannot exceed 10****.*

In cases where more than one peripheral is in use, configure the peripherals' IP (Extension Box and ICR Prime factory set default IP is 192.168.1.211).

For further details, please refer to MDE-4820 12-Port CommVerter Operation and Installation Manual.

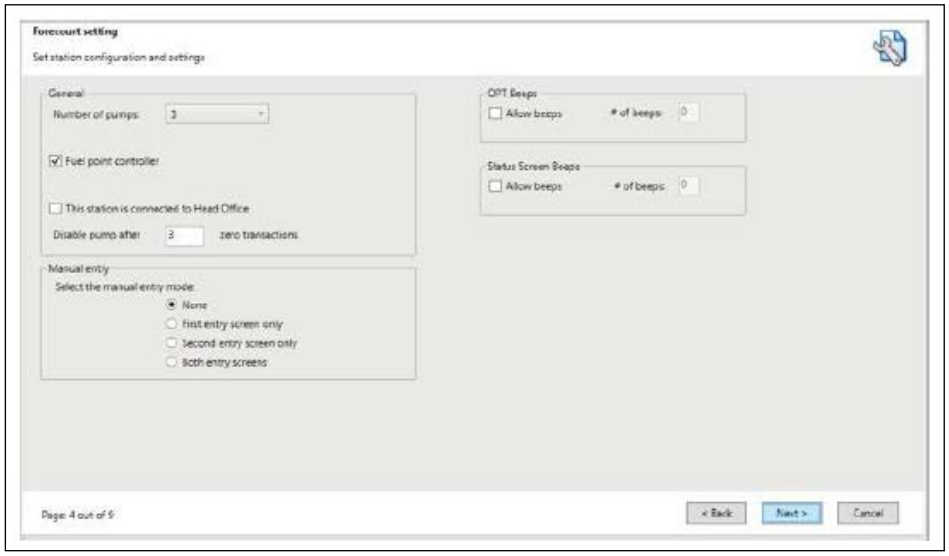
4 Click **Next** to continue.

In cases where the station architecture is identical to an already created template, select the **Other**, **load from file** option and click **Browse** to load the predefined xml file. If no template is selected, the Wizard displays the following error notification: **Must select setup file**.

5.5 Forecourt Settings

In this page the user can select the station's settings described below (see Figure 19).

Figure 19: Setup Wizard: Forecourt Settings Screen



To configure the station's settings, proceed as follows:

1 Select the **Number of pumps** from the drop-down list. The pumps number is limited according to the Controller type and the peripheral controllers in use (if any). The system supports up to 64 pumps.

2 Select the **Fuel point controller** check box in cases where the station is equipped with a vehicle identification system (Fuel Point PLUS).

3 Select **This station is connected to Head Office** if the system interfaces with third-party head office/SiteOmat360 Fleet Head Office for authorization and data sending.

4 A **Zero Transaction** is defined as an authorized transaction (fuel is being dispensed), but the volume retrieved remains zero. Set the allowed number of Zero Transactions before blocking the pump.

5 Companies can allow drivers to manually enter their device number in the OPT by using the F3 option. Select the **Manual entry** mode using the following options:

a **None**: Disables manual entry.

b **First entry screen only**: Allows manual entry only in the first screen of the authorization process.

c **Second entry screen only**: Allows manual entry only in the second stage of the two-stage authorization process.

d **Both entry screens**: Allows manual entry in both stages.

6 **OPT Beeps** function provides sound feedback each time a device is detected. Select the **Allow beeps** check box to activate the feature and enter the required **# of beeps**. In cases where more than one OPT is installed at the station, it is required to associate the dispenser to a specific OPT terminal (see "7.5 OPT" on page 14).

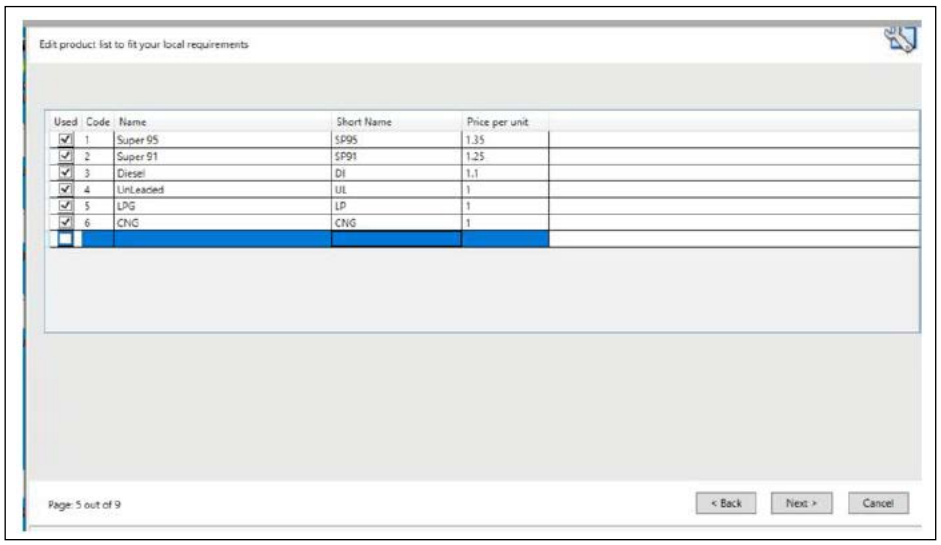
7 **Status Screen Beeps** function provides sound feedback on Status Screen each time a nozzle is lifted. Select the **Allow beeps** check box to activate the feature and enter the required **# of beeps**.

8 Click **Next** to continue.

5.6 Products

In this page the user can edit station products to fit to local requirements. The system skips this page if the user has selected a template (see Figure 20).

Figure 20: Setup Wizard: Products Screen



The screen displays a grid with the predefined products. The grid fields are:

a Code

b Product name

c Short Name (Used for reports or export to external systems)

d Price per unit

All fields in the grid are editable. Nevertheless, the parameters set must be able to cross-reference with the products in the FHO station configuration.

*Note: The **Product Name** and **Short Name** must be unique.*

To choose relevant products for the station, proceed as follows:

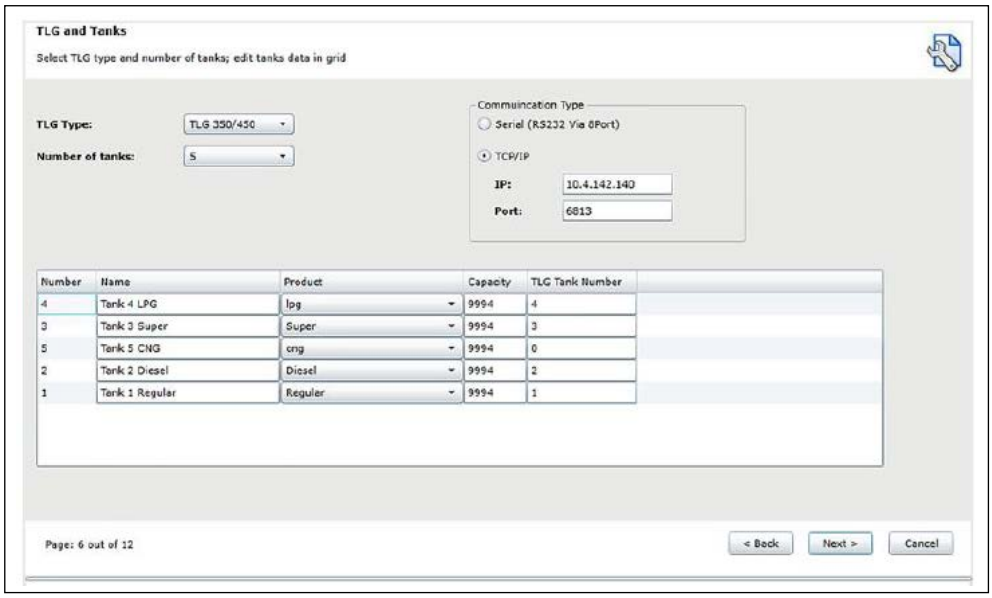
1 Select the **Used** check box (at least one product must be selected to continue, otherwise the wizard displays the following error notification: **At least one product must be selected**. The unselected products are not displayed on SiteOmat's screens after the setup is finished.

2 Click **Next** to continue.

5.7 TLG and Tanks

In this page, the user defines the tanks and the external TLG (Tank Level Gauging) system providing fuel tank information. The system skips this page if the user has selected a template (see Figure 21).

Figure 21: Setup Wizard: TLG and Tanks Screen



To define the tanks and the external TLG, proceed as follows:

1 Select the **TLG type** from the drop-down-list.

2 Select the **Number of tanks** from the drop-down list. For each tank the system opens a line in the grid.

3 Select the **Communication Type** between TLG console and Controller using the following options:

a TCP/IP: For Ethernet connection via external convertor or direct TCP/IP. Enter **IP** and **Port** (Preferred Method).

b Serial (RS-232 via 12-port): For RS-232 communication.

4 Edit the required fields in the tanks grid. The tanks grid includes the following fields:

a Number (read-only)

b Name

c Product (selected from the drop-down list including all products previously defined)

d Capacity (must be higher than zero)

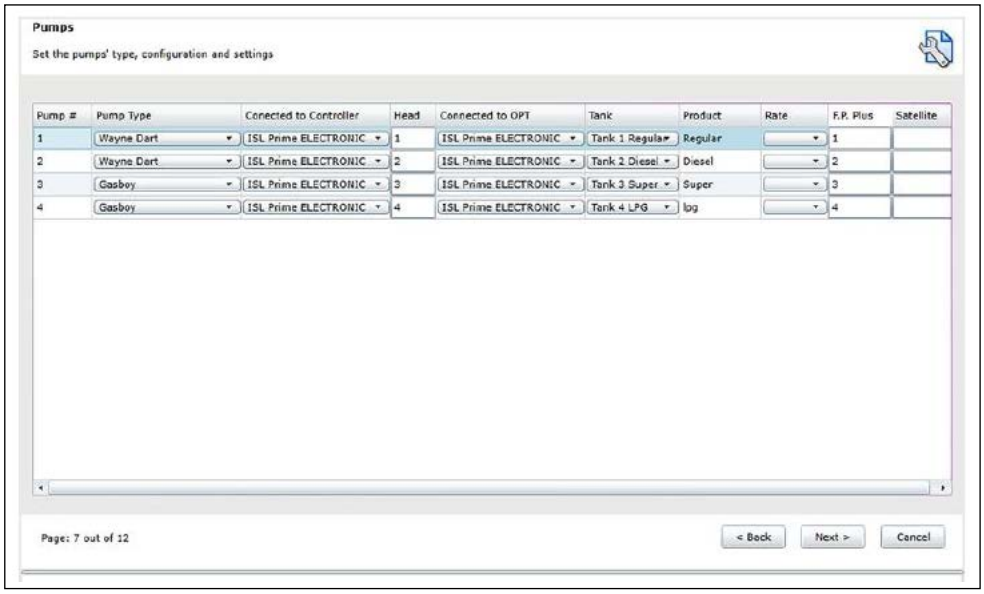
e TLG Tank Number (by default it is equal to the tank number, must be less than or equal to 16).

5 Click **Next** to continue.

5.8 Pumps

In this page, the user can define pumps and configure the connection of the pumps to the controller, printer, and Fuel Point PLUS system. The screen displays a grid with a row for every pump, according to the number of pumps defined in "5.5 Forecourt Settings" (see Figure 22).

Figure 22: Setup Wizard: Pumps Screen



To define pumps and configure the connection of the pumps, proceed as follows:

1 Select the **Pump Type** from the drop-down list containing all supported pump types.

2 Select the Controller to which the pump is connected from the **Connected to Controller** drop-down list containing the available controllers or peripherals as set on page 5. The wizard checks for compatibility between Controller and pump types selected and notifies the user on the following mismatches:

a You connected MPI pump to controller that do not have MPI slots.

b You connected more MPI than can be on a specific controller.

c Not all pumps are connected to controller.

d You connected more electronic pumps than can be on a specific controller.

3 Enter the **Head** number, namely the communication protocol address of the pump head, as defined in the dispenser setup and acquired by the technician (must be less than 64).
Note: Pumps with identical Head number cannot be connected to the same Cluster (IP and Port) on a Pump Interface Module Card.

4 Select the OPT terminal to be linked to the pump for prompts display from the **Connected to OPT** drop-down list (This setting is optional, the wizard displays a warning notification in cases where not all pumps were connected to an OPT, but does generate a validation error).

5 Set the pump to the **Tank**, the pump is actually connected to (Mandatory setting, if not set the Wizard displays the following error notification: **Select tank for all pumps**).

6 Select the **Product** from the drop-down list containing all products in use as defined in "5.6 Products"on page 8. This field is auto-populated based on tank selection.

7 Select the **Rate**, namely the number of pulses per Liter/Gallon as required for mechanic pumps setup only, using the drop-down list (10,100,1000).

8 Enter the **F.P. Plus** logical channel for communication with the controller (if F.P. Plus is in use, as defined in "5.5 Forecourt Settings"on page 6). Enter a different channel (between 1 and 16) for each pump. The Wizard provides the user with the following error notifications in cases where an incorrect value was entered:

a VIS Channel must be less than 16.

b You connected same VIS channel to two pumps.

9 For pumps that support **Satellite** linked nozzles (two nozzles connected to the same pump head allowing simultaneous refuel from both sides of a truck), enter the second nozzle F.P. Plus channel (between 1 and 16 and not previously used).

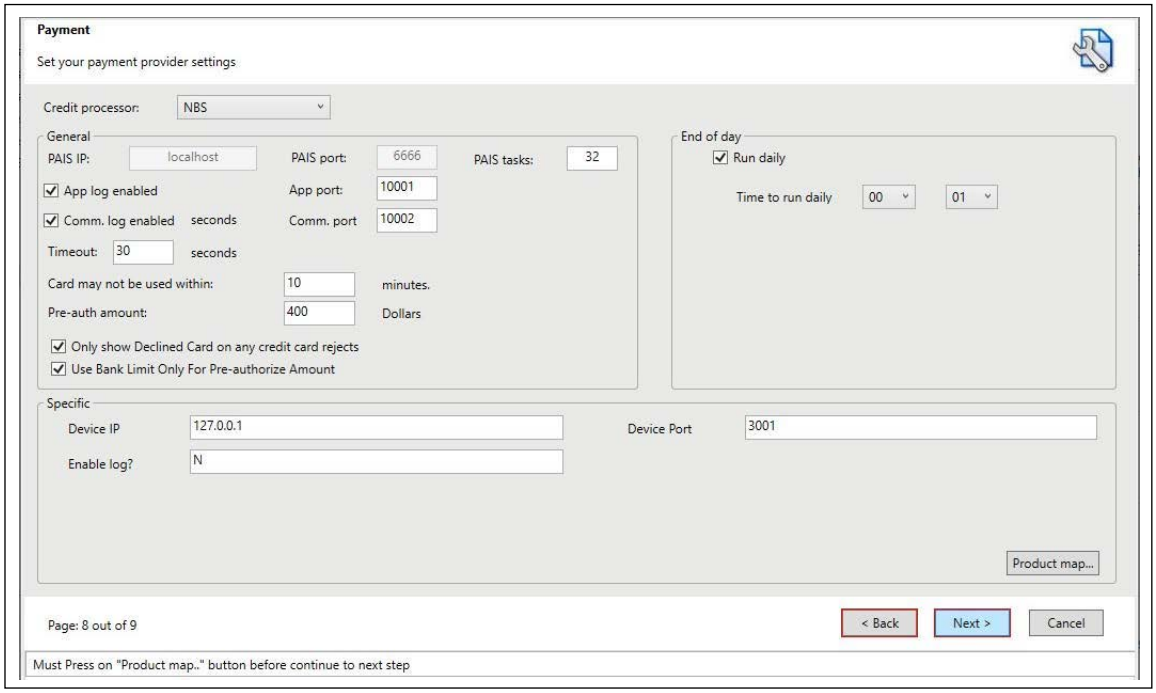
10 Click **Next** to continue.

Note: The Setup Wizard supports one-grade dispensers only. For other configurations, run the Wizard and then set up the nozzles on the Forecourt Setup screen.

5.9 Payment

In this page, the user can set the SiteOmat connection to a third-party clearing system (see Figure 23).

Figure 23: Setup Wizard: Payment Screen



Set the parameters described below in "Payment Fields" and click **Next** to continue.

Table 8: Payment Fields

Field	Description
Credit Processor	Payment processor in use, select from the drop-down list
PAIS IP & Port	IP address and port for communication between the internal payment application and the Controller (read-only).
Tasks	Number of tasks to be simultaneously handled by the processor (namely, the number of payment terminals in use in the station).
App Log	Enables application logging. Select the **Enable** check box and enter the destination **Port**.
Comm Log	Enables Controller – Processor communication logging. Select the **Enable** check box and enter the destination **Port**.
Timeout	Defines the waiting time for response from the processor. The default is 30 seconds.
Card may not be reused within	Defines the waiting time for refueling with the same bank card within the selected time frame.
Pre-authorized amount	Pre-authorizes the card prior to the transaction to the defined amount.

Field	Description
End of Day	Activates the End of Day process - the payment application returns a list of totals (Total amount, Amounts per card type). The controller saves the data in the EOD summary. Select the **Daily run enabled** check box to automatically run the process on a daily base and set the **Time to run daily** drop-down list.
Specific - Processor IP & Port	IP address and port for communication between the internal payment application and the processor.
Product Map	See “5.9.1. Product Map”.

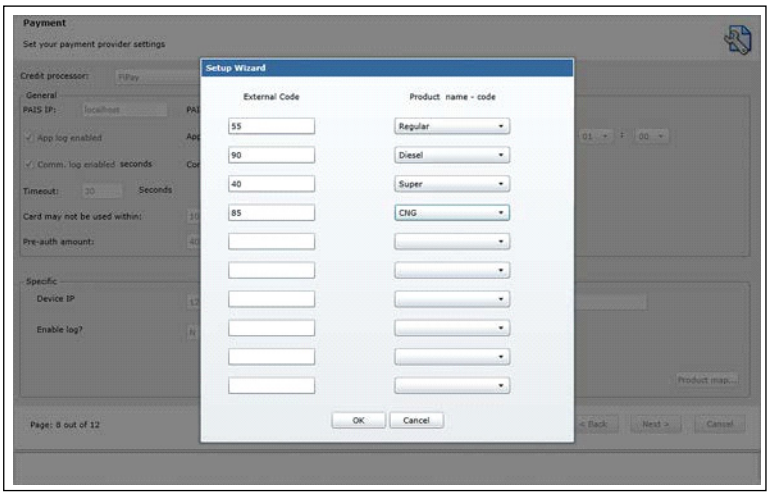
5.9.1. Product Map

This feature enables users to associate the products defined in SiteOmat to the external payment processor.

To map the product, proceed as follows:

1 Click the P**roduct Map** button to open the Product Mapping dialog box (see Figure 24).

Figure 24: Setup Wizard: Product Map Dialog



2 Select the product from the **Product name - code** drop-down list containing all products in use as defined in “5.6 Products”.

3 Enter the processor’s code for the product in the **External Code** field.

4 Repeat steps 2 to 3 for each product in use.

5 Click **Save** to save changes or **Cancel** to close the dialog box without saving changes.

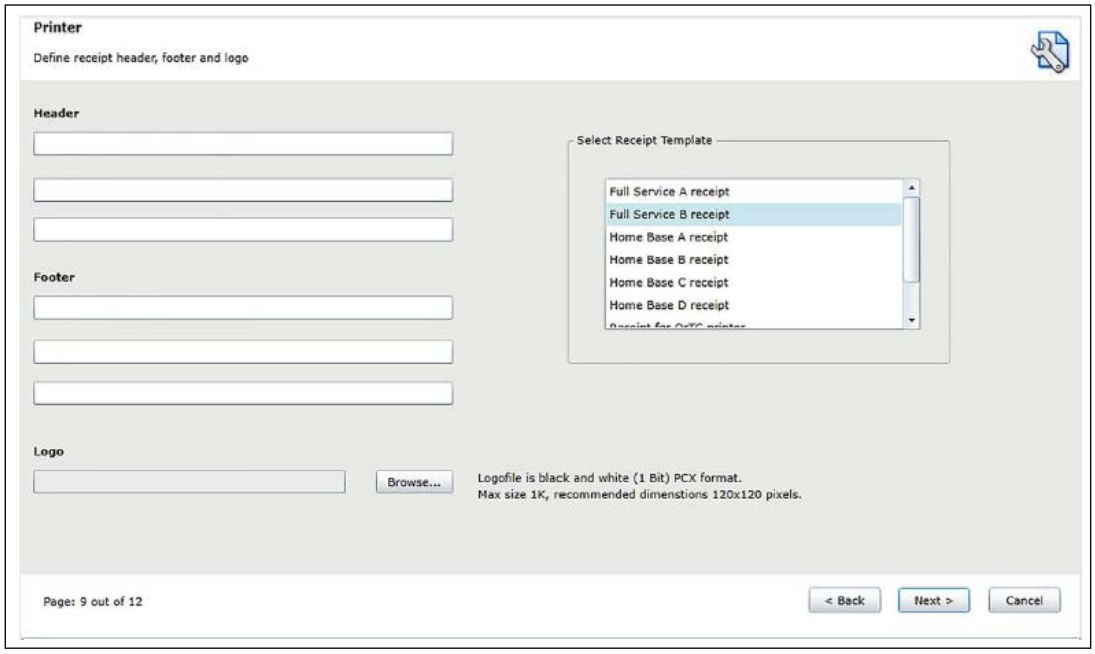
*Note: It is **not** possible to use the same external code for different product codes.*

5.10 Printer

In this page, the user can define receipts. This page is displayed only in cases where at least one printer was selected in Forecourt Settings (see Figure 25).

Note: The Printer option is not supported with Site/Truck PRIME systems.

Figure 25: Setup Wizard: Printer Screen



To define receipt, proceed as follows:

1 Select the **Receipt Template** from the list.

2 Enter a Header and Footer to be added as is to the receipt.

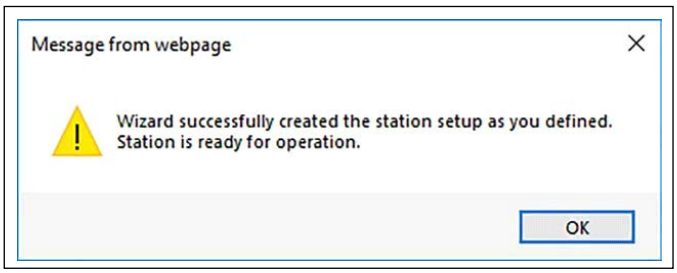
3 Click **Browse** button to load a PCX file for a logo printout at the top of the receipt. The logo should be a monochrome (black and white) PCX file, with a maximum size of 1 KB.

4 Click **Next** to continue.

5.11 Finalizing the Wizard

The last section of Installation Wizard is 6.7 Backup on page 24. Click **Finish** to finalize the process and build the setup. When the process is completed, the following dialog box is displayed (see Figure 26).

Figure 26: Setup Wizard: Finalizing Confirmation Dialog



After clicking **Finish**, the setup process starts. At this stage, the **Cancel** button is still enabled, but it only closes the Wizard GUI, without stopping the process.

Note: The setup process may take up to three minutes, depending on the complexity of the settings.

In cases where an error was found, the system provides the user with an error message. At this stage, errors are most likely to be caused by complex mismatched settings (For example, between pump, pump head number, and controller types) that were not found during the process of validation on each page. Ensure that you re-check and correct the settings.

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6 – Global Settings

6.1 General

This section provides instructions for setting up station information, general and regional settings, customizing receipts, alarms, communication properties, backups, and more.

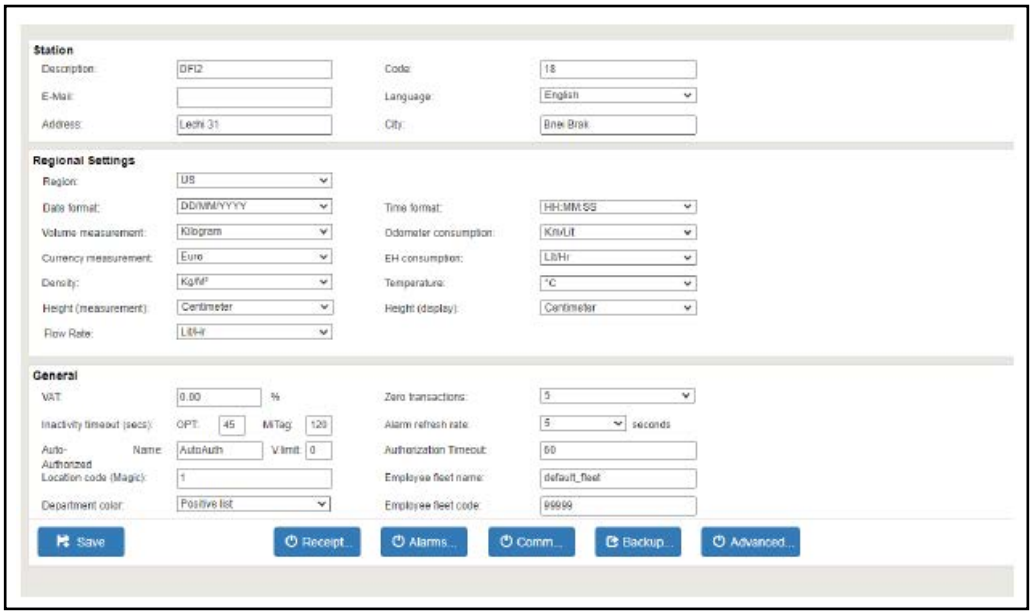
These procedures consist of:

- Advanced Station Settings
- Receipts
- Alarms
- Comm (FCC)
- Backup

In the Global page, set the two mandatory fields that identify the station: **Description** (station name) and **Code**.

To access the Global page, click the **Setup** link in the navigation bar and then select the **Global** link (see Figure 27).

Figure 27: Global Parameters Page



6.2 Global Parameters

The Global page enables you to set various station definitions (see Table 9).

Table 9: Global Tab Parameters

Parameter	Description
	Station Section
Description	Description of the station.
E-Mail	E-mail address of contact personnel.
Address	Physical address of the station.
Code	Code (identification) number of the station. The Code is defined during setup and it is highly recommended not to change it after the station becomes operational. *Note: If a station is part of a network of stations, this code must be unique across the network. This code is used to uniquely identify the station in the Head Office.*
Language	Language selection which affects the software interface and the receipt printing. Select the language from the drop-down list.
City	City of the station.
	Regional Settings Section (Select the units from the adjacent drop-down list)
Region	Select the region and the units will update to the default regional settings.
Date format	Date format used in the application (Default: MM/DD/YY).
Volume measurement	Volume measurement (Default: Gallons).
Currency measurement	Currency in use (Default: US Dollars).
Density	Fuel density at a certain temperature (Default: lb/ft³).
Height (measurement)	Measurement of tank height level (Default: inches).
Flow Rate	Volume of fuel which passes per unit time (Default: gallons per hour).
Time Format	Time format used in the application (Default: HH:MM:SS).
Odometer consumption	Distance per fuel consumption measurement (Default: miles per gallon).
EH consumption	Engine hours per fuel consumption measurement (Default: hours per gallon).
Temperature	Temperature display inside the fuel tank (Default: °F).
Height (display)	Height of the tank displayed on pages and reports (Default: inches).
	General Section
VAT (percent)	Sets the VAT rates. Currently not in use.
Inactivity timeout	Sets the time that the OPT displays the same message when waiting for the user's input (in seconds). The default is 45 seconds minimum - 120 seconds maximum.
Auto-Authorized	In cases where a pump is set in the no need for authorization mode (normally open or hot pumping) the pump is authorized as soon as the handle is lifted without additional authorization device. • **Name:** Name assigned to the device in auto-authorized transactions. • **V.limit:** Volume limit assigned to auto-authorized transactions.
Location code (Magic)	This is only relevant for customers using a Magic Head Office System. Otherwise, set value to 0.

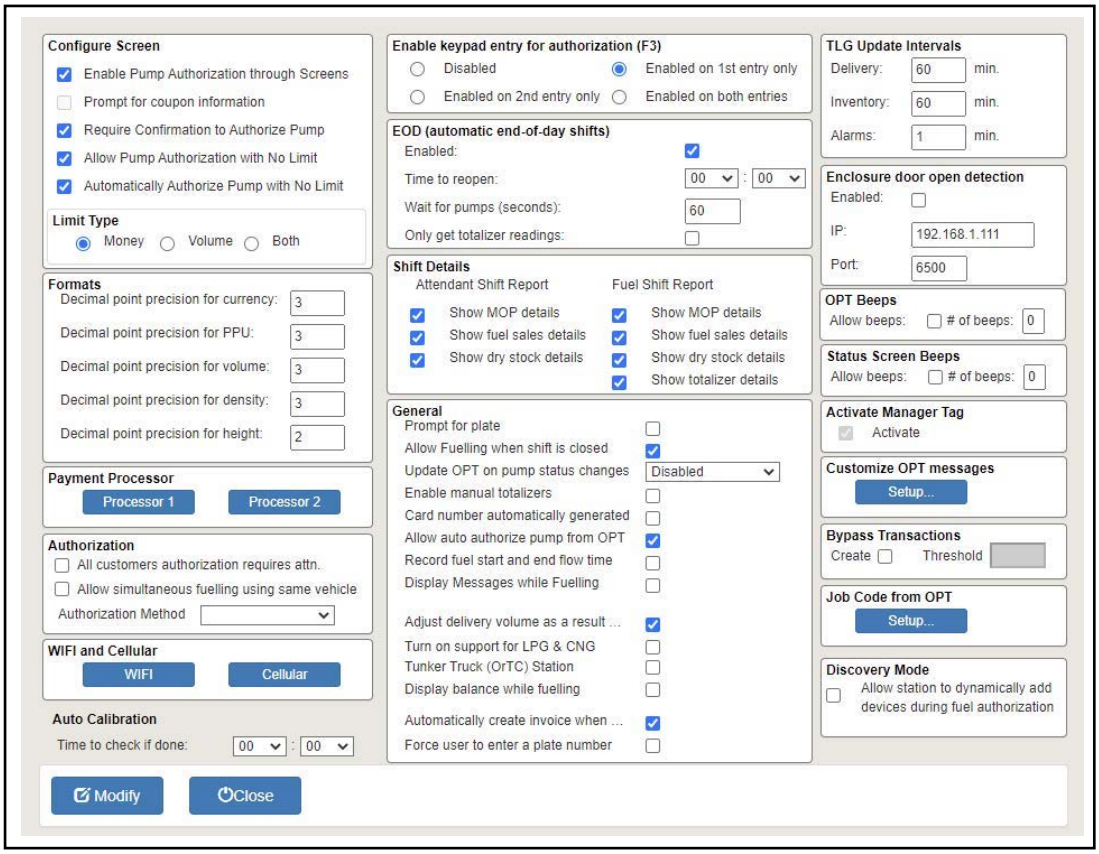
Parameter	Description
Department color	This is only relevant for systems using a Head Office System. It defines the device lists downloaded from Head Office to nOrCU as either positive or negative lists.
Zero transactions	Sets the allowed number of transactions whose volume equals to zero before blocking the dispenser (default value is 0).
Alarm refresh rate	Defines the time frequency for refreshing the Alarms page (the default is every 5 seconds).
Authorization Timeout	Defines the maximum allowed waiting time after pump is authorized and before the handle is lifted up (the default is 60 seconds, maximum value is 180 seconds).
Employee fleet name	Defines the fleet name and code given for the specific fleet.
Employee fleet code	

Click **Save** to save the changes.

6.3 Advanced Station Settings

To set additional station parameters, click **Advanced**. The Station Parameters dialog box is displayed (see Figure 28).

Figure 28: Advanced Station Settings



Note: WIFI and Cellular are optional features available only in Site PRIME and Truck PRIME.

The advanced parameters are described below (see Table 10).

Table 10: Station Parameters Dialog Panels

Panel	Description
Configure Screen	Sets options for authorizing pumps operation. Select the relevant check boxes to enable the features. Limit Types can be set per **Money**, **Volume**, or **Both.**
Formats	Sets the display of the decimal point precision for **currency**, **PPU (Price Per Unit)**, **volume**, **density**, and **height** values used in reports and printed on receipts.
Payment Processor	Sets the connection between SiteOmat360 and any clearing system for use with regular credit cards (see "6.3.2 Payment Terminal Setup" on page 10).
Authorization	• **All Customers authentication requires attn.:** Select to require authorization for all customer performed transactions. • **Allow simultaneous fueling using same vehicle:** Allows for one vehicle ID to be used to authorize fueling for several vehicles. The check box is enabled by default for US markets. • **Authorization Method:** By selecting Custom1, the Remote Authorization details in the COMM setup are mandatory.

Panel	Description
Auto Calibration	Schedules the daily check for auto calibration completion for all probes actively executing the process, by using the **Time to check if done** drop-down (HH:MM).
Enable keypad entry for authorization (F3)	Companies can allow drivers to manually enter their device number in the OPT by using the F3 option. The options in this section define whether to disable manual entry, to allow manual entry only in the first stage of the two-stage authorization process, only in the second stage of the two-stage authorization process, or to allow manual entry in both stages. *Note: The maximum number of characters for manual entry into OPT is 20.*
EOD (automatic end-of-day shifts)	Schedules the automatic EOD processes.
Shift Details	Defines which sections are to be included in the attendant reports (X report and Z report), produced at the end of each attendant shift and at the end of global shifts. This section is in-use in stations where there are attendants.
General	Sets general parameters as follows: • **Prompt for plate**: Select this check box to enable inserting vehicle plate number at the end of the transaction. • **Allow Fueling when shift is closed**: Select this check box to enable users self-service fueling after the working shift (relevant for regular service stations). • **Update OPT on pump status changes**: Select from the drop-down list whether to display a message (display or display and sound message) on the OPT when pumps status changes. • **Enable manual totalizers**: Select this check box to manually enter mechanical pump totalizers (see "7.2.4 Totalizer Offset"). • **Card number automatically generated**: Select this check box to enable Card Numbers generation for devices not burned. The vehicle is identified by its plate number and automatically receives a device number after the first refueling. • **Allow auto authorize pump from OPT**: Select this check box to allow Shift Managers to switch the pump operation modes from **Need Authorize** to **Auto-Authorize** mode through OPT. • **Record fuel start and end flow time**: Select this check box to include in transaction record the time stamp when the pump started to supply fuel, namely changed to IN_USE state. • **Display messages while fueling**: Select this check box to display currently dispensed volume on OPT screen during the transaction. • **Adjust delivery volume as a result**: Select this check box to compensate delivery data received from ATG by adding the volume of transactions performed during delivery. • **Turn on support for LPG & CNG**: Select this check box for stations that include CNG/LPG dispensers. The system will require an additional authorization device to prevent untrained personnel from operating these types of dispensers. • **Tanker Truck (OrTC) Station:** Select this check box if the station is a tanker truck. • **Display balance while fueling:** Select this check box to display the fleet balance on the terminal when fueling. • **Automatically create invoice when...:** Select this check box to automatically create an invoice when using a delivery tag. • **Force user to enter a plate number:** Select this check box to require drivers to enter the license plate number in order to authorize fueling.
TLG Update Intervals	Sets the intervals for receiving **Delivery** (default 60 minutes), **Inventory** (default 60 minutes), and **Alarm** (default 1 minute) updates from the **TLG** system.
Enclosure door open detection	N/A
OPT Beeps	Provides sound feedback each time a device is detected. Select the **Allow beeps** check box to activate the feature and enter the required **# of beeps** (the default is 0). In cases where more than one **OPT** is installed at the station, it is required to associate the dispenser to a specific **OPT** terminal (see "7.2 Dispensers" on page 3).
Status Screen Beeps	Provides sound feedback in the Status page each time a nozzle is lifted. Select the **Allow beeps** check box to activate the feature and enter the required **# of beeps**.

Panel	Description
Customize OPT Messages	See “6.3.1 Customize OPT Messages” on page 6.
Bypass Transactions	If selected, reports will display whether a transactions was standard or bypass.
Job Code from OPT	See “6.3.3 Job Code from OPT” on page 12.
Authorization Method	This field is blank by default. By selecting **Custom1**, the **Remote Authorization** details in the **COMM** setup are mandatory.
WIFI and Cellular	Enables mobile apps to be used to authorize fuel pumps and pay for fuel transactions. Fuel transactions paid for through the app are saved under a new MOP: **Mobile Driver**. (See “6.3.4 WIFI and Cellular” on page 13).

Click **Modify** to save the selections and **Close** to close the dialog box and return to the Global page; or click **Close** to exit the dialog box without saving the changes.

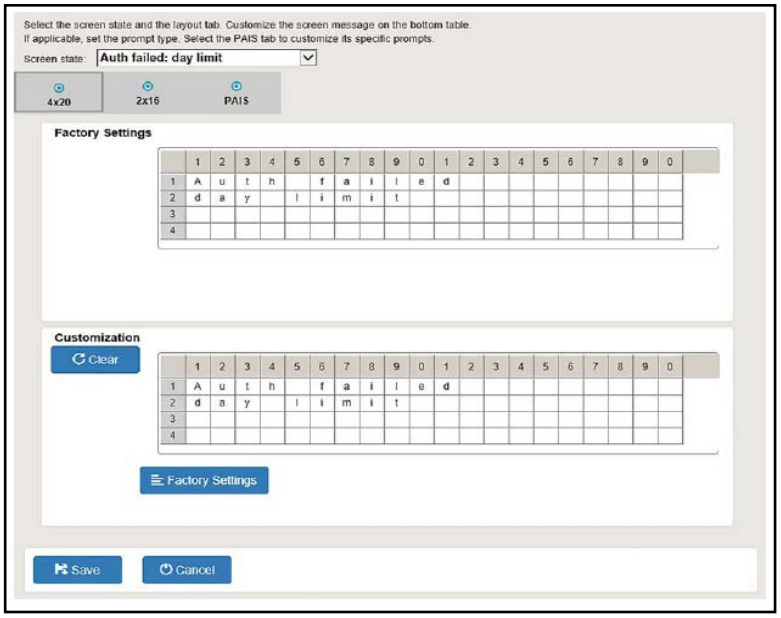
6.3.1 Customize OPT Messages

This feature allows you to customize the messages displayed on payment terminals.

Click **Setup** in the Customize OPT messages section. The following dialog box is displayed (see Figure 29).

Note: Customized OPT messages require the OPT model to be set to OPOS. For questions related to changing screen prompts/messages, contact Gasboy Technical Support.

Figure 29: OPT - Screens and Prompts Customization



The dialog box includes three OPT tabs:

- **4x20**: for OPT, CRIND, and CAT displays.
- **2x16**: for OrTR displays.
- **PAIS** for setting third-party clearing system prompts.

OPT message tabs includes two panes:
- **Factory Settings**: Shows factory settings for the selected message.
- **Customization**: Enables editing messages.

To edit the OPT tab parameters, proceed as follows:

1 Select the display resolution tab according to the OPT that you want to modify.

2 In the **Screen State** drop-down list, select a message (see Table 11 on page 8).

3 In the **Customization** pane, double-click on a cell to start editing the message.

4 (Optional) Click **Clear** to delete all the text.

5 (Optional) Click **Factory** settings to return to the factory settings of the message.

6 Click **Save** to close the dialog box and save the changes, or click **Cancel** to exit it without saving.

The PAIS tab contains one pane where the PAIS tab parameters can be edited. To edit the parameters, proceed as follows:

1 Double-click on a cell to edit the values. The following parameters can be edited:
- **Type**: select Numeric, alphanumeric, or Swipe card.
- **Minimum** and **Maximum** length.
- **Masked**: select this to mask user input, which will be replaced by asterisks (*) on the OPT screen.

2 Set the prompts in use and then click **Save**.

Note: You cannot change the location and length of prompts (for user input). Prompt cells are read-only and grayed.

You can modify OPT messages at the network level via Head Office or at the station level (SiteOmat360).

To overwrite local changes with Head Office messages, proceed as follows:
1 *Select a message.*
2 *Click **Factory Settings**.*
3 *Click **Save**.*
4 *Edit the message.*
5 *Click **Save**.*

Not all messages are available in 2x16 resolution.
Special characters are not supported.

Table 11: OPT Messages

Message	Description
Auth failed: day limit	Authorization failed because the day limit has exceeded.
Auth failed: day visit	Authorization failed because the number of allowed daily visits (fueling) has exceeded.
Auth failed: fleet is blocked	Authorization failed because the fleet is blocked.
Auth failed: month visit	Authorization failed because the number of allowed monthly visits (fueling) has exceeded.
Auth failed: time range	Authorization failed because the time is not in the allowed range.
Auth failed: week limit	Authorization failed because the weekly limit has exceeded.
Auth failed: week visit	Authorization failed because the number of allowed weekly visits (fueling) has exceeded.
Auth failed: year limit	Authorization failed because the yearly limit has exceeded.
Authorized user	User is authorized.
Blocked Pump	Selected pump is blocked.
Card/Tag not authorized	Device is not authorized.
Checking Card	Card is being checked.
Device in negative list	Authorization failed because device is in negative list.
Device not found	Device is not found in database.
Enter device ID	Swipe card/tag, enter device ID using OPT keypad.
Enter driver (2-stage)	Enter driver ID at second stage of 2-stage authorization.
Enter Driver ID	Swipe card/tag, enter driver ID using OPT keypad.
Enter Engine Hours	Enter Engine Hours.
Enter Odometer	Enter Odometer reading.
Enter PIN	Enter PIN code.
Enter Plate	Enter license plate number.
Enter Plate (receipt)	Enter license plate number to be added to receipt.
Enter Receipt Number	Enter/select receipt number.
Enter Reference Number	Enter reference number of a receipt to be printed.
Enter vehicle (2-stage)	Enter vehicle ID at second stage of 2-stage authorization.
Enter vehicle ID	Swipe card/tag, enter vehicle ID using OPT keypad.
Entry too short	User input is below the minimum length defined for the prompt.
Fueling Suspended	Fueling is suspended after the nozzle was removed from fuel filler.
Idle messages	Idle messages displayed between transactions according to OPT keypad configuration as set in SiteOmat360.
Invalid number	Invalid E.H./Odometer reading entered (as a result of reasonability check).
Invalid PIN Code	Invalid PIN code.
Invalid Vehicle	Invalid Vehicle ID.
Pump not allowed	Selected pump is not connected to OPT.
Not authorized	Device is not authorized.

Message	Description
Nozzle out of service	Nozzle is unserviceable.
Ongoing fueling	Message displayed during transaction.
Present Credit Card	Swipe credit card.
Present driver (2-stage)	Present driver ID at second stage of 2-stage authorization.
Present vehicle (2-stage)	Present vehicle ID at second stage of 2-stage authorization.
Printing receipt	Message displayed during printing.
Pump is busy	Selected pump is busy.
Pump not found	Pump number is invalid.
Receipt not found	No receipts for the selected pump.
Re-enter PIN (CAT/ CRIND only)	The entered PIN was not correct, request to re-enter.
Remove nozzle (CAT/ CRIND only)	User is instructed to take the nozzle out.
Set nozzle back	Return nozzle to holster.
Start Refuel	Start refueling.
Swipe Card	Swipe card.
Tag is blocked	Presented tag is blocked.
Wrong Fuel Type	Selected fuel type is not authorized.
Wrong fuel type for this card	The selected fuel type (product) is not allowed for the card swiped.

6.3.2 Payment Terminal Setup

This feature enables you to set up a connection to a third-party authorization system.

Note: When using an EMV solution, ***Payment Terminal Setup*** *is not applicable.*

Click **Setup** in the Payment Terminal section. The following dialog box displayed (see Figure 30, Table 12 on page 10).

Figure 30: PAIS Setup Dialog

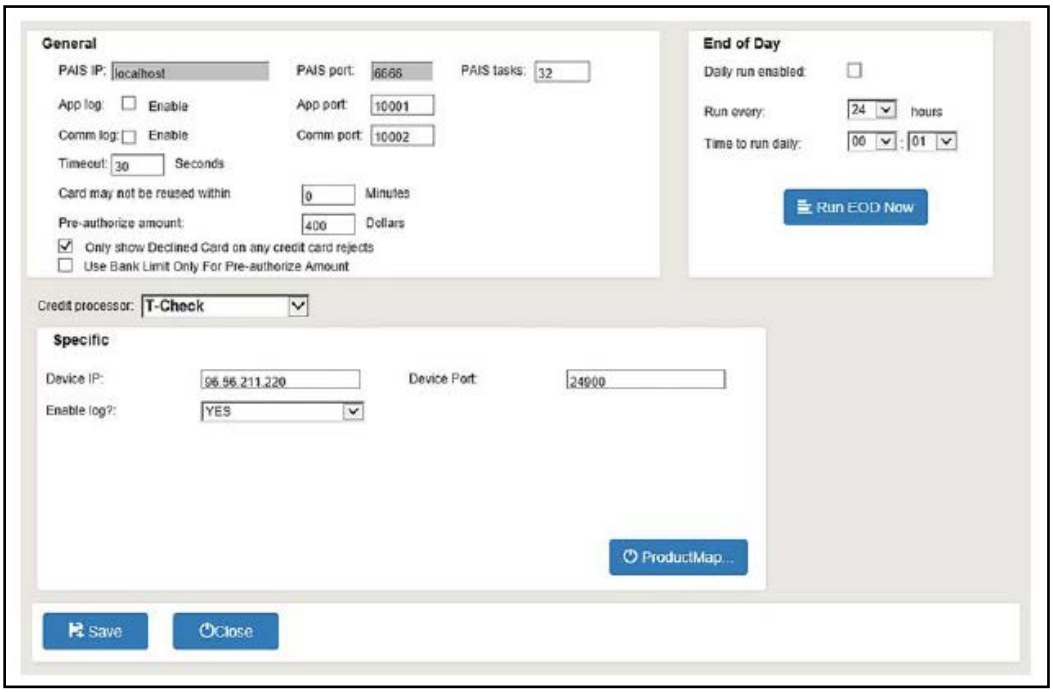


Table 12: PAIS Setup Fields

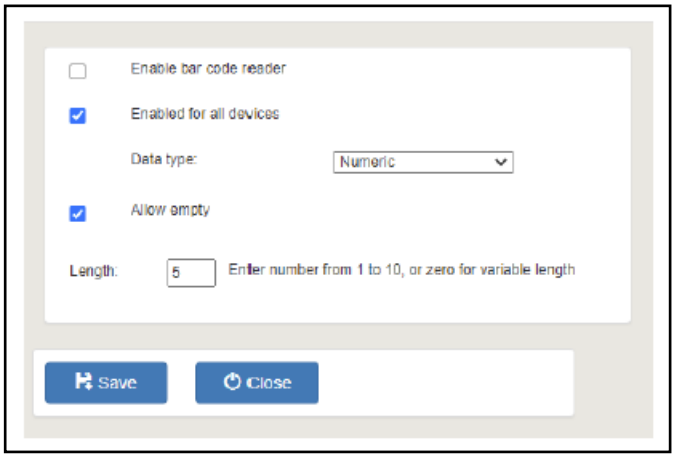
Parameter	Description
PAIS IP & Port	IP address and port for the communication between the internal payment application and the controller (read-only).
PAIS Tasks	Number of tasks that are to be handled simultaneously by the processor.
App log	Enables application logging. To do this, use the App Port field to set a destination port.
Comm log	Enables Controller - Processor communication logging. To do this, use the Comm Port field to set a destination port.
Timeout	Defines the waiting time for a response from the processor.
Card may not be reused within	Prevents refueling using the same bank card occurring within the defined time interval.
Pre-authorized amount	Pre-authorizes the card for the define amount prior to the transaction.
Only show Declined Card on any credit card rejects	Sets whether to display the rejection message as received from the payment processor on the OPT display or as a generic Declined Credit Card message.

Parameter	Description
Use Bank Limit only for pre-authorized amount	Presets the pump amount based on the bank limit. This lowers the amount requested of the customer's available credit. This setting overrides the pre-authorized amount parameter.
End of Days	Activates the End of Day (EOD) process. The payment application returns a list of totals (Total amount, amounts per card type) and saves the data in the EOD summary • Daily run enabled - Runs the process automatically on a daily basis. To run daily, set the Run every value to 24 and set the time to start the process or to run more frequently, select a different time interval in the Run every drop-down list. • Run EOD Now - Use this button to manually activate the EOD process.
Credit Processor	Selects the payment processor to use.
Specific	Sets the communication parameters to use for communication between the internal payment application and the processor.
Product Map	This opens a new dialog where it is possible to associate the products defined in the SiteOmat360 with the external payment processor.
Card Discount	N/A.

6.3.3 Job Code from OPT

The **Job Code from OPT** dialog box enables you to prompt drivers to enter a job number during authorization (see Figure 31).

Figure 31: Job Code from OPT Dialog



The dialog includes the following fields (see Table 13):

Table 13: Job Code from OPT Fields

Field	Description
Enable bar code reader	Allows job codes to be scanned with a barcode reader.
Enable for all devices	Check to require all devices to provide a job code.
Data Type	Alphabetic/Numeric
Allow Empty	Check to allow not entering a job code. In this case, the job code will be optional.
Length	Job code length.

Note: Job Code from OPT is not supported in CRIND payment terminals.

6.3.4 WIFI and Cellular

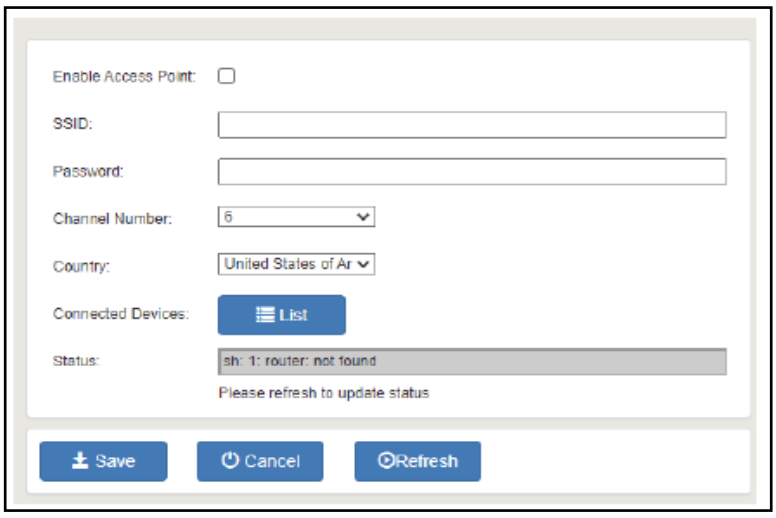
Note: WIFI and Cellular settings are optional features available only in Site PRIME and Truck PRIME.

5.3.4.1 WIFI

To enable fuel pump authorization through a mobile app, proceed as follows:

1 Select **WIFI** under **WIFI and Cellular**. The following dialog box is displayed (see Figure 32).

Figure 32: WIFI Dialog Box



2 Select **Enable Access Point**.

3 Enter **SSID**. If the **SSID** was configured in FHO, it will appear automatically. If not, or if it needs to be changed for a specific station, the station manager can configure a new **SSID**.

4 Enter the **Password** associated with the SSID. This password must be at least 14 characters, of which there must be at least one numeral, one special character, and both upper and lowercase letters.

*Note: The SSID and password can be received from HO if the HO is configured for the mobile app. For more details, refer to **Fuel & Drive Mobile Application User Manual P/N: 817400190**.*

5 Select method of obtaining **Channel Number**.

6 Select **Country Code**.

Note: Connected Devices display the list of devices currently connected to the station's Wi-Fi.

7 **Status** shows the router status. If, while the dialog is open, the status changes to **Router Not Found**, the message **Please Refresh to Update Status** will appear below the text box. Click **Refresh**.

8. Click **Save**.

Note: If Wi-Fi has been configured in FHO it is not necessary to configure in SiteOmat360 unless new sites are added after FHO is configured.

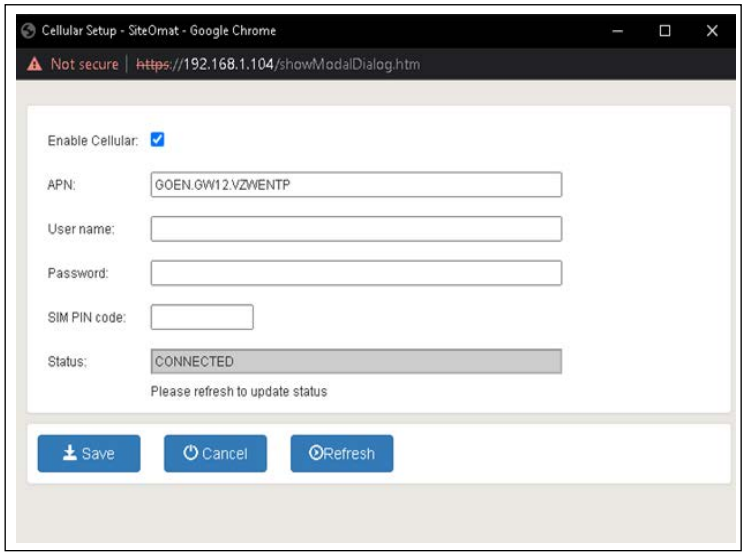
6.3.4 Cellular

The Cellular – SO360 is connected to FHO over cellular link. This feature enables connection to the cellular modem.

To configure Cellular, proceed as follows:

1 Select **Cellular** under **WIFI and Cellular**. The Cellular Setup dialog box is displayed (see Figure 33).

Figure 33: Cellular Setup



2 Select **Enable Cellular** option.

3 Access Point Name (APN) between the SIM and the controller.
*Note: Use the **GOEN.GW12.VZWENTP** APN while connecting to EKOS Cloud Server.*

4 Enter the **User name** and **Password** for private APN.
Note: It is an optional field and user can enter up to 64 characters each.

5 Enter the **SIM PIN code**. Enter 4-8 numeric digits to unlock the SIM.

6 **Status** displays the router status. When the status is not Connected, the status changes to **Router Not Found**, and the message **Please Refresh to Update Status** is displayed below the text box. Click **Refresh**.

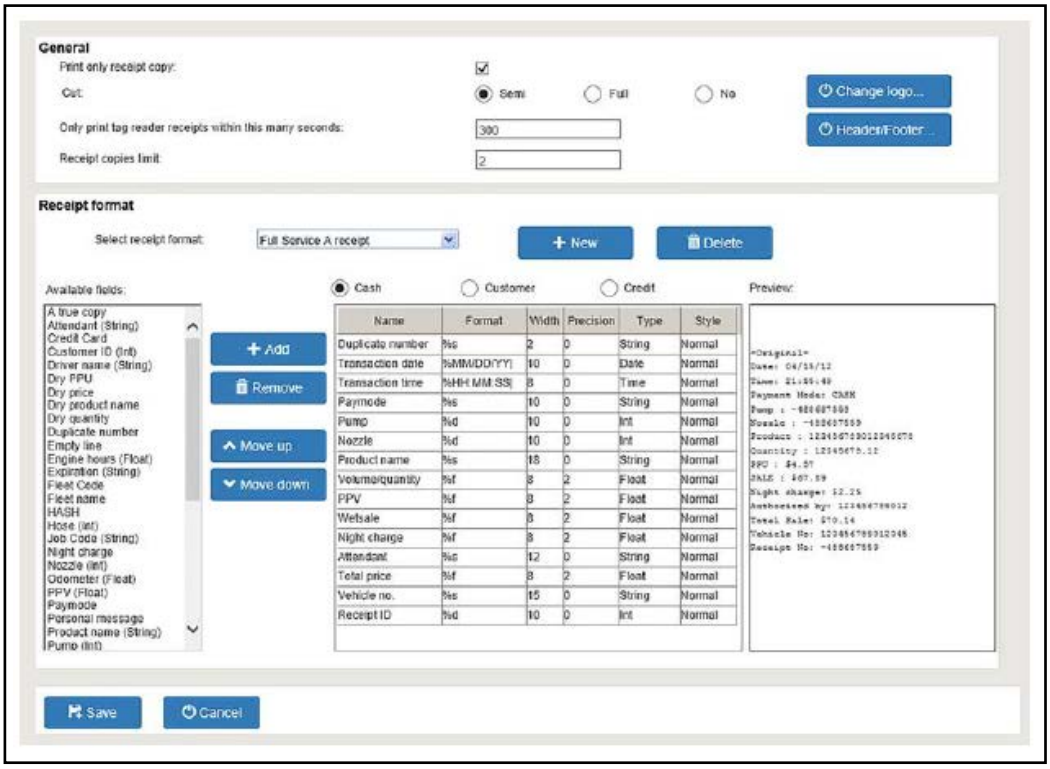
*Notes: 1) All fields are optional except the **APN**.*

2) Contact your cellular provider if PIN is required.

6.4 Receipts

Click **Receipt** to display the Select Receipt Format dialog. This feature enables selecting a format from a list of fully customizable templates as well as creating new receipt formats to meet customer expectations (see Figure 34).

Figure 34: Receipt Format Selection Dialog



6.4.1 General Settings

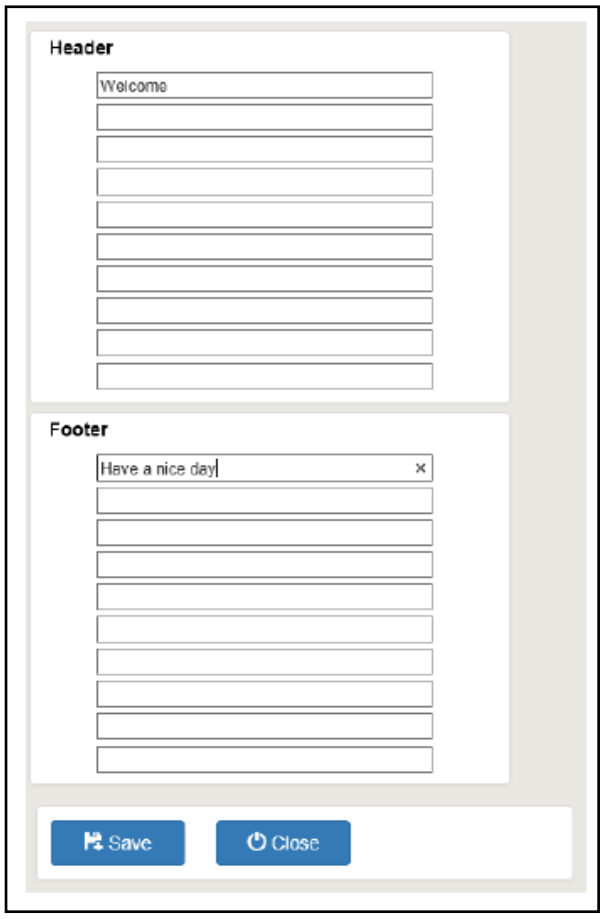
The General panel includes the following settings (see Table 14):

Table 14: Select Receipt Format - General Fields

Field	Description
Change Logo	Enables loading a PCX file for a logo printout at the top of the receipt. The logo should be a monochrome (black and white) PCX file, with a maximum size of 1 KB.
Header/Footer	Click the **Header/Footer** button to define up to 10 lines for the header and footer (each line can include up to 30 characters). The Receipt Format dialog box opens (see Figure 35 on page 16). The typed text is added as is to the receipt. Click **Save** to save the changes, and **Close** to close the dialog and return to the Select Receipt Format dialog.
Print only receipt copy	Select this check box to print only one copy of each receipt.
Cut	Enables defining printer cut modes: • **Semi**: Partial cut; end-user must lift the printer lid to take the receipt. • **Full**: Full cut; receipt is cut and ejected from the printer. • **No**: Receipt is not cut; end user must tear off the receipt.

Field	Description
Only print tag reader receipts within this many seconds	Enter the time limit for the user/attendant to present the tag and automatically print a receipt. Receipts will not be issued past this limit.
Receipt Copies limit	Enter the maximum number of receipt copies that the costumer or the attendants are allowed to withdraw for each transaction.

Figure 35: Receipt Format - Header/Footer Dialog



6.4.2 Receipt Format Settings

The Receipt Format panel enables you to define the fields to include in the receipt, their order of appearance, and more. Several templates may be defined.

The following options are available:

- Select a previously defined format from the menu.
- Select a format from the menu and then modify its properties.
- Enter a name in the menu and then click **New** to create a new format.

To edit the fields to include in the receipt, proceed as follows:

1 Click the field row in the **Available Fields** list to select it, and then click **Add** (see Table 15 on page 17). The field is added to the grid in the center.

2 (Optional) Click a row in the grid, and perform one of the following:

a Click **Move up** or **Move down** to change the field's order of appearance in the receipt.

b Double-click the **Name** field to rename the field.

Note: The Format, Width, Precision, and Style columns are read only. See the Table 15 *below for a description of the different formats.*

3 (Optional) Select the **Cash**/**Customer**/**Credit** options to specify formats for the different types of transactions and repeat Steps 1 and 2.

4 Click **Save** to save the settings. A **Preview** of the format is displayed on the right side pane.

To remove a field from the report, click the row on the right side grid and then click **Remove**.

To remove a format from the system, select the format from the **Select receipt format** drop-down and then click **Delete**.

Table 15: Receipt Fields

Field	Description
A true copy	Indicates whether the receipt was a copy or not.
Attendant	Attendant who authorized the transaction.
Balance	Customer credit balance.
Credit Card	Credit card Primary Account Number protected and masked complying with PCI standards.
Customer ID	ID number of the customer.
Driver Name	Driver name entered for identification.
Dry PPU	Price per unit of dry goods.
Dry Price	Total price of dry goods sold.
Dry Product Name	Name identifying the item.
Dry Quantity	Quantity of dry units sold.
Duplicate Number	Number of receipt copy.
Empty Line	Empty line to distinguish between the different sections of the receipt.
Engine Hours	Current number of engine hours.
Fleet Code	Numeric code identifying the fleet.
Fleet Name	Name identifying the fleet.
HASH	N/A
Hose	Number of the hose used to supply the fuel in the transaction.
Night Charge	Night charge added to a transaction performed at night shifts.
Nozzle	Number of the nozzle used to supply the fuel in the transaction.
Odometer	Odometer reading from the vehicle.
Paymode	Means of payment used in the transaction.
Personal Message	Free-text message.
PPV	Price Per Volume.
Product Name	Name identifying the product in the system.

Field	Description
Pump	Number of the pump head, from which the transaction was performed.
Receipt ID	Ordinal unique number assigned by the system to each receipt as included in each printed receipt.
Reference Number	Pre-authorization code sent by payment processor.
Sale after Discount	Sum collected in the transaction after discount.
Signature	Space provided for customer's signature.
Station Name	Gas station name.
Terminal	Payment terminal used to perform the transaction.
Total pre VAT	Total sum before VAT.
Total Price	Total sum collected in the transaction (including taxes).
Totalizer	Pump totalizer
Transaction Date	Date of the transaction.
Transaction Driver ID	ID of the driver.
Transaction ID	Unique transaction ID.
Transaction Time	Time of the transaction.
VAT	Value Added Tax percentage.
Vehicle No.	License plate number or unique number of the vehicle.
Volume/Quantity	Fuel volume supplied in the transaction.
Wetsale	Sum of money collected for wet products.
Empty/Default	Default field format.
Float (%f)	Decimal floating point numbers.
Float 0-pad (%0*.*f)	Decimal floating point numbers with zero padding to the required width.
Integer (%d)	Decimal numbers.
Hex (%x)	Hexadecimal numbers.
Int/ 0-pad	Decimal numbers with zero padding out to the required width.
Hex/ 0-pad	Hexadecimal numbers with zero padding out to the required width.
Int/exact/0-pad	Decimal numbers with zero padding out to the required width.
Hex/exact/0-pad	Hexadecimal numbers with zero padding out to the required width.
Int/ 0-pad/LJ	Decimal numbers with zero padding out to the required width, left justified.
Hex/ 0-pad/LJ	Hexadecimal numbers with zero padding out to the required width, left justified.
String (%s)	Alphanumeric characters
Right Part of String	Right characters in the string, according out to the required width.

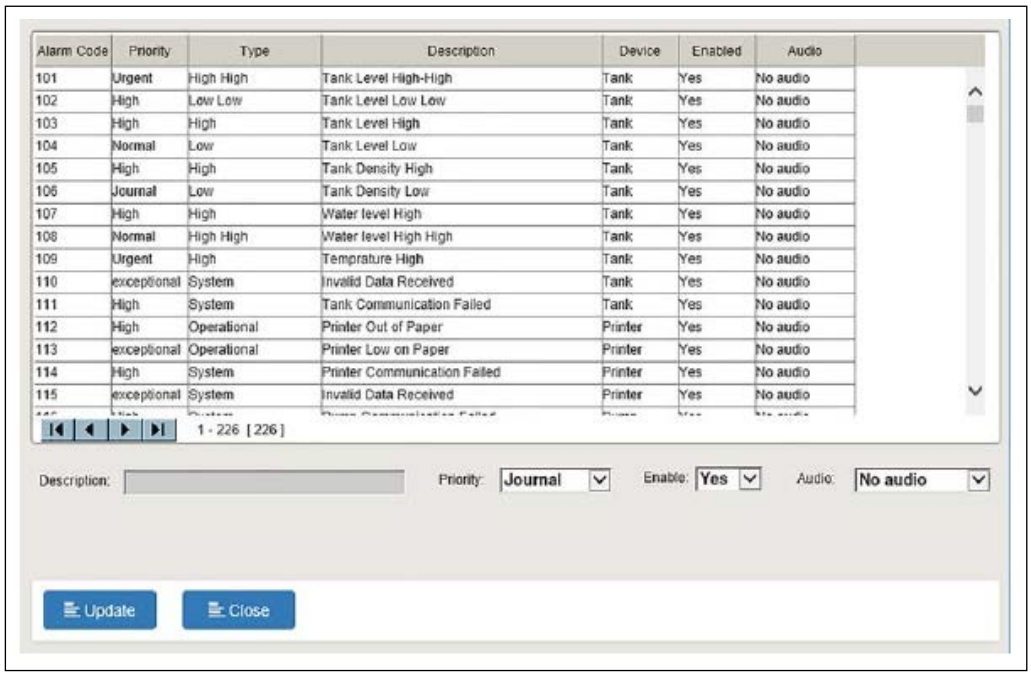
Field	Description
Date Formats	Available formats: • YYYY-MM-DD • YYYYMMDD • DD-MM-YYYY • MM-DD-YYYY • DD/MM/YYYY • MM/DD/YYYY • DD/MM/YY • MM/DD/YY • DDMMYYYY • MMDDYYY
Time Formats	Available formats: • hh:mm:ss • hhmmss • hh:mm • hhmm

Click **Save** to save the settings and **Close** to exit the dialog box and return to the Global page; or click **Close** to exit the dialog box without saving the changes.

6.5 Alarms

Click **Alarms** to display the Alarm Management dialog box, which enables you to define the alarm properties (see Figure 36). The types of alarms are predetermined in the system, and they are listed in the Alarm Code column by ascending number. The administrator can only change their properties.

Figure 36: Alarm Management Dialog



To change an alarm's properties, select the alarm by clicking on the corresponding row. The selected alarm name is shown in the **Description** field, and its properties are shown in the selection boxes. Set the properties from drop-down lists:

- **Priority**: Select the alarm's priority from lowest to highest (**Journal**/**Exceptional**/**Normal**/**High**/**Urgent**).
- **Enable**: Select whether the alarm is enabled (**Yes**/**No**).
- **Audio**: Select the type of audio the alarm will generate (**No Audio**/**Beep**/**Loudalarm**/**Buzzer**/**Wawa**/**Attention**).

Click **Update** to save the selections. Verify that the new properties are displayed in the alarm's corresponding row.

Click **Close** to exit the dialog without saving changes and return to the Station Parameters page.

6.6 Comm (FCC)

Click the **Comm** button to display the Comms Setup dialog box, which contains the communication properties of the SiteOmat360 as described in the table below (see Table 16, Figure 36).

Note: Most of the parameters in the Comms Setup screen are read-only and are used for information purposes only.

Figure 37: Comms Setup Dialog

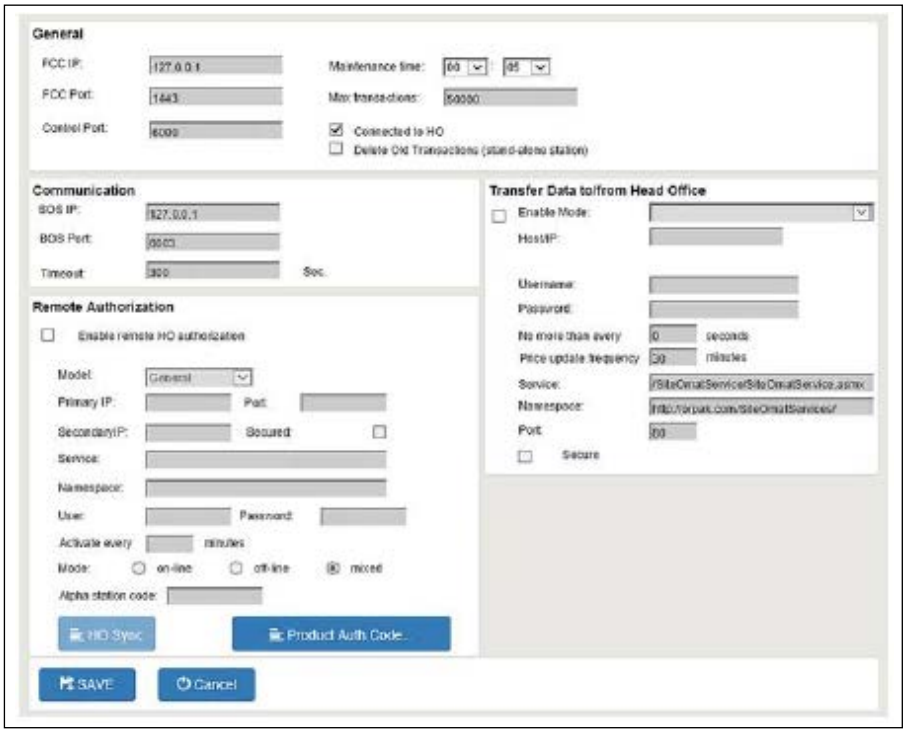


Table 16: Comms Setup Fields

Panel	Description
General	The General panel defines communication properties of the Forecourt Controller. • **FCC IP:** Identifies the IP address of the Forecourt Controller in the network for view only. The connection is identified at the **FCC Port** box (LAN1 or LAN2) and the **Control Port** box. • **Maintenance time**: Sets the time of the day, hours, and minutes after midnight, at which the SiteOmat360 performs clean-up operations of the database and other activities. The duration of the maintenance procedure depends on the workload of the system, which is the number of transactions not passed to the Head Office. This process may take a few minutes, during which the system may experience a delay in authorizing and other operations. Therefore, it is highly recommended to select a time where no activity or minor activity is expected in the station. Default procedure time is five minutes after midnight. • **Max transactions**: Sets the Forecourt Controller's transactions capacity. • **Connected to HO**: Deletes transactions only after data was transferred to HO (in cases where overriding is selected). • **Delete Old Transactions**: Enables overriding of transactions in FIFO method if the number of transactions is over the set maximum.
Communication	This panel displays read-only information.

Panel	Description
Transfer Data to/from Head Office	See “6.6.2 Transfer Data To/From Head Office” on page 23.
Remote Authorization	See “6.6.1 Remote Authorization” on page 22.
Log Server	Defines a remote server that captures log information provided by the system. When the IP and port of the server are defined, SiteOmat360 automatically starts sending UDP log messages to the specified port. SiteOmat360 does not check if the message was delivered. A Log Server application is provided by GVR. It is a Windows application that listens in on the UDP port and writes the log messages to files. This software requires entering an IP address and Port to enable downloading of log reports from the Forecourt Controller to the computer. The **Log Server** dialog requires entering the **IP** address and the Port definition as set in the computer. The **Log Server** should be used only in cases where extensive logging is required, such as during pilot procedures or for problem reporting.

Click **Save** to save the selections and return to the Global page or click **Cancel** to exit the dialog without saving the changes.

6.6.1 Remote Authorization

The fields in this panel are defined in cases where the Head Office application provides Web Services in a predefined format for authentication. Specific settings are provided for these applications only.

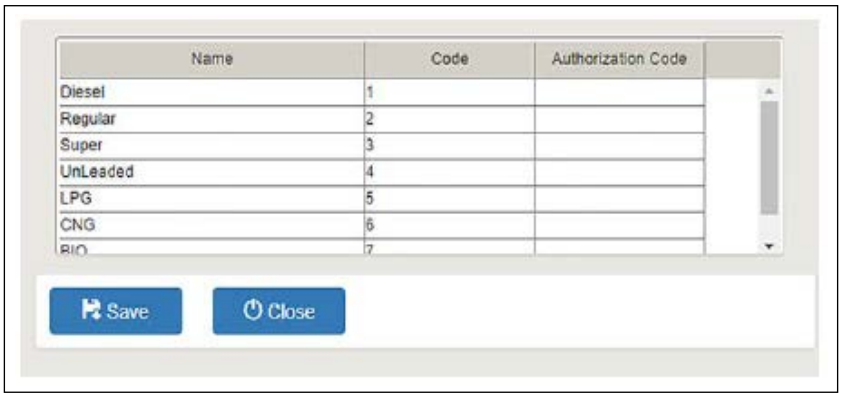
Define the following parameters:

- **Model/Primary IP/Port/Secondary IP/Secured/Service/Namespace**: Remote Authorization server parameters.
- **User/Password**: Remote authorization server credentials.
- **Activate every [x] minutes**: Rate of communication with the remote authorization server.
- **Mode**: (see Figure 37 on page 21).
  -**Online**: Authorize all transactions through the remote server.
  -**Offline**: Authorize all transactions at the local station.
  -**Mixed**: Attempt to authorize all transactions through the remote server, and if communication is unavailable authorize transactions at the local station.
- **Alpha Station Code**: Station code is set in “Global Settings”.
- **HO Sync**: Triggers the sync process with the HO server.

5.6.1.1 Product Auth Code

The Product Auth Code dialog is used to associate the products defined in the SiteOmat360 with the external payment processor (see Figure 38).

Figure 38: Product Auth Code Dialog



6.6.2 Transfer Data To/From Head Office

The fields in this panel are defined in cases where the Head Office is implemented. It requires a message from SiteOmat360 through Web Services, to activate the Head Office and update the system. The feature is disabled by default. As these are very specific settings, additional information is provided for developers of Head Office on demand.

Define the following parameters:

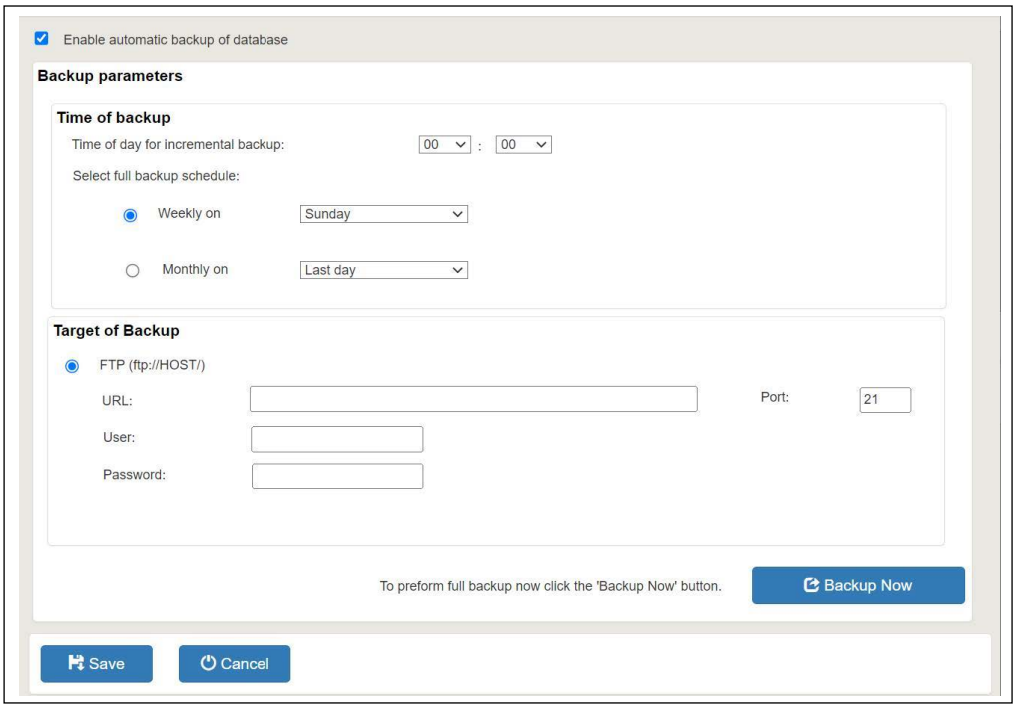
- **Enable mode**: When enabled, station initiates communication with HO, rather than HO initiating communication.
- **Host IP/Service/Namespace/Port/Secure**: HO server communication parameters.
- **Username/Password**: HO Credentials
- **No more than every [x] seconds**: Rate of communication with the HO server.
- **Price update frequency [x] minutes**: Interval at which station checks HO server to update product prices.

6.7 Backup

Click **Backup** to display the Backup setup dialog, which enables users to define the database backup (see Figure 39).

Backup can be enabled by clicking the **Enable automatic backup of database** check box, or disabled by leaving it blank.

Figure 39: Setup Backup Dialog



There are two types of backup:

- **Delta backup**: Only saves the changes made following the previous backup. If the **Enable automatic backup of database** check box is selected, the system creates a delta or incremental backup at the intervals determined in the Time of backup section.
- **Full backup**: Backs up the entire database. This type of backup must be performed manually by the user.

To define the backup parameters, proceed as follows:

1 Define the settings in the **Time of backup** panel:

- **Time of day for incremental backup**: Set the time of day to perform the **Delta backup** (HH:MM in 24-hour format).
- **Select full backup schedule**: Select the **Weekly on**/**Monthly on** options to define how often and when to perform a **Full backup**.
  -**Weekly on**: Performs a Full backup once per week. Select the day of the week from the drop-down list.
  -**Monthly on**: Performs a Full backup once per month. Select the day of the month from the drop-down list.

2 Define the backup's save location in the **Target of backup** panel:
- **FTP (ftp://HOST/)**: This option is auto-selected and cannot be changed.
- **URL**/**Port**: Set the URL and port of the target FTP server where the backup will be saved.
- **User**/**Password**: Login credentials for the target FTP server.

3 Click **Save** to save the settings. Otherwise, the following message is displayed (see Figure 40).

Figure 40: Save Data Message

4 Click **Backup Now** to test the backup settings. This procedure performs an immediate and full backup to the defined target.

Note: A binary file is created in the FTP server; in cases where using the delta mode, TXT files are created. Those files can be accessed in the restore process only, do not open them with other applications. To restore a backup, contact GVR support.

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7 – Forecourt Setup

7.1 General

This section provides setup instructions for Forecourt Controller peripherals and devices. The Forecourt setup is used to define all system components.

Perform the setup process in the following order:

1. 7.3 Buses
2. 7.4 Printers
3. 7.5 OPT
4. 7.6 Tag Readers
5. 7.8 Tank Level Gauge (optional)
6. 7.9 Tanks
7. 7.10 AVI (VIS) (optional)
8. 7.11 FPOS
9. 7.7 Pump Servers
10. 7.2 Dispensers (main page)

After defining of the parameters, click **Save** and then **Reload** to implement the setup parameters. To define all station peripherals, access the Advanced Mode.

The Advanced Mode page is accessed by clicking the **Advanced Mode** button in the Setup page (see Figure 41).

Figure 41: Setup Page - Advanced Mode

7.2 Dispensers

The Setup Pump Settings dialog enables defining the dispensers linked to the Forecourt Controller (see Figure 42).

To define a new pump, click the **Add Pump** button in the Advanced Settings page and fill the corresponding parameters in the General section of the dialog box (see Table 17).

Figure 42: Setup Pump Settings Dialog

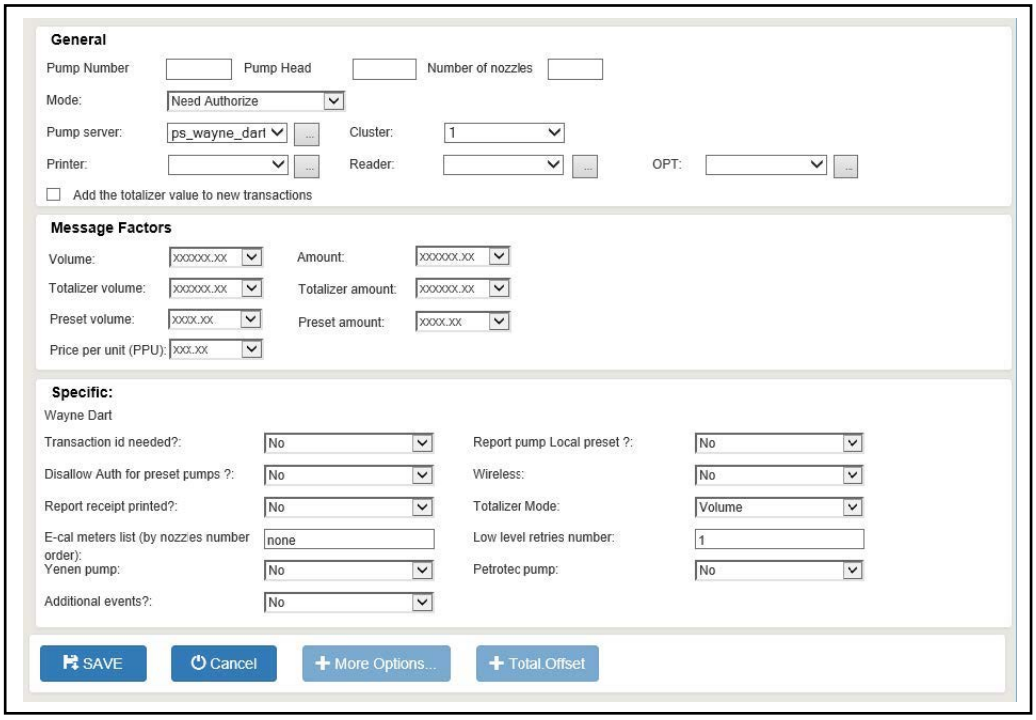


Table 17: General Section Parameters

Parameter	Description
Pump Number	Identification number of the pump. The logical number defining the pumps.
Pump Head	Address of the pump head as defined in the dispenser setup, acquired by technician.
Number of nozzles	Number of nozzles connected to the pump head.
Mode	A pump can operate in two fueling Modes. In **Auto Authorize** mode, the pump is authorized as soon as the nozzle is lifted. This mode is used only when monitoring of fueling is required. The **Need Authorize** mode blocks the pump until an authorization device is used in any of the available fueling scenarios.
Pump Server	Select the Pump Server from the drop-down list, or click the ellipsis (...) button to open the Setup Pump Server dialog (see "7.7 Pump Servers" on page 21).
Cluster	According to the selected Pump Server, select the cluster from the drop-down list.
Printer	Select the Printer to be linked to the pump from the drop-down list, or click on the ellipsis (...) button to open the Printers dialog (see "7.4 Printers" on page 12).
Reader	Select the device Reader to be linked to the pump from the drop-down list, or click on the ellipsis (...) button to open the Setup Tag Reader dialog (see "7.6 Tag Readers" on page 18).

Parameter	Description
OPT	Select the OPT terminal to be linked to the pump for prompts display from the drop-down list, or click on the ellipsis (...) button to open the OPT dialog (see “7.5 OPT” on page 14). This association applies for this function only; the terminal can serve and be linked to several pumps in the station.
Add the totalizer value to new transactions	Includes totalizer reading after transaction to each transaction record.

7.2.1 Message Factors

The Message Factors define the format of the data displayed to the customer and the operator. The location of the decimal point in the string of digits that make up the data can be set.

To select a format, click the drop-down list. The message factors are as follows (see Table 18).

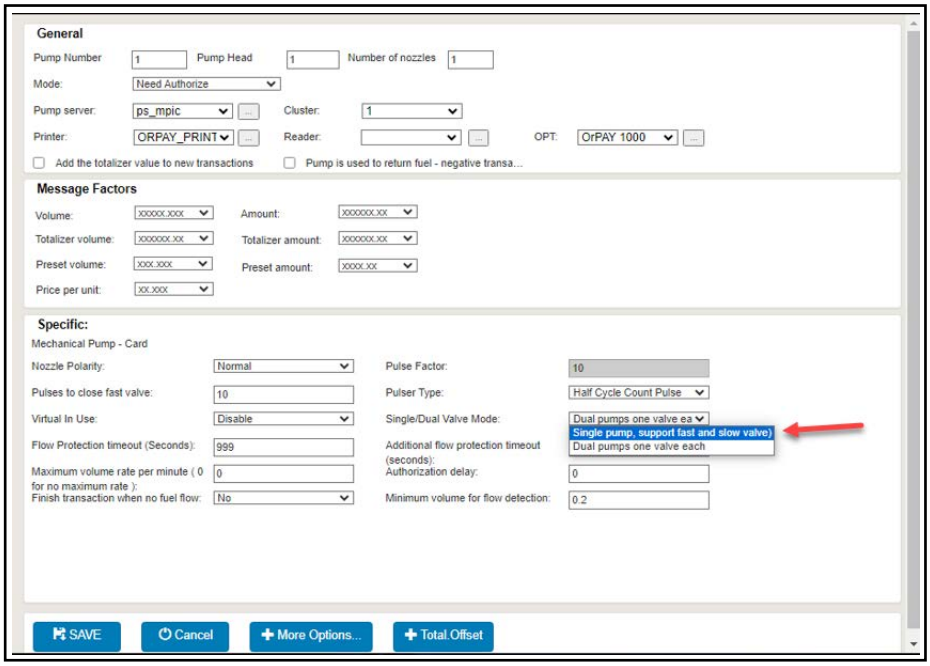
Table 18: Message Factors

Factor	Description
Volume	Volume of the pumped fuel in this transaction.
Totalizer Volume	Accumulative volume pumped in all transactions.
Preset Volume	Preset volume for pump authorization.
PPU	Price Per Unit (PPU) for all transactions.
Amount	Payment (value) in this transaction.
Totalizer Amount	Accumulative payment pumped in all transactions.
Preset Amount	Preset amount for pump authorization.

7.2.2 Specific Pumps

Each dispenser type has specific parameters that need to be defined per the pump manufacturer's specifications.

Figure 43: Pump Specific

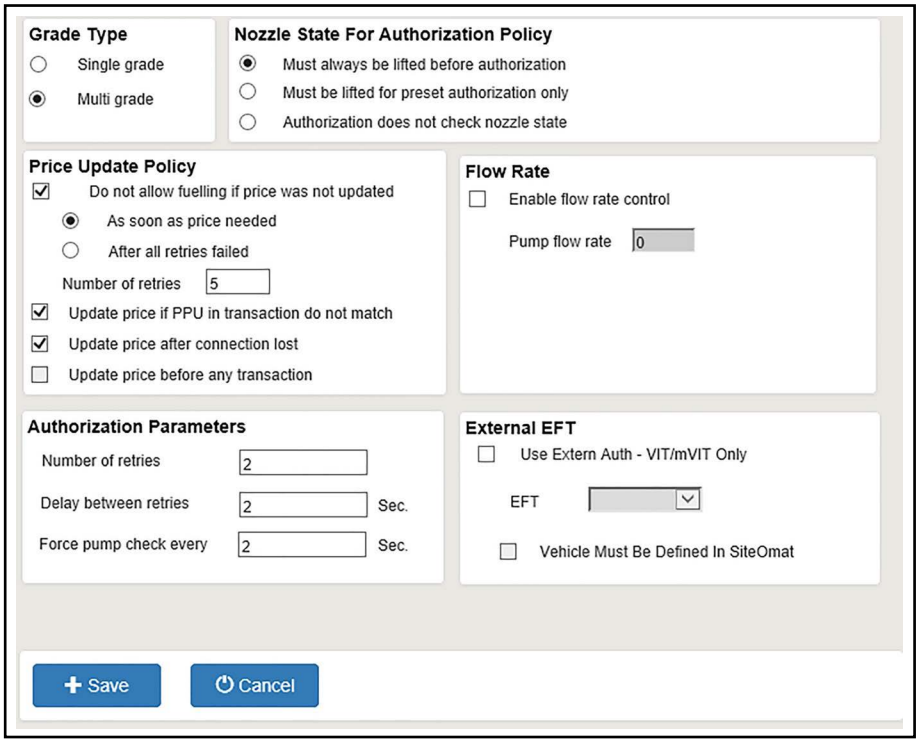


Note: The Site and Truck Prime systems configured as MPI-C pumps; the Single/Dual Value Mode must be set as ***Single pump, support fast, and slow valve*** *for the Mechanical Pump - Card setup.*

7.2.3 More Pump Options

To set additional settings, click the **More Pump Options** button, and the corresponding dialog box is displayed (see Figure 44).

Figure 44: Setup Pump Settings (more) Dialog



*Notes:1) The default settings in this dialog, and **Must always be lifted before authorization**, should not be changed unless directed by an advanced technician.*

2) When adding a new pump, the advanced options are not accessible until the pump is saved.

To access more options, proceed as follows:

1 Click the ellipsis (…) button adjacent to the desired pump. The Setup Pump Settings dialog box is displayed (see Figure 42 on page 3).

2 Click the **More Options** button. The Setup Pump Settings (more) dialog box is displayed (see Figure 44 on page 6).

3 Set the pump parameters described in the table below (see Table 19).

4 Perform one of the following:
- Click **Save** to save changes.
- Click **Cancel** to return to the Setup Pump Settings dialog box.

To delete a pump from the system, select the pump by clicking its row on the **Dispensers** tab, and then click the **Delete Pump** button. If the pump is currently in use, it cannot be deleted.

Table 19: Setup Pump Settings (more) Sections

Section	Description
Grade Type	Sets the station level of service (**Single** or **Multiple**).
Nozzle State for Authorization Policy	Defines the nozzle state for authorization. This parameter selection must match the fueling **Method** defined in the main Dispensers page. The default (must always be lifted before authorization) should not be changed for common dispensers.
Price Update Policy	Allows defining when a new price is set at the pump. The selections are: • **Do not allow fueling if price was not updated**: Do not allow fueling if the price update failed, as soon as the new price is entered or after a number of retries for the update that failed. Accordingly, set the **Number of retries**. • **Update price if PPU in transaction do not match**: Update the price if the PPU in the current transaction does not match the newly set price. • **Update price after connection lost**: Update price whenever a connection between the pump and the Forecourt Controller was lost. • **Update Price before any transaction**: This option is disabled.
Flow Rate	Verifies that the flow is not larger than x gallons/liters per minute for mechanical pumps only. The default is disabled, and the flow rate is defined as zero. In cases where the option is enabled and the flow exceeds the predetermined value (For example, actual flow is 100 gallon/min, defined flow rate is 60 gallon/min), the Forecourt Controller stops the fueling.
Authorization Parameters	Defines the **Number of Retries** allowed for the customer and the maximum **delay between retries** before the pump shuts off for the customer. You can also **Force a pump check** of its authorization definitions by defining its rate in seconds.
External EFT	(Optional) Requires integration with third-party applications. Defines system with external Electronic Funds Transfer capability (For example, the authorization process is done in an external system and not in the SiteOmat360 system). Define the type of EFT available in the system from the drop-down list. **Vehicle Must Be Defined In SiteOmat360**: Vehicles must also be defined in a list in the SiteOmat360 if this check box is selected.

7.2.4 Totalizer Offset

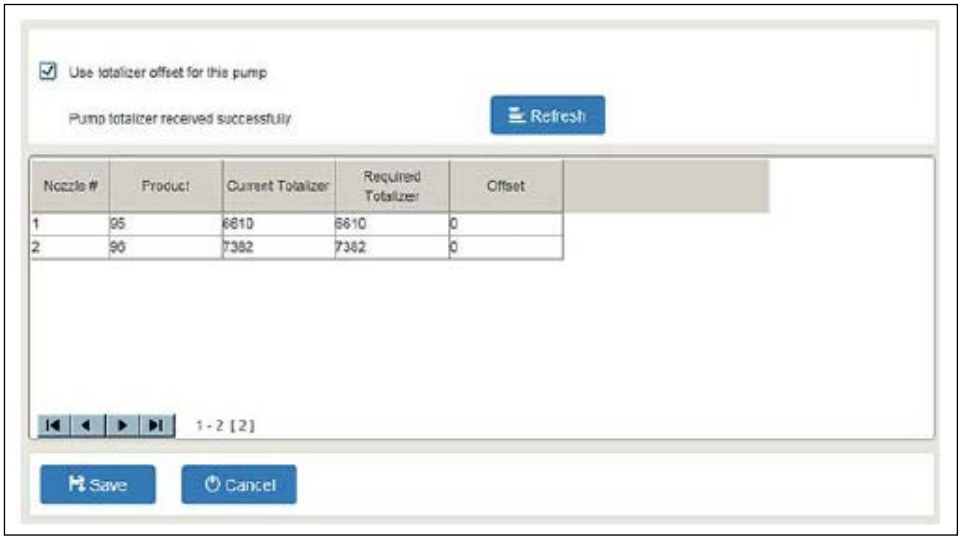
The system enables matching up mechanical totalizers to the automation totalizer readings by adding offset values.

Note: In cases of mismatch, totalizer offset should be added to each pump nozzle. Negative offset values are not accepted. It is highly recommended to set totalizer offset once at station initial setup.

To set Totalizer Offset, proceed as follows:

1 In the Setup Pump Settings dialog, click **Total Offset**. The following dialog box is displayed (see Figure 45).

Figure 45: Setup Totalizers Offset Dialog



2 Select **Use Totalizer Offset for this pump** check box.

3 (Optional) Click **Refresh** to view updated totalizer readings.

4 Perform one of the following:

a Double-click the **Required Totalizer** field and enter the compensated totalizer value (Offset is calculated accordingly).

b Double-click the **Offset** field and enter the offset value (compensated totalizer is calculated accordingly).

5 Repeat step 4 for each nozzle.

6 Perform one of the following:

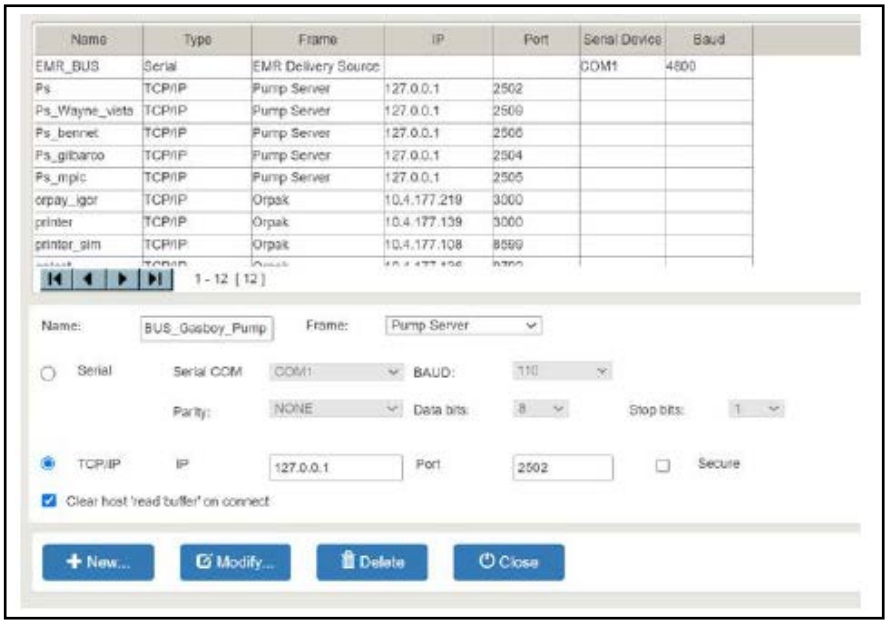
a Click **Save** to save changes.

b Click **Cancel** to return to the Setup Pump Settings dialog box.

7.3 Buses

To access the Buses dialog, select the **Buses** tab in the Setup page (see Figure 46).

Figure 46: Buses Dialog



This dialog enables setting the communication channels to the peripheral devices in use in the Forecourt Controller. Regularly, these are TCP/IP buses in use in the Converter for communication with pumps and RS-485 linked devices.

To define a bus, proceed as follows:

- Enter the Name
- Select the protocol (frame)
- Set the communication parameters (TCP or Serial)

The communication channels between the Forecourt Controller and the station's components are the initial step in setting up the system. While defining the different station devices, link them to the relevant bus.

In most cases, use the system and device's default communication parameters. These can be modified according to local network requirements.

For example, an OPT with default IP address **192.168.1.211** and port 3000 requires defining an OPT Bus channel identified by IP and port **192.168.1.211:3000**.

When defining an OPT device in SiteOmat360, that OPT is linked to the predefined OPT Bus.

In the example below (see Table 20 on page 10), each OPT device is linked to a dedicated Bus channel. The TLG console is linked to a dedicated Bus channel, and the dispensers (pumps) to another dedicated Bus channel.

Table 20: Bus Definition Example

Device	IP #	Port
OPT1	192.168.1.211	3000
OPT2	192.168.1.212	3000
Printer1	192.168.1.211	3485
Printer2	192.168.1.212	3485
TLG	192.168.1.111	3005
Pump Server	127.0.0.1	2502
WGT Standalone	192.168.1.170	3001
WGT Embedded	192.168.1.211	3001
BV1000	192.168.1.211	3737

Note: When configuring a Pump Server, which is an internal process in the system, it is required to set the communication parameters of the SiteOmat360 and the Pump Server and not the communication between the Pump Server and the target pump connected through a Converter port. This Bus communication is "localhost" and uses the IP address 127.0.0.1 and a unique port number starting with 2501 and ending with 2509.

7.3.1 Bus Settings

To define communication channels, proceed as follows:

1 In the **Name** field, enter the Bus name. It is recommended to have a convention of bus names (related to the device name). Each bus name should have a unique name and continue with the target device name.

2 Select the protocol from the **Frame** drop-down list. Only devices that use the same protocol can be defined to link to this bus. Select the frame in accordance with the devices connected to it, as listed below (see Table 21).

Table 21: Protocol Settings

Frame	Devices
Orpak	Printer, OPT, WGT
Pump Server	Pump server
Axalto	Axalto payment terminals (FPOS)
Hectronic	Hectronic TLG
Veeder-Root®	Veeder-Root TLS 350 or 450
EECO	EECO TLG
OPW PV4	OPW PV4 TLG
Start Italiana	Start Italiana TLG probe
OrTC	OrTC controller unit
DIGIO	Digital Enclosure door device
CRIND®	CRIND type OPT
CAT	CAT type OPT

Frame	Devices
URD	N/A (Universal DALKAN)
ATG Server	Data communication between PSS 5000 and TLG
AFS Probe	AFS TLG
Modbus RTU	MIPROBE TLG
BV1000	BV1000 EMV terminal

3 For TCP/IP communication:

a Verify that the **TCP/IP** option is selected.

b In the **IP** field, enter the device IP address.

c In the **Port** field, enter the device port (see "3.1.1 Default IP Addresses" on page 2).

For serial communication, select the **Serial** option, and define the following according to the serial device parameters:

a Serial COM: The physical connection to the Forecourt Controller. Currently only COM2 for the TLG direct connection to the Forecourt Controller serial port - RS232 is supported.

b BAUD: Communication speed.

c Parity: Sets the parity of transmitted data for the purpose of error detection (NONE, ODD, or EVEN).

d Data bits: The string length.

e Stop bits: Number of stop bits at the end of the string.

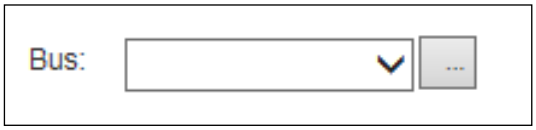
Note: The serial port is currently in use for TLG connection only.

4 (Optional) Select the **Clear host "read buffer" on connect** check box to reset external devices (For example, TLG) communication buffer whenever the communication with the device is established.

5 Perform one of the following:
- Click **New** to add the new channel. The bus is added to grid at the top of the dialog.
- Click **Modify** if the settings of an existing channel are changed.

Throughout peripherals setup, link a device to its bus from a drop-down list (For example, see Figure 47). If the bus is not yet defined, an ellipsis (…) selection button is available on the right. Click this button to return to the Buses setup dialog and define a new bus for the device.

Figure 47: Bus Selection

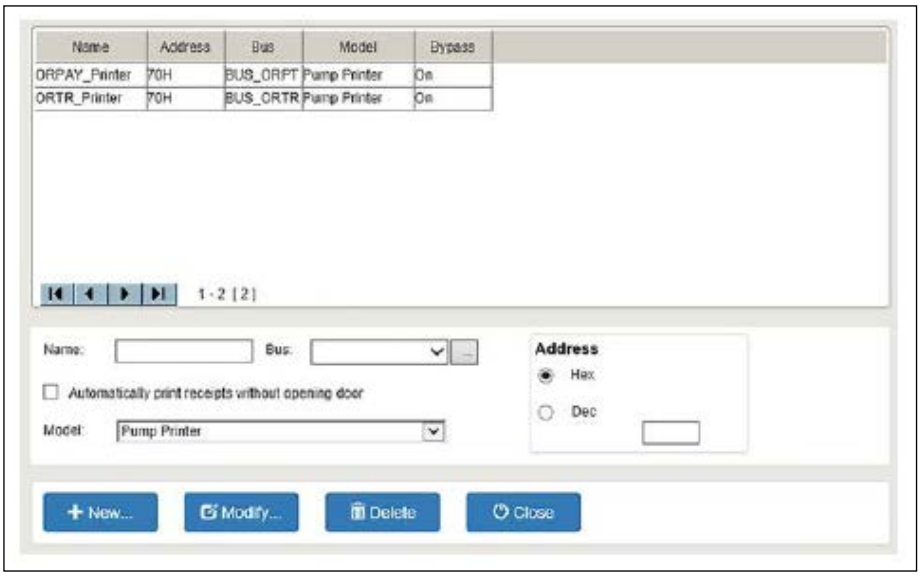


To delete a bus from the system, first select it by clicking on its row in the grid. Verify that the bus properties are displayed in the text boxes, and then click on the **Delete** button. If the bus is already in use (any device linked to it), the bus cannot be deleted.

7.4 Printers

To access the Printers dialog, select the **Printers** tab in the Setup page (see Figure 48).

Figure 48: Printers Dialog



A Printer definition is simple, requiring only a bus and an RS-485 address.

To define a printer, proceed as follows:

1 In the **Name** field, enter the Printer name.

2 In the **Bus** drop-down list, select the bus that is previously defined. All printers supported in SiteOmat360 communicate in Gasboy frame, therefore the **Bus** selection is restricted.

3 In the **Model** drop-down list, select a model from the supported models list:
- Pump Printer and OPT Printer (both used for receipts).
- Journal Printer (used for journaling important operations, such as all transactions, on hard copy).

*Note: The printer must also be selected and set up in the OPT tab, the corresponding payment terminal, and the **Printers** drop-down list, in order for the receipt printer to function (see "7.5 OPT" on page 14).*

4 In the **Address** field, define its **Hex Address**/ **Dec Address**. For Pump Printer and OPT Printer, the default Hex address is 70, and for Journal Printer it is 1 (see "Default Serial (HEX) Addresses" on page 2).

Note: Journal Printer is connected to the Converter by way of an RS-485 Module. Set a dedicated bus for the printer, with the corresponding Port.

5 (Optional) Select the **Automatically print receipts without opening door** to print the receipt without lifting the printer's lid.

Note: This setting must be selected for PRIME systems.

6 Perform one of the following:

a Click **New** to add the new printer. The printer is added to grid at the top of the dialog.

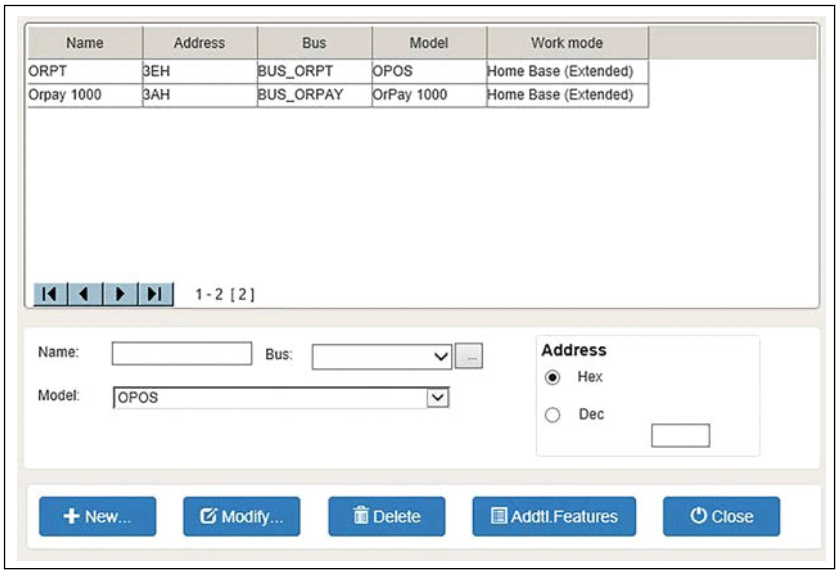
b Click **Modify** if the settings of an existing printer are changed.

c Click **Close** to return to the Setup page.

7.5 OPT

To access the OPT dialog, select the **OPT** tab in the Setup page (see Figure 49).

Figure 49: OPT Dialog



The OPT definition has several options. First, it requires a bus and an RS-485 address, and then the additional features can be defined.

To define an OPT, proceed as follows:

1 In the **Name** field, enter a descriptive name.

2 In the **Bus** drop-down list, select the bus that is previously defined. All OPTs supported in SiteOmat360 communicate in GVR frame, therefore the Bus selection is restricted.

3 In the **Model** drop-down list, select a model from the supported models list. The default Model is OPOS.

4 In the **Address** field, define its **Hex Address**/**Dec Address** (see "Default Serial (HEX) Addresses" on page 2).

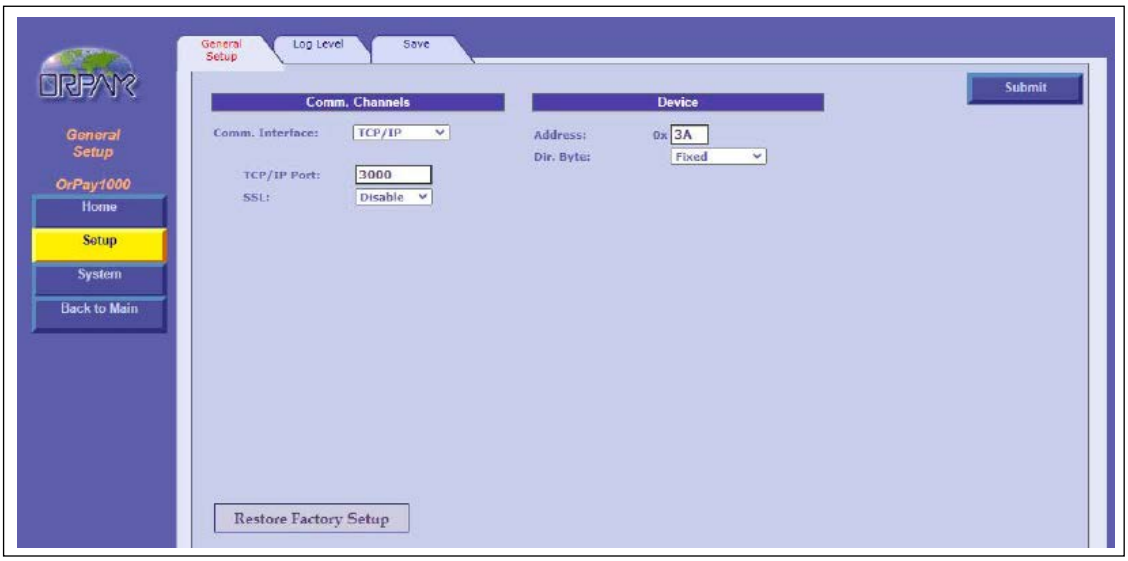
5 (Optional) Click **Addtl. Features** to define additional features.

6 Perform one of the following:
- Click **New** to add the new OPT. The OPT is added to grid at the top of the dialog.
- Click **Modify** if the settings of an existing OPT are changed.
- Click **Close** to return to the Setup page without saving changes.

7.5.1 OrPAY1000 Setup

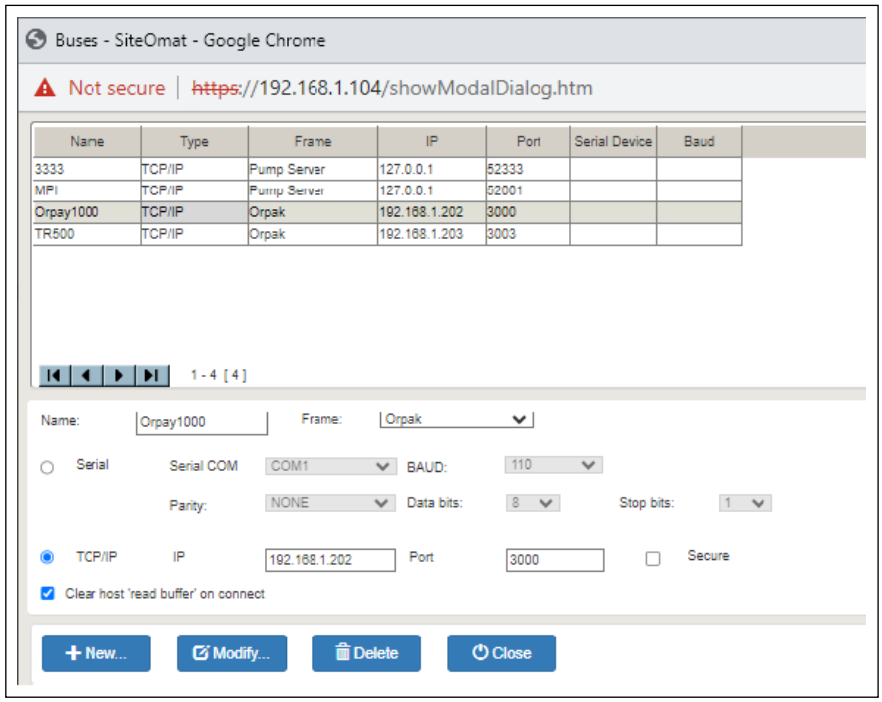
The OPT dialog is where the settings for OrPAY1000 are configured. For example, if the following settings exist in the OrPAY1000 screen.

Figure 50: OrPAY1000 Setup Screen



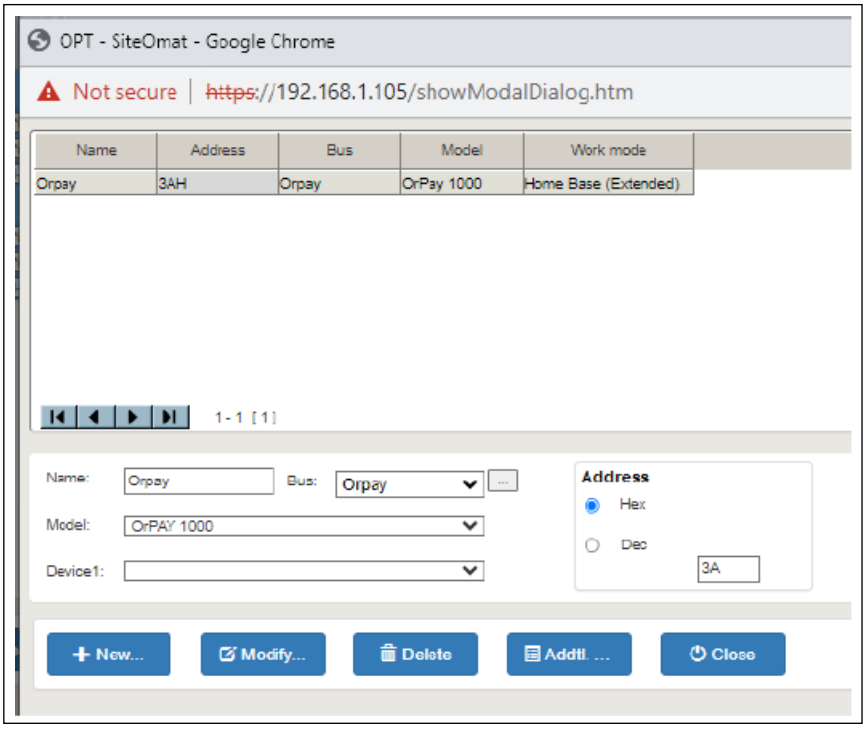
Then the buses in SiteOmat360 will be set as follows (see Figure 6-10):

Figure 51: Buses Setup for OrPAY1000



And the OPT dialog will be as shown below. For OrPAY1000, make sure to select **OrPAY100** in the Model field (see Figure 6-11):

Figure 52: OPT Setup for OrPAY1000

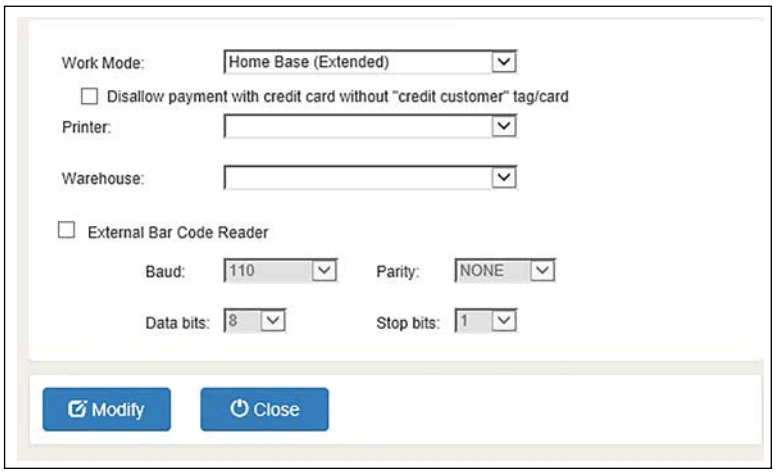


7.5.2 Additional Features

To define additional features dialog, proceed as follows:

1 Click the **Addtl. Features** button. A following dialog box is displayed (see Figure 53).

Figure 53: OPT Features Dialog



2 Select **Home Base (Extended)** from the **Work Mode** drop-down list.

3 **Disallow payment with credit card without "credit customer" tag/card**: N/A.

4 Select a printer that the OPT uses for printing receipts from the **Printer** drop-down list (select the name of the pump printer that is defined previously).

5 **Warehouse**: N/A for PRIME X.

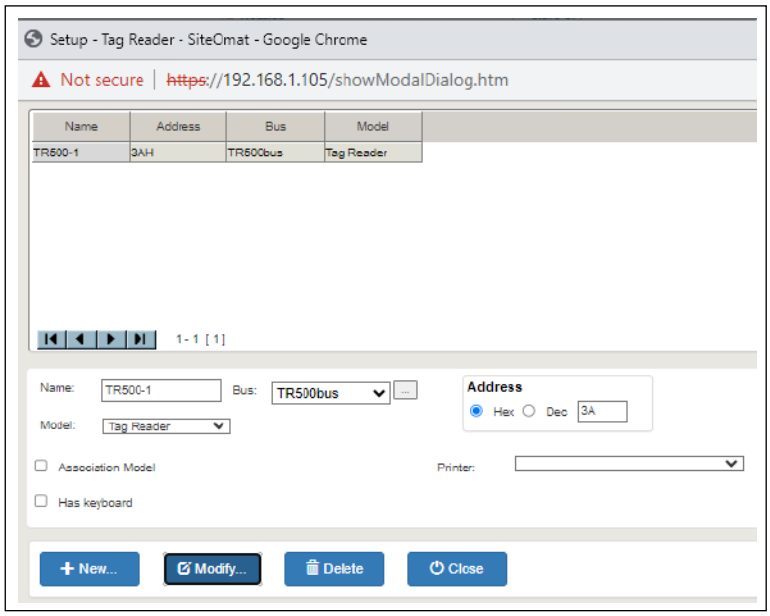
6 (Optional) If using an external barcode reader connected to the terminal, select the **External Barcode Reader** check box and set the serial communication parameters.

Note: Currently, SiteOmat360 supports Motorola Symbol DS3508 Digital Scanner protocol. For this model, use the settings shown above (see Figure 53). For other models, please contact Customer Support.

7.6 Tag Readers

To access the Setup Tag Readers dialog, select the **T. Readers** tab in the Setup page (see Figure 54).

Figure 54: Setup Tag Reader Dialog



To define a tag reader, proceed as follows:

1 In the **Name** field, enter a descriptive name.

2 In the **Bus** drop-down list, select the bus that is previously defined or click the ellipsis button (…) for a prompt display of the Buses dialog with a selection of the bus. All readers supported in SiteOmat360 communicate in GVR frame.

3 In the **Model** drop-down list, select a model from the supported models list. It includes the following:
- **Tag reader**: RFID tag reading device.
- **TR500**: MiTag tags reading device.
- **UPI**: Reading device that accepts old Fuel Ring (AVI) tags only.

4 In the **Address** field, define its **Hex Address**/ **Dec Address** (see "3.1.2 Default Serial Addresses" on page 2).

5 (Optional) Select the **Association Model** check box to use the Tag Reader for reading tag strings that define a fleet. This setup is necessary for Fleet Management. In this mode, the Tag Reader serves for fleet authorization, and cannot be used for fueling authorization.

6 (Optional) Select the **Has keyboard** check box, if the tag reader is equipped with one.

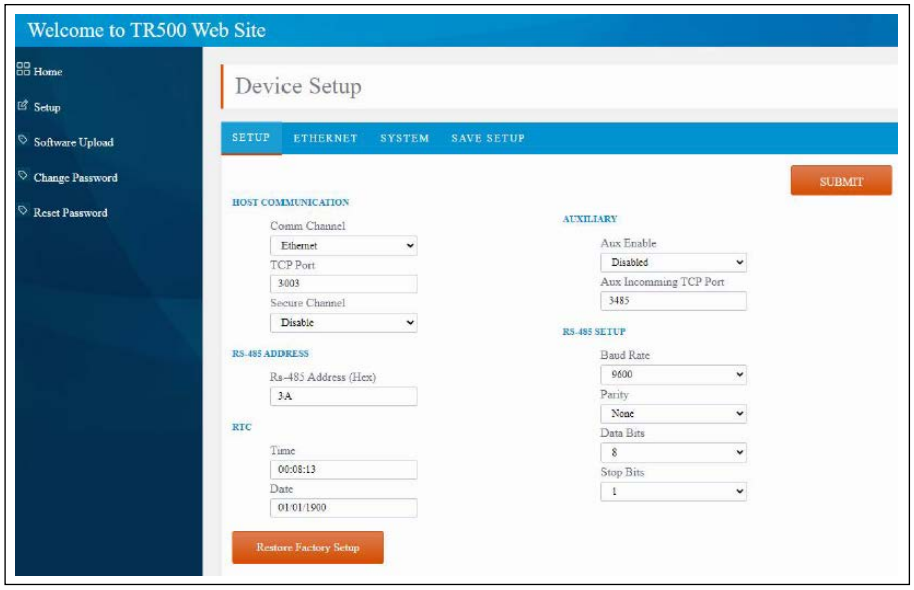
7 Perform one of the following:
- Click **New** to add the new Tag Reader. The Tag Reader is added to grid at the top of the dialog.
- Click **Modify** if the settings of an existing Tag Reader are changed.
- Click **Close** to return to the Setup page.

7.6.1 TR500 Setup

To configure settings for TR500 in the Tag Reader settings dialog, proceed as follows:

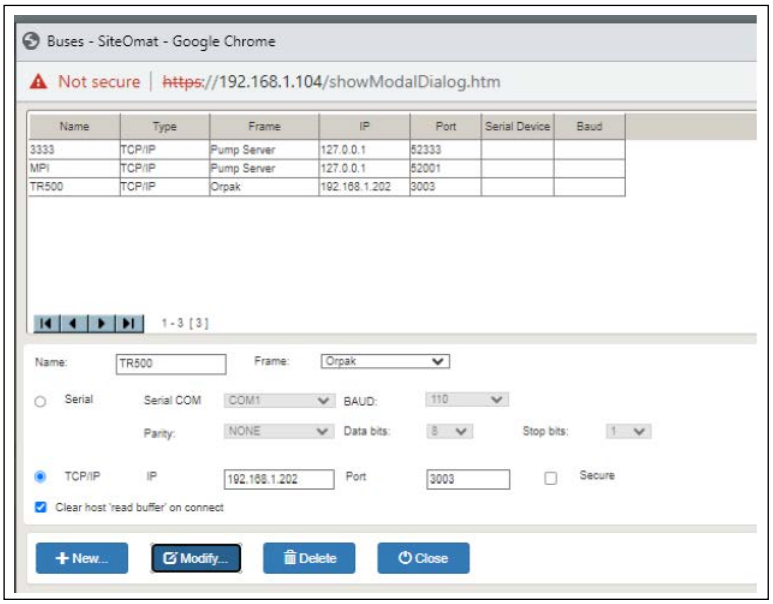
If the following settings exist in the TR500 screen (see Figure 55).

Figure 55: TR500 Device Setup Screen



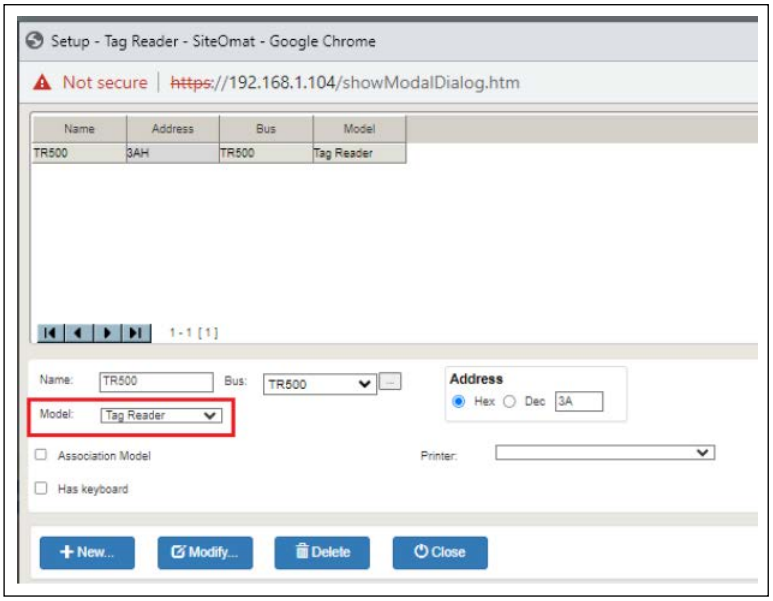
Then the buses in SiteOmat360 will be set as follows (see Figure 56).

Figure 56: Buses Setup for TR500



And the Tag Reader dialog will be as shown below. For TR500, ensure to select **Tag Reader** in the Model field (see Figure 57):

Figure 57: Tag Reader Setup for TR500

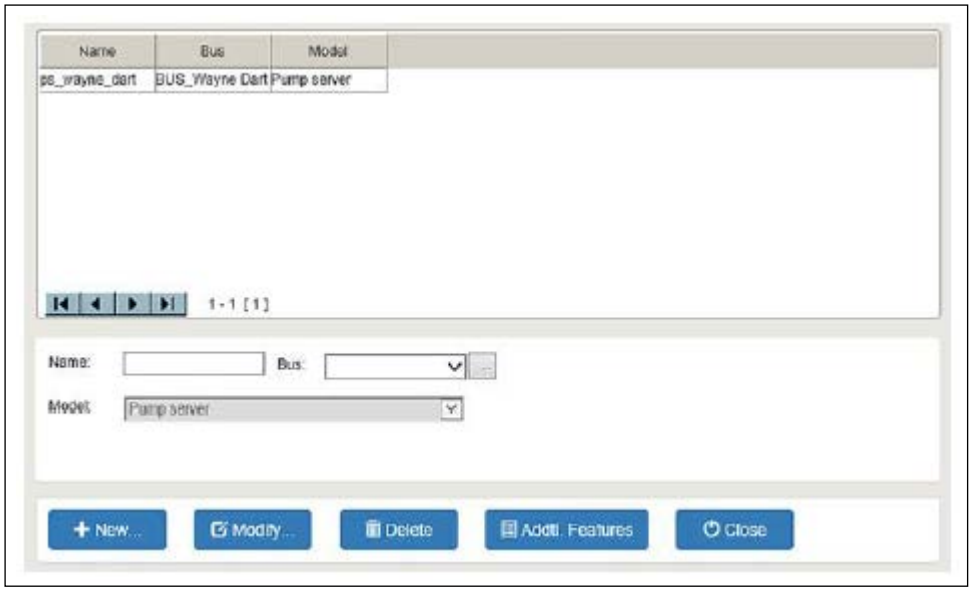


7.7 Pump Servers

The Forecourt Controller's communication with a pump is performed only through a Pump Server component, which is an internal process within the SiteOmat360.

To access the Pump Server dialog, select the **P. Servers** tab (see Figure 58).

Figure 58: Setup Pump Server Dialog



To define a Pump Server, proceed as follows:

1 In the **Name** field, enter a descriptive name.

2 In the **Bus** drop-down list, select the bus that is previously defined or click the ellipsis button (…) for a prompt display of the Buses dialog. All servers supported in SiteOmat360 communicate in Pump Server frame (protocol) only (see "7.3 Buses" on page 9).

*Note: The **Model** field is inactive, and the default selection is always Pump Server.*

3 Perform one of the following:
- Click **New** to add the new Pump Server. The Pump Server is added to grid at the top of the dialog.
- Click **Modify** if the settings of an existing Pump Server are changed.

4 After defining a new pump server, the specific features of that Pump Server must be defined. Click **Addtl. Features**.

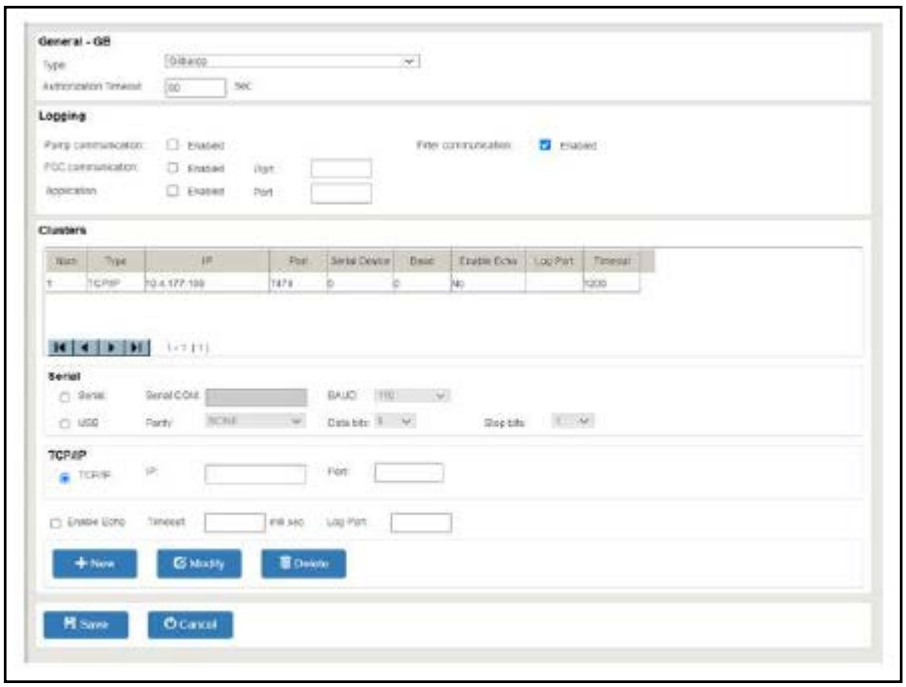
To delete a Pump Server from the system, first select it by clicking its row in the grid. Verify that the Pump Server properties are displayed in the text boxes, and then click the **Delete** button.

7.7.1 Additional Features

To define the Pump Server's additional features, proceed as follows:

1 Click the **Addtl. Features** button. The Pump Server Settings dialog box is displayed (see Figure 59).

Figure 59: Pump Server Settings Dialog



2 In the **Type** drop-down list, select the pump type (protocol).

3 In the **Authorization Timeout** field, enter the time in seconds that will stop the pump when it is authorized, but there is no fuel flow (the default is 60 seconds).

4 In the **Logging** section, set the Pump - Pump Server - Forecourt Controller logs parameters (see Table 22 on page 23).

*Note: It is highly recommended that not to define the **Logging** section parameters. Only the manufacturer's certified technicians should enable this feature. Logging enables data transfer between the pump and the pump server.*

5 Define the Pump Server clusters as needed. Clusters bundle several pumps to a pump server through a common physical link. The physical link is a port in the Converter, connected to the pump. Ports are usually defined with TCP/IP parameters: Converter IP and Port (3001 to 3008).

a First, define the communication parameters:

For TCP/IP communication:

- Verify that the **TCP/IP** option is selected.
- In the **IP** field, enter the Converter IP address (Default: 192.168.1.111).
- In the **Port** field, enter the number of the Converter's port to which the cluster of pumps is connected (3001 to 3008) (see "3.1.2 Default Serial Addresses" on page 2).

For serial communication, select the **Serial** option, and define the following according to the serial pump protocol:

- **Serial COM:** The physical connection to the Forecourt Controller.
- **BAUD:** Communication speed.
- **Parity:** Sets the parity of transmitted data for the purpose of error detection (NONE, ODD or EVEN).
- **Data bits:** The string length.
- **Stop bits:** Number of stop bits at the end of the string.

b (Optional) Select the **Enable Echo** check box to enable echo communication with pumps with Current Loop protocol (this feature is applicable in specific cases; consult Customer Care for further details).

c In the **Timeout** field, define the waiting time for response from the pump. It is recommended to enter a value in the range of 250 to 300 milliseconds.

d In the **Log Port** field, enter the port number for collecting communication logs between the Pumps in the cluster and the Pump Server.

e Perform one of the following:

- Click **New** to add the new Cluster. The Cluster is added to grid at the top of the Cluster section.
- Click **Modify** if the settings of an existing Cluster are changed.
- To delete a previously defined cluster: select a Cluster by clicking on its row in the grid, and then click **Delete**.

6 Click **Save** to apply the changes, or click **Cancel** to exit the dialog without saving the changes.

Table 22: - Logging Section Parameters

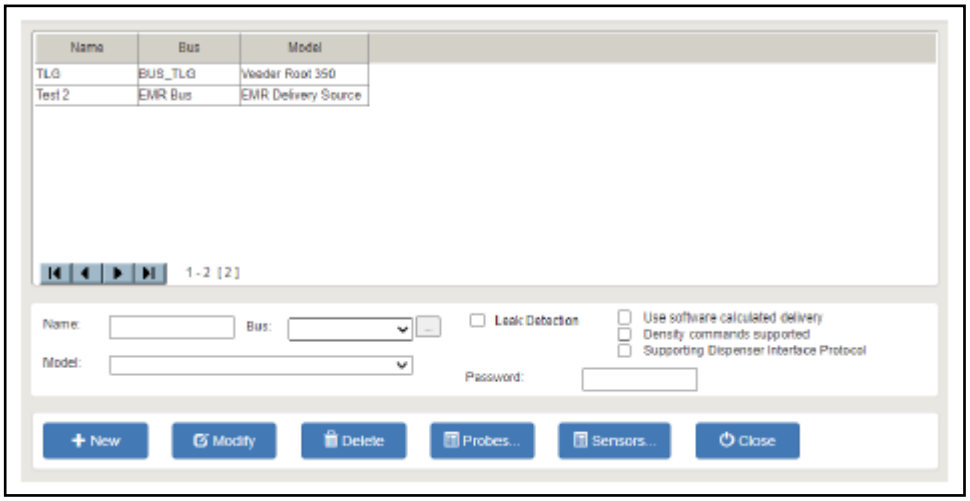
Parameter	Description
Pump Communication	Enables generation of Pump - Pump Server communication logs.
Comm (FCC) Communication	Enables generation of Forecourt Controller - Pump Server communication logs. The connection Port must be defined.
Application	Enables application logs generation on the Pump Server. The connection Port must be defined.
Note: Set Ports to enable monitoring with a Telnet terminal without storing the logs.	

7.8 Tank Level Gauge

The Tank Level Gauge (TLG) dialog enables technicians to define external Automatic Tank Gauging (ATG) systems that read fuel tank information using probes.

To access the TLG dialog, select the **TLG** tab in the Setup page (see Figure 60).

Figure 60: Tank Level Gauge Dialog



Before defining any new ATG in the system, define a bus for the ATG in the Buses dialog (see "7.3 Buses" on page 9), proceed as follows:

1 In the **Name** field, enter a descriptive name.

2 In the **Bus** drop-down list, select the bus that is previously defined.

3 In the **Model** drop-down list, select a model from the supported models list. It includes the following:
- Veeder-Root TLS 350 and 450 (For all TLG systems using VR TLS protocol).
- OPW
- Hectronic
- Start Italiana
- Omntec
- DOMS
- ATS Probe
- Miprobe
- IB-Box
- EMR Delivery Source

  *Note: To support EMR3 and EMR4, a bus must be created with **EMR Delivery Source** selected as the **Frame** and **Model**.*
- Fafnir Probe

4 (Optional) Select the **Leak Detection** check box to use the external ATG Leak Detection mechanism.

5 (Optional) If using software to calculate deliveries, select the **User software calculated delivery** check box.

6 Select the **Density commands supported** check box to support density commands.

7 If the TLG uses a Dispenser Interface Protocol, select the **Supporting Dispenser Interface Protocol** check box.

8 In the **Password** field, enter the password required for communication between SiteOmat360 and the ATG, as set in the ATG console.

9 Click **Probes** to define the probes connected to the system (see "7.8.1 Probes" on page 26).

10 Click **Sensors** to set up the ATG leak sensors (see "7.8.2 Sensors" on page 30).

11 Perform one of the following:
- Click **New** to add the new ATG. The ATG is added to grid at the top of the dialog.
- Click **Modify** if you changed the settings of an existing channel.

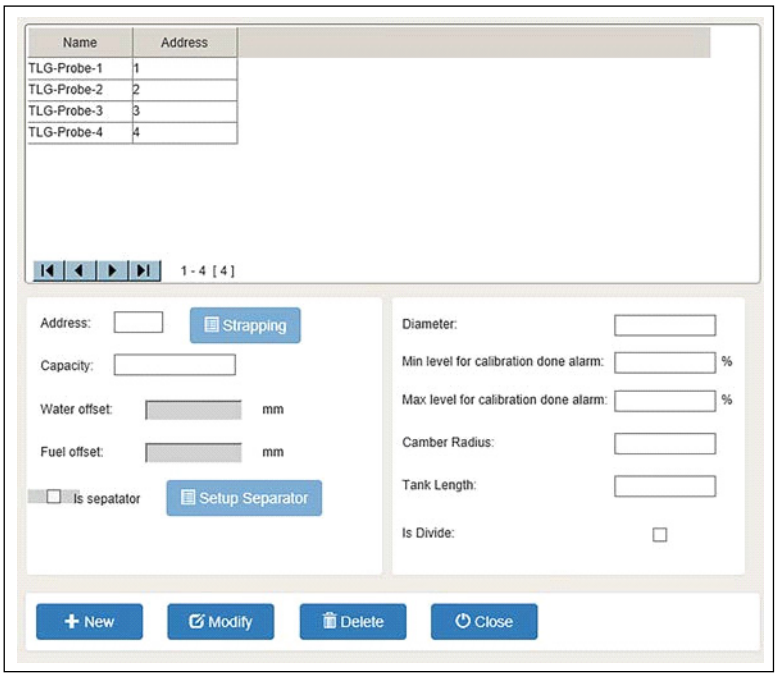
To delete an ATG from the system, select the ATG by clicking its row in the grid. Verify that the ATG properties are displayed in the text boxes, and then click the **Delete** button. If the ATG is already in use (a tank is linked to it), the ATG cannot be deleted.

7.8.1 Probes

To define the ATG's physical probes, proceed as follows:

1 Click the **Probes** button. The **Probes** dialog box is displayed (see Figure 61).

Figure 61: Probes Dialog



*Note: The probes option is not available when a bus with an **EMR Delivery Source** frame is defined.*

2 In the **Address** field, enter the probe address as defined in the ATG.

3 In the **Capacity** field, enter the tank volume. The volume is set in Liters/Gallons.

4 (Optional: for Start Italiana probes connected directly to the Forecourt Controller only): In the **Water Offset** and **Fuel Offset** fields, set the actual height of water and fuel. For example, if a tank is empty and the probe reads 3 cm. of water, enter the probe reading to the **Water Offset** text box. The Forecourt Controller will compensate the value.

5 (Optional: for Oil/Water Separators Tanks probes only): Select the **Is separator** check box and click the **Setup Separator** button to setup the Oil / Water Separator probe settings (see "7.8.1.2 Oil/Water Separator Probe Setting" on page 28).

6 (Optional: if using the auto-calibration feature):

a In the **Diameter** field, enter the tank's diameter.

b In the **Min. level for calibration done** alarm, enter the minimum volume level to be covered so that the auto-calibration process will be completed, set in percentage of tank capacity.

c In the **Max. level for calibration done** alarm, enter the maximum volume level to be covered so that the auto-calibration process will be completed, set in percentage of tank capacity.

d In the **Camber Radius** field, enter the radius of the tank dished ends.

e In the **Tank Length** field, enter the length of the tank from side to side, not including the dished ends.

f Select the **Is Divide** check box if the tank has two compartments.

g For TLGs that are not an EMR 3/4, select the EMR Delivery Source from the drop-down list.

Notes: 1) In addition to the above coverage parameters, the auto calibration is completed if the following condition is met: Maximum volume difference between two sampling points should not be higher than the tank capacity divided by the number of points as required for the specific ATG.

2) Since the system checks for auto calibration completion on a daily base, the alarm is generated again each day until auto calibration is stopped for this probe (OFF).

3 Perform one of the following:

a Click **New** to add the new probe. The probe is added to grid at the top of the dialog.

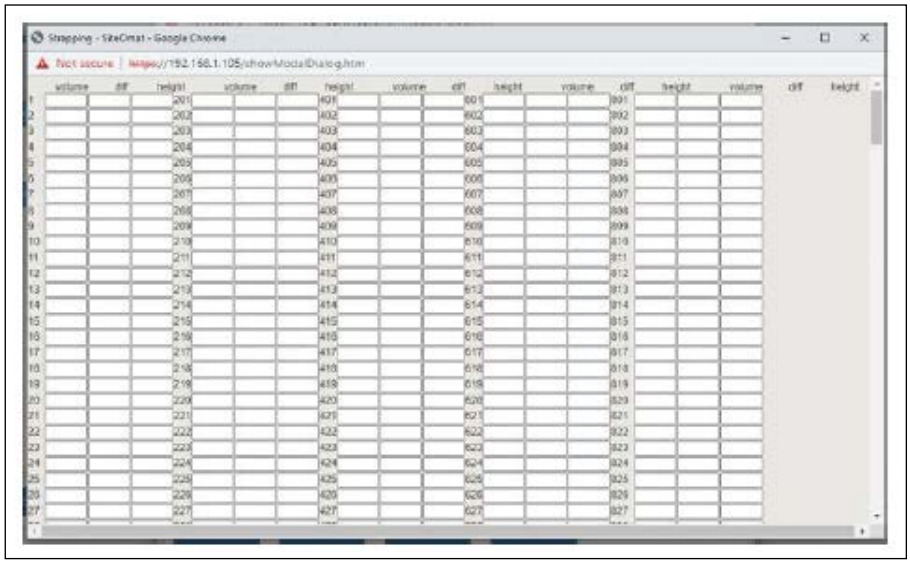
b Click **Modify** if you want to change the settings of an existing probe.

To delete a probe from the system, first select it by clicking on its row in the grid. Verify that the probe properties are displayed in the text boxes, and then click the **Delete** button. If the probe is still in use (a tank/ATG linked to it), the probe cannot be deleted.

7.8.1.1 Strapping

If Hectronic, Fafnir, or Start Italiana probes are used without an ATG controller, they do not provide volume (only height). Click the **Strapping** button (else the button remains disabled). The Strapping dialog box is displayed (see Figure 62 on page 28).

Figure 62: Strapping Table Dialog



This dialog contains a strapping definition table that allows calculating the volume of product in a tank according to given depths/levels.

Type the following values in the strapping table:

- **Volume**: Expected volume in tank.
- **Diff**: The difference between two measurement points. Utilized to find out the volume in a specific point in the range. For example, if you define points at each 10 inches, the formula uses the diff field in cases where the probe informs height of 35 inch. When building the table, calculate the diff for point B as follows:
  (Volume B - Volume A) / (Height B - Height A) /10

- **Height:** The actual fuel height measurement in the tank.

Click the **Modify** button to record the values in the table.

A strapping table can also be loaded from a CSV file by clicking the **Load** button. The Strapping File dialog box is displayed and enables you to browse the system for the compatible CSV file.

7.8.1.2 Oil/Water Separator Probe Setting

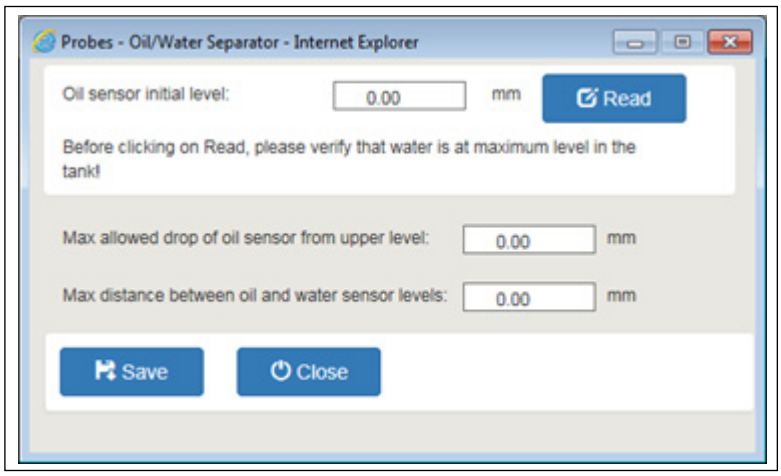
SiteOmat360 includes a specific configuration for probes used as a level sensor in Oil/Water Separators Tanks, which receive oily waste water generated during fueling processes.

To define a probe as a water/oil separator sensor, proceed as follows:

1 Select the **Is Separator** check box in the Probes dialog (see Figure 61 on page 26).

2 Click the **Setup Separator** button. The Probes Oil/Water Separator dialog box is displayed (see Figure 63).

Figure 63: Probes Oil/Water Separator Dialog



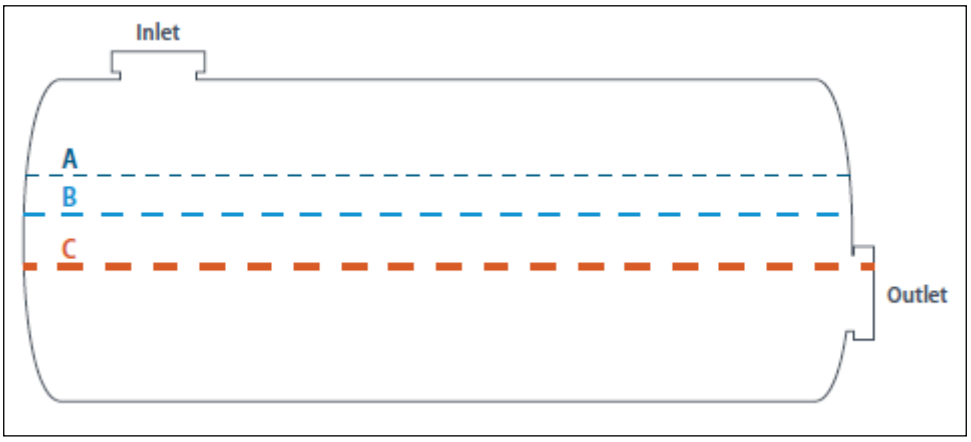
3 Verify that water is at maximum level and click **Read** to receive and enter the initial level (A in the diagram below).

4 Define the maximum drop of the sensor from the initial level. In cases where this threshold is passed and the tank should be filled, the system generates an alarm (B in the diagram below).

5 Define the maximum distance between oil and water level sensors. In cases where this threshold is passed, the system generates an alarm to prevent waste from leaking through the tank outlet (C in the diagram below).

6 Click **Save** to apply the changes and close the dialog.

Figure 64: Oil/Water Separator Initial and Alarm Levels



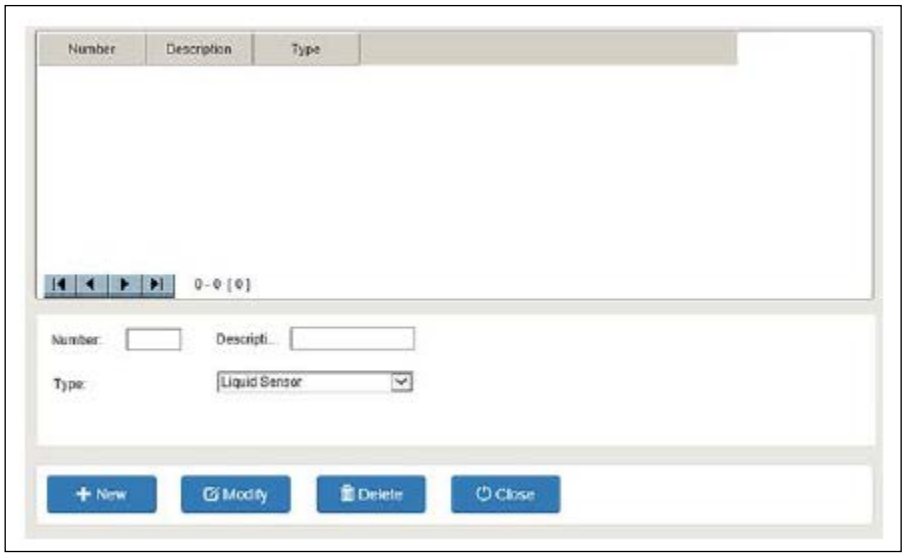
7.8.2 Sensors

Once the ATG is defined, define the ATG's leak sensors.

To define the ATG's leak sensors, proceed as follows:

1 Click the **Sensors** button. The Sensors dialog box is displayed (see Figure 65).

Figure 65: Sensors Dialog



2 In the **Number** field, enter a number for the sensor.

3 In the **Description** field, enter a description for the sensor.

4 In the **Type** drop-down list, select the type of sensor from the supported types list. It includes the following:
- **Liquid**: for liquid level detection sensors
- **Input**: for any 0/1 switch sensor
- **Vapor**
- **Groundwater**
- **Type A**
- **Type B**
- **Universal**

5 Perform one of the following:

a Click **New** to add the new sensor. The sensor is added to grid at the top of the dialog.

b Click **Modify** if you want to change the settings of an existing channel.

To delete a sensor from the system, first select it by clicking on its row in the grid. Verify that the sensor properties are displayed in the text boxes, and then click the **Delete** button. If the sensor is in use (a tank is linked to it), the sensor cannot be deleted.

7.8.3 Auto Calibration

The Auto Calibration process provides an accurate strapping table providing the volume for different levels in the actual tank structure.

The process utilizes the combined pump data and probe level to build a strapping table, based on samples taken over time, in cycles between deliveries.

It is recommended to perform Auto Calibration at setup, and once every six months thereafter.

To start the auto calibration, proceed as follows:

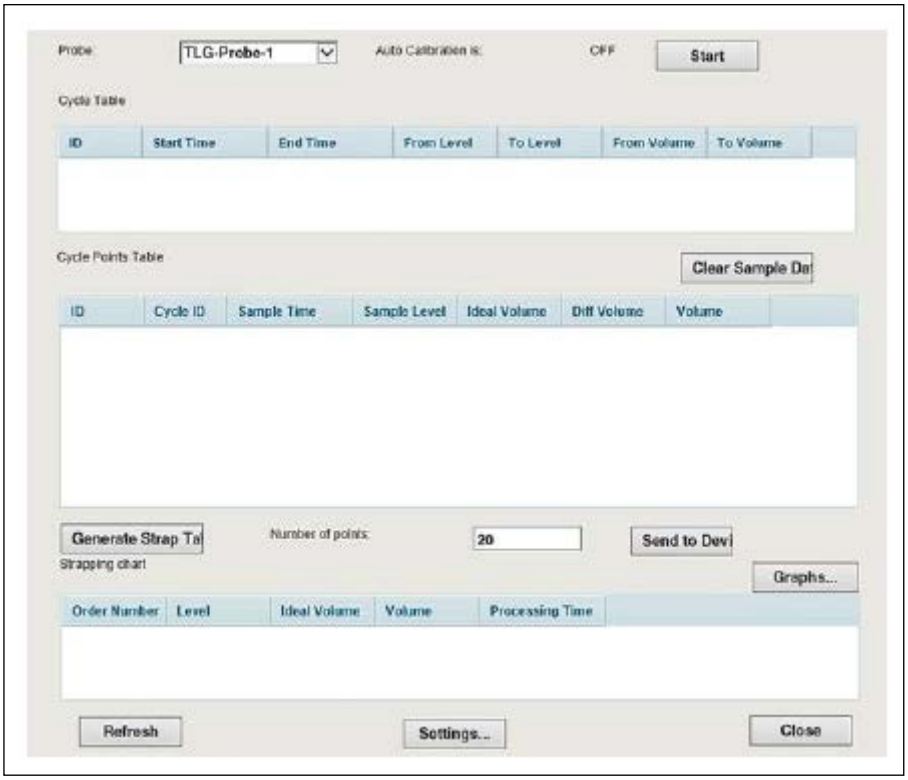
1 Click the **Status** link in the navigation bar.

2 Select the **Tanks** link. The Tank Status page is displayed (see Figure 66).

Figure 66: Tank Status Page

3 Click the required tank indicator. The Auto Calibration Data dialog box is displayed (see Figure 67).

Figure 67: Auto Calibration Data Dialog



4 Select the required probe from the drop-down list.

5 Click the **Start** button to start the auto calibration process. Once this feature has been enabled, the **Start** button changes to **Stop**.

The dialog contains three tables:

a Cycle Table: Displays an entry for each cycle of samplings.

b Cycle Points Table: Displays all sampling points for all cycles.

c Strapping chart: The calculated charts based on the sampled data.

In addition, it includes the following functional buttons:

a Clear Sample Data: Clears all data in both Cycle Table and Cycle Points Table.

b Generate Strap Table: Calculates the strapping chart based on the sampling data. The Number of points text box enables setting the measurement points required (For example, Veeder Root requires 20 and OPW requires 45).

c Send to Device: Sends the strapping table to the ATG. It is highly recommended to inspect the results and then update the device.

d Refresh: Updates the data displayed in the dialog.

e Graphs: See "6.8.3.1 Tank Calibration Graphs" on page 33.

f Settings: Defines advanced setting parameters.

g Close: Closes the dialog.

6.8.3.1 Tank Calibration Graphs

Clicking the **Graphs** button opens the following dialog (see Figure 68).

Figure 68: Tank Calibration Graphs Dialog

The Tank Calibration Graph on the left side displays the strapping table volume as a function of high, in red, over a green reference line.

The Tank Calibration Difference Graph displays the difference in volume between two points as a function of height, based on the strapping table.

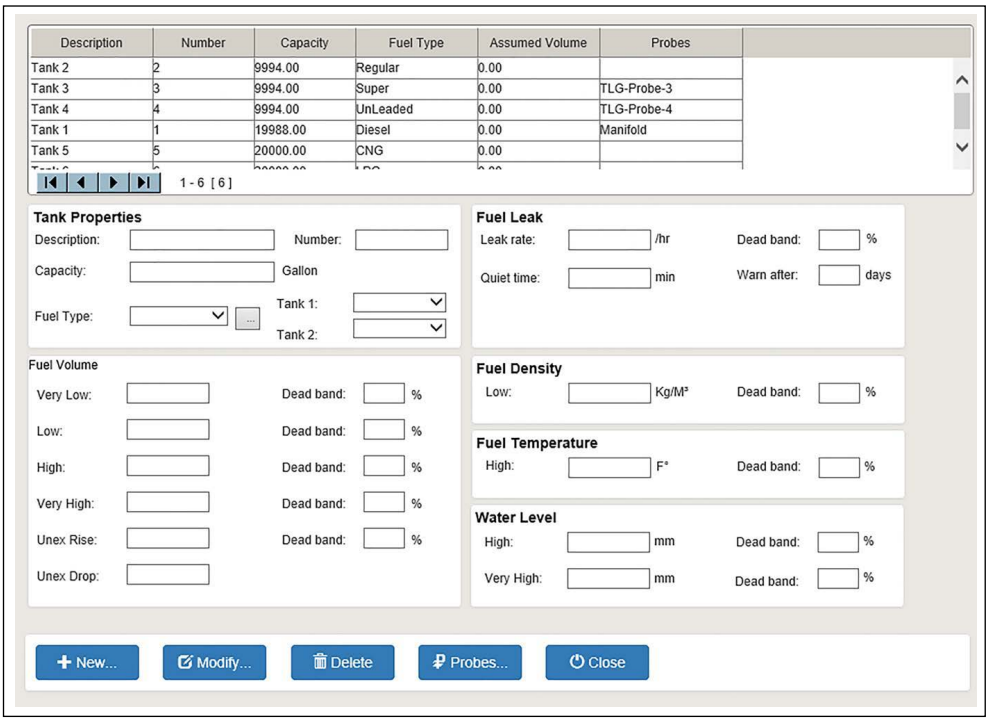
Click **Close** to close this dialog and return to the Auto Calibration Data dialog.

7.9 Tanks

To access the Tanks setup dialog, click the **Tanks** tab.

This dialog enables technicians to provide a full definition of the tank properties and operational characteristics, as well as define the sensors attached to it that provide information for monitoring.

Figure 69: Setup Tanks Dialog



7.9.1 Tank Settings

To define a tank, proceed as follows:

1. In the **Description** field, enter a descriptive name.
2. In the **Number** field, add a unique identification number defined in the station.
3. In the **Capacity** field, enter the storage capacity of the tank.
4. Select the product stored in the tank from the **Fuel Type** drop-down list.

   *Note: If the Forecourt Controller is connected directly to probes, or if the user wants to receive alarms in parallel to those generated by an external ATG; set the **Tank Alarms** parameters as described below (see Table 23 on page 35).*

5. Click **Probes** to link the tank to the probe monitoring as defined below.

6 Perform one of the following:

a Click **New** to add the new Tank. The Tank is added to grid at the top of the dialog.

b Click **Modify** to change the settings of an existing Tank.

c Click **Close** to return to the setup page.

To delete a tank from the system, first select it by clicking on its row in the grid. Verify that the tank properties are displayed in the text boxes, and then click the **Delete** button. If the tank is still in use (connected to a nozzle), the tank cannot be deleted.

Table 23: Tank Alarm Settings

Parameter	Description
Fuel Leak	This section enables defining the alarm settings in cases where a fuel leak from the tank is detected.
Leak Rate	Threshold for alarm activation.
Dead Band	This parameter is used to eliminate noise when generating alarms. Each alarm defined by an analog threshold value also has a dead band defined in percentage. The alarm is not activated or stopped at the nominal value, but at the addition of the +/- percentage value of the dead band. For example, if the alarm value was set to 100 with a dead band of 5%, the alarm will be triggered when the value is higher than 105, and will stop when the value is lower than 95.
Quiet time	Sets the minimum quiet time required for calculating the leak rate (in minutes). A quiet time is defined as idle time with no pump activity or fuel delivery. The system calculates the difference in fuel level between the start and the end of this quiet time (only when idle time is larger than this parameter). The system then normalizes it to quantity per hour. If the value is higher than the Leak Rate value, the alarm is triggered.
Warn after X days	Sets the time (in days) for warning that a leak test has not been performed as a result of not finding quiet time.
Fuel Volume	This section enables defining the level of fuel in the tank to be considered as alarm triggers for the upper and lower levels of fuel, including: • Very Low • Low • High • Very High It is possible to set the above level thresholds and their corresponding dead bands. In addition, users can also set thresholds for Unexpected Rise and Unexpected Drop in tank level. The system monitors this parameter at the end of shifts.
Fuel Density	Sets Low Density alarm threshold and dead band. Requires a density probe.
Fuel Temperature	High temperature alarm threshold and dead band.
Water Level	High and very high water level alarm thresholds and dead bands.

7.9.1.1 Tank Interlocks

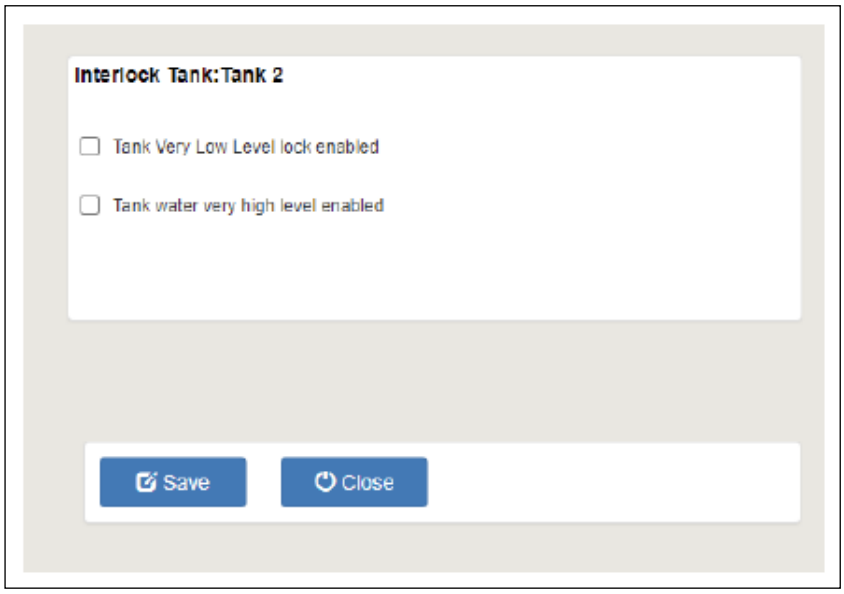
Interlocks allow the automatic locking of tanks when preset undesirable conditions in the tank are met.

To enable interlocks for a tank, proceed as follows:

1 Enter the threshold of amounts or percentages in the **Fuel Volume** and **Water Level** section that would trigger the interlock if met.

2 Click **Interlock**. The following dialog box is displayed.

Figure 70: Tank Interlocks Dialog



3 Select the interlocks to enable them.

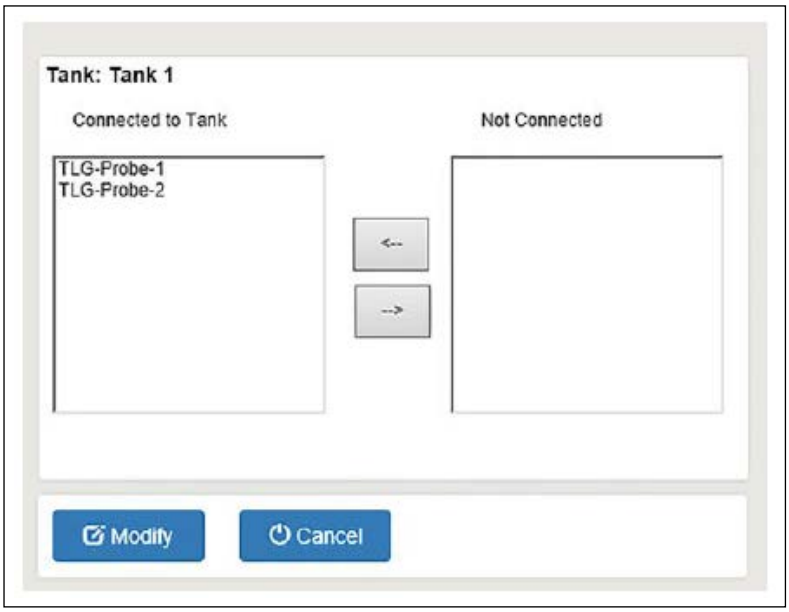
4 Click **Save**.

7.9.2 Linking Probes

To link a probe to the tank, proceed as follows:

1 Click the **Probes** button. The following dialog box is displayed (see Figure 71).

Figure 71: Tanks Probes Dialog



2 Click a probe in the **Not Connected** list and press <. The Probe moves to the **Connected to Tank** list and is linked to the tank.

3 Select one of the following:
- Click **Modify** to apply the changes.
- Click **Cancel** to exit the dialog without saving.

Select one or more probes to connect them to the tank. Manifold tanks are defined by connecting all of the probes to the same tank. The system sums up the volume for all connected probes to obtain the tank volume.

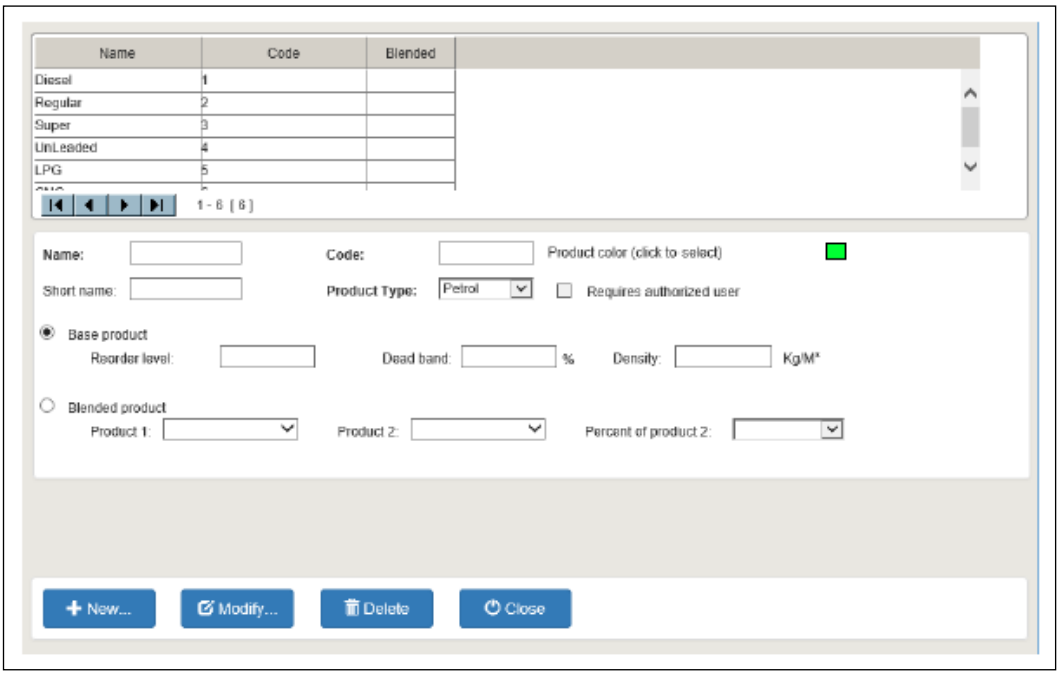
To unlink a probe, select it from the **Connected to Tank** list and click >.

7.9.3 Products

Define the products before proceeding further in the tank setup.

Click the ellipsis (…) button next to the Fuel Type drop-down list in the **Tank Properties** section. The Setup Fuel Products dialog box opens.

Figure 72: Setup Fuel Products Dialog



To set up the fuel products, proceed as follows:

1 In the **Name** field, enter the product's name.

2 In the **Code** field, enter the identification code.

3 Click the **Product color** square to select a color palette. The color is used in trend graphic reports.

4 In the **Short nam**e field, enter the product's name for reports or exporting to external systems.

5 Select the type of fuel product: Petrol/GNG/LPG, from the **Product Type** drop-down list.

6 If GNG/LPG is selected, **Requires authorized user** check box becomes available. Select this option to require an additional authorization device to prevent untrained personnel from operating these types of dispensers.

Note: The following restrictions are applicable when defining a CNG/LPG dispenser:
- *CNG/LPG pumps cannot dispense other product types.*
- *CNG/LPG products cannot be defined as part of a blended product.*

7.9.3.1 Base Product

To define a fuel product, proceed as follows:

1. Set the **Reorder level** alarm. The alarm is triggered as soon as the total volume level in all of the tanks that contains this product falls lower than the set value. Refer to Alarms setup for more information on alarms and dead band definition.

2. Set the **Dead band** in % for this alarm. Dead band is a technique used to eliminate noise when generating alarms. Each alarm is defined by an analog threshold value which also has a dead band defined in percentage.

   Note: The alarm is not activated or stopped at the nominal value, but at the addition of the +/- percentage value of the dead band. For example, considering an alarm set value of 100 with a dead band of 5%; the alarm is triggered (delayed) when the value is higher than 105, and similarly stops when the value is lower than 95.

3. Enter the nominal density of the fuel in the **Density** field. Enter zero (0) if not applicable.

4. Click **New** to save the settings for a newly added product.

5. Click **Modify** if an existing product was edited and then click **Close** to return to the Setup Tanks dialog.

6. To delete a product from the list, select it by clicking on its row. Click **Delete** once its parameters are displayed.

   Note: A product that is in use cannot be deleted or modified. Disassociate the product from the tank, and then disassociate the tank from the pumps.

7.9.3.2 Blended Product

To define a blended product that are composed of two base products stored in two different tanks, proceed as follows:

1. Select the previously defined base product from the **Product1** drop-down list.

2. Select the previously defined base product to be added to blend from the **Product2** drop-down list.

3. Select the percentage of the second fuel in the mixture from the **Percent of Product 2** drop-down list.

4. Click **New** to save the settings for a newly added blended product.

5. Click **Modify** if an existing blended product was edited.

6. Click **Close** to return to the Setup Tanks dialog.

7.9.3.3 Virtual Tank for Blended Fuel

To support a blended product, a virtual tank composed of the two tanks to which the nozzle is connected should be defined.

These virtual tanks are neither shown on the Status page nor be available in the Wet Stock Management for inventory and delivery. As the tanks are virtual, TLG probes cannot be connected to them. Still, the amount dispensed from the blended product nozzles will be included when calculating reconciliation for each of the base tanks (transaction volume multiplied by percentage of fuel in the mixture).

To add virtual tanks for blended fuel, proceed as follows:

1. Define the two base-tanks.
2. Define the blended product.
3. Select the blended product from the Fuel Type drop-down list.
4. Select **Tank1** (the tank that contains Product1).
5. Select **Tank2** (the tank that contains Product2).
6. Click **New** to save all the settings.

7.9.3.4 Lubricant Product

This feature is defined in order to allow dispensing of lubricants such as oil, water, and additives, while refueling fuel without a need for an additional authorization.

To add a lubricant product, proceed as follows:

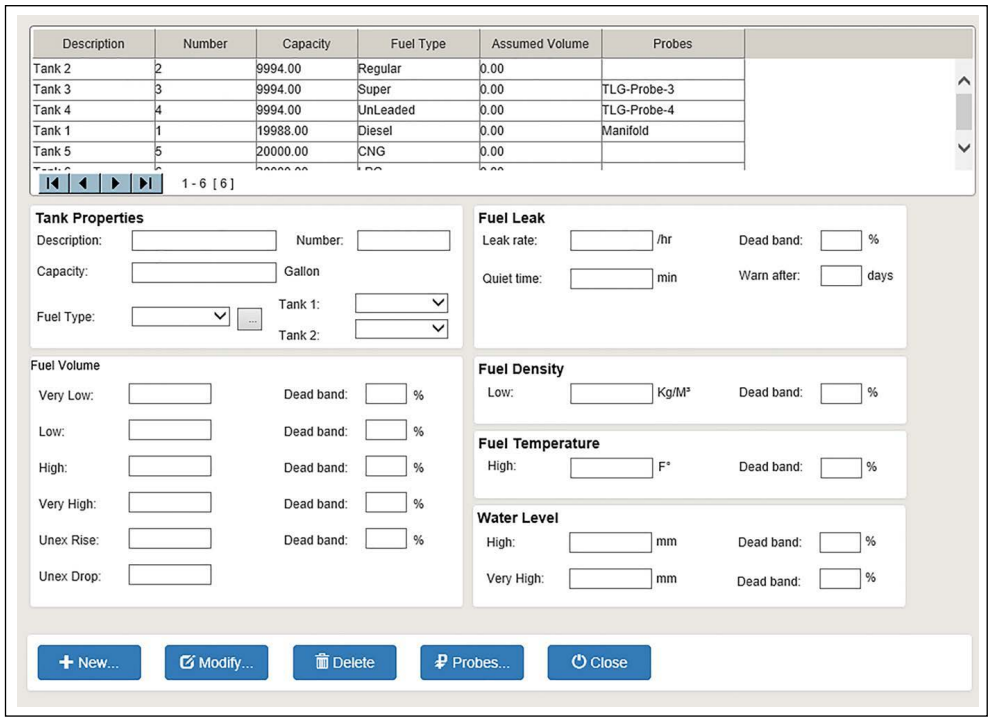
1. Define a lubricant product.
2. Define a virtual tank for the lubricant product.
3. Define a pump for the lubricant product.

7.9.3.4.1 Defining a Lubricant Product

In order to define a lubricant product, proceed as follows:

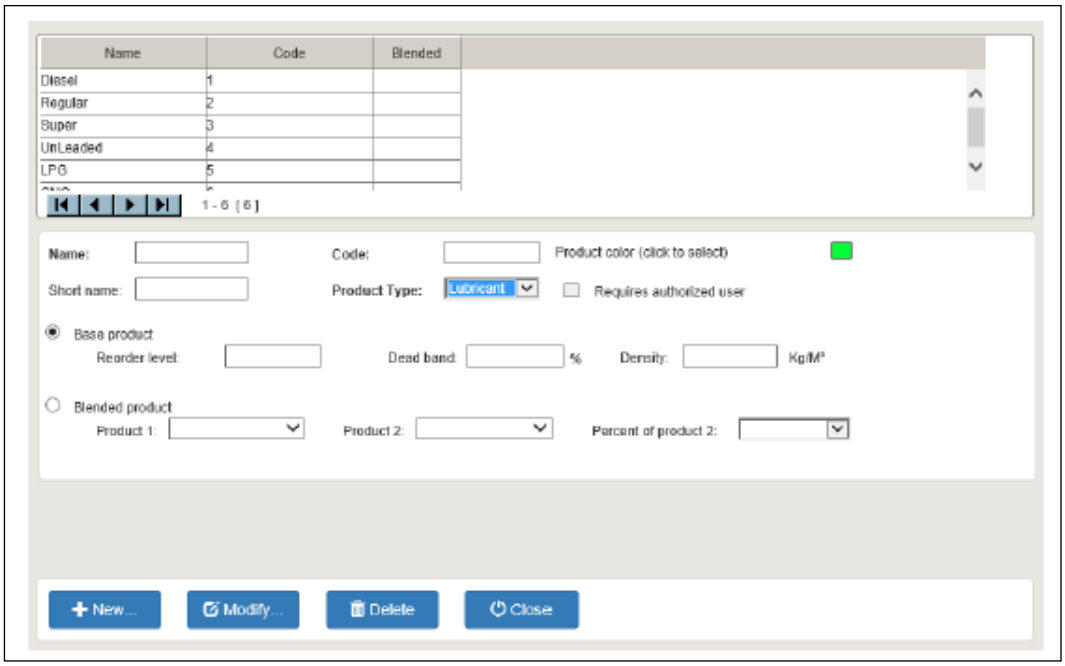
1 In the Setup Tanks dialog, click the ellipsis (…) button next to the Fuel Type field.

Figure 73: Setup Tanks Dialog



2 Select **Lubricant** from the **Product Type** drop-down list when the Setup Fuel Products dialog box is displayed.

Figure 74: Setup Fuel Lubricant Product Dialog



3 Enter the product's name in the **Name** field.

4 Enter the identification code in the **Code** field.

*Note: (Optional) Click the **Product color** square to select a color palette (the color is used in trend graphic reports. Enter the product's name in the **Short Name** field for reports or exporting to external systems.*

5 Click **New** on the bottom-left corner of the screen to setup a new fuel.

6 Click **OK** when the pop-up message opens.

7 Click **Close** to return to the Setup Tanks dialog.

7.9.3.4.2 Defining a Virtual Tank for the Lubricant Product

To create a virtual tank for the lubricant, proceed as follows:

1 Enter description for the product in the **Description** field of the Setup Tanks dialog.

2 Enter a unique identification number in the **Number** field.

3 Add the tank's capacity in the **Capacity** field.

4 Select the newly defined lubricant added in the previous step from the **Fuel Type** drop-down list.

5 Click **New**, the tank will be automatically added to the system.

6 Click **Close** and to move to the Setup page.

7.9.3.4.3 Defining a Pump for the Lubricant Product

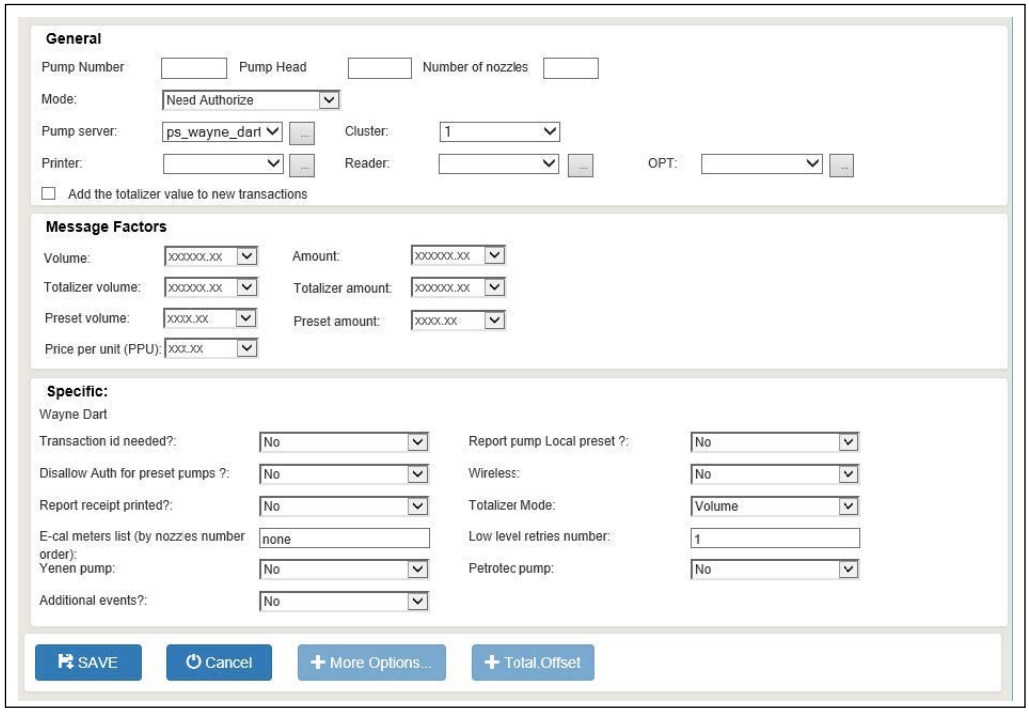
To allow dispensing of a lubricant product without additional authorization, the virtual tank defined for the lubricant should be paired with a lubricant pump.

This pump should be defined as a slave of a fueling dispensing pump, which serves as a master for the sake of authorization. Once the master is authorized, then the slave pump that is paired with it may dispense as well.

To setup a pump, proceed as follows:

1 In the Dispensers tab on the setup page, click **Add Pump**. The Setup Pump Settings screen is displayed.

Figure 75: Setup Pump Settings Dialog



2 In the **Pump Number** field, enter the number of pump.

3 In the **Pump Head** field, enter the number of pump head.

4 In the **Number of nozzles** field, enter "**1**".

5 Click **Save**. The window closes and the Dispensers list refreshes automatically with the new pump appearing in the list.

6 To pair the lubricant pump to the master pump, select the pump from the drop-down list under the Tank column in the **Dispensers** tab.

Figure 76: Dispensers tab in Setup Dialog

7 In the **Dispensers** tab on the Setup page, click **Add Pump**. The Setup Pump Settings screen is displayed (see Figure 75 on page 43).

8 Select the number of the master pump from the **Slave of pump no.** drop-down list.

9 Click **Save** and then click **Reload** to refresh the system.

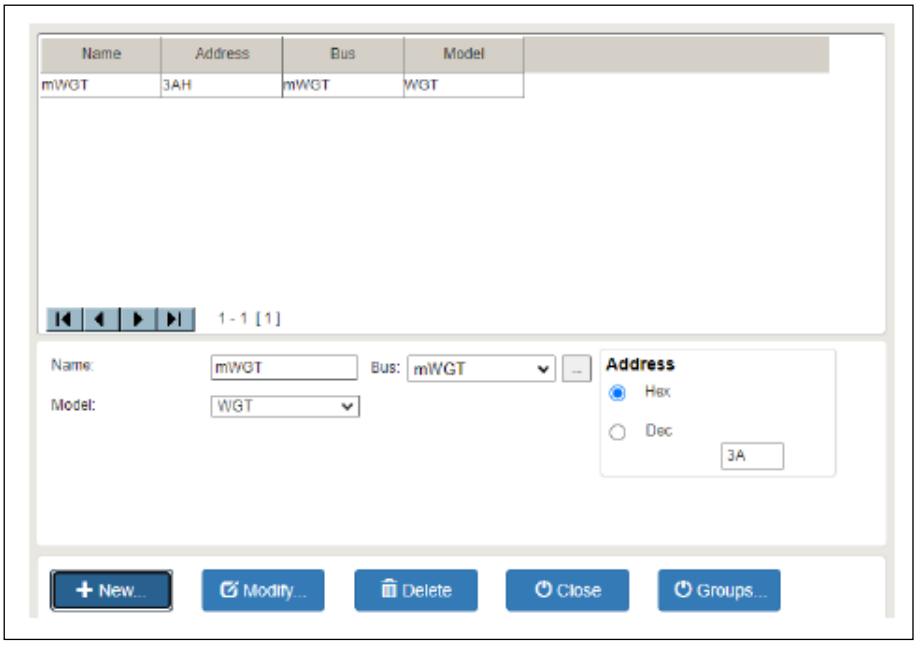
Notes:1) A selected pump cannot be set as its own master pump.
2) The pump that is defined as a slave cannot be set as a master pump for a different pump.
3) The pump cannot be set as a slave pump if its product type is not a lubricant.

7.10 AVI (VIS)

This dialog is intended for stations that include ForeFuel Automatic Vehicle Identification (AVI) solution and enables setting up the MWGT, the Wireless Network Gateway access point.

To access the VIS dialog, select the **VIS** tab in the setup page.

Figure 77: VIS Dialog



To setup the MWGT, proceed as follows:

1 Enter the name of the device in the **Name** field.

2 From the **Bus** drop-down list, select the bus that is previously defined or click the ellipsis (…) button for a prompt display of the Buses dialog.

3 Select **WGT** from the **Model** drop-down list. The other models are not available.

4 Define the **Hex** address in the **Address** field. For more details, refer to Table 2 on page 2.

5 Proceed with one of the following steps:
- Click **New** to add the MWGT. It is added to grid at the top of the dialog.
- Click **Modify** to change the settings of an existing device.
- Click **Close** to return to the setup page.

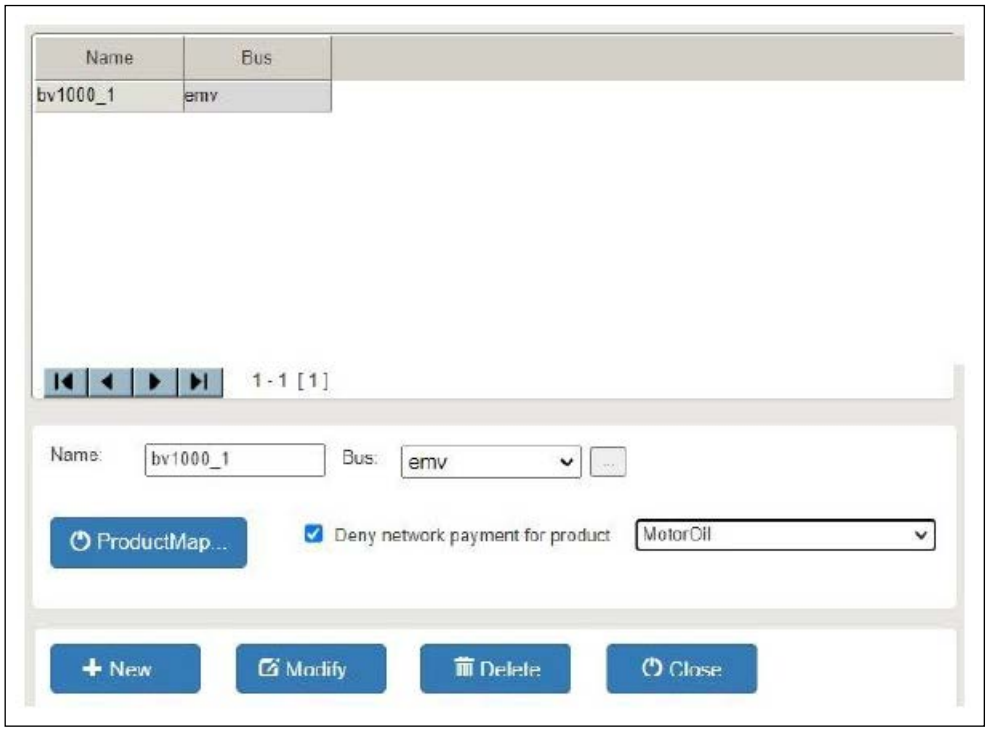
To delete a device from the system, first select it by clicking on its row in the grid. Verify that the device properties are displayed in the text boxes, and then click **Delete**. If the MWGT is already in use (an operating nozzle is linked to it), the MWGT cannot be deleted.

7.11 FPOS

This dialog is intended for stations that include FPOS and EMV-based solutions, and enables setting up the communication parameters.

To access the FPOS dialog, select **FPOS** tab in the setup page.

Figure 78: FPOS Setup Dialog



To setup the FPOS, proceed as follows:

1 Enter the name of the device in the **Name** field.

2 From the **Bus** drop-down list, select the bus previously defined or click ellipsis (…) button for a prompt display of the Buses dialog.
Note: When selecting a bus with a BV1000 frame, additional features are available.

3 Proceed with one of the following steps:
- Click **New** to add the FPOS. It is added to grid at the top of the dialog.
- Click **Modify** to change the settings of an existing device.
- Click **Close** to return to the setup page.

To delete a device from the system, first select it by clicking on its row in the grid. Verify that the device properties are displayed in the text boxes, and then click **Delete**. If the FPOS is already in use, the device cannot be deleted.

7.11.1. BV1000

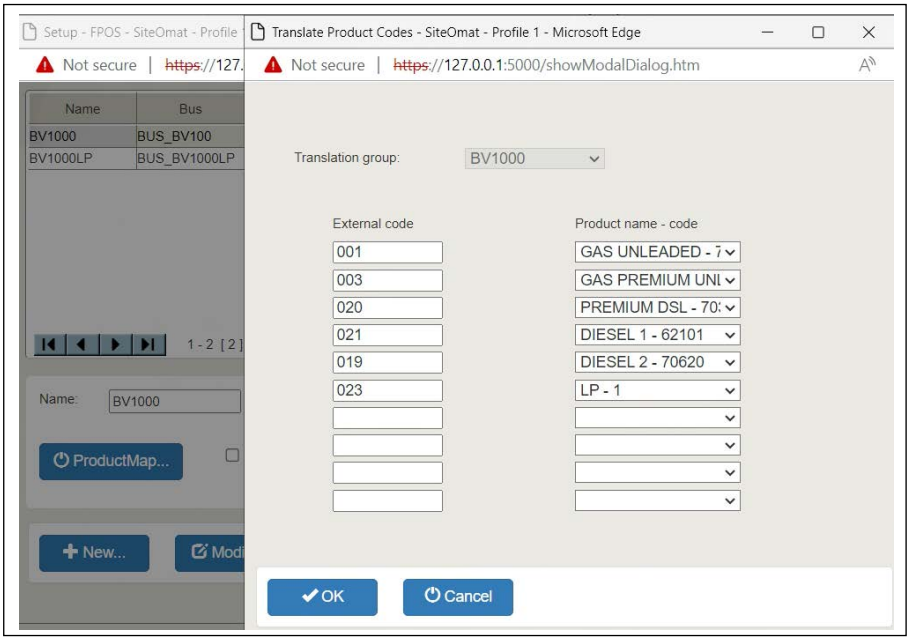
The following are available when configuring an FPOS with a BV1000 frame:

- Select an OrPAY EMV OPOS.
- Select **Deny network payment for product** to restrict products available with EMV payments. Only one product can be selected to be restricted.

To create a product map, proceed as follows:

1 Click **ProductMap**, the Product Map dialog opens.

Figure 79: FPOS Product Map Dialog



2 Enter the product information of up to 20 products.

3 Click **OK**.

7.12 Export/Import

All the settings defined in the Setup can be saved by exporting, or loaded into the system by importing. The procedures are performed using the buttons in the Setup page – Dispensers tab (refer Figure 80).

Notes: 1) Exporting from Plus system to PRIME system is supported. However, NOT ALL of the Global settings can be exported.

2) Some settings may need to be adjusted to reflect differences between the PLUS and PRIME.

7.12.1 Exporting/Saving Setup

Save or Export all the definitions defined in the setup procedures to a file in XML format, to use it later as backup or for quick loading of the station's setup.

Figure 80: Setup Page - Application Buttons

To export/save setup, proceed as follows:

1 Click **Export** in the Setup page. A Processing message is displayed and then a File Download dialog box enables you to save the export setup file. The file name is automatically defined and consists of the station name and its ID (code) number.

Figure 81: Open or Save Downloaded File Message

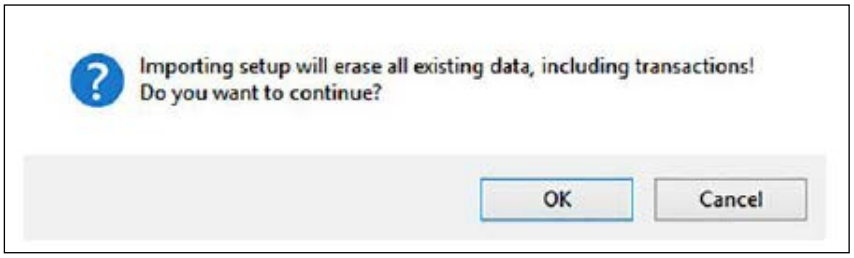
To **Load** or **Import** all the definitions saved in previous setup procedures in an XML file format, proceed as follows:

Notes: 1) All the existing settings and data in the SiteOmat360 are erased and replaced. This procedure is intended only for a new station at the setup stage, or for a restored system.

2) Prices are NOT imported and it will be set to ZERO. They will HAVE TO BE RELOADED!!!.

1 Click **Import** on the Setup page. A confirmation message is displayed.

Figure 82: Importing Setup Confirmation Message



2 Click **OK**. The Setup Import dialog box is displayed and enables you to browse the system for the compatible XML file.

Figure 83: Setup Import Dialog

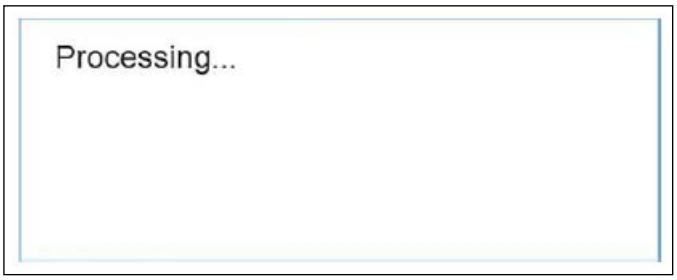
7.13 Applying Setup Settings

After completing or changing the SiteOmat360 setup, save the data by clicking **Save**. Click **Reload** to completely finish the process.

Note: It is highly recommended to export the setup data at this stage. Save the data as a recovery backup file.

A processing message opens, displaying the various steps of the configuration procedure starting from clearing the existing setup and ending with writing INI files for the pump server.

Figure 84: Processing Message



After the processing has successfully completed, an Operation Successful message is displayed.

*Note: If the power fails during the reload process, the system may be left in Stop mode. Click **Start** to restart it when the power returns.*

8 – Maintenance

8.1 General

This section provides general maintenance and troubleshooting guidelines, including system files location and logs collection.
Note: This section contains instructions for advanced users only.

The hardware platform to run SiteOmat360 is nOrCU Controller, which runs on an embedded Linux Operating system.

The SiteOmat360 runs on the OrIC Prime Controller hardware platform, which runs on an embedded Linux Operating system.

The SiteOmat360 software is divided into the following modules, each runs as a separate process inside the system, with different log files names and database locations:

- **FCC:** Forecourt Controller module is responsible for all communications to the forecourt devices. It controls the pump (via pump server), authorizes transactions, and records them into the database.
- **BOS:** Back Office System module is responsible for all interfaces to the network. This includes browsing to the SiteOmat360 for setup, operation and reports. It is also the module that communicates with the Head Office.
- **FCC Loader:** Watchdog process responsible for starting and monitoring all other processes including pump servers. The watchdog verifies that all processes are running and re-runs them, if needed.
- **Pump Servers:** Internal component responsible for communication between FCC and the pumps (or cluster of pumps).

8.2 Tools and Utilities

To access SiteOmat360 files and logs, the following are needed:

- Logger: SiteOmat360 log collection tool that supports both the TCP/IP and UDP protocols.
- A log file monitoring tool, such as BareTail for real-time monitoring or NotePad++.
- An FTP solution to browse SiteOmat360 files in the Linux environment for analysis purposes, such as FileZilla.
- An SSH and telnet client, such as PuTTY, for access to the platform software.

8.3 IP Addresses and Ports

The following ports must be opened to allow communication with the SiteOmat360:

- 22
- 443
- 80
- 6443

SiteOmat360 connects over a secure link HTTPS (SSL) communications layer. To access the unit use Google Chrome and navigate to https://SiteOmatIP (e.g. https://192.168.1.104).

Note: SiteOmat360 also works with Mozilla Firefox and Microsoft Edge, but it is strongly recommended to use Google Chrome.

The system comes with two ports with the following defaults:

- LAN1 - 192.168.1.104 Mask 255.255.255.0. Used for communication with station devices.
- LAN2 - 10.0.0.1 Mask 255.255.255.0. Used for communication with the network (Head Office, remote host).

8.4 Files Location

8.4.1 BOS Files Location

The following BOS files may be accessed for maintenance purposes, as instructed by Customer Services:

- **/opt/fccapps/StationAutomation/BOS/bin**: Contains several components needed in the BOS process.
- **/opt/fccapps/StationAutomation/BOS/bin/lo**g: Contains all BOS log files.
- **/opt/fccapps/StationAutomation/BOS/DB/patches**: Contains patches for upgrades to latest database versions.
- **/opt/fccapps/StationAutomation/BOS/DB/patches**: Contains the files necessary to operate the SiteOmat360 BOS screens.

8.4.2 Internal Log Files Location

The following log files may be accessed for maintenance purposes, as instructed by Customer Services:

- **/tmp/tmplogs**: Contains temporary log files.

8.4.3 FCC Files Location

The following FCC files may be accessed for maintenance purposes, as instructed by Customer Services:

- **/opt/fccapps/StationAutomation/bin/log**: Contains the FCC log files.

8.4.4 Disk Usage Thresholds

When the SiteOmat360 detects that the disk usage exceeds 60%, the **FCC Hard Disk Almost Full** alarm is generated and the system tries to clean and free disk space automatically.

When the disk usage exceeds 70%, the **FCC Hard Disk Full** alarm is generated, and the station is stopped. All communication to devices is stopped and new transactions are not allowed.

In addition, if the database size exceeds 5 MB in the FCC module or 100 MB in the BOS module, the station is stopped.

In all of the above cases, an **Out of service** message is displayed on all OPT devices in the station and an alarm is sent to the Head Office.

8.5 Pump Server

The Pump Server is an Internal component that communicates between FCC and the pumps.

If no data is received from a pump server, the watchdog checks status of the first pump in each cluster.

8.5.1 Pump Server INI Files

The Pump Server INI files are created by the SiteOmat360 based on the settings defined through the BOS screens. The INI files are located in: **/opt/fccapps/StationAutomation/bin**.

The following table describes the Pump Server INI file logging properties (see Table 24).

Table 24: Pump Server INI Files

Property	Description	Logging Parameters	Type	Remarks	Default
log_spec_ output_dir	Common Output Directory	Full path to the common log files and runtime backup directory	String	'/' (slash) character at the end of the string Unique: Dir name +File name	Process working dir.
log_stat_output_ dir	Status File Output Directory	Full path to the runtime backup directory	String	'/' (slash) character at the end of the string	log_ spec_ output_ dir
start_up_log_ name	Startup Log File Name	Start up log file name	String	Following the log filenames convention…	
log_app	Update System Log In File?	Enable system (Pump Server) log file output?	String	Y/N	Y
app_log_name	System Log File Name	System log file name	String	Following the log filenames convention…	
log_app_size	System Log File Size	System log file maximal size	Integer	-1 – unlimited > 0	200000
log_app_port	System Log File Port	Port number for run-time debug of the system log	Integer	> 1023 Unique within 'localhost' 0 – not used	0
log_scucomm	Update SCU Log In File?	Enable log file output for the communication with the SCU?	Boolean	Y/N	N
scu_log_name	SCU Log File Name	SCU log file name	String	Following the log filenames convention…	
log_scucomm_ size	SCU Log File Size	SCU log file maximal size	Integer	-1 – unlimited > 0	100000
log_scu_comm_ port	SCU Log File Port	Port number for run-time debug of the SCU log	Integer	> 1023 Unique within 'localhost' 0 – not used	0
log_cluster_ comm	Update Cluster Log In File?	Enable log file output for the communication with each cluster?	Boolean	Y/N	N
log_cluster_ comm_size	Cluster Log File Size	Cluster log file maximal size	Integer	-1 – unlimited > 0	2000000

Property	Description	Logging Parameters	Type	Remarks	Default
log_ clusterfiltercomm	Apply Filter On Cluster Log?	Apply filter on log? Yes – the log will contain verbose only; No – the log will contain full information (including code strings)	Boolean	Y/N	N
[cluster_xx]		Cluster parameters appears as many times as total number of clusters		'00' ≤ xx ≤ '99'	
Cluster_log_ name	Cluster Log File Name	Cluster log file name	String	Following the log filenames convention…	
log_cluster_port	Cluster Log Port No.	Port number for run-time debug of the cluster log	Integer	> 1023 Unique within 'localhost' 0 – not used	0

8.5.2 Pump Server Factor Settings

The following table displays the Pump Server factor settings for the various types of pumps (see Table 25).

The numbers reflect pumps whose default display format configuration is two digits after the decimal point. Verify that the pump settings in the SiteOmat360 match the format at the pump display.

Table 25: Pump Server Factor Settings

PumpServer INI file	Aplab	Avery	Gilbarco	Midco	L&T	NP	NP	Tatsuno	Wayne	
price_factor	100	100	100	100	100	100	100	100	100	
volume_ factor	100	100	1000	100	100	100	100	100	100	
total_factor	100	100	100	100	1000	100	100	100	100	
totalizer_vol_ factor	100	100	100	100	1000	100	100	100	100	
totalizer_ money_factor	100	100	100	100	1000	100	100	100	100	
preset_ volume_ factor	100	10	1000	100	100	100	100	100	100	Identical to the volume factor except of Avery
preset_ amount_ factor	100	1	100	100	1000	100	100	100	100	Identical to the total factor except of Avery

8.6 Log Files

Notes:1) This section is for advanced users only.
2) Log files are limited on the embedded platform. Only critical logs are written locally, all other logs are written on remote host using log server utility.

Both the BOS and the FCC make use of several types of log files to record information when the system runs.

In order to keep the size of the log files manageable, all log files in the log folder are "rotated" on a daily basis. This indicates that an active log file is "moved aside" by renaming it to include a sequence number, and a new active log file is opened using the standard name for the log file (an active log file has no sequence number in its name).

For example, old debug.log files are named debug.log.1, debug.log.2, etc. The lower the sequence number, the more recent the file is.

Old (non-active) log files are kept for a period of 14 days.

Note: Every line in the log files includes a date. When sending a log file to GVR for troubleshooting purposes, the date should always be checked inside the file to verify that this is the correct file.

8.6.1 BOS Log Files

The following table describes the different types of log files that are generated by the BOS (see Table 26).

All BOS log files are stored in: **/opt/fccapps/StationAutomation/BOS/bin/log**.

Table 26: BOS Log Files

Type	Name	Description
BOS Traffic	BOS_REMOTE_ HO.log	Records all outbound and inbound traffic of BOS with a remote Head Office. This is similar to WEB_COMM, but in this case it is a client of Head Office.
Database Logs	DATA.log, META_ DATA.log, LANG.log	For each database used by the system, there is a log file that records all queries sent to it. The database log files include both SELECT queries, as well as queries that modify the database in any way.
Web Server Access Logs	WebAccessxxxx.log	Records any attempt to establish a SiteOmat360 session with a name and password. The port number is included in the name of the log file.
Web Server Communications Logs	WebCommxxxx.log	Records all HTTP requests made to the web server. SOAP requests from the FCC are also logged into this file. The port number is included in the name of the log file.
Debug Log	debug.log	Records all actions performed in the system.

8.6.2 FCC Log Files

The following table describes the different types of log files that are generated by the FCC (see Table 27).

All log files are stored in: **/usr/local/Orpak/FCC/bin/log**.

Table 27: FCC Log Files

Type	Name	Description
FCC Authorization Logs	FCC_AUTH.log	Logs all authorization calls from FCC to BOS – same information found in BOS_WEB_COMM log – this log is from the FCC side
Database Logs	DATA.DB.log, META_ DATA.DB.log	For each database used by the system, there is a log file that records all queries sent to it. The database log files include both SELECT queries, as well as queries that modify the database in any way.
Bus Logs	BUS_xxx.log	Records buses communications. There is a separate log file for each bus defined during setup, which includes the name of the bus in the log's name. The log entries are in Hex format for buses that use the GVR protocol, and in XML format for buses used by Pump Servers.
Web Server Access Logs	WebAccessxxxx.log	Records SOAP login sessions from the BOS.
Web Server Communications Logs	WebCommxxxx.log	Records SOAP requests from the BOS. It includes all HTTP / Web Services communications data, including HTTP headers.

8.6.3 Pump Server Log Files

The following table describes the different types of log files that are generated by the Pump Server components (see Table 28).

Table 28: Pump Server Log Files

Type	Name	Description
Startup Log	start_up_ xxxxxxxxx.log	Records startup times.
Application Log	app_xxxxxxxxx.log	System log that records software problems, such as invalid pump behavior.
Cluster Log	cluster_log_ xxxxxxxxx.log	Records communication between the pumps and their Pump Server.
Forecourt Controller Log	scu_xxxxxxxxx.log	Records communication between FCC and the Pump Server.

8.6.4 FCC Loader and Watchdog Log Files

The following table describes the different types of log files that are generated by the FCC Loader module (see Table 29).

Table 29: FCC Loader and Watchdog Log Files

Type	Name	Description
FCC Loader Log	fccloader.log	Records FCC Loader activity. *Note: The log file is located in the **/usr/local/Orpak/** directory, one level up from the other log files.*
Web Server Watchdog Log	WebAccess6001.log, WebComm6001.log	Records watchdog service activity.

8.6.5 Log File Format

The following is an example of a log generated by the system. In this case, it is part of FCC.debug log which contains all messages recorded during fueling in auto authorization mode:

[16-02-22 12:14:54.356] <00011922> INFO [FCC.fueling] <20353> PUMP: OID 200000009 NUMBER 3 CPU 3

From IDLE To CALL Proccess IDLE

[16-02-22 12:14:54.356] <00011922> DEBUG [FCC.fueling] <20347> PUMP: OID 200000009 NUMBER 3 CPU 3

Authorizing: No limit - Auto authorized mode

[16-02-22 12:14:54.357] <00011922> DEBUG [FCC.fueling] <20523> CreateAuth e5aaefb0

[16-02-22 12:14:54.357] <00011922> DEBUG [FCC.fueling] <20535> Create authorization object number of objects:1

[16-02-22 12:14:54.357] <00011922> INFO [FCC.fueling] <20288> PUMP 3 HEAD 3: sending request for authorize nozzle 1.

[16-02-22 12:14:54.827] <00011922> INFO [FCC.fueling] <20353> PUMP: OID 200000009 NUMBER 3 CPU 3

From CALL To READY Proccess AUTH_DONE

[16-02-22 12:14:57.007] <00011922> INFO [FCC.fueling] <20353> PUMP: OID 200000009 NUMBER 3 CPU 3

From READY To IN_USE Proccess AUTH_DONE

[16-02-22 12:15:01.581] <00011922> INFO [FCC.fueling] <20353> PUMP: OID 200000009 NUMBER 3 CPU 3

From IN_USE To PAYABLE Proccess FUELING

[16-02-22 12:15:01.584] <00011922> INFO [FCC.fueling] <20305> PUMP: OID 200000009 NUMBER 3 CPU 3 -

got final payment message (final_payment_data_report req_id="0" auth_ tag="1||300000034||0|0|9|0||||0|0|7|0.000|0|0.000000|0|0.000000|78970.110000|0" pump_num="3" nozzle="1" product_id="0" volume="000002.73" sale="000006.82" ppv="0002.50" time_and_date="2016/02/22 12:15:01" trx_ seq_no="932" result="0" />)

[16-02-22 12:15:01.584] <00011922> CRITICAL [FCC.fueling] <77777> ####### Before pPump->m_auth->trylock () for pump 3(3) -

[16-02-22 12:15:01.585] <00011922> CRITICAL [FCC.fueling] <77777> ####### After OK pPump->m_auth-

>trylock() for pump 3(3) -

[16-02-22 12:15:01.585] <00011922> DEBUG [FCC.fueling] <77777> pump (3) with trx_seq_no=932 -

[16-02-22 12:15:01.585] <00011922> INFO [FCC.fueling] <20580> PushToTransactionsQueue : Pump 3, trx_seq_ no=932

[16-02-22 12:15:01.591] <00011922> INFO [FCC.fueling] <20350> PUMP: OID 200000009 NUMBER 3 CPU 3

INFO: checking transaction - meanID=1 nozzle=1 mean_type=9

[16-02-22 12:15:01.591] <00011922> INFO [FCC.fueling] <20352> PUMP: OID 200000009 NUMBER 3 CPU 3

INFO: flow rate checks skipped

[16-02-22 12:15:01.592] <00011922> INFO [FCC.fueling] <20579> DoGuardChecks - handle transaction : Pump 3, trx_seq_no=932

[16-02-22 12:15:01.601] <00011922> INFO [FCC.fueling] <20485> DB: Added transaction: ID=300006257, PUMP=3, Vol= 2.730 Price= 6.820 TagID=1

Each log contains the following (examples taken from the first message in the log above):

- Date and time stamp (e.g. [16-02-22 12:14:54.356]).
- Thread ID (e.g. <00011922>): A thread is a unit of code that performs a specific task. Threads run in parallel, while each thread has an ID. SiteOmat360 uses threads for various operations, we may use this ID to track task execution.
- Log Level (e.g. INFO): log severity.
- Log Type (e.g. [FCC.fueling]): type of action recorded.
- Message ID (e.g. <20353>): Number that identifies the specific message.
- Log Message (e.g. PUMP: OID 200000009 NUMBER 3 CPU 3 From IDLE To CALL Process IDLE): the message recorded to the log.

8.6.6 Collecting Log Files

Logger, the Log Server application provided by GVR, listens in on both the UDP port and TCP/IP ports (for Pump Server logs), captures and writes the log messages to a remote Log Server.

Note: The Logger Tool can be can be downloaded from the FTP.GILBARCO.COM.

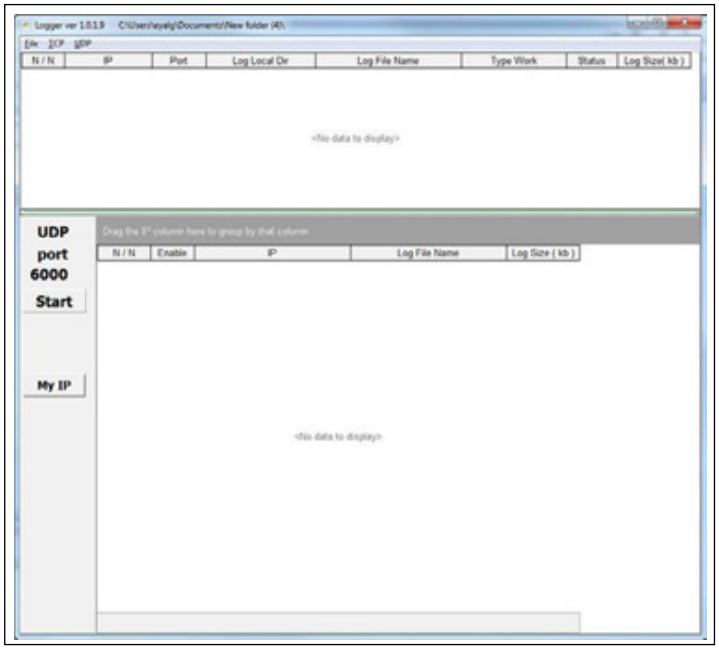
To collect log files without Logger using the Memory Logs feature, follow the instructions below:

8.6.6.1 Setting up the Logger

To set up the Logger tool, proceed as follows:

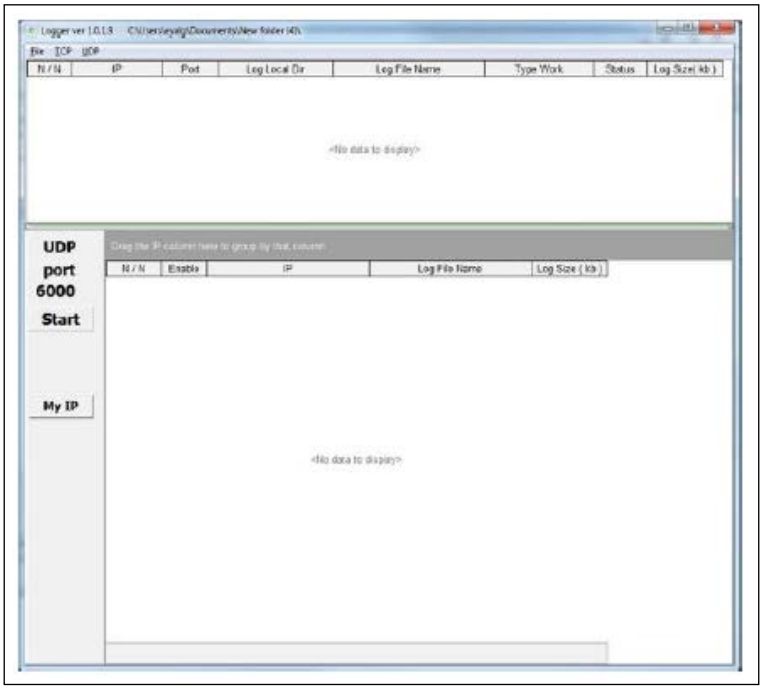
1 Run the Logger.exe file. Logger runs as a service in the background, no installation is required. The following screen is displayed (see Figure 85).

Figure 85: Logger Main Screen



2 In the **File** menu, select **Setup**. The following dialog box is displayed (see Figure 86).

Figure 86: Config Dialog - Global Tab



3 In the **Global** tab, set the following parameters:

a In the **Log Directory** field, enter the path to save the logs on the remote Log Server PC.

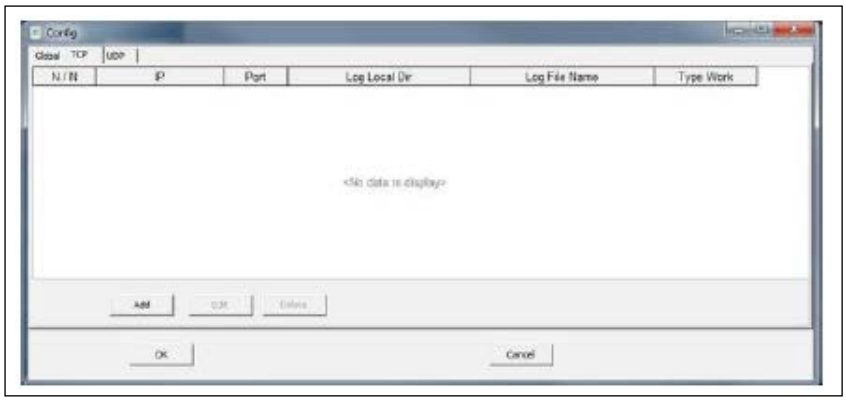
b In the **Editor File Name** field, enter the path of the log file monitoring tool utilized (For example, BareTail, NotePad++).

c In the **Max File Size**, **MB** field, set the maximum size of the log file. When exceeded, the system will compress this log into a .ZIP file.

*Note: There is no need to change the default values of **Connect Timeout**, **sec**, and **Display delta File Size**, **KB** fields.*

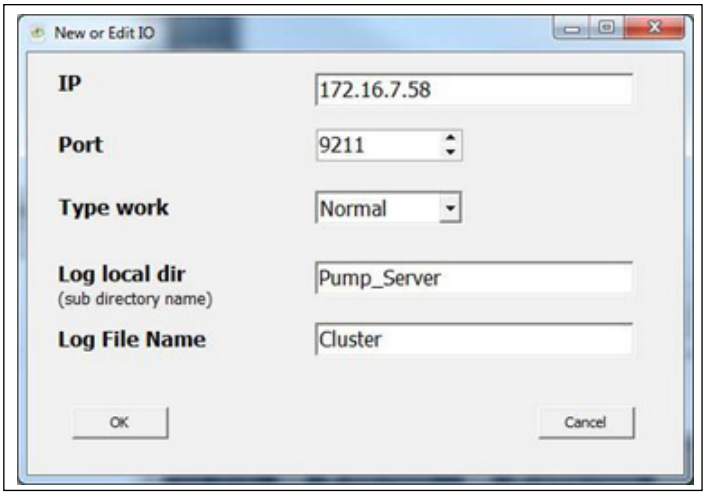
4 Select the **TCP** tab to set communication parameters for Pump Server logs (see Figure 87).

Figure 87: Config Dialog - TCP Tab



5 Click **Add**. The following dialog box opens (see Figure 88).

Figure 88: New or Edit IO Dialog



6 In this dialog box, set the following parameters:

a In the **IP** field, enter the system's IP address.

b In the **Port** field, set the Port previously defined in Pump Server Settings dialog (see "7.5.2 Additional Features" on page 17).

c In the **Type work** drop-down, select the work mode: **Normal** or **Auto Start**, while in Auto Start the Logger automatically starts collecting logs after being run.

d In the **Log local dir** field, enter the sub directory name to save the logs on the remote Log Server PC.

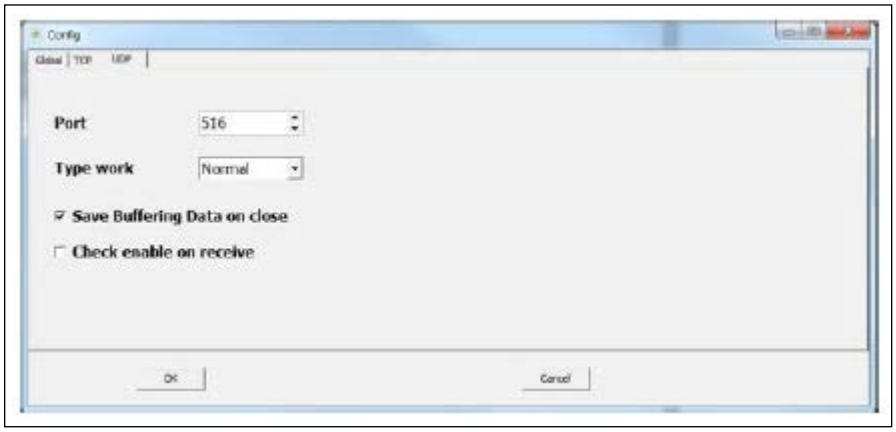
e In the **Log File Name** field, enter a descriptive name for the log file.

f Click **OK**. The TCP/IP port is added to the grid at the top of the Config screen.

7 Repeat step 6 on page 12 for each Pump Server log needed, such as Cluster, Pump Communication, Comm (FCC) Communication, and Application.

8 Select the **UDP** tab to set communication parameters for all system logs (see Figure 89).

Figure 89: Config Dialog - UDP Tab



9 In this dialog, set the following parameters:

a In the **Port** field, enter the port that is previously defined in the Logging Settings dialog. Please refer to "4.3.1 Logging Settings".

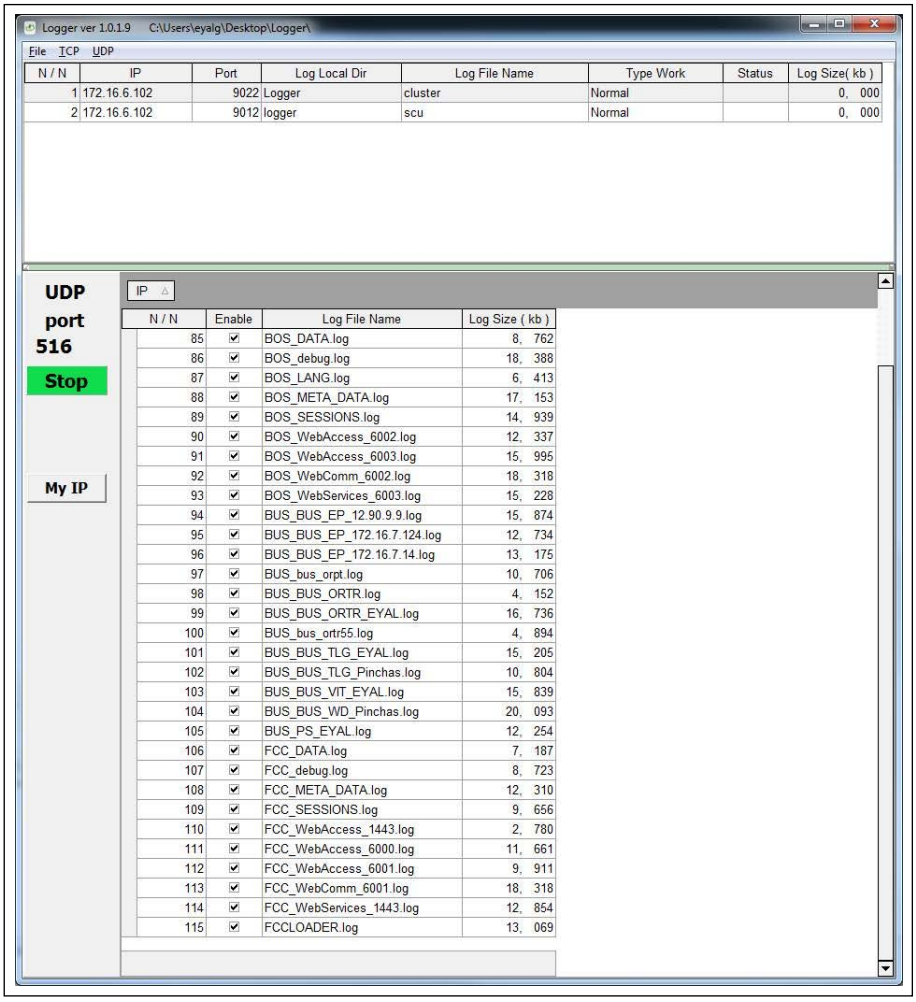
b In the **Type work** drop-down, select the work mode: **Normal** or **Auto Start**, while in Auto Start the Logger automatically starts collecting logs after being run.
*Note: There is no need to change the settings of **Save Buffering Data on close** and **Check enable on receive** check boxes.*

c Click **OK**.

8.6.6.2 Using the Logger

After setting up the Logger, click **Start** to start collecting logs.

Figure 90: Logger Main Screen



The Logger screen includes two grids:

- **Upper grid:** Displays the TCP/IP ports currently being listened to
- **Lower grid:** Displays the log files being collected

Perform the following steps:

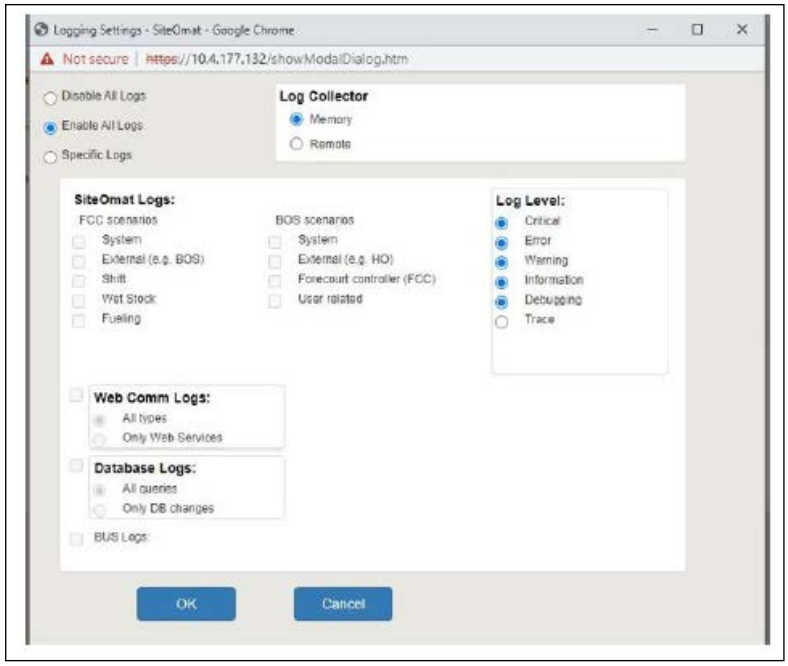
a Click **Stop** to stop collecting the logs.

b Right-click a log and select the **Open Log File** option to open it in the log monitoring tool defined in the system.

8.6.6.3 Using Memory Logs

To start collecting logs, open the **Logging Settings** dialog. Under **Log Collector**, select the **Memory** option, then click **OK**.

Figure 91: Memory Option Button



After clicking **OK**, logs will be created under the **/tmp/tmplogs** folder. The following conditions apply:

- If the logs are deleted manually, they will not get created again and will require the system to reboot.
- Logs are automatically saved to Memory - if logging has already been configured by the client, the setting changes to Memory. If the client changes it again and upgrades, the setting will not change.
- Cluster logs are automatically set to Filtered (if the client changes this setting and upgrades again, it will remain what the client has chosen).
- It is recommended to not select the Trace logs.

Notes: 1) Logs are deleted and recreated after manual/power off reboot.

2) The version 7.2.27.xxx or above and Service Pack 24 or higher must be installed for the Memory Logs feature to work.

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Appendix A: Alarms

This section lists all the system alarms, along with their definition and component(s) that they are related to. Please refer the table below for more details:

Table 30: System Alarms

Alarm ID	Definition
101	Tank Level High-High
102	Tank Level Low Low
103	Tank Level High
104	Tank Level Low
105	Tank Density High
106	Tank Density Low
107	Water Level High
108	Water Level High-High
109	Temperature High
110	Invalid Data Received
111	Tank Communication Failed
112	Printer Out of Paper
113	Printer Low on Paper
114	Printer Communication Failed
115	Invalid Data Received
116	Pump Communication Failed
117	Invalid Data Received
118	Price Update Failed
119	Pump Out of Order
120	Pump Price Incorrect
121	Tag Reader Communication Failed
122	Blocked Fleet Device Presented
123	Fleet Fuel Type Mismatch
124	Fleet Credit Limit Exceeded
125	Unauthorized Tag Presented
126	Communication Failed with OPT
127	Invalid Data Received
128	Invalid Data Received
129	Replication Halted
130	Unable to Connect
131	Communication Failed with PS
132	Suspected Leak Detected
133	Error Sensor 1
134	Error Sensor 2
135	Error Sensor 3

Alarm ID	Definition
136	Error Sensor 4
137	Error Sensor 5
138	Error Sensor 6
139	Error Sensor 7
140	Error Sensor 8
141	Error Sensor 9
142	Error Sensor 10
143	Temperature Sensor Error
144	Density Sensor Error
145	Leak Test Overdue
146	Level Below Reorder Level
147	System Stopped
148	FCC restarted
149	Cannot connect to CMS FTP
150	Connection to CMS FTP successsful
151	Time Offset Detected
152	Communication Failed with FCC
153	CMS never initialized
154	Tank Unexpected Drop
155	Tank Unexpected Rise
156	CMS dialup error
157	RO code empty
158	No communication with TLG
159	Security plug not found
160	FCC hard disk almost full
161	FCC hard disk full - old logs purged
162	UPI communication error
163	Station transceiver communication error
164	Station is off-line
165	Station mapping is broken
166	Backup failed
167	System Disk Usage High
168	Application Disk Usage High
169	Controller Activity Blocked
170	Delivery volume differs from expected amount
171	Enclosure door open
172	Digital I/O communications error
173	DB disk almost full
174	Tank volume sudden loss
175	OrData unit is off-line
176	Probe error - cannot fuel
177	Tank delivery - cannot fuel
178	Probe error - fuelling stopped

Alarm ID	Definition
179	Tank delivery - fuelling stopped
180	No communication with LED
181	BOS hard disk almost full
182	BOS hard disk full - old logs purged
183	Shift in progress
184	No communication with BOS or BOS Down
185	Preset Deviation
186	Low Stock
187	W&M Seal not Present
188	Delivery missing Tank Truck Receipt - cannot fuel
189	Delivery missing Tank Truck Receipt - fueling stopped
190	Delivery missing Tank Truck Receipt
191	Delivery Tank Truck Receipt Quantity Mismatch - cannot fuel
192	Delivery Tank Truck Receipt Quantity Mismatch - fueling stopped
193	Delivery Tank Truck Receipt Quantity Mismatch
194	Tank Probe Out
195	UPS AC Failure (UPS 1)
196	UPS Battery Low (UPS 1)
197	UPS Scheduled Shutdown (UPS 1)
198	UPS Battery High Voltage (UPS 1)
199	No communication with TLG device
200	EDL no communication
201	Tank Setup Data Warning
202	Tank Leak Alarm
203	Tank High Water Alarm
204	Tank Overfill Alarm
205	Tank Low Product Alarm
206	Tank Sudden Loss Alarm
207	Tank High Product Alarm
208	Tank Invalid Fuel Level Alarm
209	Tank Probe Out Alarm
210	Tank High Water Warning
211	Tank Delivery Needed Warning
212	Tank Maximum Product Alarm
213	Tank Gross Leak Test Fail Alarm
214	Tank Periodic Leak Test Fail Alarm
215	Tank Annual Leak Test Fail Alarm
216	Tank Periodic Test Needed Warning
217	Tank Annual Test Needed Warning
218	Tank Periodic Test Needed Alarm
219	Tank Annual Test Needed Alarm
220	Tank Leak Test Active
221	Tank No CSLD Idle Time Warning
222	Tank Siphon Break Active Warning

Alarm ID	Definition
223	Tank CSLD Rate Increase Warning
224	Tank AccuChart Calibration Warning
225	Tank HRM Reconciliation Warning
226	Tank HRM Reconciliation Alarm
227	Tank Cold Temperature Warning
228	Tank Missing Delivery Ticket Warning
229	Tank/Line Gross Leak Alarm
231	Printer Out of Paper
232	Printer Error
233	EEPROM Configuration Error
234	Battery Off
235	Too Many Tanks
236	System Security Warning
237	ROM Revision Warning
238	Remote Display Communications Error
239	Autodial Error
240	Software Module Warning
241	Tank Test Shutdown Warning
242	Protective Cover Alarm
243	BIR Shift Close Pending
244	BIR Daily Close Pending
245	PC (H8) Revision Warning
246	System Self Test Error
247	System Clock Incorrect Warning
248	System Device Poll Timeout
251	Sensor Setup Data Warning
252	Sensor Fuel Alarm
253	Sensor Out Alarm
254	Sensor Short Alarm
255	Sensor Water Alarm
256	Sensor Water Out Alarm
257	Sensor High Liquid Alarm
258	Sensor Low Liquid Alarm
259	Sensor Liquid Warning
261	Input Setup Data Warning
262	Input Normal
263	Input Alarm
270	Tank Bad Temperature
271	Product Volume Out of Range
272	Water Volume Out of Range
273	Water Height Out of Range
274	Leak Detected
284	Auto Calibration Done

Alarm ID	Definition
285	Delivery in Progress
286	Sensor position not installed
287	Sensor low level
288	Sensor high level
289	Sensor position down
290	Separator alarm - please check water level in tank and add as necessary
291	Separator alarm - please empty excess oil from tank
292	One or more certificates could not be found
301	Number of FCC Transactions is High
302	Number of FCC Transactions Reached Max
303	Communication Failed with Multimedia ORSPT
305	Tank deactivated
306	UPS Disconnected (UPS 1)
310	Product Low Stock
311	Communication to HO failed
312	Pump in bypass mode
313	Nozzle is locked due to lack of testing
314	Totalizer mismatch
315	Pump preset deviation
316	Tank fixed level while fueling
318	Dry product low inventory
319	No EOD in the last 24 hours
321	Price Pole Display 01 - communication error
322	Price Pole Display 02 - communication error
323	Price Pole Display 03 - communication error
324	Price Pole Display 04 - communication error
325	Price Pole Display 05 - communication error
326	Price Pole Display 06 - communication error
327	Price Pole Display 07 - communication error
328	Price Pole Display 08 - communication error
329	Price Pole Display 09 - communication error
330	Price Pole Display 10 - communication error
331	Price Pole Display 11 - communication error
332	Price Pole Display 12 - communication error
333	No communication with AVL Server
334	Pump is blocked after zero transactions
335	Transaction mismatch: Total not equal to Vol * PPV
336	Could not read Totalizers from Pump
337	Charge Failure (UPS 1)
338	UPS Mains Failure (UPS 1)
339	UPS Overload (UPS 1)
340	Over Temperature (UPS 1)
341	SPD1 Connection Failed

Alarm ID	Definition
342	DAP communication failure
343	Charge Failure (UPS 2)
344	UPS Mains Failure (UPS 2)
345	UPS Overload (UPS 2)
346	Over Temperature (UPS 2)
347	Over Temperature (UPS 2)
348	UPS Disconnected (UPS 2)
349	SPD2 Connection Failed
350	UPS Battery Low (UPS 2)
351	UPS Battery High Voltage (UPS 2)
352	UPS AC Failure (UPS 2)
353	PMB Disconnected
354	PMB Battery Low
355	PMB Load on Battery
356	XtraPower no communication
357	ITPS communication failure
358	CMS communication failure
359	Automatic Version Upgrade starting
360	New delivery received
361	DU error
362	DU error - other
363	Pump interlock due to compulsory receipt
364	Tank Level Low Interlock Activated
365	Water Level High Interlock Activated
366	Preset Mismatch Interlock Activated
367	Automatic version upgrade failed
368	ATG failure interlock activated
369	DU printer communication failure
370	Delivery in progress interlock
371	No valid price for product-nozzles have been locked
372	Missing Morning Density Readings
373	pullCSPRC Not Available
374	pullCSINV Not Available
375	pullCSINT Not Available
376	pullCSPAR Not Available
377	pullCSRPR Not Available
378	pullCSSCH Not Available
379	Delivery Chamber Density Mismatch
380	ATG: Post Delivery Density Mismatch
381	Missing Decantation Safety Checklist
382	Backup host is offline
383	pullCSMCM Not Available
384	pullCSFMM Not Available

Alarm ID	Definition
385	pullCSROM Not Available
386	pullCSDOB Not Available
387	pullCSCUS Not Available
388	pushFRM Not Available
389	pullCSFRM Not Available
390	Nozzle Manual Interlock Activated
391	Bay Manual Interlock Activated
392	Price Mismatch Interlock Activated
393	Density Mismatch Interlock Activated
394	pushFMM Not Available
395	pushFRM Not Available
396	Communication Failed With GPS Device
397	pullCSATM Not Available
398	pullCSTAG Not Available
399	pullCSCAU Not Available
400	pullCSUSR aot available
401	Price update sent
402	Price update ack
403	Price update nack
404	pullCSDVM Not Available
405	Connected Slave DU blocked by server
406	pushUSR Not Available
407	Input Voltage High (UPS 1)
408	Input Voltage Low (UPS 1)
409	Input Frequency High (UPS 1)
410	Input Frequency Low (UPS 1)
411	Output Short Circuit (UPS 1)
412	Fan Failure (UPS 1)
413	Battery Discharging (UPS 1)
414	Input Voltage High (UPS 2)
415	Input Voltage Low (UPS 2)
416	Input Frequency High (UPS 2)
417	Input Frequency Low (UPS 2)
418	Output Short Circuit (UPS 2)
419	Fan Failure (UPS 2)
420	Battery Discharging (UPS 2)
421	Device Communication Failure Alarm (HHR)
422	EDC Communication Failure
423	FCC switchover has occurred
424	Wireless Gateway communication error
425	Slave WGT communication error
426	Warning Phase separation detected over reference density
427	Phase separation detected over reference density

Alarm ID	Definition
428	Tank Level High-High Interlock
429	High Price Interlock activated
430	Hooter Communication error
431	Pump is offline
432	Tag Reader is offline
433	Insert manual delivery

Appendix B: Event Viewer Codes

This section lists all the Event Viewer items and their respective definitions. Please refer the table below for more details:

Table 31: Event Viewer Codes

Event Code	Definition
101	SOB expected
102	EOB expected
106	Unexpected EOT
111	Incorrect CRC
107	Timeout
108	Service denied
910	Acknowledge
911	Are you really there
920	Active/Passive
921	Driver active
922	Passive
930	Invalid value
931	Repeat message
940	Communication error with device
941	Communication restored with device
103	SOH expected
104	STX expected
105	ETX expected
113	Incorrect length
201	System online
302	System offline
411	Failed to Authorize string #1#. Reason: #2#
403	Shift Start
404	Shift End
950	Open connection
951	Close connection
952	Close and open connection
201	Log OBQ is on
202	Log OBQ is off
203	Log RTR is on
204	Log RTR is off
205	Log VD on
206	Log VD off
901	Still there
305	User Inactivity Timeout

Event Code	Definition
406	Refuel ratio error
412	Failed to authorize on fuel type check. approved #1#, requested #2#
413	Device limit exceeded for day, week, month or year
306	Sysinit called
307	Reload called
308	Pump #1# initialized (previous status=#2#; process=#3#)
309	Apache stuck watch dog activated
310	Database error - restarting
405	Process code #1# out of sync. Transaction pump #2# total_price #3# volume #4# ppv #5# may not have been written
414	Device visits exceeded for day, week or month
407	Failed To Authorize Orsan Resson Communication Error Card Number #1#
207	User Inactivity Off
208	User Inactivity on A
209	User Inactivity on B
415	Pump #1# price update failed
408	Fueling card authorization fail Card #1# Client #2# Reason #3#
410	Price sent to - Pump no. #1# Head #2# Nozzle #3# Price #4#
416	Pump #1# Head #2# Ack new price
417	Pump #1# Head #2# Nack new price
418	Pump #1# Price #2# Should be #3#
419	Pump #1# Authorize command failed After #2# retries
420	Pump #1# incorrect nozzle #4# was lifted. correct nozzle was not lifted after #2# seconds, transaction #3# canceled
421	Pump has not started dispensing for more than #1# seconds, refueling canceled
801	Fleet Head Office service started
802	Station #1# : #2# in host #3# was added to the HeadOffice
803	Station #1# : #2# in host #3# was deleted from the HeadOffice
830	station no comm
831	station no auth
832	station bad data
833	station version mismatch
804	Station #1# : #2# in host #3# changed properties
430	Fleet credit has been exceeded
431	Vehicle Blocked or not found. Card number #4#
432	Not allowed to fuel in this time range
433	Department
436	Fleet Blocked or not found. Fleet code - #3#
437	Number of allowed visits has been exceeded
438	Device #1# is not allowed to fuel in this station
439	Device #4# credit has exceeded
440	Fleet head office offline
500	Internal screen info
442	Too Many Digits from Pump #1#

Event Code	Definition
423	Pump #1# No nozzle was lifted #2# seconds, transaction #3# canceled
443	Multiple Nozzles Lifted
444	No Nozzle Lifted
445	Pump Not in Open Shift
446	Pump Not Available for Fueling
447	Attendant Tag not in Shift
448	Pump Not in Open Shift
449	Product Not Authorized
450	Fueling not Authorized
451	No Pump Assigned
452	Assigned Pump Not On Tag Reader
453	Multiple Fueling Not Allowed
454	Unrecognized string in device #1#
455	Bad Tag Format
441	Preset fueling incomplete. Pump #1# Preset #2#
457	Device in negative list #1#
458	Blocked mean #1#
459	Blocked fleet #1#
465	Transaction rejected by flow rate #1#
466	Wrong PIN #1# for tag #2# entered
467	Tag #2# blocked after wrong PIN #1# entered
468	Can not authorize: pump #1# is busy
469	Day visits exceeded
470	Week visits exceeded
471	Month visits exceeded
472	Day limits exceeded
473	Week limits exceeded
474	Month limits exceeded
475	Bypass On - Totalizer: #1#
476	Bypass Off - Totalizer: #1#
460	Blocked department #1#
513	The system is missing certificate: #1#
955	Sysinit called
956	Bus updated
957	Bus deleted
958	Device added
959	Device updated
960	Device deleted
961	Nozzle updated
962	Probe updated
963	WP registered
964	WP reset approved
965	Organization ID not found
966	Device ID change not permitted

Event Code	Definition
477	Pump #1# was blocked due to #2# consecutive zero transactions
967	HASP problem
968	Export Failed
969	Export finished successfully
970	Backup Failed
971	Backup finished successfully
972	Automatic export deleted
973	Update base price failed
974	Sudden loss of volume (#1# units) for tank #2#
975	New Delivery created successfully for order #1#, tank #2#
976	New Delivery created successfully for order #1#, tank #2#
977	Oil sensor at height #1# which is #2# below top level (#3#)
978	Difference between oil sensor height (#1#) and water sensor height (#2#) is #3#
979	Data is corrupted for record #1# station #2# unit #3#
980	Series 1000 key type #1# unsupported for device #2#
981	Series 1000 employee and vehicle are both empty for device #1#
982	Series 1000 expiry date #1# passed for device #2#
983	Series 1000 error (#1#) adding dept #2# for device #3#
984	Series 1000 error (#1#) adding group rule #2# for device #3#
985	Series 1000 error (#1#) adding device for device #2#
986	Series 1000 cannot generate pin; string/card_num: #1#/#2#; employee/vehicle:#3#/#4#
987	Series 1000 missing fuel rule #1# for device #2#
988	Series 1000 missing limit rule #1# for device #2#
478	Wrong Odometer entered
479	Transaction #1# fueled only #2# though preset was #3# (#4#)
480	Current volume (#1#) lower than required volume (#2#) or lower than minimum (#3#) for tank #4#
989	#1# battery level is very low. Performing System shutdown
990	Delivery invoice quantity change; Old Quantity: #1#, New Quantity: #2#, User: #3#, Compartment: #4#, TT Number: #5#
481	PAIS EOD failure for #1#, code=#2#, description=#3#
482	Year limits exceeded
483	Current volume (#1#) lower than required volume (#2#) or lower than minimum (#3#) for product #4#
491	Authorization #1# cancelled
492	Mean expired
991	Transaction was Reversed. request_method:#1# session_id:#2# response_code:#3# response_description:#4# approval_code:#5#
992	Settlement response code:#1#. merchant id:#2#. batch no:#3#. sales count:#4#. sales total amount:#5#. system trace:#6#. response session id:#7#
993	Batch-Up response code:#1#. batch_no:#2#. system_trace:#3#. transacton id:#4#. stn_ id:#5#. session id:#6#. original transaction reference:#7#. original system trace:#8#
994	Card-Validation response code:#1#. merchant id:#2#. card id:#3#. system trace:#4#. transaction reference:#5#
995	Sale response code:#1#. system trace:#2#. transaction reference:#3#. session id:#4#. transaction_id:#5#, station id:#6#

Event Code	Definition
996	Void-Sale response code:#1#. session id:#2#. system trace:#3#. staion id:#4#. sale transaction id:#5#, void sale transaction id:#6#
997	Post soap request failed. request method:#1#. error:#2#
840	E.H. reasonability check failed, current E.H. is #1#, entered E.H. #2# for plate #3#
841	E.H. reasonability check failed, fuelling is denied, current E.H. is #1#, entered E.H. #2# for plate #3#
842	Calibration factor changed at totalizer #1# to #2# for nozzle #3# of bay #4# (#5#) at #6# (received at #7#)
843	MPD Mode changed to #1# for bay #2# (#3#) at #4# (received at #5#); totalizers: #6#
844	MPD timestamp changed to #1# for bay #2# (#3#) at #4# (received at #5#)
845	Customer #4# #5# has taken #1# liters fuel in #2# fills in the last #3# days
846	Low Stock: Tank #1# current stock #2# low (capacity #4#)
847	Stock reorder: Tank #1# current stock #3# below reorder level (capacity #4#)
848	Density Variation: Tank #1# density #2# at #4# exceeds +/-#6# from post-decantation density of #7# at #8#
849	ATG failure for tank #1#
850	Sales variation of #5# exceeds +/-#6# during shift from #7# to #8#; open/close/delivery/sales volumes are #1#/#2#/#3#/#4#
851	ROIR Reconciliation not available for #1#
666	Cash amount #2# held by DSM #1# has reached maximum (#3#)
852	Interlock due to no TL Receipt for delivery started at #1#, ended at #2#, volume #3#, product code #4#
853	RO Closer closed shift #1# (#2#)
854	Current stock level #1# for dry product #2# is lower than threshold #3#
555	Bank deposit file #1# - bad data
855	BDS for EOD date #1# was not done
856	Mismatch for BDS EOD date #1# between cash deposit #2# and cash amount #3# where check deposit is #4#
857	Vehicles #1# removed from customer #2# mobile #3# due to duplication
858	Customer #1# data removed due to duplicate mobile #2#
859	Duplicate vehicles #1# added back to customer #2# mobile #3# by force
860	Pump #1# #2# by user #3#
861	Pump #1# #2# by user #3#
862	Customer #1# (mobile #2#) vehicle #3# removed by HOS
863	Pump interlock due to tank disabled
864	Pump interlock due to pump test required
865	Pump interlock due to tank high water level
866	Pump interlock due to compulsory receipt required
867	Pump interlock due to delivery in progress
868	Pump interlock due to tank probe error
869	Pump interlock due to very low stock: Tank #1# current stock #2# very low (capacity #4#)
870	Setup change: #1# #2#
871	Unknown transaction received from POS #1# batch: #2# Track2 #3# approval code #4# Fuel #5# #6#
872	Transaction mismatch received from POS #1# ID and batch #2# Track2 #3# approval code #4# #5#

Event Code	Definition
873	Settlement mismatch received from POS #1# ID/batch/date: #2# POS count/total #3# HO count/total #4#
874	Unhandled transaction in HO from POS #1# ref num #2# Track2 #3# approval code #4# Fuel code #5# #6#
875	No pre-authorization data found for received transaction; station/terminal: #1# #2#
876	The received transaction value is higher than the pre-authorization approved value; station/terminal: #1# #2#
877	The received transaction fuel type is different than the pre-authorization approved fuel type; station/terminal: #1# #2#
114	Totalizer offset changed for pump #1# nozzle #2# from #3# to #4# by user #5#
878	Timeout from two-stage state #1# (#2#) after inactivity of #3# seconds; return to Idle
879	Two-stage scenario no driver match found for vehicle #1#
880	Two-stage scenario no vehicle match found for driver #1#
881	Two-stage scenario aborted while expecting vehicle got #1#
882	Two-stage scenario aborted while expecting driver got #1#
484	Single fuel limit exceeded
485	Manual Transaction upload as failed due to missing parameter, Vehicle ID:#1# ,product code:#2# ,QTY:#3# ,Job Code:#4#
883	Odometer reasonability check failed, fueling is denied, current value is #1#, entered value #2# for plate #3#
422	Safe drop for #1# is required
425	Price of product #1# changed from #2# to #3# at #4# (tank #5#, stock #6#)
884	Odometer reasonability check failed, current value is #1#, entered value #2# for plate #3#
556	Could not read Totalizers from Pump #1#, Status #2#
557	Transaction mismatch: Total Sale #1# not equal to Vol * PPV (#2# * #3#) for Transaction #4# Pump #5#
558	HOS request #1# id(#2#) failed with error: #3#
559	Mean #1# with Vehicle Plate #2# Expired
839	Price changed at totalizer #1# to #2# for nozzle #3# of bay #4# at #5# (received at #6#)
837	Idle timeout of #2# seconds on bay #1#
838	Zero transaction with preset on bay #1#
805	D. Air Pressure used by #1# on #2# ; plate:#3#, Vehilce Type:#4#, mobile:#5#, email:#6#, #7#
885	Automatic Version Upgrade starting
886	#1# #2# #3# #4# #5#
887	E. Door Lock user:#1# on #2#; status:#3#
953	Terminal #1#: mode was changed from Self-Service to Full-Service
954	Terminal #1#: mode was changed from Full-Service to Self-Service
806	Password audit type=#1# at #2# (received at #3#) user-level=#4#
807	Hardware change type=#1# at #2# (received at #3#) user-level=#4#
808	Firmware change version:checksum=#1# at #2# (received at #3#) user-level=#4#
809	Set density to #1# totalizer=#2# at #3# (received at #4#) user-level=#5#
810	Motor timeout at #1# (received at #2#) user-level=#3#
811	Zero transaction at #1# (received at #2#) user-level=#3#
812	Test delivery at #1# (received at #2#)) user-level=#3#
814	OTP Done at #1# (received at #2#) user-level=#3#

Event Code	Definition
815	Month #1# closed by #2#
816	Preset override from #1# to #2# was performed for #3# by #4#
998	Nozzles locked for product #1# due to expired price; last effective price: #2#; expired on #3#
999	Tank #1#: Missing Morning Density Readings
949	Shift closed without ESD Z Report
947	Dealer Shift has been automatically opened. It will be automatically closed in 30 minutes, unless manually closed earlier
946	Cannot open Dealer Shift. Dealer Shift already opened today.
505	Location not allowed: #1#
424	final_payment_rejected no such bay or nozzle pump_index:#1# trx_seq_no:#2#
891	Problem updating CMS attendant master for ID: #1. Received master fields are not unique.
893	Transaction failed: could not get auth tag #1#
894	*Note: The Dealer Shift is currently open and should be manually closed by #1#*
925	Tyre Inflator Status=#1#, Count=#2#, at=#3#
924	Digital type inflator error=#1#, code = #2#
897	No sales were made for the past #1# hours for product #2#
918	Bay interlock due to tank very high level
823	Pump test transaction is out of range (#1#)

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Greensboro, North Carolina 27410
Phone (336) 547-5000 · http://www.gilbarco.com · Printed in the U.S.A.
MDE-5414B SiteOmat360 Setup and Maintenance Manual · June 2024