



M3041

Dispenser Terminal Control (DTC)

Software Configuration Guide

1.2.1.1



NOTE: Before you use this guide, make sure you have the latest revision. Check the revision level of this document against the most current revision found at <http://www.opwglobal.com/opw-fms/tech-support/manuals-how-to-videos>. Download the latest revision if necessary.



OPW Fuel Management Systems is a part of Dover Fueling Solutions.

Copyright Information

Copyright © 2018 Delaware Capital Formation, Inc. All Rights Reserved. DOVER, the DOVER logo are registered trademarks of Delaware Capital Formation, Inc., a wholly-owned subsidiary of Dover Corporation.

Contact OPW Fuel Management Systems

Visit us at www.opwglobal.com, or contact us at:

Call 1-877-OPW-TECH (877-679-8324)

For calls outside US and Canada, call +1-708-485-4200

Fax 1-800-421-3297

Monday through Friday, 7 a.m. to 6 p.m., US CST

For technician registration, see

<http://opwglobal.com/TechSupport/TechnicianRegistration.aspx>.

For in-depth training via OPW University, see

<http://www.opwglobal.com/opw-u-training-registration.html>.














Table of Contents

Section 1 Introduction	5
1.1 Icon Glossary	5
Section 2 Setup	6
2.1 Prerequisites	6
2.2 Installation Process	6
Section 3 Using the DTC Configuration Tool	9
3.1 Connection	9
3.2 Main Window	9
3.3 Connection Settings	10
3.4 Configuration	11
3.4.1 Adding a New Configuration	12
3.4.2 Editing a Configuration	12
3.4.3 Adding/Editing a New Controller	12
3.4.4 Adding a New Terminal	14
3.4.5 Editing the Keyboard Layout	15
3.4.6 Alpha Keypad for Gilbarco 500 (Non-secure)	16
3.4.7 Editing a Terminal	16
3.4.8 Deleting a Terminal	16
3.4.9 Deleting a Controller	16
3.4.10 Deleting a Configuration	16
3.5 Get Maximum Terminal Quantity Allowed	17
3.6 Send Configuration and Keyboards	18
3.7 Get Configuration and Keyboards	19
Section 4 DTC Message and Prompt Setup	20

4.1 DTC Message/Prompt Sets (Recommended)	20
4.1.1 Wayne CATs	21
4.1.2 Gasboy ICR	22
4.2 DTC Prompts and Prompt-Related Messages	22
4.2.1 DTC Prompt Display Behavior	22
4.2.2 DTC Prompt Maximum Character Entry	22
4.2.3 DTC Prompt Timeout Behavior	23
4.3 Gilbarco Secured-Prompt Terminals	24
4.4 Example: Prompt Table with Secured Prompt IDs Setup	25
Appendix A - Jumper Settings	27
Appendix B - Cable Pin-Out Connection	28
Appendix C - DTC Board	29
Appendix D - DTC Firmware Upgrade Procedure	30
Warranty	32

Section 1 Introduction

1.1 Icon Glossary

DTC Configuration Tool Icons/Buttons	
New	
Edit	
Cancel	
Save	
Delete Configuration	
Refresh	
Add Terminal	
Keyboard	
Delete Terminal	
Successful	
Failed	
Edit Controller	
Delete Controller	

Section 2 Setup

The **Setup** section details the prerequisites and full installation process for the DTC Configuration Tool software used to configure the DTC Board.



IMPORTANT: At this time the DTC Configuration Tool software is not compatible with the Windows 10 platform. There are no known compatibility issues when this software is run on Windows 7 or Windows 8.

2.1 Prerequisites

The installation process determines if the software is installed on the computer and installs any missing software utilities automatically prior to installing the DTC Configuration Tool.

The following items are the software requirements that are necessary for the DTC Configuration Tool to run:

- Microsoft .NET Framework 4.0
- SQL Server Compact 3.5 SP2
- Windows® Installer 3.1

2.2 Installation Process

To install the DTC Configuration Tool software, follow the steps outlined in this section:

1. Double-click the **setup.exe** file to open the DTC Configuration Tool Setup Wizard.
2. Click **Next** on the DTC Configuration Tool Setup Wizard window.

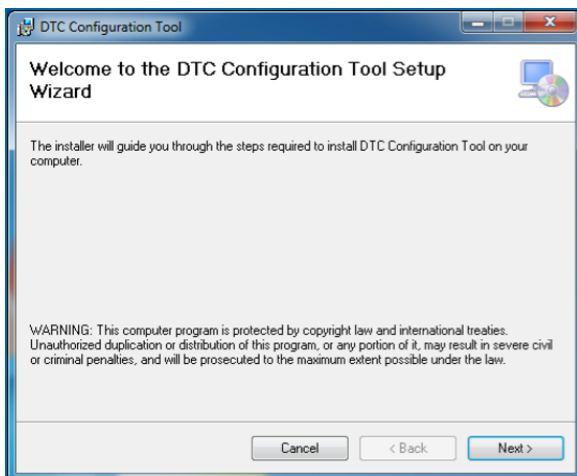


Figure 2-1 Setup Welcome Window

3. Select the destination folder and select whether the configuration tool will be installed for all users, then click **Next**.

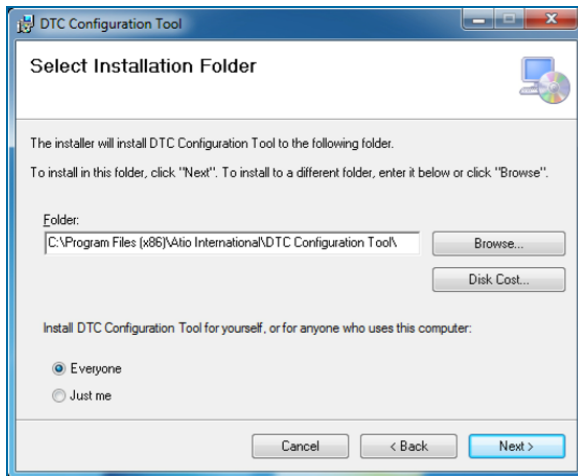


Figure 2-2 Select InstallationFolder

4. Click **Next** to confirm the installation process.

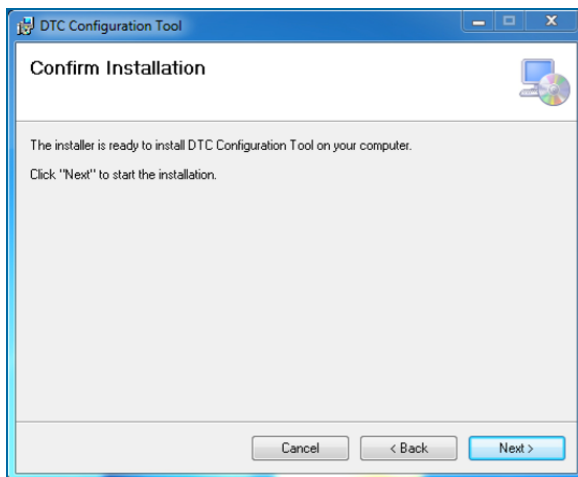


Figure 2-3 Confirm Installation

5. A progress bar will come into view while setup is taking place.

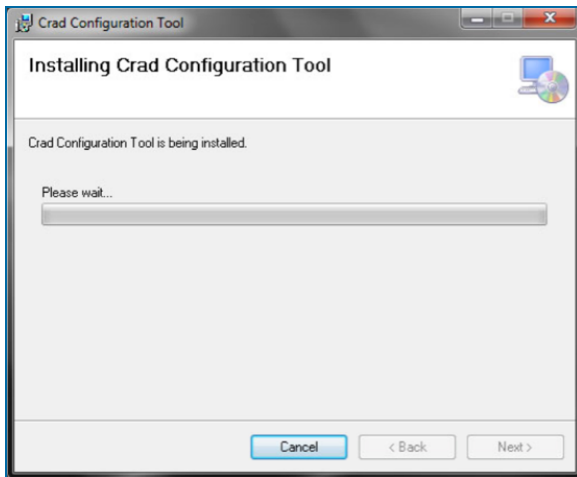


Figure 2-4 Installation Progress

6. The **Installation Complete** window will come into view when the installation is finished. Click **Close**.

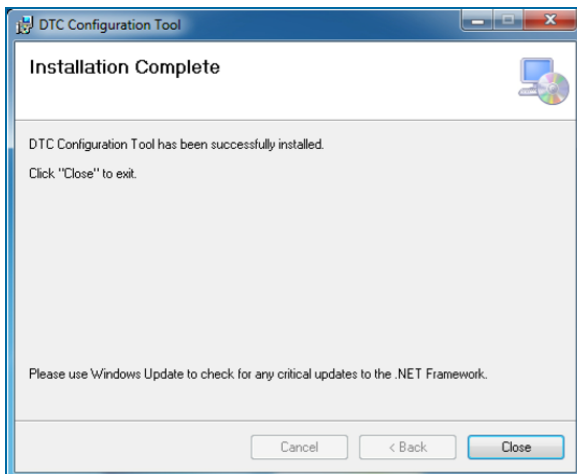


Figure 2-5 Installation Complete

Section 3 Using the DTC Configuration Tool

This section will guide you through the various features and capabilities of the DTC Configuration Tool software.

3.1 Connection

Connect the DTC Board to your PC via the supplied configuration cable (OPW part number: 20-1520-07).

- For proper pin-out settings, see Appendix B – Cable Pin-Out Connection.
- For correct DTC board jumper settings, see Appendix A – Jumper Settings.

3.2 Main Window

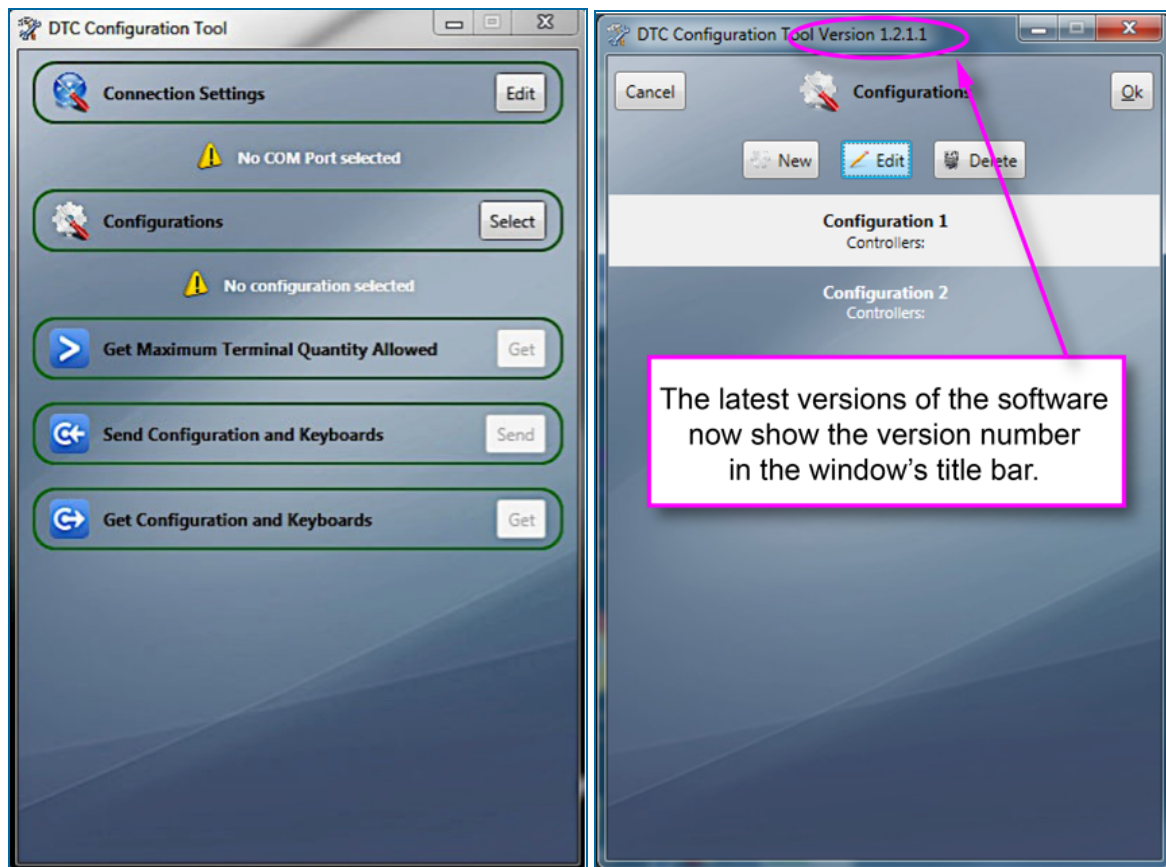


Figure 3-1 Main Window



Double-click on the DTC Configuration Icon [] that the installer placed on your desktop.

The DTC Configuration Tool's **Main Window** is the first screen you will see, and it will appear after a possible delay. It contains all executable operations and configurations. Within the Main Window you can access the following:

- Connection Settings
- Configurations
- Get Maximum Terminal Quantity Allowed
- Send Configuration and Keyboards
- Get Configuration and Keyboards

3.3 Connection Settings



Figure 3-2 Setting Communication Parameters

Within the **Connection Settings** window are the following configuration settings:

- Port
- Baud
- Parity
- Data Bits
- Stop Bits

To configure your DTC Board, you must first tell it which of your PC's communication ports will be used. The **Connection Settings** window allows you to set up the communication (COM) port for Serial communication with the DTC Board.

To access the **Connection Settings Window**, click on the "Edit" button next to "Connection Settings" in the **Main Window**. The DTC Configuration Tool will automatically show the available COM ports found on the PC. In addition, there exists a "Refresh" button that can be used to manually request the software to look for available COM ports on the PC.

To save the changes you've made, press the "**Save**" button. Press the "**Cancel**" button to use the previously selected COM port.

Now that the connection has been established, you are ready to begin configuring the DTC Board.

3.4 Configuration

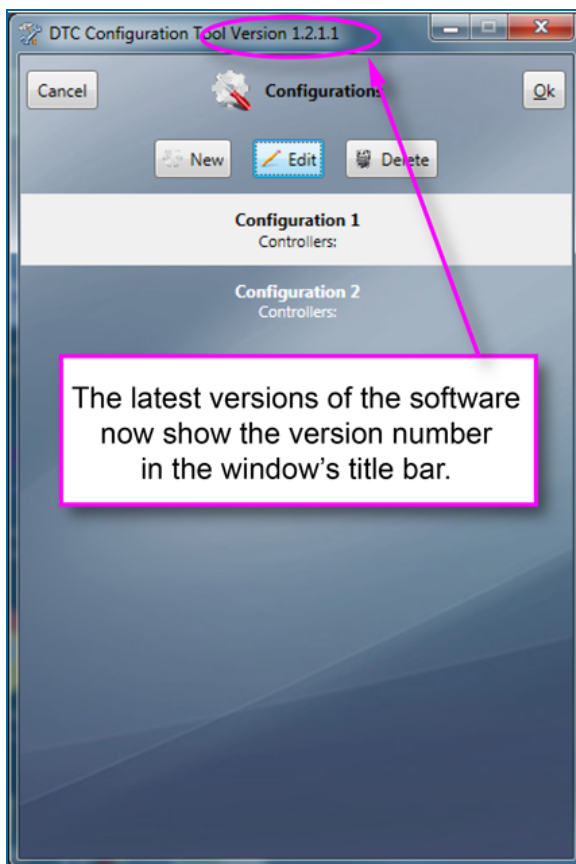


Figure 3-3 Configuration Window

Click on the **Configurations** button. This will bring up the **Configurations** window. This window displays all of the saved configurations of controllers and terminals stored in the database.

Within the **Configurations** window you can Add, Edit or Delete configurations, as well as choose a saved configuration to send to the DTC Board.

3.4.1 Adding a New Configuration

If you are performing the initial configuration of a DTC Board or setting up a new configuration for an existing DTC Board, you will need to add a new configuration.

To do so, press the **New** button. The new configuration will be identified with the next available number and appear in the configuration window ready to be edited.

3.4.2 Editing a Configuration

Next, you will need to edit your new **Configuration**. To do so, find and select it in the **Configurations** window and press the **Edit** button.

The **Board Configuration** window will appear, allowing you to configure the board settings, including controllers, terminals and connection Settings.



NOTE: You can return to the Edit a Configuration screen at any time.

Clicking the **Save** button in the **Board Configuration** window will return you to the **Configurations** window, saving your changes. Clicking the **Cancel** button will undo your changes and return you to the **Configurations** window.

Remain within the **Board Configurations** window to continue configuration by adding a new controller.



NOTE: In most cases, there will be only one configuration per site. Multiple configurations are provided to accommodate multiple locations.

3.4.3 Adding/Editing a New Controller

The next step in your DTC Board configuration is to **Add a New Controller** to your new configuration.

To begin, click the **Add Controller** button (see Icon Glossary) in the **Board Configuration** window. A new Controller will be added to the list and become available to **Edit** automatically.

You will now be able to configure the controller's ID and its type of terminals. You will also be able to set up the connection settings, including the Port, Baud Rate, Parity, Data Bits and Stop Bits for the controller.


The proper settings for Gilbarco and Wayne controllers are shown in the table below. For Gasboy ICRs, use the Wayne setting.

Table 3-1 Controller Settings

	Gilbarco	Wayne
DTC COM Port	3	5-7
Baud	4800	9600
Data Bits	8	8

	Gilbarco	Wayne
Parity	Even	None
Stop Bits	1	1



NOTE: To return to this screen to edit a controller at any time click on the **“Edit Controller”** button  next to the controller you wish to edit.

Each controller configuration can include up to eight (8) terminals. Continue to the next section, **Adding a New Terminal** to configure terminals.

Click the **“Cancel”** button to undo any changes, and delete the controller you are configuring.

A separate controller setup is required for each DTC COM Port connection. For Gilbarco, there is only one (1) controller (port 3). All CRINDs (up to 12) will be configured on that controller. For Wayne, it is recommended to use one controller for every four (4) CATs; to connect 12 CATs, three controllers will be used. See the table below.

Table 3-2 Wayne Port Configuration

Controller	Ports	CATs
1	5	1-4
2	6	5-8
3	7	9-12



IMPORTANT: For Gasboy ICRs, a maximum of four (4) ICRs may be controlled. Each ICR should be connected to its own controller when possible and only connect multiple ICRs to one controller if multiple dropped wires are not available.

3.4.4 Adding a New Terminal

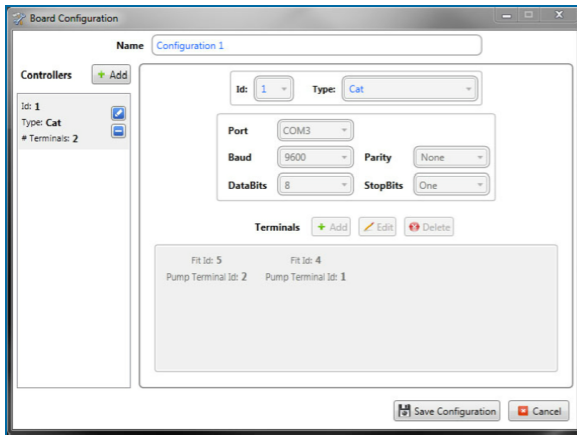


Figure 3-4 Add a New Configuration

A **Terminal** is composed of the following:

- FIT ID
- Pump Terminal ID
- Keyboard Layout

To add a terminal to your newly configured controller, click the “**Add Terminal**” button. 

The new terminal will appear in the Terminals List, with a FIT ID and a Pump Terminal ID automatically assigned.

- The **FIT ID** must be unique for each terminal. The FIT ID corresponds to the FIT ID setup in the Fuel Site Controller.
- The **Pump Terminal ID** corresponds to the Pump ID programmed into the pump.

A default Keyboard Layout will be also assigned to the terminal.

3.4.5 Editing the Keyboard Layout

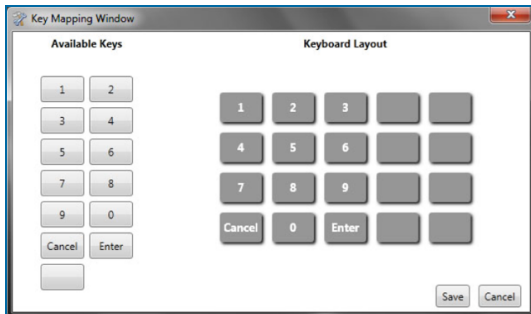


Figure 3-5 Key Mapping

The next step in DTC Board Configuration is to **Edit the Keyboard Layout** so that it matches the keyboard of the terminal you intend to use. To do so, click the **“Edit Keyboard”** button. The **Key Mapping** Window will open. The available keys will be displayed on the left side and a graphical representation of the keyboard layout will be on the right.

To select a key, click the desired key in the right panel, then click the position at which you prefer it to appear, matching the keyboard layout on your terminal.



NOTE: By default, the “Empty” key will always be available while no other key is being pressed. Clicking any position will remove any previous key.

Every time a key is pressed, a message will show up displaying that key for verification. Continue positioning keys on the graphical layout until your custom keyboard layout matches your terminal.

To save your new keyboard layout, click the **“Save”** button. To undo your changes and delete the custom keyboard layout, click the **“Cancel”** button. Doing so will return you to the **Board Configuration** window, where you can edit the terminal.

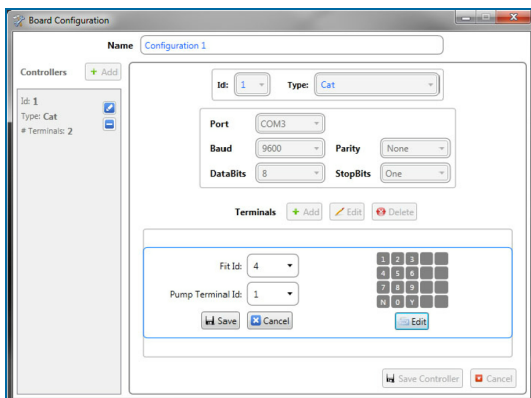


Figure 3-6 Board Configuration

To save your new terminal configurations, click the **“Save”** button below the terminal layout display in the board configuration screen.

Clicking the **“Cancel”** button will undo your changes to the terminal configuration.

3.4.6 Alpha Keypad for Gilbarco 500 (Non-secure)

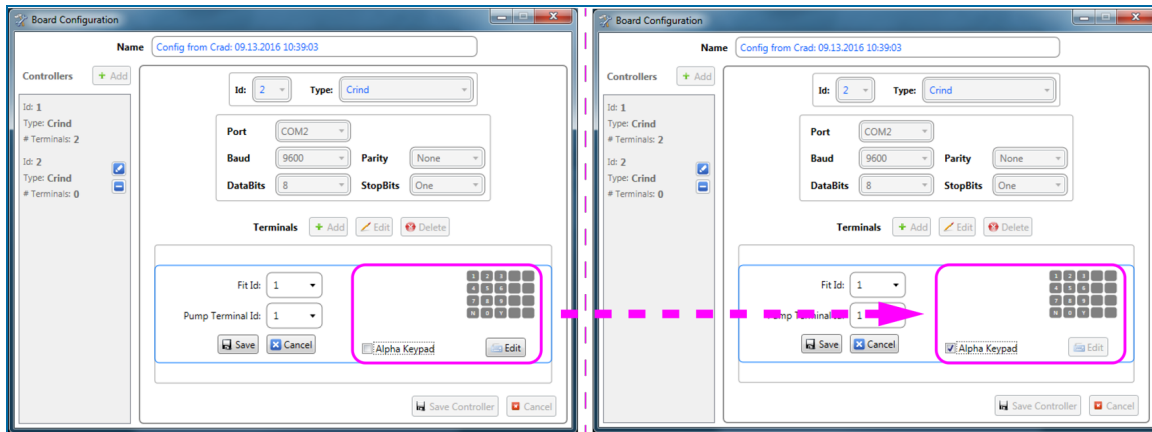


Figure 3-7 Enable Alpha Keypad

For Gilbarco 500 with an installed alpha keypad, select the **Alpha Keypad** checkbox to enable this feature. The Edit button will no longer be available and will be "grayed out." See the illustration above.



NOTE: The Alpha Keypad is not configurable.


3.4.7 Editing a Terminal

To edit the default values assigned to your newly added terminal, select the desired terminal and press the **Edit Terminal** button. A panel will appear within the **Board Configuration** window for editing the terminal, allowing you to choose a different FIT ID, Pump Terminal ID and to edit the Keyboard.




NOTE: You can return to this screen and edit your terminals at any time.


3.4.8 Deleting a Terminal

In order to Delete a Terminal, select the terminal and click the **Delete Terminal** button. 

3.4.9 Deleting a Controller

To Delete a Controller select the controller you wish to remove from the configuration, and press the **Delete Controller** button. 

3.4.10 Deleting a Configuration

To Delete a Configuration, select the configuration you wish to remove and click the **Delete Configuration** button. 

3.5 Get Maximum Terminal Quantity Allowed



Figure 3-8 Maximum Terminal Quantity

The **Get Maximum Terminal Quantity Allowed** option allows you to verify the maximum number of terminals your fuel-site controller will allow the DTC Board to control.

To view this number, press the “**Get**” button next to “Get Maximum Terminal Quantity Allowed.”

3.6 Send Configuration and Keyboards



Figure 3-9 Send Configuration and Keyboards



NOTE: The DTC Board must be connected to the configuration software to Send and Get Configurations and Keyboards.

The **Send Configuration and Keyboards** option allows you to send your new configuration to your DTC Board, implementing all of the changes you have made and readying your terminal for use.

To **Send a Configuration** to the DTC Board, make sure the Connection Settings within the Connection Settings window are correct and select the desired configuration from the Configurations window. Make sure the board is connected to the PC (see Section 4).

Click the **Send Configuration and Keyboards** button, and wait for the process to finish. If successful, a message is displayed and the DTC Board is configured according to your settings. If an error occurred, a failure message is displayed.

3.7 Get Configuration and Keyboards

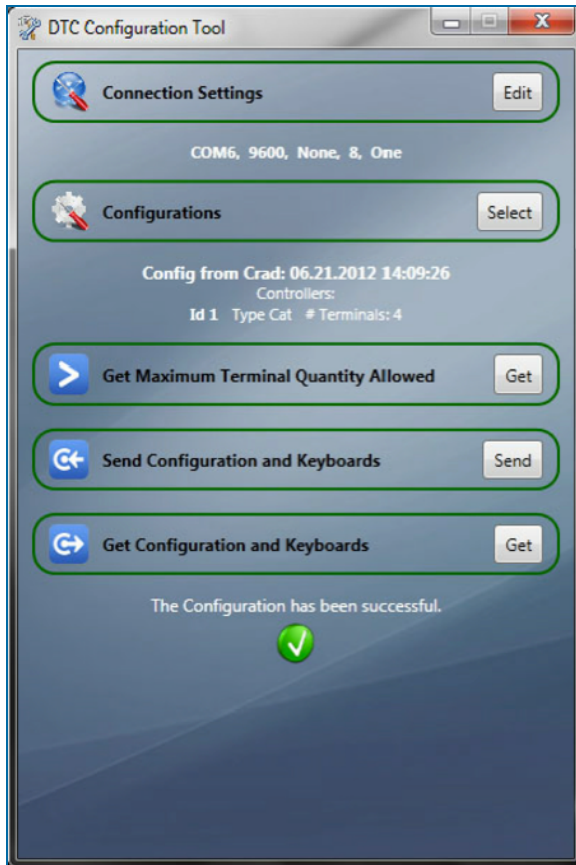


Figure 3-10 Get Configuration and Keyboards

The **Get Configuration and Keyboards** option allows you to download and edit the current configuration on your DTC Board.

To **Get the Configuration and Keyboards** from the DTC Board, press the “**Get Configuration and Keyboards**” button found in the Main window. Once the process has finished successfully, the new configuration will be stored in the database. The date and time will be added to the new configuration name to identify it.

If successful, a green check mark will be displayed. If an error has occurred, a failure message will be displayed.

Section 4 DTC Message and Prompt Setup

The Dispenser Terminal Controller (DTC) is a hardware and software solution that enables the use of third-party terminals such as the Wayne CAT, Gilbarco CRIND and Gasboy® ICR with the OPW system.

DTC is a translator between the terminal's third-party protocol and OPWPetro-Net™ FIT protocol.



NOTE: Third-party terminals have different display types and functionality; therefore, there are variances in how messages are displayed and prompted compared to an OPW terminal.

The following section explains how to set up DTC-equipped sites using ARTWare™ and the differences in how the terminals behave.

To support sites with OPW and third-party terminals, the OPW FSC3000 Fuel Site Controller is equipped to utilize the second language for third-party terminal messages and prompts. DTC terminals will always use second language when available. For sites using only DTC terminals, Language 1 can be used.

Refer to DTC prompt and message sets for more information.



NOTE: DTC-equipped sites will not support DUAL LANGUAGE for different languages.

4.1 DTC Message/Prompt Sets (Recommended)

Using ARTWare, load the recommended message sets.

When **Language 2** is required, **Dual Language** must be enabled.

1. Enable/Disable Dual Language, as needed.
2. Select Display Type.
3. Load Language 1 and Language 2, if applicable.

Table 4-1 Gilbarco CRINDs

Terminal Type 1	Terminal Type 2	Display Type	Messages Language 1	Messages Language 2	Prompts Language 1	Prompts Language 2
CRINDs		Graphics	Gilbarco CRIND		CRIND or CRIND Tiered Account	
CRINDs (Secured Prompts)		Graphics	Gilbarco CRIND (Secured)		CRIND (Secured Prompt)	
CRINDs	K800™ Hybrid	2x16	Text with DTC	Gilbarco CRIND	Default 2x16	CRIND or CRIND Tiered Account
CRINDs	C/OPT™ or FIT500™	Graphics	Graphics with DTC	Gilbarco CRIND	Graphic Default	CRIND or CRIND Tiered Account
CRINDs (Secured Prompts)	K800™ Hybrid	2x16	Text with DTC	Gilbarco CRIND (Secured)	Default 2x16	CRIND (Secured Prompt)
CRINDs (Secured Prompts)	C/OPT™ or FIT500™	Graphics	Graphics with DTC	Gilbarco CRIND (Secured)	Graphic Default	CRIND (Secured Prompt)

4.1.1 Wayne CATs

Table 4-2 Wayne CATs

Terminal Type 1	Terminal Type 2	Display Type	Messages Language 1	Messages Language 2	Prompts Language 1	Prompts Language 2
CATs		2x16	Wayne CAT		CAT or CAT Tiered Account	
CATs	K800™ Hybrid	2x16	Wayne CAT		CAT or CAT Tiered Account	
CATs	C/OPT™ or FIT500™	Graphics	Graphics with DTC	Wayne CAT	Graphic Default	CAT or CAT Tiered Account

4.1.2 Gasboy ICR

Table 4-3 Gasboy ICRs

Terminal Type 1	Terminal Type 2	Display Type	Messages Language 1	Messages Language 2	Prompts Language 1	Prompts Language 2
ICRs		2x16	Gasboy ICR		Gasboy ICR	

4.2 DTC Prompts and Prompt-Related Messages

4.2.1 DTC Prompt Display Behavior

Table 4-4 Prompt Display Behavior

DTC	Display Format	Limitations
Gasboy ICR	1x20	Display Prompts entry will always start on position 13.
Gilbarco CRIND	1x20	Graphics displays will always be 1x20 mode.
Gilbarco CRIND (Secured Prompt)	1x20	Displays must use predefined Gilbarco prompts.
Wayne CAT	2x16	Display Prompts entry will always start on line 2, position 1. Graphics displays will always be 2x16 mode.

4.2.2 DTC Prompt Maximum Character Entry

Table 4-5 DTC Prompt Maximum Character Entry

DTC	Max. Characters Entry	
Gasboy ICR	16	
Gilbarco CRIND	20	
Gilbarco CRIND (Secured Prompt)	20	
Wayne CAT	16	Auto <ENTER> when defined max entry is entered.

4.2.3 DTC Prompt Timeout Behavior

Table 4-6 DTC Prompt Timeout Behavior

DTC	Timeouts (Seconds)
Gasboy ICR	Fixed 15 (Total)
Gilbarco CRIND	Fixed 15 (Per key press)
Gilbarco CRIND (Secured Prompt)	Fixed 30 (Total)
Wayne CAT	Fixed 30 (Total)

4.3 Gilbarco Secured-Prompt Terminals

If modification to any message prompts with Gilbarco secured-prompt terminals is required, only use the predefined prompts.

Enter the prompt ID into the message prompt string.

Table 4-7 Gilbarco Secured-Prompt Terminal IDs

Prompt ID	Message (English)
01	Enter Data
02	Enter Car Wash Code
03	Enter Card Number
04	Enter Code
05	Enter Coupon Number
06	Enter Driver ID
07	Enter Driver Number
08	Enter Driver Number
09	Gasoline Purchase Amount
10	Enter Gasoline Purchase Amount \$1 and \$150
11	Enter Job Number
12	Enter Key Number
13	Enter ID Number
14	Enter License Number
15	Enter Mileage
16	Enter Odometer Reading
17	Enter Password
18	Enter Redemption Code
19	Enter Ticket Number
20	Enter Vehicle Number
21	Enter Voucher Number
22	Enter Security ID
23	Enter Department Number

Prompt ID	Message (English)
24	Enter User ID
25	Enter Trip Number
26	Enter P.O. Number
27	Enter Fleet Code
28	Enter Product Code
29	Enter Preset Amount
30	Enter MAX \$ Auth Amount
31	Enter MAX \$ Auth Amount / Including Car Wash
32	Enter 5 Digit ZIP Code
33	Enter Trailer Number
34	Enter Alternate ID
35	Enter Phone Number
36	Enter Loyalty Number
37	Enter Customer ID
38	Enter Amount
39	Enter Discount ID

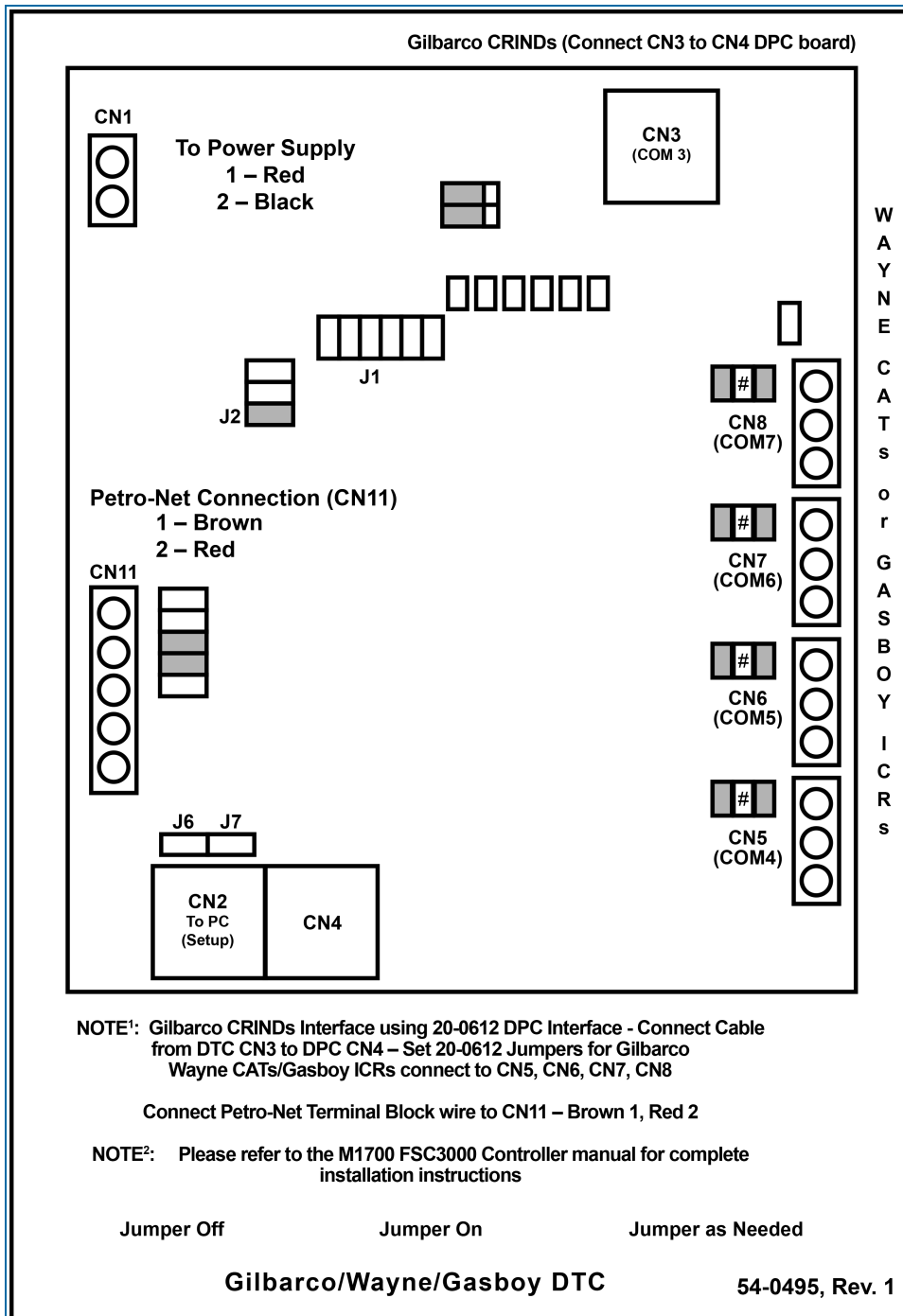
4.4 Example: Prompt Table with Secured Prompt IDs Setup

Code	Prompt	Entry	Max	Min
A	REFER FUEL Y/N : (no matching secure prompt)	Y/N	1	0
B	16	123	6	0
C	25	ABC	12	0
D	TRIP LEG: (no matching secure prompt)	ABC	2	0
E	22	***	8	0
F	06	***	16	0
G	20	ABC	12	0
H	33	ABC	12	0
I	REFER HOURS: (no matching secure prompt)	123	5	0
J	DRIVER LICENSE STATE: (no matching secure prompt)	ABC	2	0
K	14	ABC	25	0
L	11	ABC	20	0
M	14	ABC	20	0
N	TRAILER LICENSE STATE: (no matching secure prompt)	ABC	2	0
O	33	ABC	20	0
P	07	ABC	16	0
Q	26	ABC	10	0

Code	Prompt	Entry	Max	Min
R	CONTROL #: (no matching secure prompt)	ABC	12	0
S	32	123	9	0
T	01	123	8	0

ENTER (prompt table row # (A-T) or [RETURN] to exit) :

Appendix A - Jumper Settings

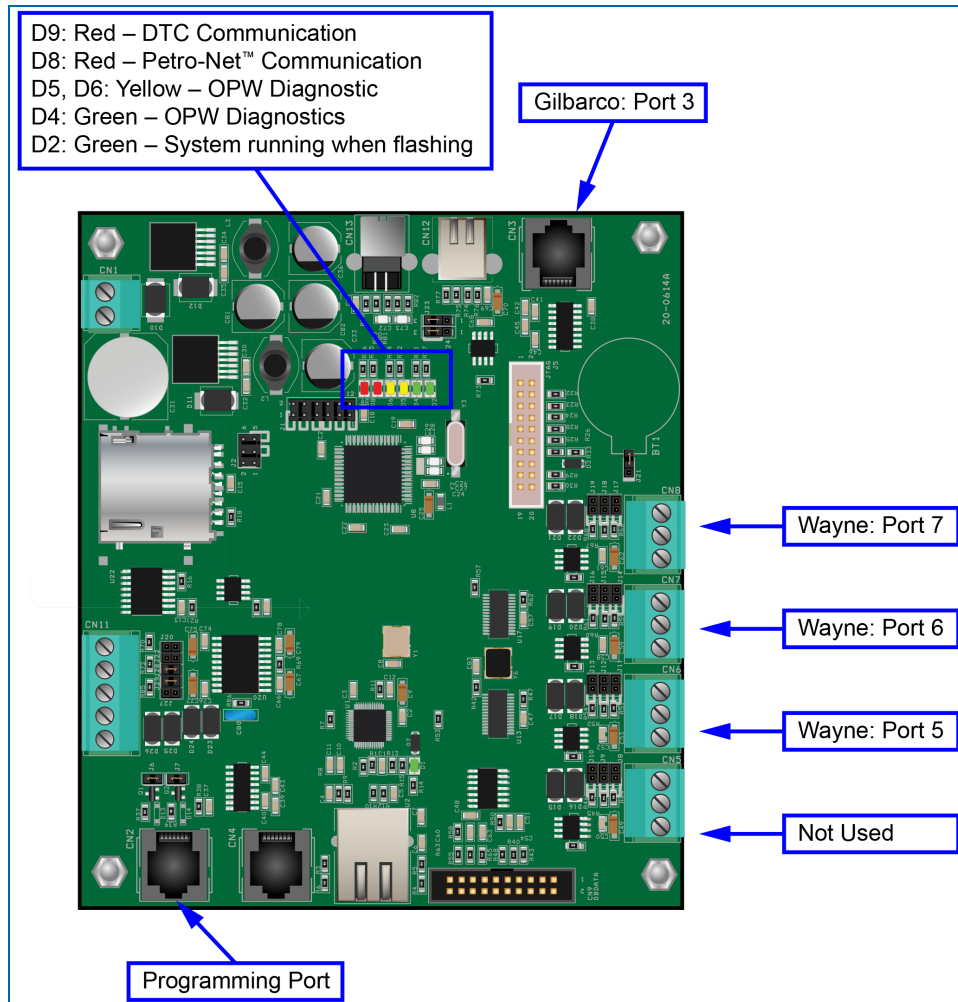


Appendix B - Cable Pin-Out Connection

Cable Pin-Out

Cable Pin-Out	
RJ45	DB9
1	7
2	4
3	5
4	2
5	3

Appendix C - DTC Board



DTC Board

Appendix D - DTC Firmware Upgrade Procedure

Follow the steps below to upgrade the DTC board Firmware.

- Connect OPW P/N 20-1520-07 cable to connector **CN2** on the **DTC board** and the **PC serial port**.
- Set jumpers **J6 & J7** to "**ON**" (above **CN2** connector).
- Cycle power on DTC unit.
- Install the **Flash Magic Utility** and select "**Run**."
 - To download the latest version of Flash Magic, scan the QR code below or click on the QR image link to go to <http://www.flashmagictool.com/>.

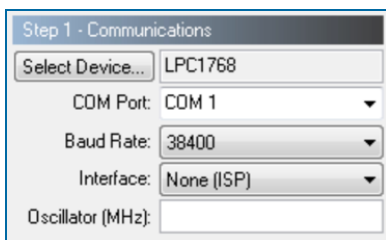


NOTE: Minimum hardware requirements that must be met in order to run the software utility:



- Windows® NT/2000/XP/Vista/7
- Serial COM port
- 16 Mb RAM
- 10 Mb Disk Space

D.0.0.1 Step 1 – Communications



Step 1 - Communications

Select Device... LPC1768

COM Port: COM 1

Baud Rate: 38400

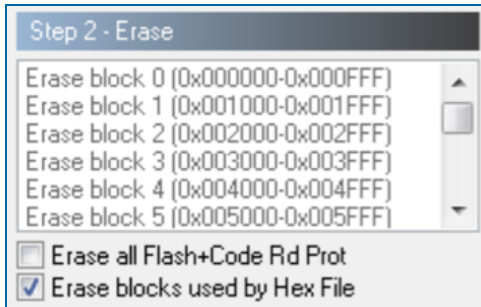
Interface: None (ISP)

Oscillator (MHz):

Set up communications as follows:

- Select Device: LPC1768 (in ARM Cortex folder)
- COM Port: (match your PC port)
- Baud Rate: 38400
- Interface: None (ISP)
- Oscillator (MHz): (leave blank)

D.0.0.2 Step 2 – Erase



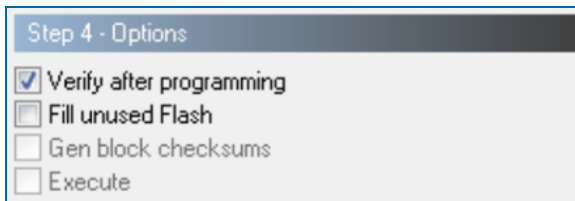
Select "Erase blocks used by Hex File."

D.0.0.3 Step 3 – Hex File



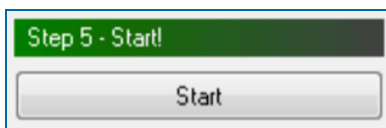
Using the **Browse** button select the "**Hex**" file to be updated to the DTC board.

D.0.0.4 Step 4 – Options



Select "Verify after programming."

D.0.0.5 Step 5 – Start!



- Set jumpers **J6 & J7** that are located above the **CN2** connector to "**OFF**."
- Cycle power on the DTC unit.



NOTE: The previous configuration is still intact.

Warranty

OPW Fuel Management Systems warrants that all OPW Tank Gauge and Petro Vend Fuel Control systems supplied by OPW Fuel Management Systems to the Original Purchaser will be free from defects in material and/or workmanship under normal use and service for a period of 12 months from the date of installation or 15 months from the date of shipment from OPW. Additionally, OPW Fuel Management Systems warrants that all upgrades and replacement parts (new and remanufactured) supplied by OPW Fuel Management Systems will be free from defects in material and workmanship under normal use and serviced for a period of 90 days from the date of installation or for the remainder of the system's original warranty, whichever is greater, as set forth in the first sentence of this statement. The foregoing warranties will not extend to goods subjected to misuse, neglect, accident, or improper installation or maintenance or which have been altered or repaired by anyone other than OPW Fuel Management Systems or its authorized representative. The buyer's acceptance of delivery of the goods constitutes acceptance of the foregoing warranties and remedies, and all conditions and limitations thereof.

If a claim is made within the warranted time period that any equipment and/or remanufactured part is defective in material or workmanship under normal use and service, such equipment and/or remanufactured part shall be returned to OPW Fuel Management Systems, freight prepaid. If such equipment or remanufactured part is found by OPW Fuel Management Systems in its sole judgment to be defective in material or workmanship under normal use and service, OPW Fuel Management Systems shall, at its sole option, repair or replace such equipment and/or remanufactured part (excluding, in all instances, fuses, ink cartridges, batteries, other consumable items, etc.) OPW Fuel Management Systems shall not be held responsible for data loss or retrieval on returned products.

The warranties, as set forth above, are made expressly in lieu of all other warranties, either expressed or implied (including, without limitation, warranties of merchantability and fitness for any particular purpose and of all other obligations or liabilities on OPW Fuel Management Systems' part.) Further, OPW Fuel Management Systems neither assumes, nor authorizes any other person to assume for it, any other liability in connection with the sale of the systems, or any new/replacement part that has been subject to any damage from any act of nature or any force majeure. Any terms proposed by the Original Purchaser either orally or in writing are expressly rejected. The terms and conditions expressed in this document may only be changed upon the express written consent of OPW Fuel Management Systems.

The term "Original Purchaser" as used in these warranties shall be deemed to mean the authorized OPW Fuel Management Systems' distributor to which the system or any new/replacement part was originally sold. These warranties may be assigned by the original purchaser to any of its customers who purchase any OPW Fuel Management Systems' systems or new/replacement parts. This document shall be governed by and construed in accordance with the law of the State of Illinois. OPW Fuel Management Systems and Original Purchaser agree that any legal action or proceeding under or with respect to this document may ONLY be brought in the courts of the State of Illinois, or the United States District Court having jurisdiction in the City of Hodgkins, Illinois. Original Purchaser expressly consents to personal jurisdiction in any of the above-mentioned forums and agrees to waive all defenses based on improper venue or inconvenient form should an action be brought therein.

The sole liability of OPW Fuel Management Systems, for any breach of warranty, shall be as set forth above. OPW Fuel Management Systems does not warrant against damage caused by accident, abuse, faulty or improper installation or operation. In no event shall manufacturer's liability on any claim for damages arising out of the manufacture, sale, delivery or use of the goods exceed the original purchase price of the goods. In no event shall OPW Fuel Management Systems be liable for any direct, indirect, incidental or consequential damage or loss of product.

TERMS

Ex-works our factory, Hodgkins, Illinois, USA

Installation not included.

All trade names are registered. Patents pending.

Subject to engineering improvement and/or other changes.

Revisions

Revision #	ECO	Effective	Software Version	Key Changes
(M1702) r0	na	9/30/13		Initial Release
1	527	11/4/13		New view for the install procedure. New connection diagram for ICR gasboy.
2	630	8/5/14		Added Section 4.2 DTC Prompts and Prompt-Related Messages Added Appendix D DTC Firmware Upgrade Procedure
3	822	10/19/15		Removed note from section 3.4.3 to prevent connecting multiple ICRs to a single controller. Updated content style to current brand standard.
4	1141	3/6/2017		Add note for incompatibility with Windows 10.
(M3041) r0	1419	9/6/2018	1.2.1.1	Alpha keypad support for Gilbarco 500 - Renumber to standard - Rebrand



NOTE: It is possible that older software versions might not support all features



INNOVATIVE SOLUTIONS FUELING BUSINESS SUCCESS WORLDWIDE



Dover Fueling Solutions Global Locations

Corporate Headquarters
3814 Jarrett Way
Austin, Texas 78728
United States
Phone: +1 512 388 8311

North America

Richardson, TX, USA
Hodgkins, IL, USA
Brighton, Ontario, CAN

Latin America

Rio de Janeiro, Brazil

Europe

Midlothian, UK
Elland, UK
Dundee, UK
London, UK
Skelmersdale, UK
Grenthville, FR
Paris, FR

Munich, DE
Bladel, NL
Turnhout, NL
Malmö, SE
Bovisio Masciago, IT
Castione Adevenno, IT
Turkey

Asia Pacific

Mumbai, IN
Petaling, MY
Guangzhou, CN
Shanghai, CN

OPW Fuel Management Systems • 6900 Santa Fe Dr. • Hodgkins, Illinois, USA 60525 • Tel: (708) 485-4200