

TITAN GATEWAY

CONFIGURATION UTILITY MANUAL

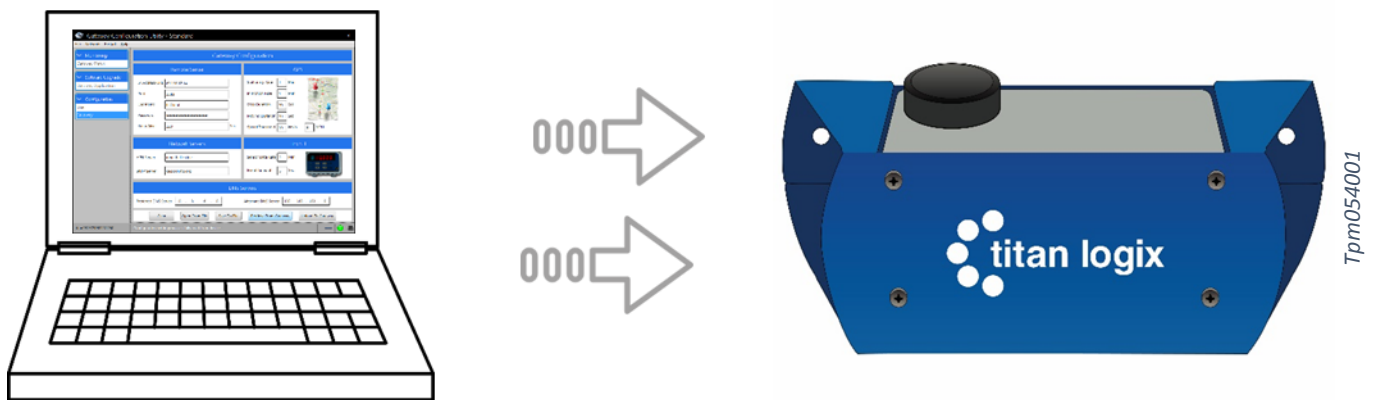


Figure 1 – Gateway Configuration Utility



TPM 054

Version 1.0



TECHNICAL SUPPORT

24 Hour Technical Support Line

1-877-462-4085

Titan Logix provides 24 hour technical support for their products. Call the technical support number:

- to arrange a service call
- if you have immediate questions regarding operations and installation
- if you have a request for documentation and/or software
- technical assistance

RETURNS FOR REPAIR, REPLACEMENT, OR CREDIT

Inside Sales (8:00-4:30 Mountain Daylight Time)

1-877-462-4085

!	NOTE Returned product for repair, replacement, or credit, must be accompanied by a Titan Logix generated RMA number.
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To generate an RMA number:

1. Call the Inside Sales number to speak with a representative and obtain an RMA number
2. Provide the serial number of the item with a description of issue and expected resolution
3. Describe the issue and indicate whether the item is defective, missing components, not suitable for the intended use, or purchased in error
4. Indicate the expected resolution (repair, replacement, return)
5. Return the item together with the RMA number to the indicated Titan service facility

When speaking with your Titan representative, please indicate whether the item is still under warranty.

Shipping cost to and from a Titan Logix service facility is the responsibility of the customer unless the product is under warranty. If the product is under warranty, the freight cost to Titan is incurred by the customer. From Titan, the cost is incurred by Titan.

All returns for credit are subject to a 20% restocking fee.



INTRODUCTION

This manual provides information specific to the Titan Gateway Configuration Utility application (hereafter referred to as the Configuration Utility) only.

This manual describes use of the Configuration Utility as part of the Gateway System, together with the TD80 and Finch II systems. For complete installation and programming details on the Gateway and the TD80 Level Gauging System, refer the Gateway Installation and Operation manual (TPM 053), TD80 product manual (TPM 001) and Finch II product manual (TPM 010).

This guide is intended to assist the user on the installation, use, and maintenance, of the Titan Gateway, under normal working conditions. Operations outside the scope of this guide or specialized installations, will require further documentation. Please contact your nearest Titan Logix service facility with your requirements.

It is essential that this manual be read and understood for proper installation and operation of your Gateway Configuration Utility software.

Please see our Terms and Conditions for details about our product warranty.

DISCLAIMER

The information in this document is subject to change without notice. Titan Logix Corp. makes no representations or warranties with respect to the contents hereof.

PROPRIETARY INFORMATION




The Information disclosed herein contains proprietary rights of Titan Logix Corp. Neither this document nor the information disclosed herein shall be reproduced or transferred to other documents, or used or disclosed to others for manufacturing purposes, or for any other purpose except as specifically authorized in writing by Titan Logix Corp.

SAFETY

The product must be installed and operated in accordance with Titan manuals, application notes, and all other relevant publications. Only qualified personnel familiar with the installation and operation of this equipment should install, adjust, operate, or service this equipment.

Observe all federal, state/provincial and local safety standards and industry recommended practices.

This manual will use the following standard safety terms and conventions to indicate conditions:

	<p>WARNING</p> <p>Indicates a hazardous situation which, if not avoided, could result in death or serious injury.</p>
	<p>CAUTION</p> <p>Indicates a hazardous situation which, if not avoided, could result in moderate injury and/or property damage.</p>
	<p>NOTE</p> <p>Indicates an important message not related to personal injury or property damage.</p>

RADIO FREQUENCY (RF) SAFETY

Notice regarding Compliance with FCC and Industry Canada Requirements for RF Exposure

The antenna intended for use with this unit meets the requirements for mobile operating configurations and for fixed mounted operations, as defined in 2.1091 of the FCC rules for satisfying RF exposure compliance.

Compliance of the device with the FCC and IC rules regarding RF Exposure was established and is given with the maximum antenna gain as specified above for a minimum distance of 20 cm (8 in) between the devices radiating structures (the antenna) and the body of users.



SECURITY

Titan recommends the following steps to protect the security of your system:

- Change the Wi-Fi password from the factory setting
- Keep all passwords documented and secure. Password must use a combination of letters, numbers, and symbols and be at least 8 characters long with no spaces or the special characters: < > & '



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OVERVIEW

The Gateway Utility is a software tool to monitor the health of the Gateway, update internal software, and modify the factory set configuration. Wi-Fi is used to communicate with the Gateway. This eliminates the need to directly connect to the vehicle, allowing maintenance to be performed remotely within Wi-Fi range of the Gateway and PC.

It is used after installation to verify normal operation of the gateway. Service technicians may use the utility to verify normal operation of the gateway and to diagnose failures. Internal settings are changed and software is updated in the field, eliminating the need to return the Gateway to Titan for most changes.

The utility is compatible with desktop and laptop PCs with Windows 7 or 10 installed.

<p>!</p>	<p>NOTE</p> <p>The Gateway Utility has the ability to save and retrieve configuration profiles in the event of a software update or a module replacement.</p>
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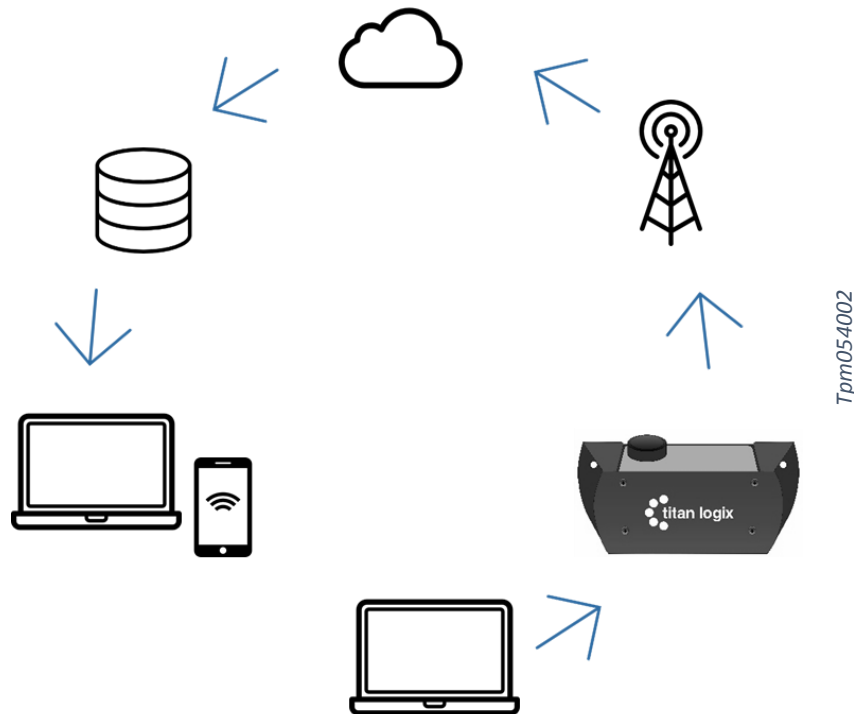


Figure 2 – Gateway Communication Flow

The flow of communication is initiated from the user's computer via the Configuration Utility through Wi-Fi to the Gateway. The Gateway generated information is communicated via cellular radio to a cloud based server and subsequently accessed by the customer's computer or smartphone dashboard.

INSTALLATION

Installing the utility software is a one-time operation.

PC Requirements:

- Desktop or Laptop PC with Windows 7 or 10 Installed
- Display resolution 1024 X 768 min.
- Wi-Fi 802.11b/g/n, 2.4GHz
- Optional Internal 10/100Base-T Ethernet Adapter*

*External Ethernet adapter is not supported for Windows 10

Go to www.support.titanlogix.com and click on Gateway>Software>Download. The auto-start will guide the user through the initial installation.

Each Gateway system ships with the WI-FI password and SSID pre-installed at the factory. The SSID is located on the identification label on the bottom of the Gateway module (see the Gateway Installation and Operation Manual TPM 053).

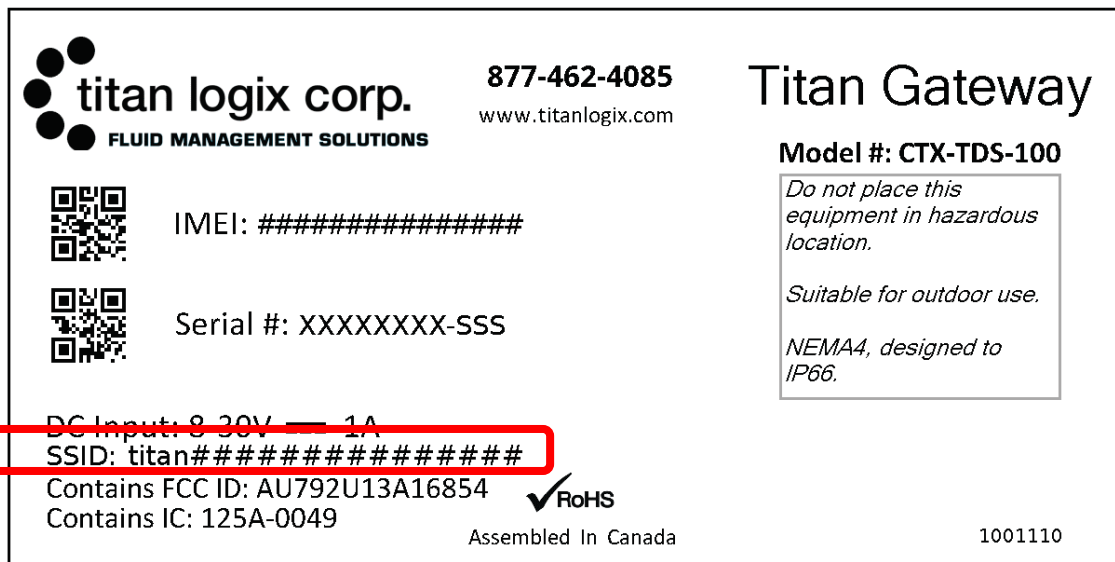
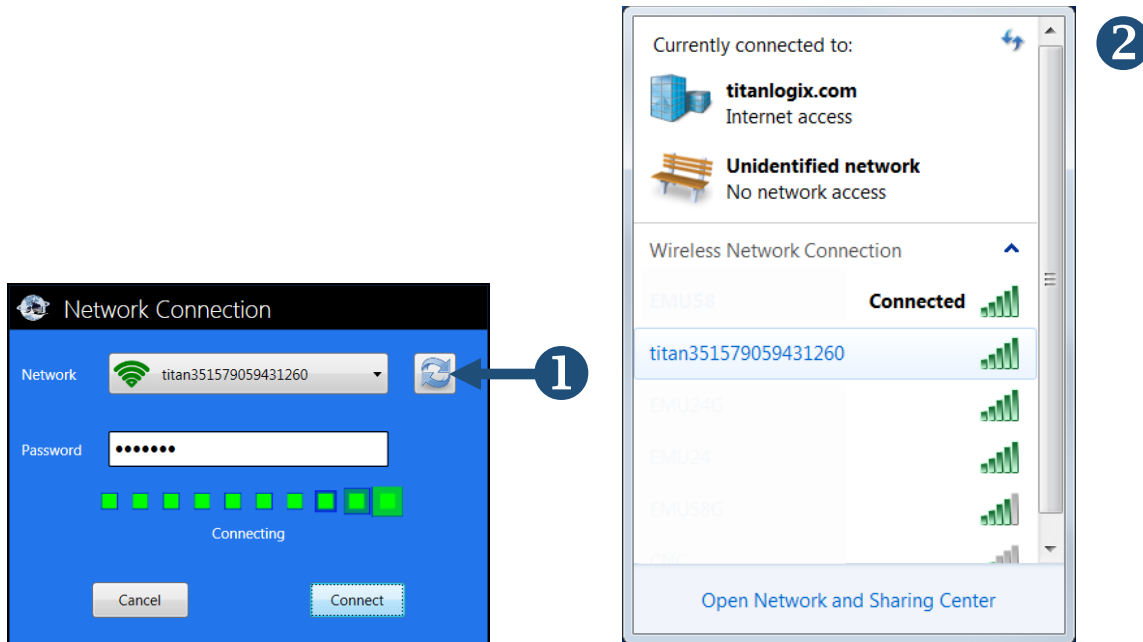


Figure 3 – Gateway Identification Label

CONNECTING TO THE NETWORK



!	<p>NOTE</p> <p>The Wi-Fi connection is device dependant and may result in variations with the connection process.</p>
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Once the Utility has launched, click on NETWORK then CONNECT. Click on the dropdown menu and choose the correct network: **titanxxxxxxxxxxxxxxxx**. If the correct network does not appear in the list, click on the refresh button **1**. Enter your supplied password and click CONNECT. The user can confirm the connection with their PC Wireless Network Manager (typically found at the bottom right-hand corner of the screen). **2**

For details on connecting to the network and for connection troubleshooting steps, refer to the MENU BAR>NETWORK section of this manual.

CHANGING THE WI-FI PASSWORD

The Configuration Utility is configured at the factory with a factory set Wi-Fi password. Titan recommends the owner change the password to one that is unique to them.

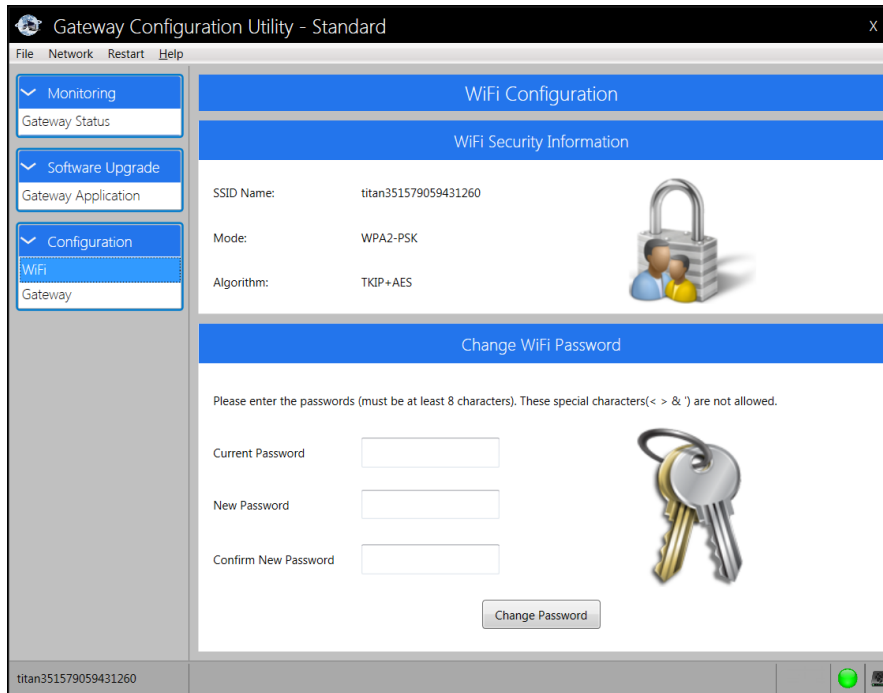
The factory set SSID is: **titanxxxxxxxxxxxxxxxx**

(see the SSID label on the module for the correct number)

The factory set WI-FI password is: **tlcgateway**

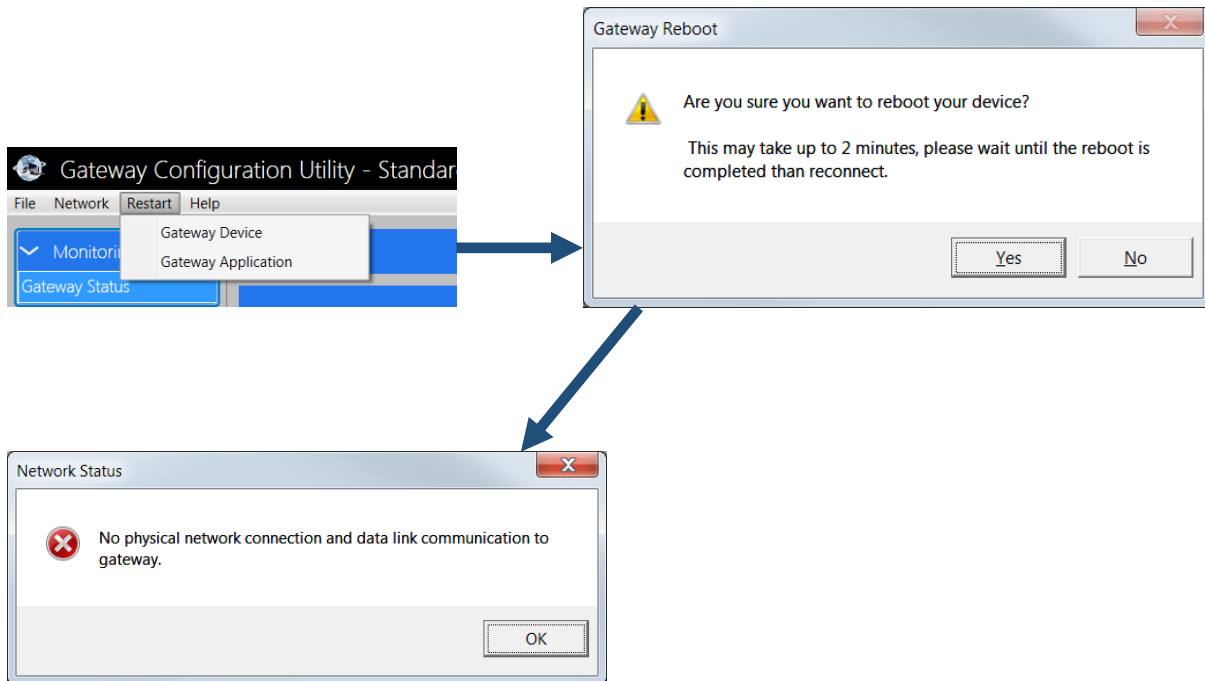
In the event the Wi-Fi password is lost or forgotten, or if the password needs to be reset to the factory setting, contact Titan.

	<p>NOTE</p> <p>Keep the passwords in a secure place and use for reference when needed.</p>
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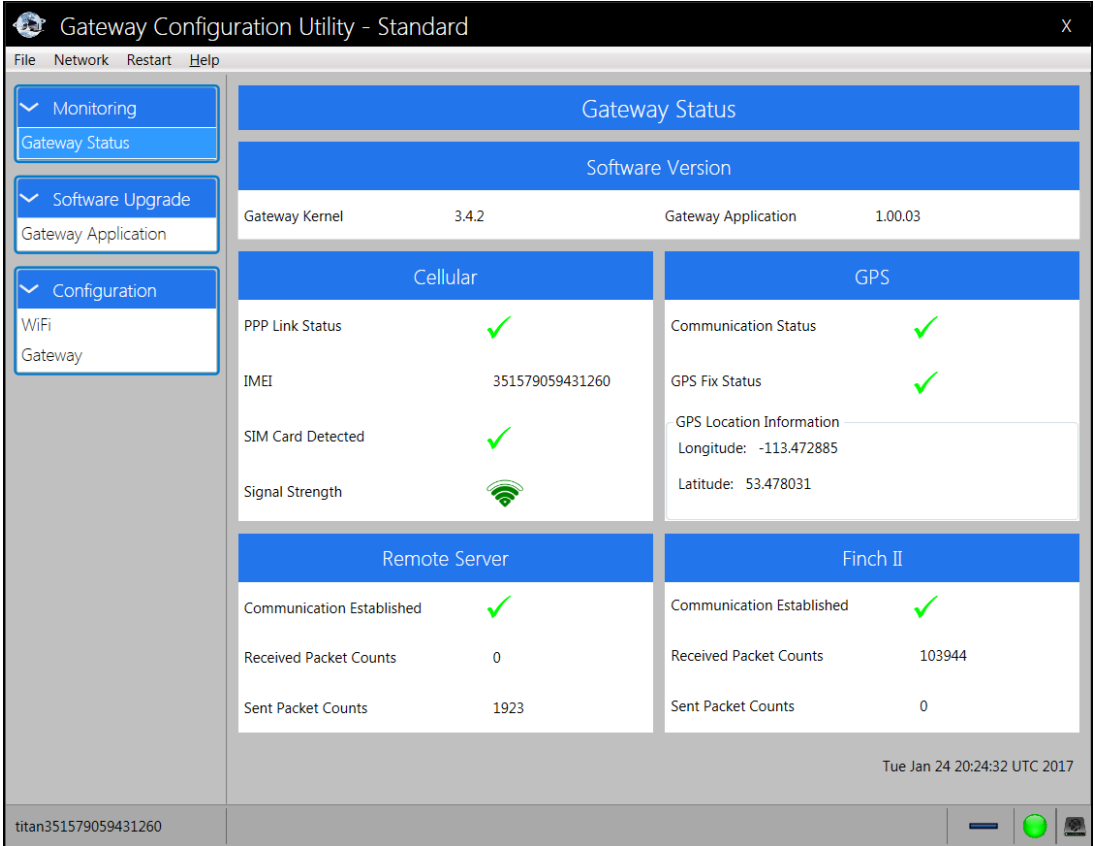


1. Establish a Wi-Fi connection to the Gateway, then click on the Wi-Fi option under the Configuration dropdown in the Screen Navigation area
2. Enter your factory set password, then enter your new, unique password
3. Enter the new password again. Click to change password
4. Click on RESTART then GATEWAY DEVICE
5. Choose Yes/No or cycle the power

After restarting the Gateway Device, the user must perform the network connection steps listed previously.



DASHBOARD



Menu Bar

Utility Navigation Dropdowns

- Monitoring
 - Gateway Status
- Software Upgrade
 - Gateway Application
- Configuration
 - WiFi
 - Gateway

Utility Navigation Panels

Date/Time Stamp

Status Bar

titan351579059431260

Gateway Status

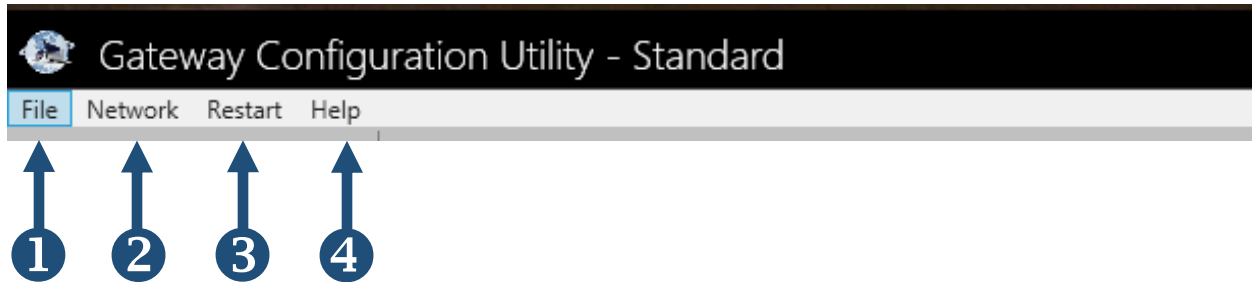
Software Version

Gateway Kernel	3.4.2	Gateway Application	1.00.03
Cellular		GPS	
PPP Link Status	✓	Communication Status	✓
IMEI	351579059431260	GPS Fix Status	✓
SIM Card Detected	✓	GPS Location Information	
Signal Strength	📶	Longitude:	-113.472885
		Latitude:	53.478031
Remote Server		Finch II	
Communication Established	✓	Communication Established	✓
Received Packet Counts	0	Received Packet Counts	103944
Sent Packet Counts	1923	Sent Packet Counts	0

Tue Jan 24 20:24:32 UTC 2017

!	NOTE Hovering over most screen elements will show the user important Tool Tips.
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MENU BAR

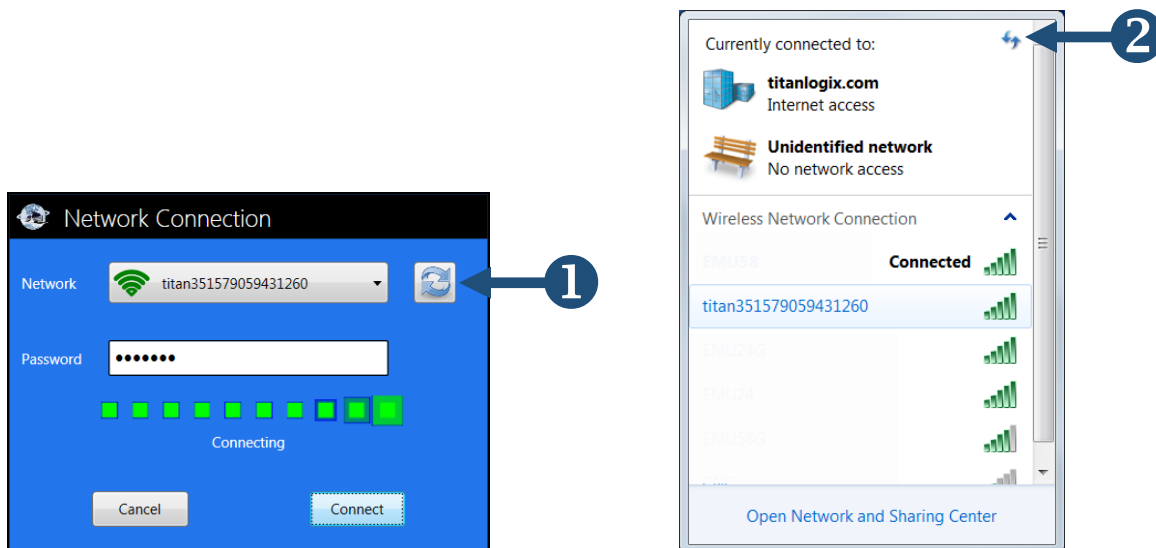


1 FILE (EXIT THE PROGRAM)

Click on FILE then EXIT. This action will allow the user to exit the Configuration Utility program.

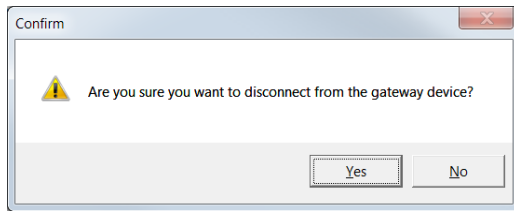
2 NETWORK (CONNECT TO/DISCONNECT FROM THE NETWORK)

CONNECT



1. Click on NETWORK then CONNECT. Click on the dropdown menu and choose the correct network. If the correct network does not appear in the list, click on the refresh button. 1
2. Type in the password.
3. Click connect.
4. The user can confirm the connection with their PC Wireless Network Manager (typically found at the bottom right-hand corner of the screen).

DISCONNECT



1. Click on NETWORK then DISCONNECT
2. Choose Yes/No

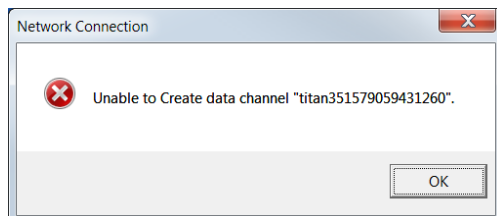
TROUBLESHOOTING THE CONNECTION

Occasional Wi-Fi connection problems can occur due to electrical interference or range issues in industrial environments.

1. Network Connection Does Not List Gateway SSID
 - a. Ensure vehicle power is turned on and the LED on the Gateway is flashing
 - b. Click the Network Connection refresh, look for the Gateway SSID again and continue trying to connect
 - c. Open the PC Wireless Network Manager (typically found at the bottom right-hand corner of the screen)
 - i. Click the refresh button **2** until the SSID appears
 - ii. Click the Network Connection refresh button **1** and continue trying to connect
 - d. Move laptop closer to the vehicle and click refresh until the SSID appears in the list
 - e. Confirm the correct Gateway SSID from the label on the bottom of the Gateway device (see Titan Gateway Installation & Operation Manual TPM 053 for details)

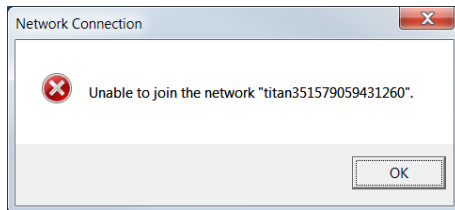
The user may also experience the following error messages:

1. Unable to Create Data Channel



- a. User is too far away from the Gateway device; move laptop closer to the vehicle and continue trying to connect
- b. There may be strong Wi-Fi interference; continue to try connecting or move laptop closer to the vehicle

2. Unable to Join Network



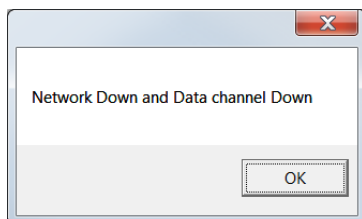
- a. User is too far away from the Gateway device; move laptop closer to the vehicle and continue with the connection process
- b. There may be strong Wi-Fi interference; continue to try connecting or move laptop closer to the vehicle
- c. The Wi-Fi password may be incorrect; confirm the Wi-Fi password and continue to try connecting

3. Data Channel Down



- a. Reconnect the Wi-Fi

4. Network Down and Data Channel Down

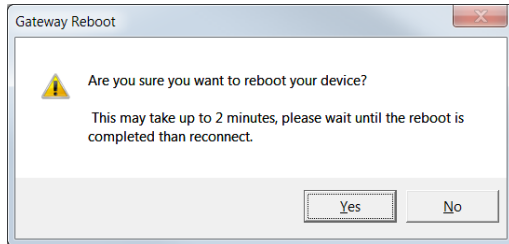


- a. Reconnect the Wi-Fi

Contact your Titan representative if troubleshooting does not resolve the issue(s).

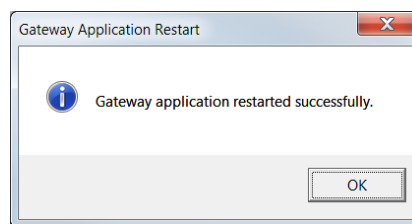
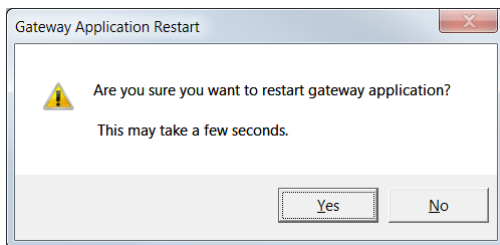
3 RESTART

GATEWAY DEVICE (AFTER UPDATE TO SETTINGS AND/OR A CHANGE IN WI-FI PASSWORD)



1. Click on RESTART then GATEWAY DEVICE
2. Choose Yes/No
3. After restarting the Gateway Device, the user must perform the network connection steps listed previously

GATEWAY APPLICATION (AFTER UPDATE TO THE APPLICATION)



1. Click on RESTART then GATEWAY APPLICATION
2. Choose Yes/No; clicking YES will reboot the application
3. After restarting the Gateway Application, the user must perform the network connection steps listed previously

4 HELP

Contact the Titan Technical Support Line at 1-877-462-4085 in the event that issues cannot be resolved using this manual.



ABOUT

Version information



STATUS BAR



1 NETWORK CONNECTION

This field shows the network for the Gateway connection. It will show as OFFLINE if there is no connection to the network. Confirm the correct Gateway is connected.

2 ACTIVITY MESSAGE

This field shows information about the application activity. It can show setting messages indicating proper activity and/or error messages.

3 DATA LINK ACTIVITY

This field shows datalink activities when the utility is communicating.

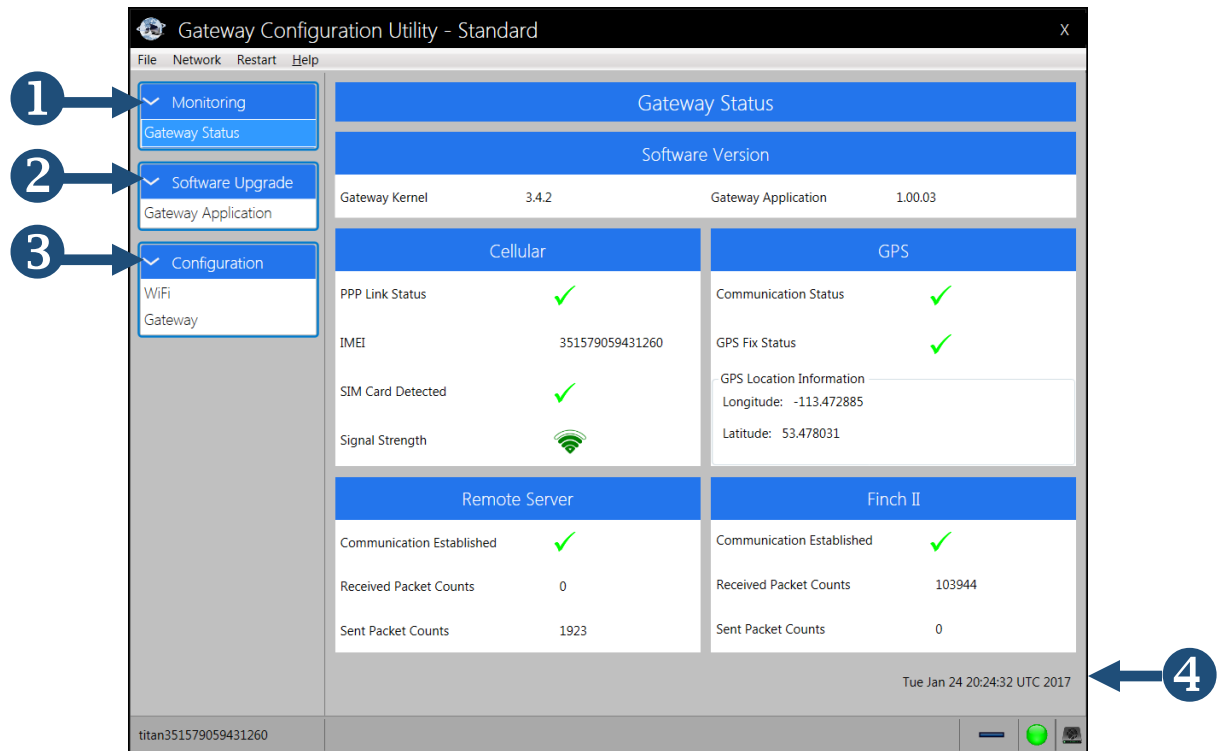
4 DATA LINK STATUS

This field shows green when the data link status is successfully exchanging data with the connected Gateway device. It will show red if there is no link.

5 PHYSICAL CONNECTION

This field shows the physical network connection status when connected to the Gateway device via LAN or Wi-Fi. It will show as a red 'X' if disconnected and will also show OFFLINE at the Network Connection indicator on the left.

UTILITY NAVIGATION



1 MONITORING

GATEWAY STATUS

NAVIGATION PANELS

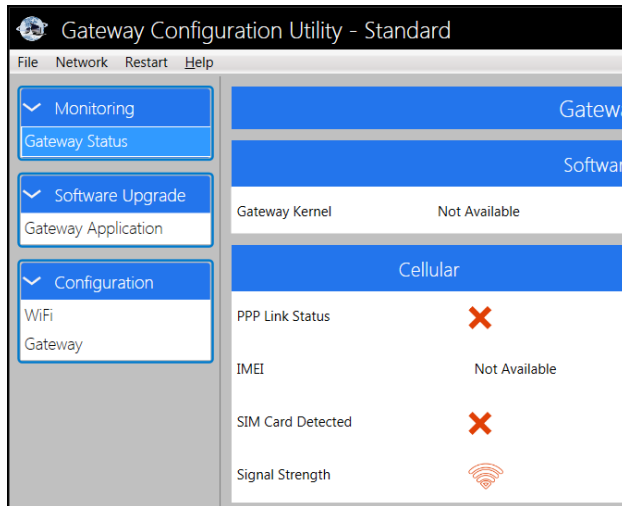
Software Version

1. Gateway Kernel – This field describes the Gateway operating system.
2. Gateway Application – This field describes the Titan application. Updates will be available through the portal support site www.support.titanlogix.com.

Cellular

1. PPP Link Status - ✓ indicates a proper connection with the cellular provider.
2. IMEI – This field shows the international serial number unique to the Gateway.
3. SIM Card Detected - ✓ indicates an existing SIM card in the module.
4. Signal Strength – The higher the bars, the better the signal. A red icon indicates no signal.

TROUBLESHOOTING CELLULAR

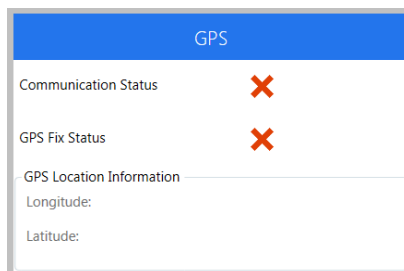


1. If a SIM card is not detected (✗), contact Titan.
2. If a PPP link is not detected (✗),
 - a. Check the signal strength.
 - b. Check the APN Server.
 - c. Cycle the power to the Gateway and check the PPP link after 2 minutes.
3. If the Signal Strength is weak,
 - a. Ensure the Gateway is within transmission range.
 - b. Ensure the Gateway device is in a clear area with no interference.

GPS

1. Communication Status – ✓ indicates internal communication with the GPS device.
2. GPS Fix Status – ✓ indicates that GPS position information is available.
3. GPS Location Information (longitude and latitude) – Shows positional information of the Gateway device.


TROUBLESHOOTING GPS




1. If the Communication Status shows ✗,
 - a. There is an internal failure of the device. Call your Titan representative.
2. If the GPS Fix Status shows ✗,
 - b. Move into an area with an open view of the sky.

- c. Inspect the Gateway device antenna and ensure it is clean and intact.

Remote Server


1. Communication Established –  indicates a connection between the Gateway device and the remote server.
2. Received Packet Counts – This field shows information received from the Gateway device and the Finch II device.
3. Sent Packet Counts – This shows information sent from the Gateway device to the remote server.

TROUBLESHOOTING REMOTE SERVER


Remote Server	
Communication Established	
Received Packet Counts	0
Sent Packet Counts	0

1. The Remote Network Server is not communicating.
 - a. Check the Remote Server and DNS settings.
 - b. Check the PPP Link Status is checked green.

Finch II

1. Communication Established –  indicates that the Gateway device is receiving valid information from the Finch II device.
2. Received Packet Counts – This field shows how much information is being received from the Finch II device.
3. Sent Packet Counts – This field shows how much information is being sent from the Finch II device to the remote server.


TROUBLESHOOTING FINCH II

Finch II	
Communication Established	
Received Packet Counts	0
Sent Packet Counts	0


1. Ensure the cable connections between the junction box, Gateway and the Finch II display unit are secure.
2. Confirm that the Finch II and TD80 are operating normally as per TPM 010.

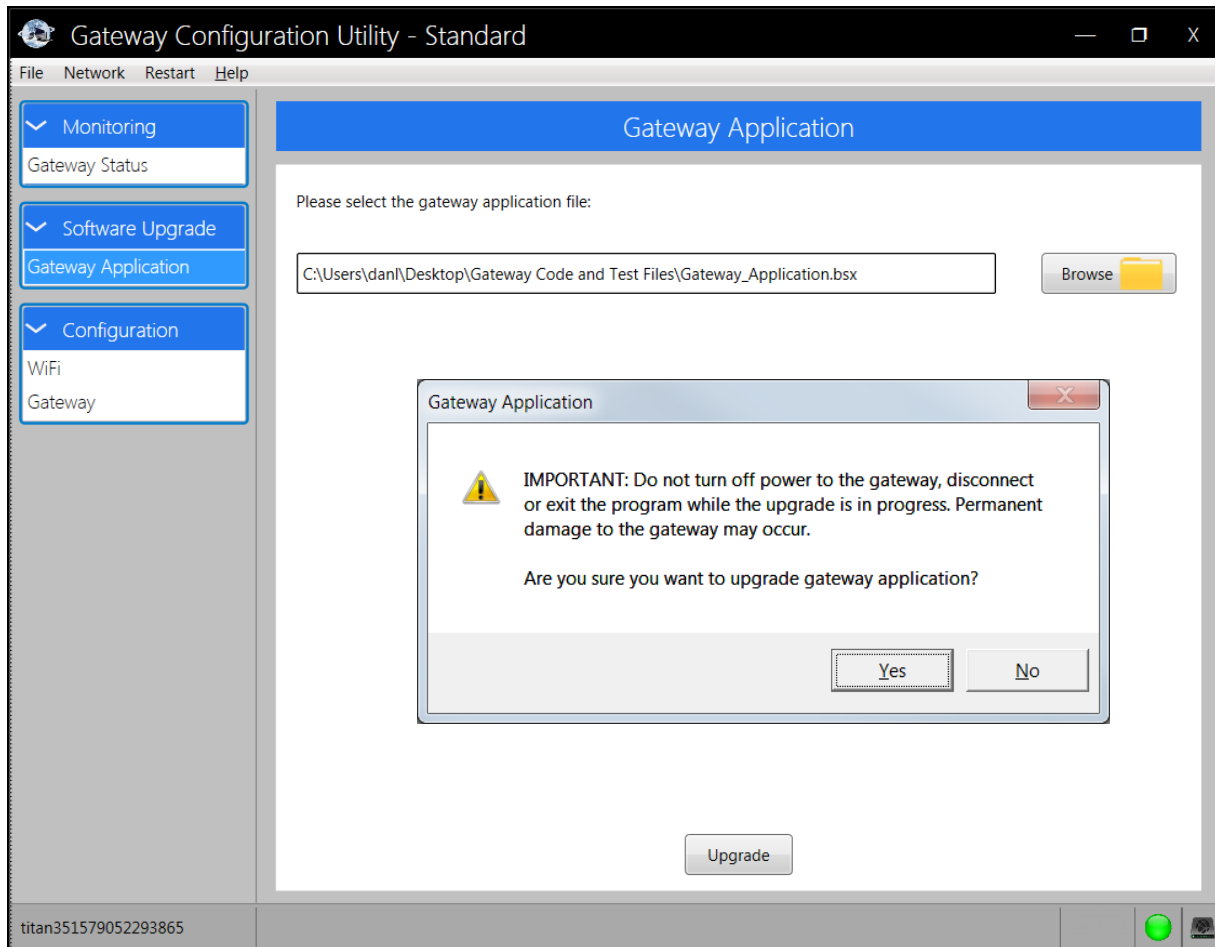
3. Confirm the Finch II firmware version supports Gateway operation, firmware version 1.07.00 or greater. Refer to the Finch II Installation and Operation Manual TPM 010 for details.

2 SOFTWARE UPGRADE

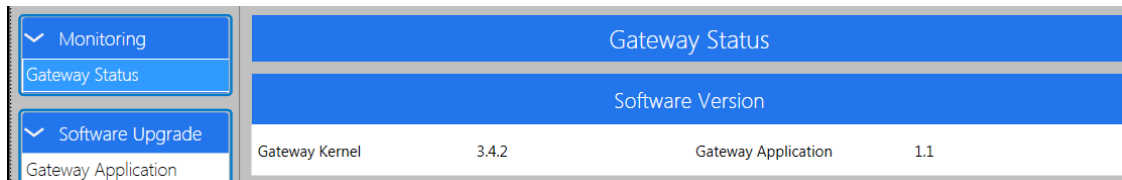
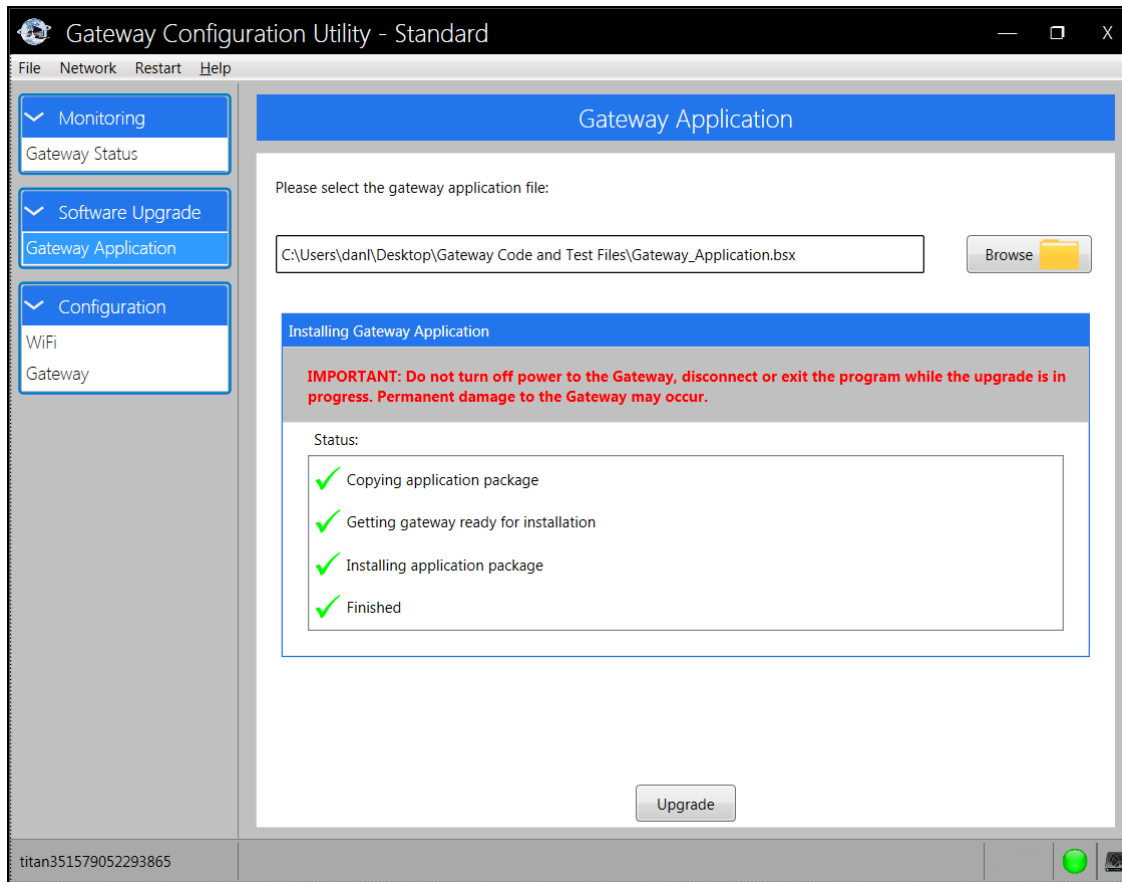
	<p>NOTE</p> <p>Prior to any upgrade and/or update, it is recommended that the user save their settings. See the Gateway Configuration Management procedure in this manual.</p>
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GATEWAY APPLICATION (UPGRADE PROCEDURE)

	<p>CAUTION</p> <p>Do not interrupt power while upgrading. Permanent damage to the Gateway may result. If the user cannot supply constant power through the update process, click NO to cancel the process.</p>
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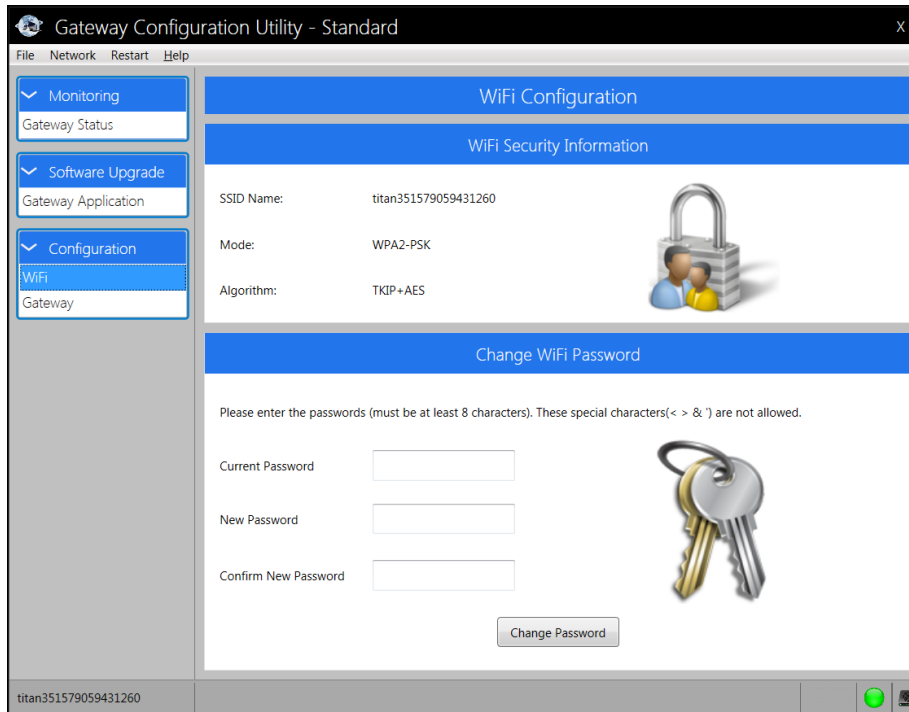


1. Go to the Software Upgrade dropdown and click GATEWAY APPLICATION > BROWSE
2. Browse to the configuration file folder (new file provided by Titan) and select the file ending in .BSX, then click 'OPEN'
3. Click UPGRADE
4. Click 'Yes' to continue with the upgrade or 'No' to cancel
5. Observe the upgrade status and wait until a green checkmark, ✓, appears next to 'Finished'
6. Click RESTART>GATEWAY DEVICE or cycle the power to complete the upgrade
7. Reconnect the Wi-Fi NETWORK using the procedure listed previously
8. Go to MONITORING >GATEWAY STATUS
9. Confirm that the Gateway Application version is correct
10. Confirm the Gateway configuration settings are correct in all fields of the Configuration Utility Navigation Panels; go to CONFIGURATION>GATEWAY>RETRIEVE FROMGATEWAY



3 CONFIGURATION

WI-FI



The screenshot shows the 'Gateway Configuration Utility - Standard' window. The left sidebar has three main sections: 'Monitoring' (with 'Gateway Status'), 'Software Upgrade' (with 'Gateway Application'), and 'Configuration' (with 'WiFi' and 'Gateway'). The 'WiFi' option is selected. The main content area is titled 'WiFi Configuration' and contains two sub-sections. The first, 'WiFi Security Information', displays the following details: SSID Name: titan351579059431260, Mode: WPA2-PSK, and Algorithm: TKIP+AES. To the right of this information is an icon of a padlock with two people. The second sub-section, 'Change WiFi Password', includes a warning: 'Please enter the passwords (must be at least 8 characters). These special characters(< > & ') are not allowed.' Below this are three input fields labeled 'Current Password', 'New Password', and 'Confirm New Password'. To the right of these fields is an icon of two keys. A 'Change Password' button is located at the bottom right of the input fields. The status bar at the bottom left shows the device ID 'titan351579059431260' and a green status indicator on the right.

NAVIGATION PANELS

Wi-Fi Security Information

This screen displays the security information for the system.

Change Wi-Fi Password

This screen allows the user to make changes to the Wi-Fi password.

- Enter the current password
- Enter the new password
- Enter the new password again and click on CHANGE PASSWORD
- Restart the Gateway device or cycle the power

GATEWAY CONFIGURATION MANAGEMENT

!	NOTE Prior to any upgrade and/or update, it is recommended that the user save their settings.
---	---

Save Settings

1. Connect to the Gateway through Wi-Fi
2. Click Configuration Gateway>Retrieve From Gateway>Save To File
3. Select a folder and filename to save a record of the current Gateway configuration
4. Keep the file in a secure place and use for reference when needed
5. Optionally record the settings in a text file or capture a screenshot with the configuration settings; save in a secure place and use for reference when needed

Retrieve Settings from the Gateway

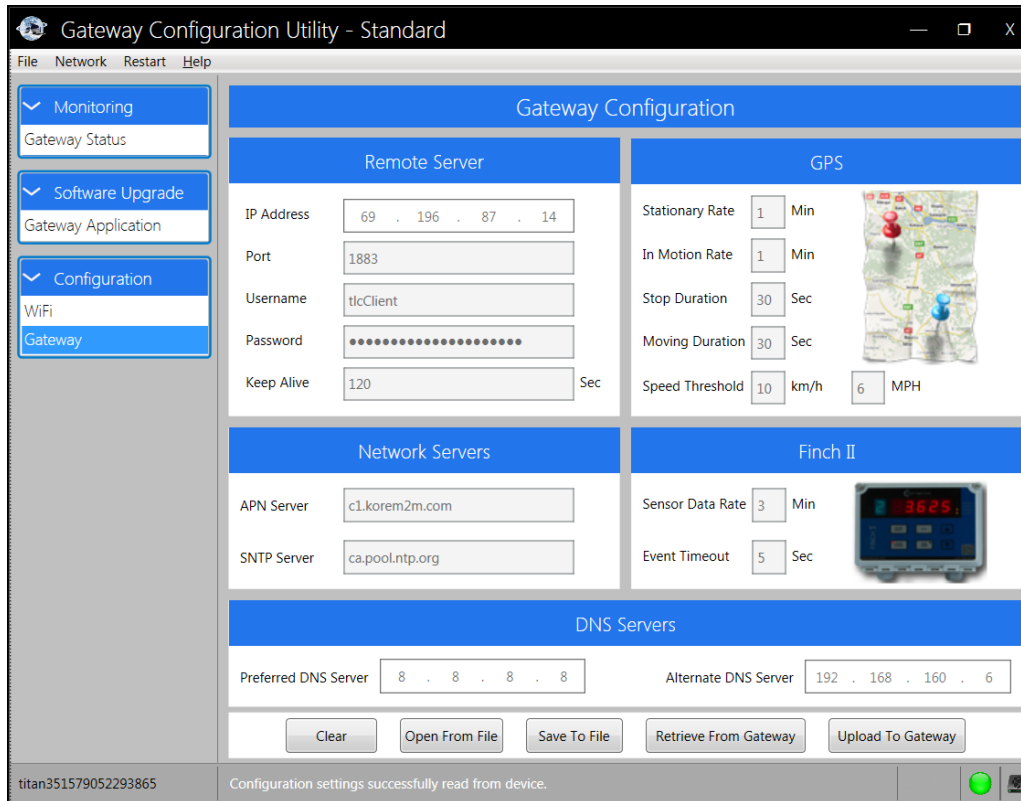
1. Connect to the Gateway through Wi-Fi
2. Click Configuration Gateway>Retrieve From Gateway
3. Record the settings in a text file or capture a screenshot with the configuration settings; save in a secure place and use for reference when needed
4. Optionally click Save To File, select a folder and filename to save the configuration

Use these settings to compare with the configuration on file that was previously saved during installation or maintenance.

Retrieve Settings from a File (connection to the Gateway is not required)

1. Click Configuration Gateway>Open From File
2. Browse to the folder that contains the previously saved configuration settings
3. Select the correct file and click Open
4. Record the settings in a text file or capture a screenshot with the configuration settings; save in a secure place and use for reference when needed

GATEWAY



NAVIGATION PANELS

Remote Server

1. IP Address – This field shows the internet address of the remote server and the destination of the Gateway data.
2. Port – This field describes the destination of the Gateway data together with the IP address.
3. Username – This field shows the client login information unique to each client.
4. Password – This field shows the client login information unique to each client.
5. Keep Alive – This field is a timeout setting verifying the remote server connection every 120 seconds. This setting can be changed if required. Contact Titan for details.

GPS

This shows the positional reporting information and how often it is reported. These settings can be changed if required. Contact Titan for details.

1. Stationary Rate – This field shows how often the information is sent to the remote server when the vehicle is stopped.
2. In Motion Rate – This field shows how often the information is sent to the remote server when the vehicle is moving.
3. Stop Duration – This field is the set time before the system identifies a stopped condition.
4. Moving Duration – This field is the set time before the system identifies a motion condition.
5. Speed Threshold – This rate determines whether the vehicle is stationary or in motion. Entering a value will update the other value.

Network Servers

1. APN Server – This field shows the data access (name) assigned by the cell provider.
2. SNTP Server – This field provides the date/time information to the Gateway (not PC) and will be specific to the user's geographic location.

Finch II

1. Sensor Data Rate – This is the rate at which the Gateway device sends Finch II data messages to the remote server.
2. Event Timeout – This is the maximum time the Gateway waits before indicating a Gateway/Finch II communication failure. If this field shows **✗**, see Troubleshooting Finch II under MONITORING in this manual.

DNS Servers

1. Preferred DNS Server – The server in this field translates the URL to the IP address and is the default IP for the Gateway.
2. Alternate DNS Server – This field shows the alternate IP address. If the Preferred DNS Server is down, the system will default to the Alternate DNS Server.

Gateway Configuration Group Buttons

1. Clear – Clicking on this button clears all the system settings.
2. Open From File – This button is used to load update files.
3. Save to File – This button is used to save the current configuration file for the purpose of sending to Titan or for future retrieval.
4. Retrieve from Gateway – This button shows the internal settings from the Gateway.
5. Upload to Gateway – This button is used to send new settings to the Gateway. The user must restart the Gateway device or cycle the power after an upload.

4 DATE/TIME STAMP

This field indicates the UTC date and time stamp for incoming or outgoing Gateway device data.

TROUBLESHOOTING DATE/TIME STAMP

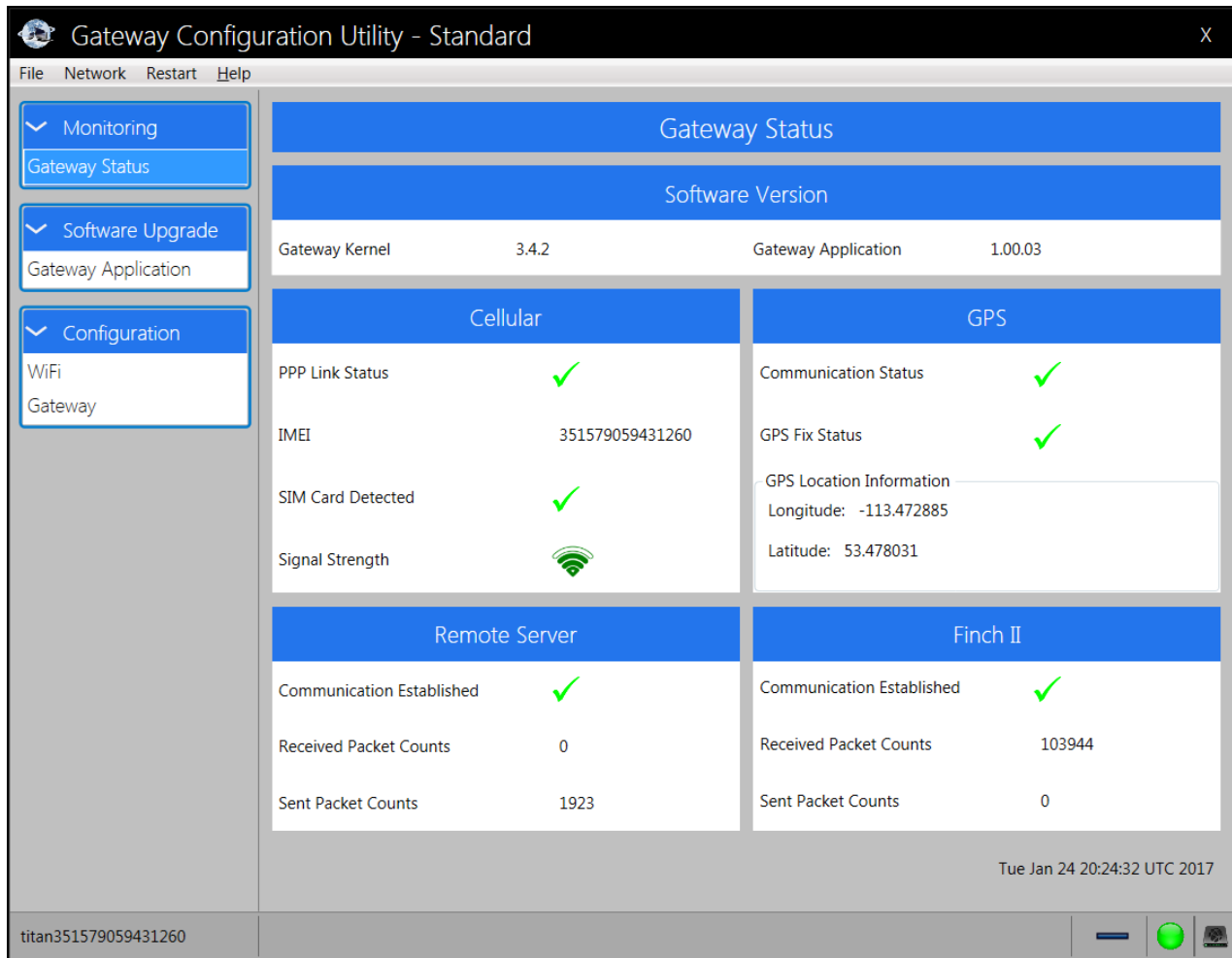
If the date and/or time is incorrect, scrambled, or not updating:

- Check the PPP link status (needs to be checked green)
- Check the SNTP server setting is correct
- Check the network is connected to the Gateway
- There is an internal failure. Contact Titan

CONFIGURATION AND COMMUNICATION TEST PROCEDURE

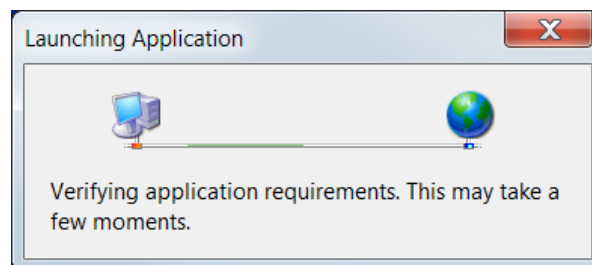
Perform the following steps before carrying out any custom configuration. This procedure is intended to be used by installers and service technicians.

Step	Detail	✓
1. Power up the Gateway	<ul style="list-style-type: none"> a) Turn on the Gateway module by turning on the vehicle electrical accessory power or connecting to a fully charged battery power source b) Wait until the status indicator starts flashing (this could take up to 2 minutes) c) Observe that the status indicator is blinking 1/2s ON and 1/2s OFF 	
2. Launch the Gateway Configuration Utility - Standard	<ul style="list-style-type: none"> a) Establish a Wi-Fi connection with the Gateway b) Save the configuration settings using the Gateway Configuration Management procedure in this manual c) Click the "Gateway Status" selection 	
3. Optional – Customized Configuration	<ul style="list-style-type: none"> a) Go to the Gateway Configurations page b) Click "Open From File" c) Browse to the configuration file folder (new file provided by Titan), click on the filename, then click "Open" (the filename ends in .gwu and is supplied by Titan) d) Confirm that the new settings are correct e) Save new settings to the Gateway by clicking "Upload to Gateway" button f) Restart the Gateway device g) Reconnect to the Gateway via Wi-Fi h) Go to the Gateway Status page 	
4. Check the Cellular Status	<ul style="list-style-type: none"> a) PPP Link Status, checked b) Signal Strength, good 	
5. Check the Remote Server Status	<ul style="list-style-type: none"> a) Communication Established 	



UPDATES

Whenever there is an internet connection, the Configuration Utility will search for, and auto-update the program to the newest version. The program will prompt if you want to do the update. Once the program is launched, you will see the following status as the Configuration Utility updates:



ADVANCED TROUBLESHOOTING

The Gateway system operation depends on correct operation of the vehicle's power supply, connection to the TD80 Level Gauging System, and communication with the remote server. Failure of any one of these components disrupts the Gateway operation.

Methodical testing and verification of the TD80 system and Gateway components will lead to successful troubleshooting and repair. For TD80 system issues, refer to the Finch II product manual, TPM 010, for troubleshooting and repair details. The following test and troubleshooting guidance is for Gateway issue resolution. See TPM 053 for further details on issue resolution.

REQUIRED TOOLS AND EQUIPMENT

- Laptop computer with Standard Gateway Configuration Utility installed
- Digital Multimeter (DMM)
- Electrical wiring diagrams
- TD80, Finch II troubleshooting guides, TPM 010

OPTIONAL TOOLS AND EQUIPMENT (AS REQUIRED)

- Finch II programming kit and software
- Up-to-date Finch II firmware file

GATEWAY HEALTH CHECK

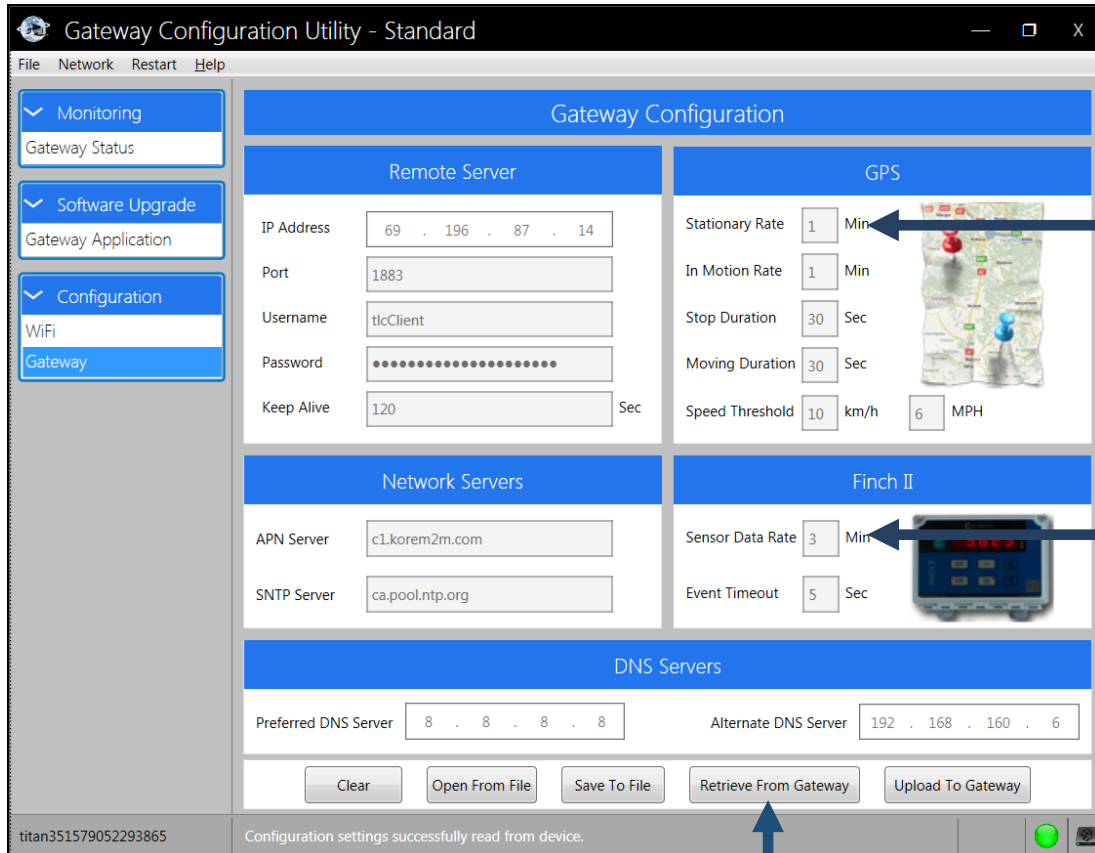
The Gateway Health Check is a quick test to confirm that the Gateway is operating normally or to verify a failure. It uses visual observation of the status light and the Configuration Utility to determine the health of the system. Failure of any checklist step below indicates a problem to be resolved.

This check is easily performed remotely through a Wi-Fi connection. Note that the vehicle must provide adequate power for a successful health check. Error free steps 2 through 6 imply that the Status light is indicating normally.

Step	Detail	✓
1. Observe the Gateway Status light	Confirm: Blinking ½ second ON, ½ second OFF	
2. Launch the Gateway Configuration Utility	Establish a Wi-Fi connection with the Gateway Click the “Gateway Status” selection	
3. Finch II communication	Confirm: Communication Established, checked	
4. Cellular connection	Confirm the following: <ul style="list-style-type: none"> • PPP Link Status, checked • Signal Strength, good 	
5. Remote server connection	Confirm: Communication Established, checked	
6. GPS data	Confirm the following: <ul style="list-style-type: none"> • Communication Status, checked • GPS Fix Status, checked 	

GATEWAY COMMUNICATIONS DIAGNOSTICS

Perform each of the diagnostic steps below before performing any communications troubleshooting to determine the status of the Gateway system. Issue resolution may require contacting your Titan representative.



Gateway Configuration Utility - Standard

File Network Restart Help

Monitoring
Gateway Status

Software Upgrade
Gateway Application

Configuration
WiFi
Gateway

Gateway Configuration

Remote Server	GPS
IP Address: 69 . 196 . 87 . 14	Stationary Rate: 1 Min
Port: 1883	In Motion Rate: 1 Min
Username: tlcClient	Stop Duration: 30 Sec
Password:	Moving Duration: 30 Sec
Keep Alive: 120 Sec	Speed Threshold: 10 km/h 6 MPH

Network Servers	Finch II
APN Server: c1.korem2m.com	Sensor Data Rate: 3 Min
SNTP Server: ca.pool.ntp.org	Event Timeout: 5 Sec

DNS Servers

Preferred DNS Server: 8 . 8 . 8 . 8 Alternate DNS Server: 192 . 168 . 160 . 6

Clear Open From File Save To File Retrieve From Gateway Upload To Gateway

titan351579052293865 Configuration settings successfully read from device.

Diagnostic Step	Detail	✓
1. Observe antenna location.	Unobstructed view of sky	
2. Launch the Gateway Configuration Utility.	Establish a Wi-Fi connection with the Gateway	
3. Verify Gateway settings. Troubleshooting may continue without this step, but some issues may not be resolved.	Gateway Configuration screen: a) Click the “Retrieve From Gateway” button 1 b) Confirm all settings	
4. Verify Finch II communication.	Gateway Status screen: Confirm the following: a) Communication Established, checked b) Received Packet Counts, incrementing at the expected rate; see the Sensor Data Rate setting 2	
5. Verify Cellular connection.	Gateway Status screen: Confirm the following: a) PPP Link Status, checked b) IMEI c) SIM Card Detected, checked d) Signal Strength, good	
6. Verify Remote server connection.	Gateway Status screen: Confirm the following: a) Communication Established, checked b) Sent Packet Counts, incrementing at the expected rate; see the Stationary Rate setting 3	
7. Verify GPS data.	Gateway Status screen: Confirm the following: a) Communication Status, checked b) GPS Fix Status, checked c) GPS Longitude and Latitude, current location	



ASSET MANAGEMENT DASHBOARD VERIFICATION (3RD PARTY PROVIDER)

1. Login to the customer account to access the dashboard by an internet connected device (PC or smartphone). The website address username and password are provided by the customer.
2. Select the vehicle or asset being tested.
3. Verify the following details:

Verification Step	Detail	✓
GPS Location	Confirm location	
Tank volume(s) and alarm status	Confirm product volume(s) and alarm status	

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