HME®
HOSPITALITY & SPECIALTY COMMUNICATIONS

ZOOM Nitro®
Vision AI

Version 8.0

User's Guide

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Chapter 1 - ZOOM Nitro Overview

Congratulations on the purchase of your state-of-the-art ZOOM Nitro® system. This system helps optimize your store's efficiency by providing a full range of customizable analytics. The ZOOM Nitro system measures customer vehicle events for comparison against your service-time goals at multiple detection points in a drive-thru lane or other locations throughout your premises. It collects detection data, organizes it, and displays it in a clear, easy-to-read visual format on the Dashboard (a monitor display of drive-thru and event data). The Dashboard includes total and average event times through an animated display of actual vehicles in the drive-thru lane or other designated locations.

Equipment

Your basic system includes:

- **Detectors** (not shown): These detectors are installed in strategic, out-of-sight locations throughout the premises. They are used to detect the presence of vehicles in areas such as drive-thru lanes or reserved parking spaces.
- **VPU/TSP (Video Processing Unit/Timer Signal Processor):** These devices receive and sort lane-event data from peripheral detectors and send it to the Control Unit for processing. These devices are abbreviated throughout this guide. Fig. 1.1 shows the VPU (top) and TSP60.
- **CU (Control Unit):** This device receives lane event data from the TSP, processes it, and displays the information in real time on the system monitor in a visual format. It stores your settings and manages a database of drive-thru activity history that it uses to generate scheduled and on-demand reports. This device is abbreviated throughout this guide as CU (Fig. 1.2).
- **Monitor**: This is the primary drive-thru data display for your system (Fig. 1.3). It displays lane event data from the CU. You can customize the layout of the display. The main display on the monitor is known as the Dashboard. Other menu options can also be displayed, such as viewing reports, editing ZOOM Nitro settings, and performing diagnostics. Your ZOOM Nitro system can also support a second monitor for use as a ZOOM Nitro Leaderboard (Gamified or non-gamified, depending on the selected service).
- **Remote Access**: If your ZOOM Nitro system has been configured to work with your network, all information displayed on the monitor can also be accessed from a connected PC or through HME CLOUD® using a laptop or smart device. This provides another way to make changes to your system and print reports.



Fig. 1.1



Fig. 1.2


Fig. 1.3

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Drive-Thru Layout

The most common Lane configurations are:

- Single Lane: One entry-point detector and one exit-point detector.
- Y Lane: Two entry-point detectors and one exit-point detector.
- Mobile Order/Pull Forward/Wait Areas: Vehicle detection occurs off to the side of a lane or in a reserved parking space designated by the restaurant or store. Figure 1.4 shows two Pull-Forward/Wait Area stalls and two Mobile Pickup spaces. Figure 1.5 shows one of each.

Figures 1.4 and 1.5 illustrate examples of typical drive-thru layouts. Detection points (indicated by the circular yellow markers) can be installed at various strategic locations. These detection points can be cameras, in-ground loops, or a combination of both. You can label each detection point on your Dashboard. Common labels include Arrival, Greet, Menu, Order, Cashier, Pay, Present, Service, Mobile Order, Pull-Forward/Wait Area.

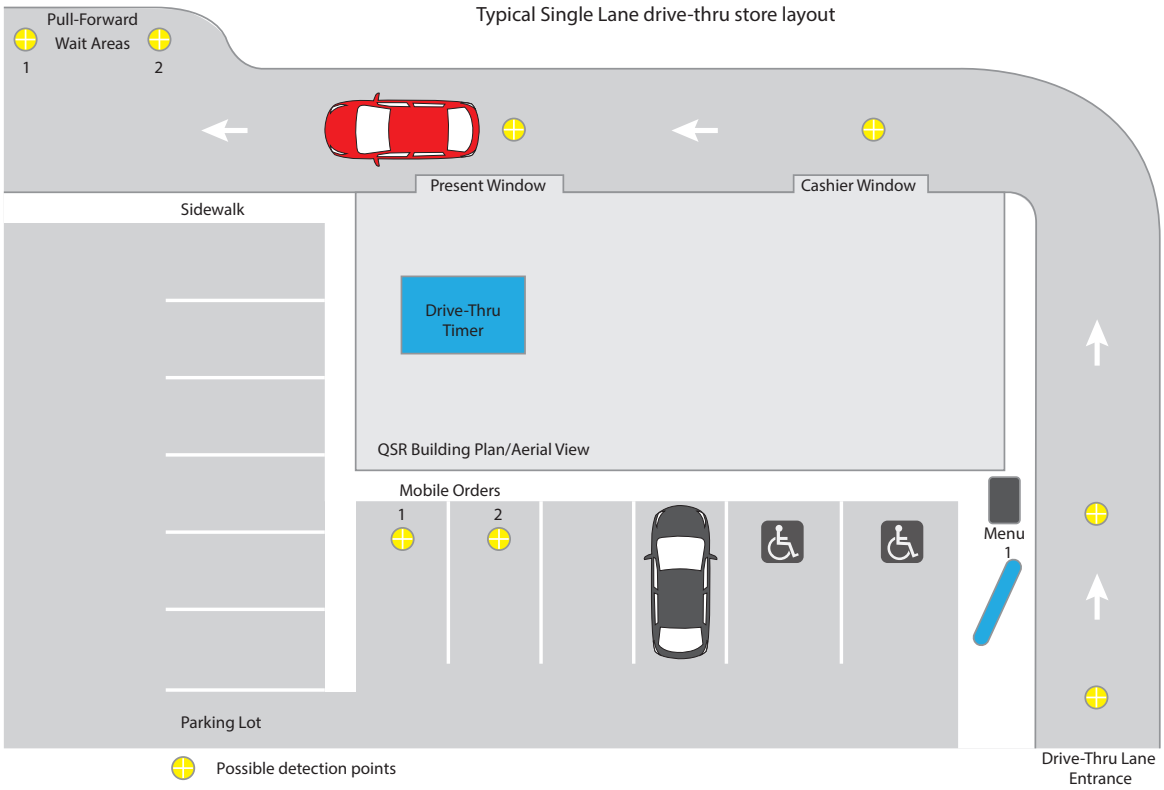


Fig. 1.4

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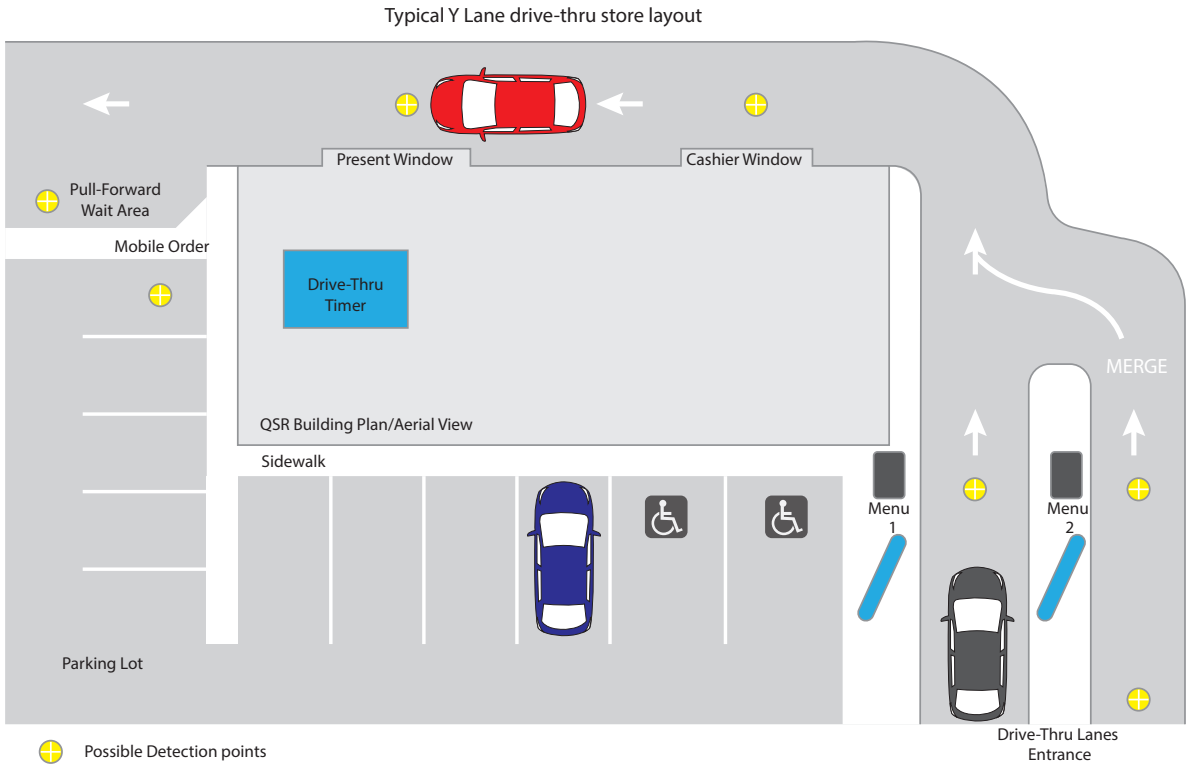
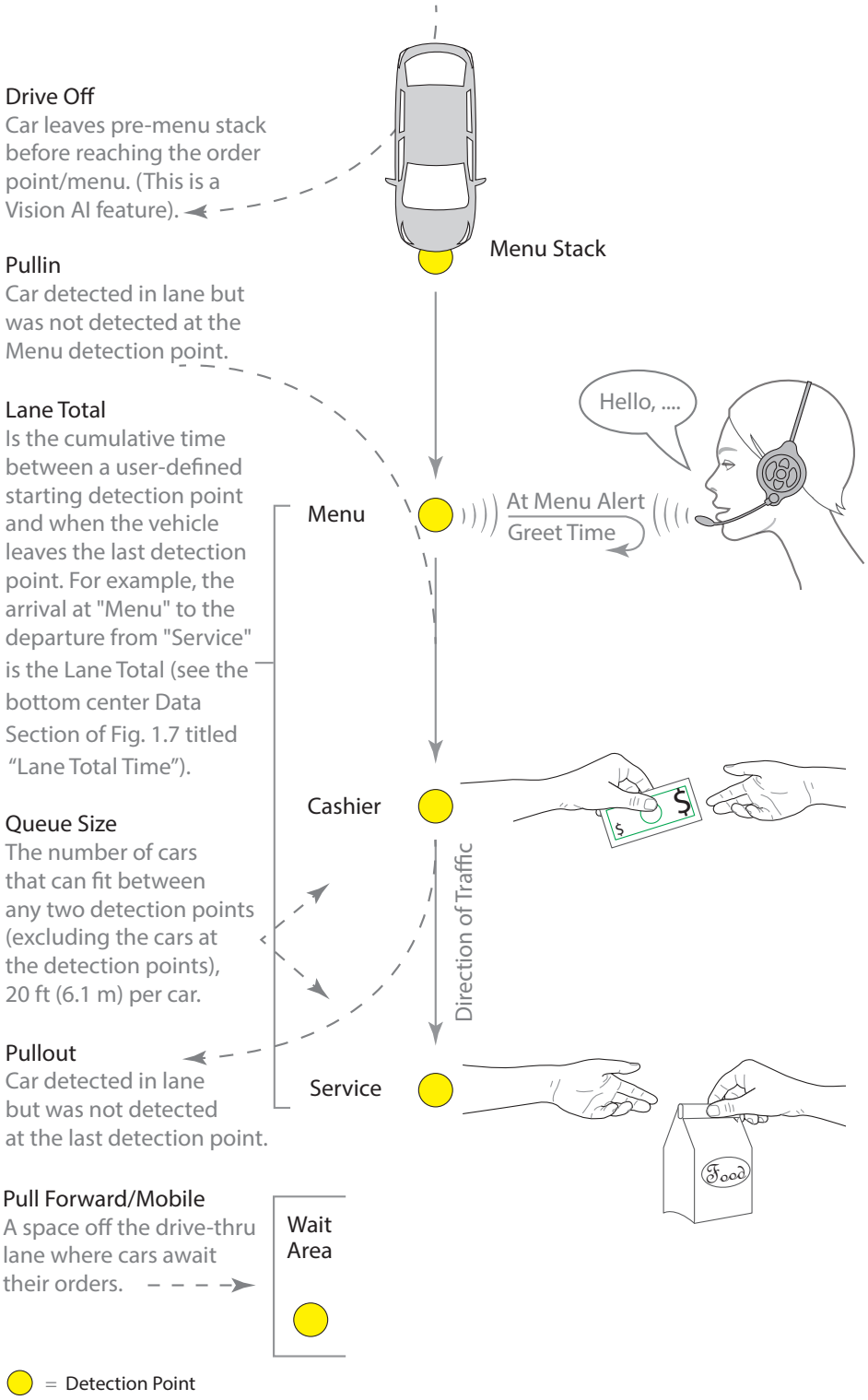


Fig. 1.5

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Overview of Typical Events in a Drive-thru Lane

Figure 1.6 is an example of a Single Lane type configuration with five detection points.



Menu Stack: A Vision AI feature that allows vehicles to be detected even before they reach the Menu ordering point. It provides valuable metrics such as drive offs.

"Menu" A typical user-defined descriptive label for a detection point or zone. The measured event for this point/zone is generally displayed in a Data Section (see the top left Data Section of Fig. 1.7 titled "Menu 1 Time").

Greet Time: Is the time period from when a customer is detected at the menu board to the time the host begins speaking to the customer.

"Cashier" A typical user-defined descriptive label for a detection point or zone. The measured event for this point/zone is generally displayed in a Data Section (see the top right Data Section of Fig. 1.7 titled "Cashier Time").

"Service" A typical user-defined descriptive label for a detection point or zone. The measured event for this point/zone is generally displayed in a Data Section (see the bottom left Data Section of Fig. 1.7 titled "Service Time").

Fig. 1.6

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The Dashboard

The ZOOM Nitro system is initially configured to your specifications during installation. Figure 1.7 shows an example of the default Dashboard screen. If you wish to further customize your system or modify its current settings, you can connect a mouse to a USB port on the CU, allowing you to access the menu on the Dashboard monitor. Alternatively, if your system is connected to the same network as your back-office PC, you can use the back-office PC to make changes.

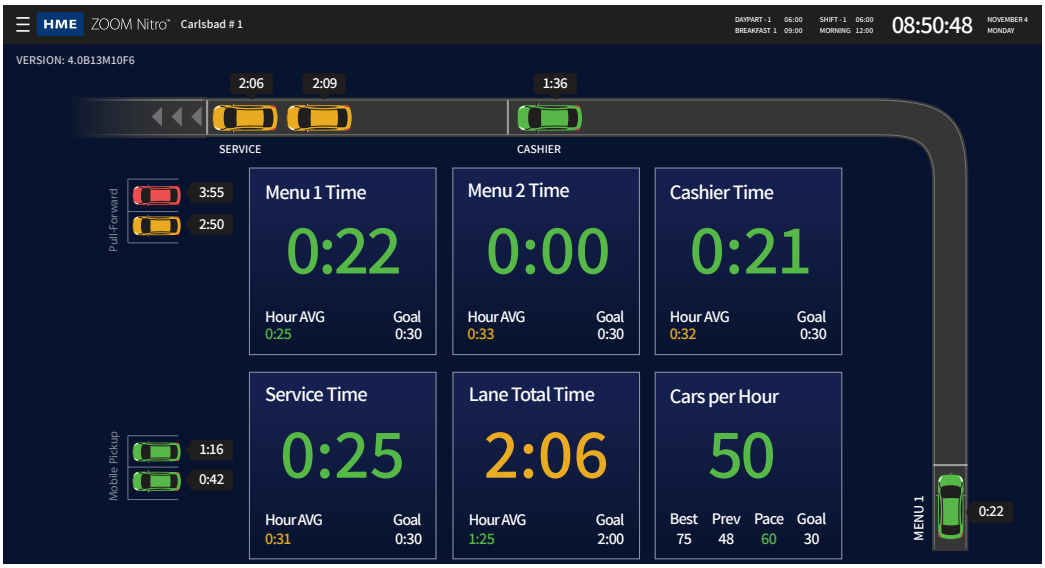


Fig. 1.7

Note: *The screenshots used in this guide are for illustrative purposes only. The displayed data and values are simulated and do not reflect actual drive-thru data from a real store.*

Click the ☰ (menu) icon in the upper-left corner of the Dashboard screen. The SECURITY screen opens. Select User Type, then log in to access the options displayed in the sidebar menu. Permission levels, which are determined by the selected User Type, restrict access to specific menu options. Each menu option is covered in a corresponding chapter of this guide, as shown in Fig. 1.8.

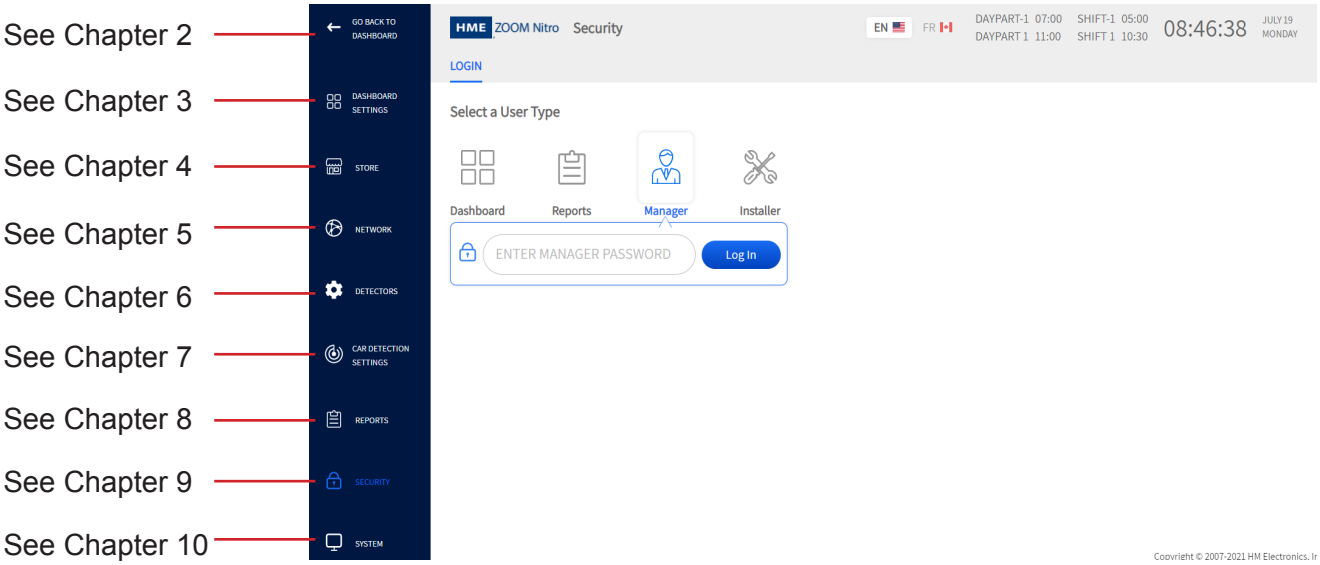


Fig. 1.8

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Making changes to ZOOM Nitro screens

To return to your main Dashboard at any time, click on the ← (GO BACK TO DASHBOARD) icon in the upper-left corner of the screen (see Fig. 1.8).

Most screens have active areas that are editable; these may include the following:

Direct Access Fields: These are fields you can type directly into. When you click the cursor or tap in this field, a pop-up keyboard opens (see Fig. 1.9). This allows you to enter information using a mouse (without the need for a physical keyboard).

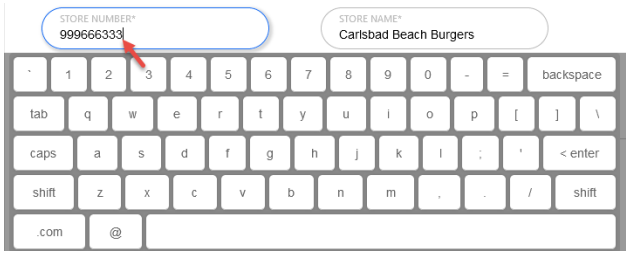


Fig. 1.9

Time/Value Fields: Some active areas, such as time fields, are edited by clicking on the field. When you click or tap this field, a pop-up keypad opens (see Fig. 1.10). Use the "backspace" key to clear the field, the number keys to enter a time value, and the colon key to separate hours and minutes. Click "Copy to All" to apply this value to all active fields in the column. A "Warning" dialog will prompt you to Cancel or Confirm. Click "Confirm" to apply.

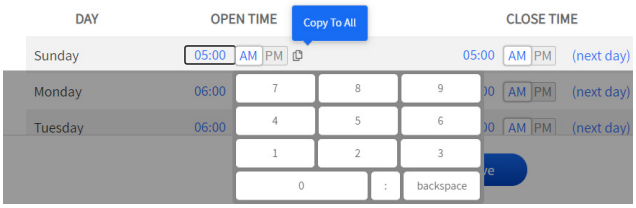


Fig. 1.10

ON/OFF Switches: Click the **OFF/ON** switch to turn an option ON (if its current status is off) or OFF (if its current status is on). Some fields are invisible in the OFF position but become visible when turned ON (see OPEN TIME and CLOSE TIME columns in Fig. 1.11).

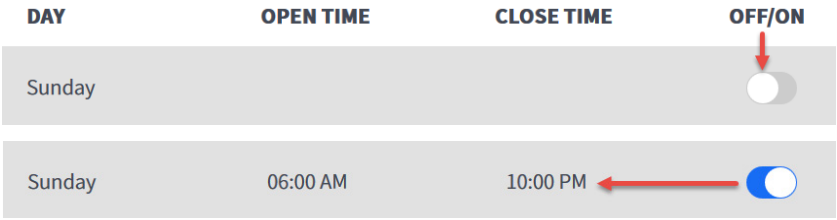


Fig. 1.11

Drop-down Lists: The down arrow ⌄ in a field indicates there are more options available to choose from. Click in the field or on the arrow to open the drop-down list and select your choice.

Add and Remove Icons: Some active screens have an ⊕ **Add** and a 🗑 **Remove** icon located next to a table. Clicking the ⊕ **Add** icon (see Fig. 1.12) adds another row to the bottom of the current table. If you want to delete a row, select the row and the 🗑 **Remove** icon will appear; click Remove to

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delete the row. In Fig. 1.13, shift 2 is selected (the circle next to the shift number is checked). Clicking the **Remove** icon deletes the selected row.



Fig. 1.12



Fig. 1.13

Some features need to be enabled first to activate. For example, DHCP Enable indicates that DHCP (a "**NETWORK**" settings feature) is enabled. Clicking on this switch again will disable it. Some features are enabled by default or vice versa.

Save and Cancel: Most screens have a Cancel Save button located at the bottom of the screen (this may be hidden from view, so you may need to scroll down to the bottom to access). **Any changes made must be saved to take effect. New settings are lost and default to the previous state if not saved.** Clicking "Cancel" also returns settings to the previous state if not yet saved.

If you exit a screen but forget to save your changes, a "**Warning**" prompt appears. This prompt asks you: "Are you sure you want to leave? You will lose changes." Click the Cancel button to return to the screen and save your changes or Confirm to leave the screen without saving the changes.

> ***NOTE:*** *The following chapters assume that the user now knows that any changes made to a screen must be saved first to take effect. Therefore, to keep our guides lean, instructions prompting the user to save changes will not be repeated hereafter.*

Required Fields: Certain fields are mandatory and cannot be skipped. The system will alert you if a field cannot be left blank (see Fig. 1.14). In this example, the field needs to be populated with an option from the drop-down list before proceeding.

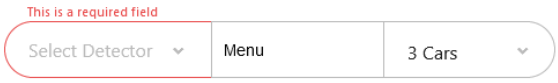


Fig. 1.14

+ and - signs: When next to a field, they indicate that this section can be expanded or collapsed.

Filter operators <, >, and =: When used with a value field, these indicate less than, greater than, or equal to the value selected, respectively.

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Permissions

Different permission levels can be assigned to personnel who use this system. While this guide provides an overview of all features, some features may not be accessible due to permission-level restrictions (see “Chapter 8 - Security” on page 63). Features available only to installers, or to installers and managers, are identified at the beginning of the applicable chapter.

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Chapter 2 - Getting Started

The main Dashboard is the default screen displayed on the monitor (Fig. 2.1). The Dashboard shows real-time lane events for each vehicle in the drive-thru lane. It consists of a frame containing one to six user-defined Data Sections that display various combinations of measured event data. Figure 2.1 shows a single-lane drive-thru setup with six real-time Data Sections, including Pull-Forward and Mobile Pickup sections. The displayed event information is refreshed every second.

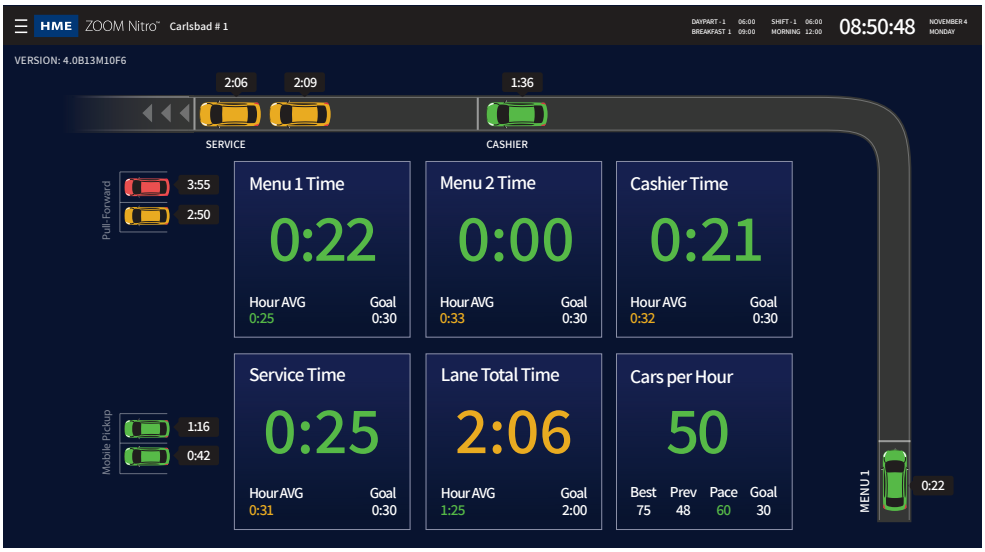


Fig. 2.1

To customize and configure the Dashboard, click the ☰ (menu) iconin the upper-left corner of the screen. The Security (Login) screen appears. Log in by selecting your assigned User Type and entering your password. This opens the Dashboard Settings screen. The default language is English. To switch to French, click the Canadian flag icon FR 🇨🇦 at the top of the screen (see Fig. 2.2).

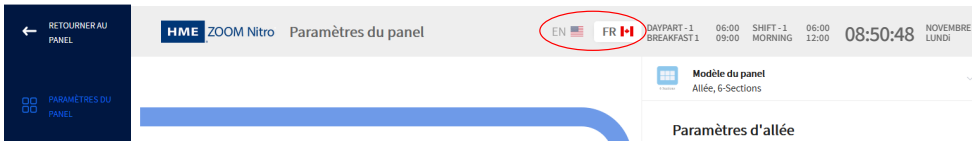


Fig. 2.2

Fig. 2.3 shows a yellow banner. This indicates that select settings are locked by your administrator. Locked fields/settings are grayed out and cannot be adjusted.

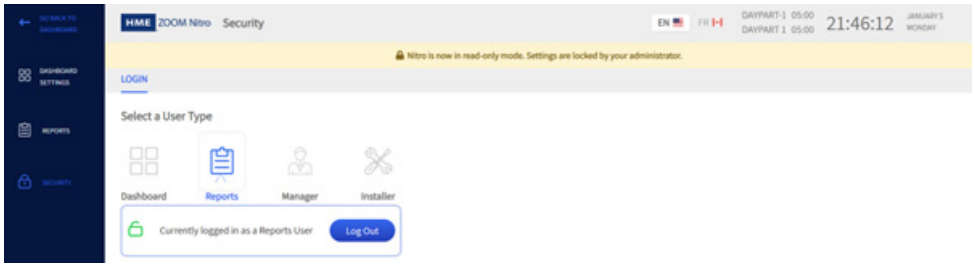


Fig. 2.3

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Chapter 3 - Dashboard Settings

Dashboard Layout

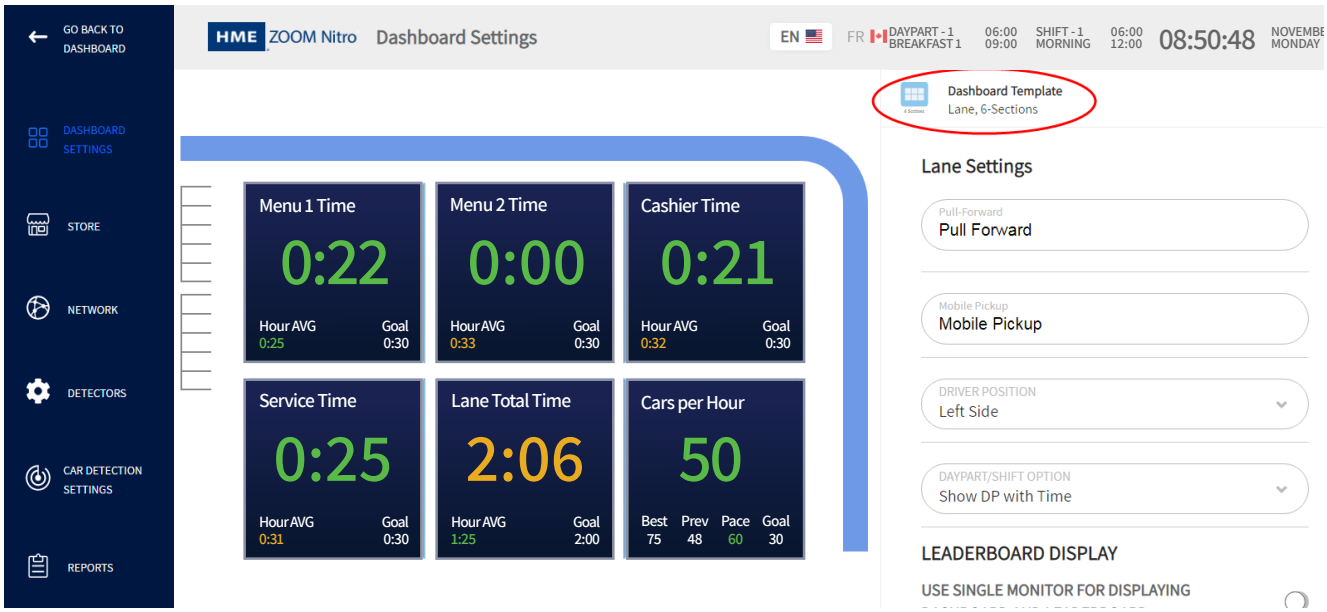


Fig. 3.1

What is this screen for? This screen allows you to edit the main Dashboard screen. Despite the different background color, it reflects what is displayed on the Dashboard.

Why is it needed? You may wish to configure and customize the appearance of your Dashboard. This includes selecting which measured events are displayed. Click any Data Section to open it for editing. The editable fields for the selected Data Section appear on the right side of the screen. For example, the Lane graphic in Fig. 3.1 was selected, so the **Lane Settings** fields are available for editing.

Screen details explained: Figure 3.1 shows a Single Lane layout, Figure 3.2 shows a typical Y Lane layout.

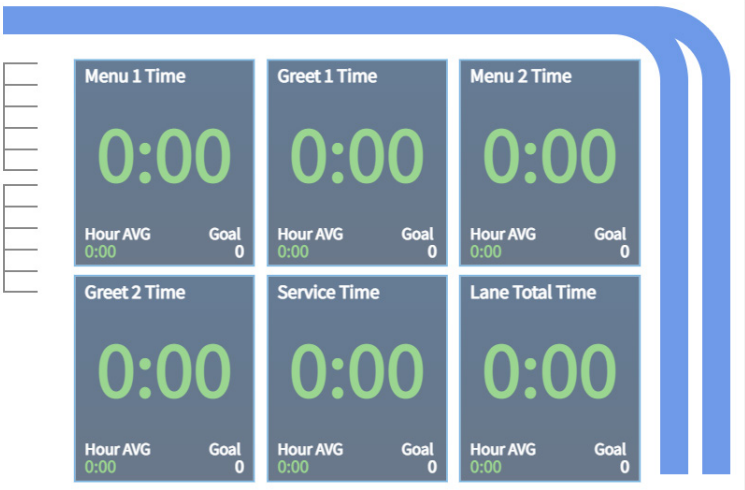


Fig. 3.2

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To adjust the layout of the Dashboard screen, click on the icon found in the upper portion of the screen or the adjacent down arrow icon next to it (see Fig. 3.1).

This opens the **Dashboard Template** menu, which shows various designs that let you customize your Dashboard layout (see Fig. 3.3). Click any layout to select it.

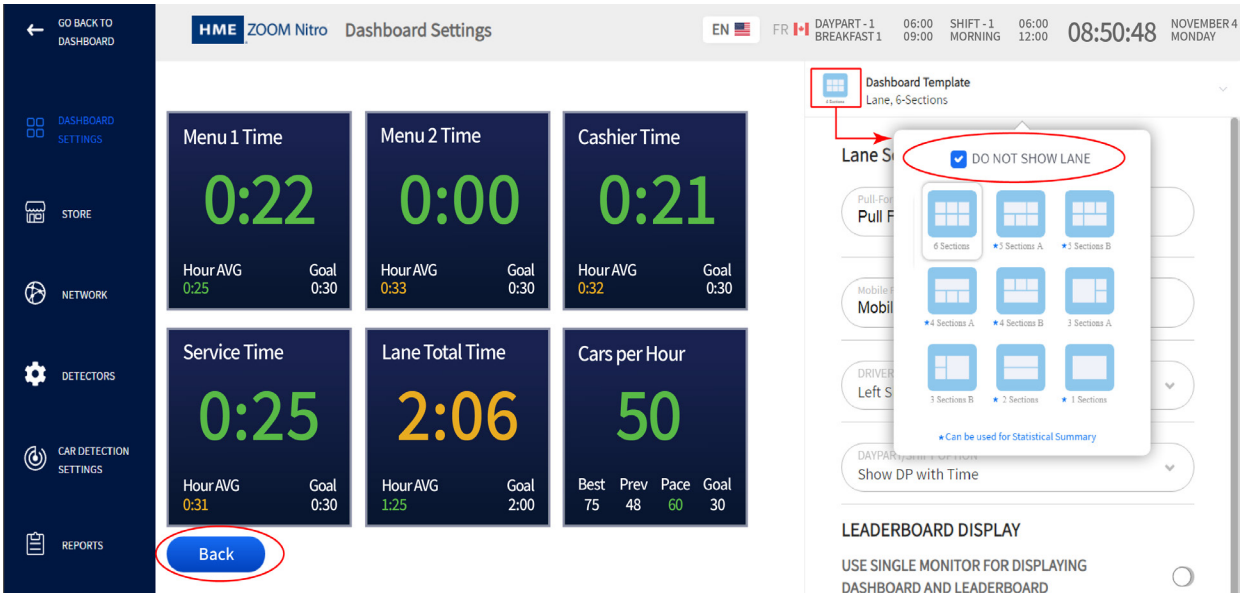


Fig. 3.3

Checking the "☐ DO NOT SHOW LANE" box (see Fig. 3.3) removes the Lane, Pull Forward, and Mobile Pickup graphics from the screen. Removing the lane will increase the size of the Data Sections on your Dashboard layout. If you wish to redisplay the Lane, Pull Forward, and Mobile Pickup graphics again, click on the "Back" button that is now beneath the Data Sections, or click the Dashboard Template again and uncheck the "☑ DO NOT SHOW LANE" box.

Some **Dashboard Template** layouts have a small asterisk next to them, as shown in Fig. 3.4. This indicates that these layouts support a Statistical Summary section (the six-section layout in Fig. 3.4 does not).

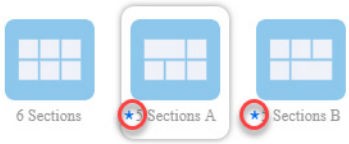


Fig. 3.4

The Data Section must be large enough to display Statistical Summary data. Therefore, only the large rectangular section (Section 1) in Fig. 3.5 can accommodate a Statistical Summary.

1. Click the Data Section to open **Section 1** for editing.
2. Then, in the **MEASURE** field to the right, choose "Statistical Summary" from the drop-down list (this option will not appear if smaller sections are selected because they can't display this data).
3. Select at least one period from the **Statistical Summary Periods** field. Up to three periods can be selected.
4. Once a selection is made from the **Statistical Summary Periods** field, the Statistics option appears beneath this field. This set of options includes: **AVG & Goal % Statistics, Disastrous Orders Statistics,** and **Car Count Statistics** (scroll down to view). You must then enable at least one statistic from the list for the Data Section (Section 1 in this example) to populate (see Fig. 3.5). Up to six statistical options can be selected.

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NOTE: *If any changes are made to the Car Detection Settings (such as display name changes, mapping changes, or add/remove detectors), the Statistical Summary must be disabled and then re-enabled to see the newly added detector option within the settings.*

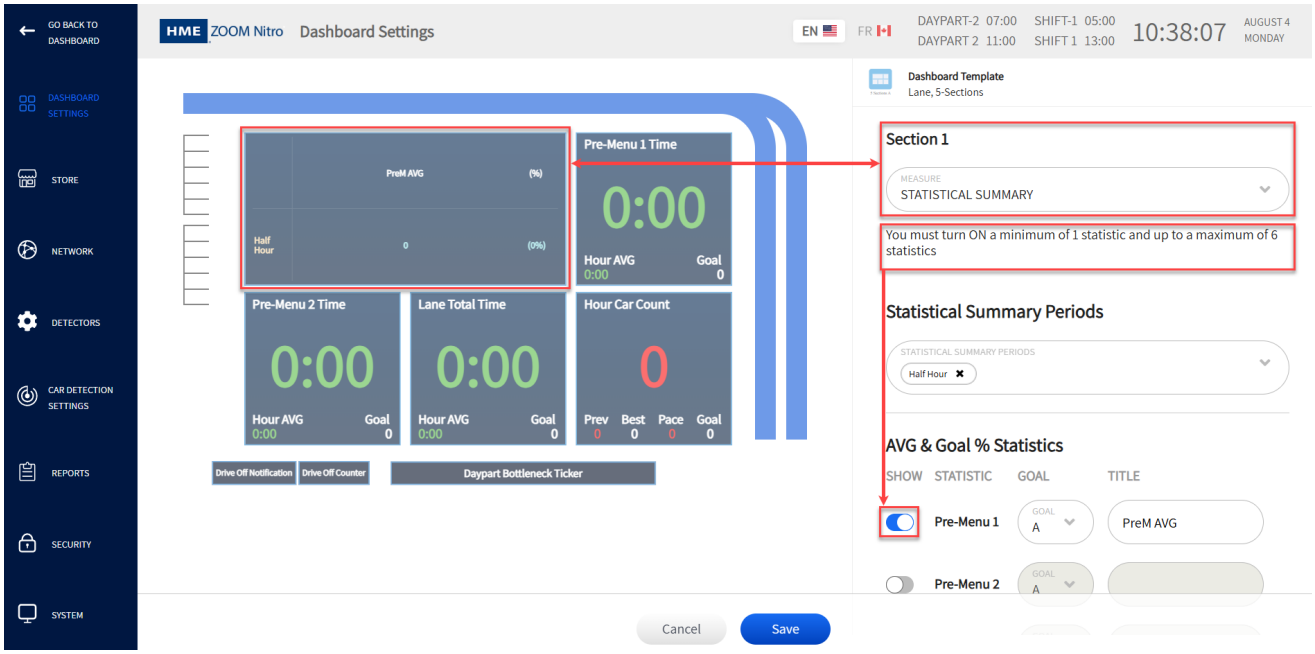


Fig. 3.5

When the **Daypart Bottleneck Ticker** option is enabled, a scrolling ticker appears at the bottom of the Dashboard. Figures 3.6 and 3.7 show how it appears in Dashboard Settings and on the Dashboard. The ticker displays current Daypart information, identifies where the bottleneck occurred during previous Dayparts, and shows the average Daypart time for the detection point where the bottleneck occurred.

NOTE: *Dayparts must be configured in STORE settings before this option can be enabled.*

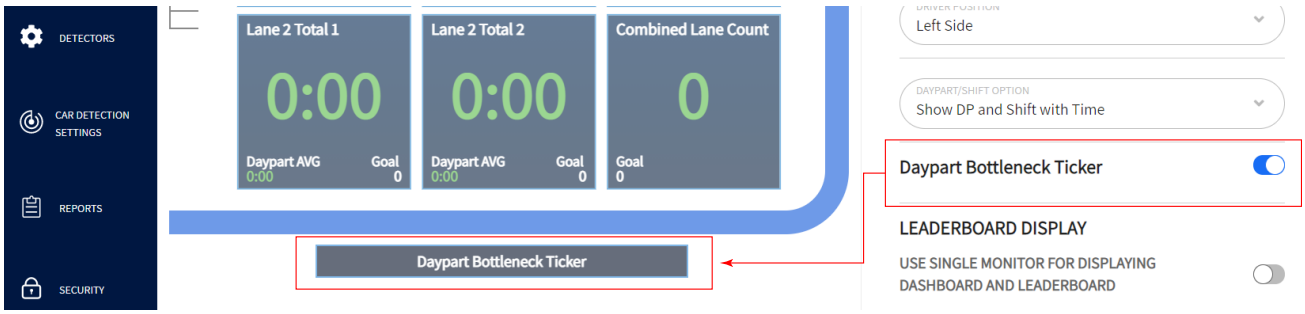


Fig. 3.6

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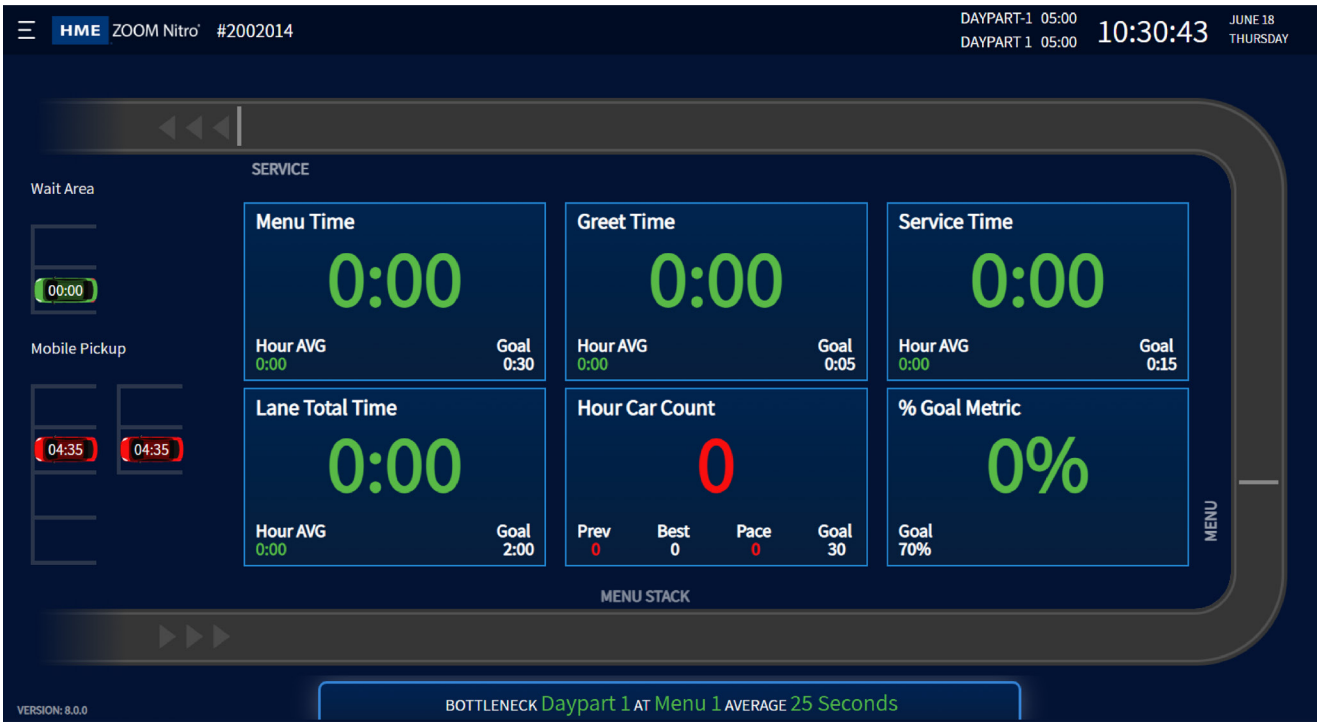


Fig. 3.7

> ***NOTE:*** *The system must be configured before the Dashboard can be used. If it is not configured, the Dashboard displays the following message:* ***Please configure the detectors or check their connection****. At a minimum, the Menu and Service detectors must be configured.*

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With ZOOM Nitro Vision AI Enabled

Nitro Vision AI is a camera-based technology used to detect vehicles. Metrics such as Drive Offs can be detected earlier in a Single Lane or Y Lane drive-thru. Nitro Vision AI can also be used to support up to eight Mobile spaces and up to two Pull Forward spaces.

Footer Drive Off Counter: Under **Lane Settings**, enable this option to display the number of drive-offs that occur within a selected time period (half hour, hour, daypart, or day). These time periods are selected from the drop-down list of the DRIVE OFF COUNTER TIMER METRIC field. This counter appears below the lane and data section graphics as shown in Fig. 3.8.

Footer Drive Off Notification: This feature displays real-time drive-off notifications.

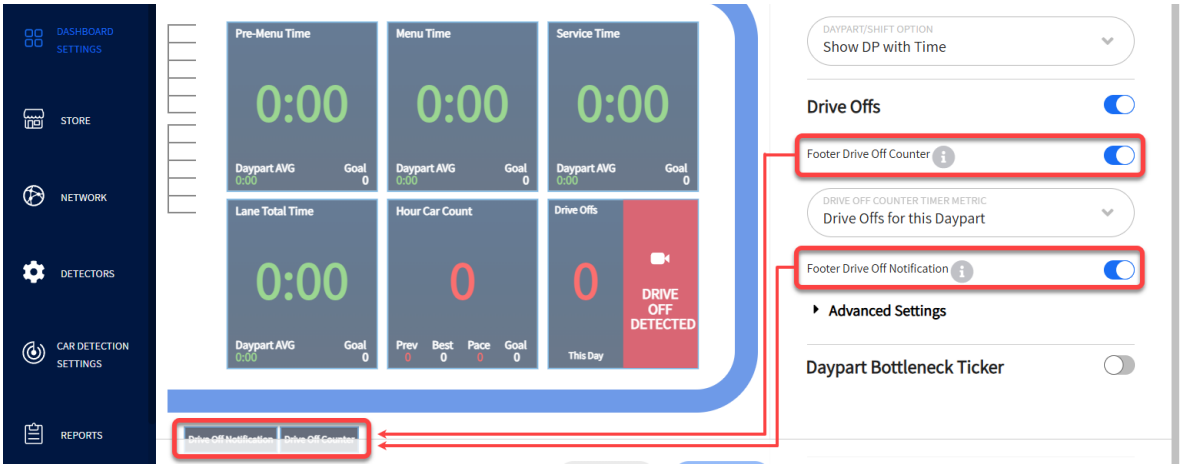


Fig. 3.8

Drive-off information can also be displayed in a Data Section. Click on a Data Section (Section 6 is the example used in Fig. 3.9). From the drop-down list of the **MEASURE** field, select DRIVE OFFS. Label this Data Section in the Title field (“Drive Offs” is used in this example), and then select the time period from the DRIVE OFF COUNTER TIMER METRIC field (“This Day” is used in this example). See Fig. 3.9.

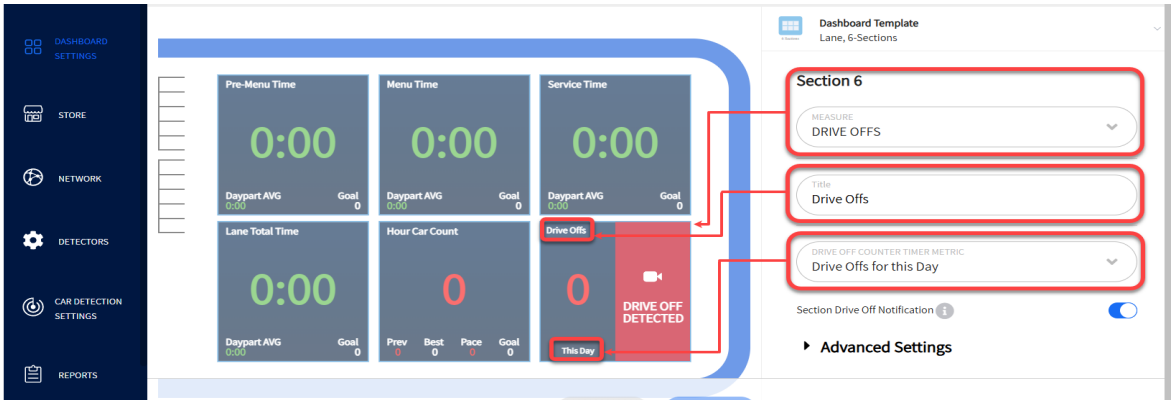


Fig. 3.9

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Advanced Settings: Click to expand (see Fig. 3.10). Here, you can define expected drive-off ranges and set thresholds that color-code the results as green, yellow, or red. This allows for easy identification of relative drive-offs based on expectations.

Green drive offs will indicate less than expected, while red will indicate more than expected. The example shown in Fig. 3.10 shows a value of 5 for the first goal and 10 for the second goal. This means that when there are fewer than five drive offs for the selected time (Drive Offs for this Day in this example), the value will be displayed in green. Between five and ten drive offs will yield a yellow value, while more than ten drive offs will yield a red value.

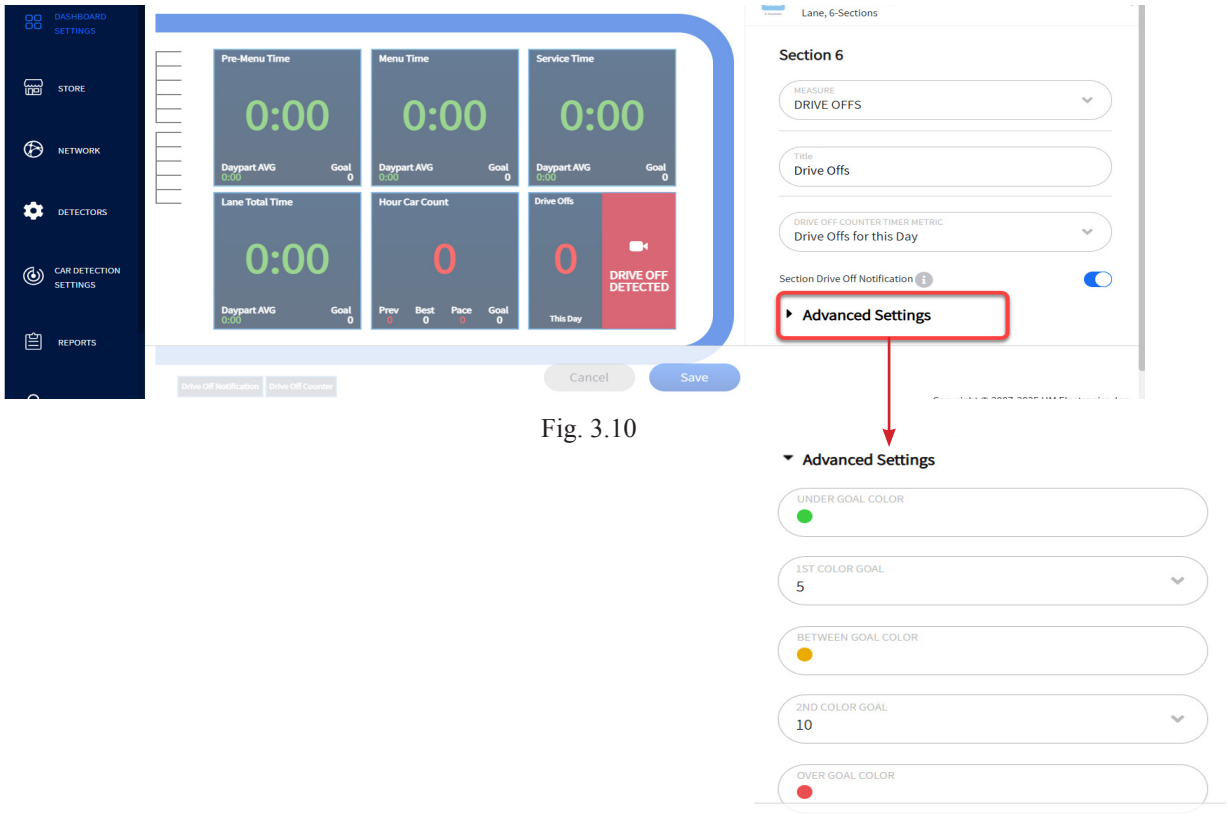


Fig. 3.10

Menu Stack: This is a combined detection zone monitored by the camera before vehicles reach the menu ordering point. Fig. 3.11 shows how it is displayed on the dashboard. See “Drive-Thru” on page 41.

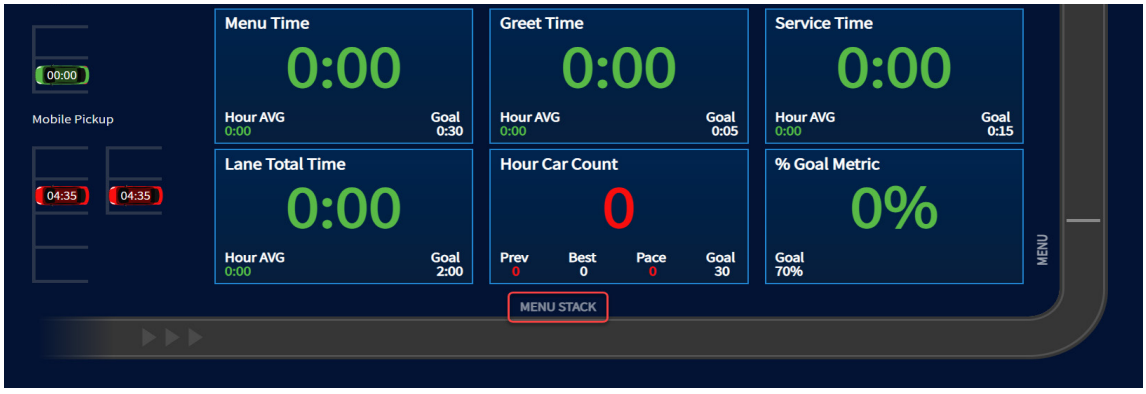


Fig. 3.11

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Lane Settings

To edit what is displayed on your Dashboard, use the column of associated fields on the right. The Dashboard Settings screen opens to “**Lane Settings”** by default.

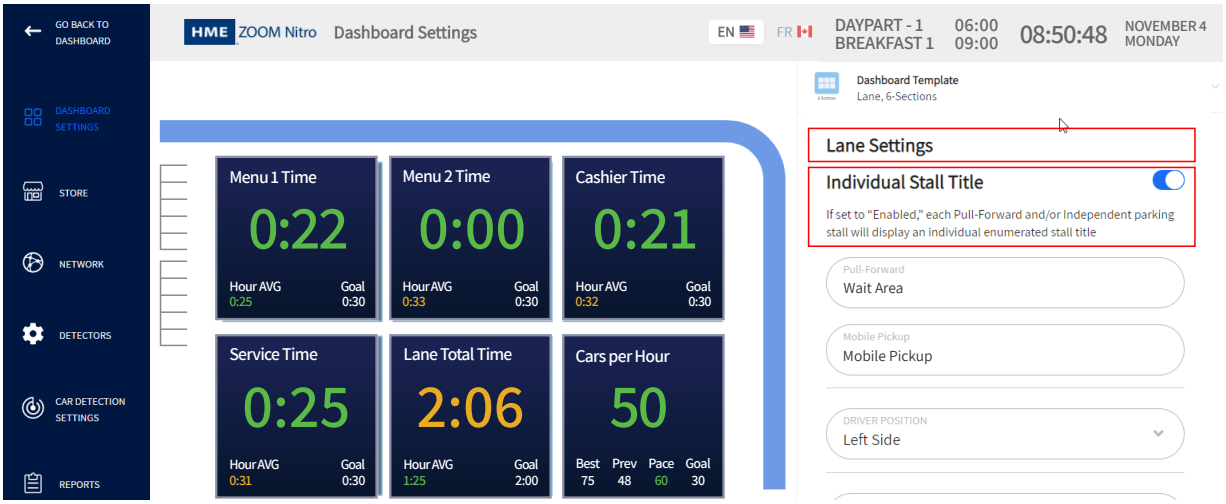


Fig. 3.12

The Pull-Forward and Mobile Pickup fields are editable. These fields can be relabeled but are restricted to a 12-character limit.

When “**Individual Stall Title**” is enabled, the first letter of the Wait Area or Mobile Pickup detector is used along with a stall number.

Fig. 3.13a shows two Pull-Forward stalls and two Mobile Pickup stalls. The labels chosen by the customer (Wait Area and Mobile Pickup in this example) appear on the Dashboard when the **Individual Stall Title** is turned off.

Fig. 3.13b shows how this changes when **Individual Stall Title** is enabled (as in Fig. 3.12). Each stall is labeled P1 or P2 for Pull-Forward stalls, while M1 and M2 denote Mobile Pickup stalls.

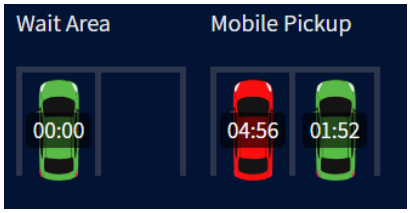


Fig. 3.13a

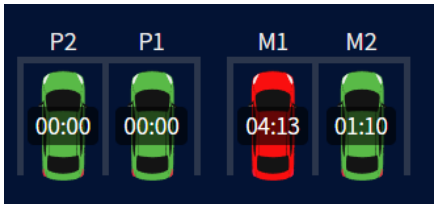


Fig. 3.13b

The individual stalls can be oriented vertically or horizontally. The vertical orientation is shown in Fig. 3.13 while the horizontal orientation is shown in Fig. 3.11. To change the orientation, go to Advanced Settings under “Lane Settings” on page 56.

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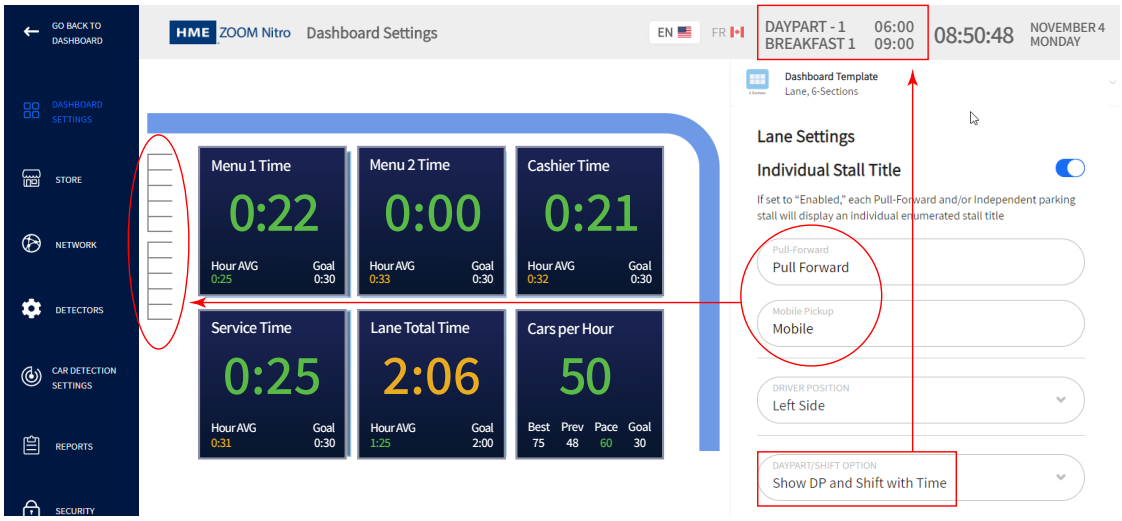


Fig. 3.14

Menu Item	Description
Pull-Forward Pull Forward	Pull-Forward: Click this field to edit and give your wait area a descriptive name (12-character limit). This field is used for Pull-Forward detectors.
Mobile Pickup Mobile Pickup	Mobile Pickup: Click this field to edit and give your wait area a descriptive name (12-character limit). This field is used for independent detectors (not part of lane events).
DRIVER POSITION Left Side	DRIVER POSITION: The default Driver Position is on the left side (standard in the United States and other countries). Click the down arrow and choose Right Side if you need to display it on the right. Changing the Driver Position changes the orientation of the lane and wait area graphics accordingly.
DAYPART/SHIFT OPTION Show DP with Time	DAYPART/SHIFT OPTION: Select different combinations of Daypart (DP), Shift, and Time to display at the top of your Dashboard screen (see Fig. 3.13).
LEADERBOARD DISPLAY USE SINGLE MONITOR FOR DISPLAYING DASHBOARD AND LEADERBOARD	LEADERBOARD DISPLAY: Stores using a single monitor may wish to alternate between displaying the Dashboard and Leaderboard. By default, the Leaderboard and Dashboard alternate. By clicking the toggle, you will disable the Leaderboard and only show the Dashboard. The Leaderboard option is only visible with a cloud connection. The following three fields are visible if the Leaderboard display is enabled.
DASHBOARD DISPLAY DURATION 00:10	Dashboard Display Duration: This sets the length of time the Dashboard is displayed before alternating back to the Leaderboard.
LEADERBOARD DISPLAY DURATION 00:10	Leaderboard Display Duration: This sets the length of time the Leaderboard is displayed before alternating back to the Dashboard.
ONLY SWITCH WHEN LANE IS EMPTY Yes	ONLY SWITCH WHEN LANE IS EMPTY: **Yes** in this field means that the Leaderboard is displayed only when the lane is empty. **No** means the Dashboard and Leaderboard alternate displays regardless of lane activity.

If you scroll to the bottom of **Lane Settings**, you will see **Advanced Settings**. Click to expand and see next section “Advanced Settings - Goals” on page 18.

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Advanced Settings - Goals

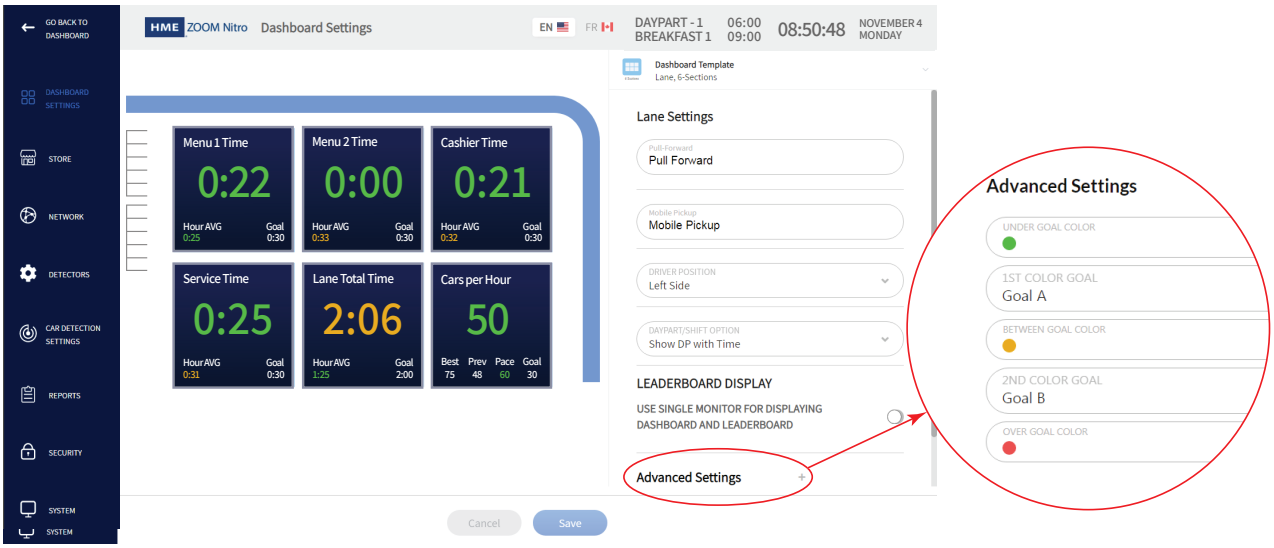


Fig. 3.15

The Lane graphic shows the movement of customer vehicles through your drive-thru lane. Vehicles are color-coded based on their performance against specific goals (Lane Total 1 under Lane Settings). The color of each animated car in the lane allows you to easily identify how your drive-thru lane is performing against these goals. These goals are user-defined under "**STORE**" (see "Speed Goals" on page 29). Up to four goals can be set for each event. These goals are labeled A, B, C, and D and assigned values. The values assigned to these goals create performance ranges for specific events, allowing results to be measured against defined targets.

> ***NOTE:*** *Goals under **Lane Settings** apply only to **Lane Total** of vehicles in the lane, whereas goals under Data Sections 1 through 6 are based on events at individual detection points/zones (unless one of these sections is also used to display the Lane Total value of the animated lane).*

Menu Item	Description
Advanced Settings UNDER GOAL COLOR	UNDER GOAL COLOR, **Green:** This color indicates you are exceeding your goal. For example, you are monitoring a detection point/zone labeled "Cashier" in the lane. If the goal selected is "A" (as in the next field of this example) and A has a value of 30 seconds assigned to it, an event completed in less than 30 seconds will have a green value.
1ST COLOR GOAL Goal A	1ST COLOR GOAL: Selecting goal "A" here sets one end of an event range.
BETWEEN GOAL COLOR	BETWEEN GOAL COLOR, **Yellow:** This color indicates you are meeting your goals. When your event falls between the two goals (A and B in this example), you are on target to meet your goal. For example, if A = 30 seconds and B = 60 seconds, any event within this range is displayed in yellow.
2ND COLOR GOAL Goal B	2ND COLOR GOAL: Selecting goal "B" here sets the other end of an event range.
OVER GOAL COLOR	OVER GOAL COLOR, **Red:** This color indicates you are not meeting your goal. Continuing our example, if A = 30 seconds, B = 60 seconds, any event taking longer than 60 seconds is displayed in red.

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Data Sections - Example 1

Data Sections are Dashboard panes that display user-defined event data. Clicking the upper-left Data Section (**Menu Time**) opens a column of associated fields on the right (**Section1**), allowing you to edit what is displayed in the Data Section (see Fig. 3.19).

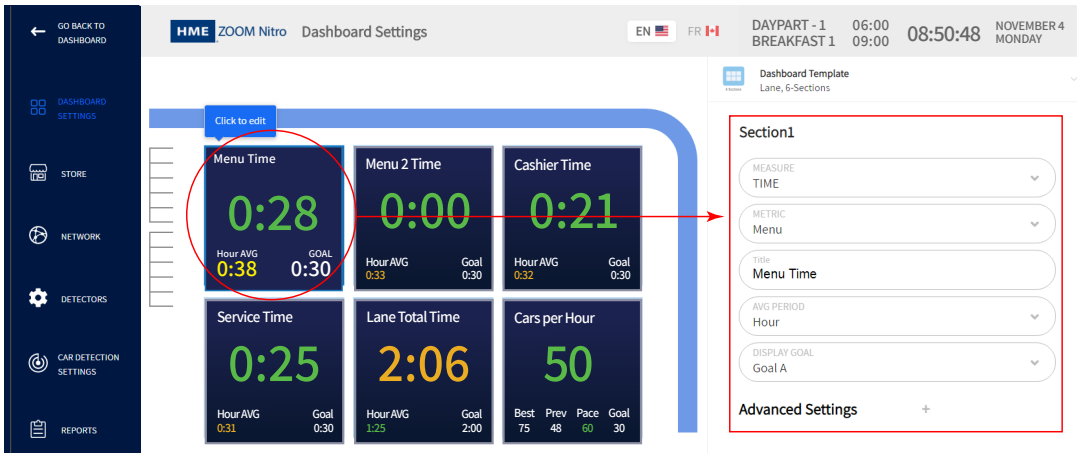


Fig. 3.16

The editable field associated with each value in the **Menu Time** Data Section is shown in Fig. 3.17. The Metric used in this example is Menu (the second field from the top under **Section1** in Fig. 3.16); these events are defined under “Chapter 6 - Car Detection Settings” on page 40. The center value (0:28 in Fig. 3.17) is green because this event occurred in less than 30 seconds, the lower time limit set by goal A (0:30 in Fig. 3.17). The hour average (0:38 in Fig. 3.17) is yellow because it is on target (the value is in the range between goal A and goal B). These goals were set under the **Advanced Settings** of **Section1**. Only one goal (A in this example) can be displayed in the Data Section.

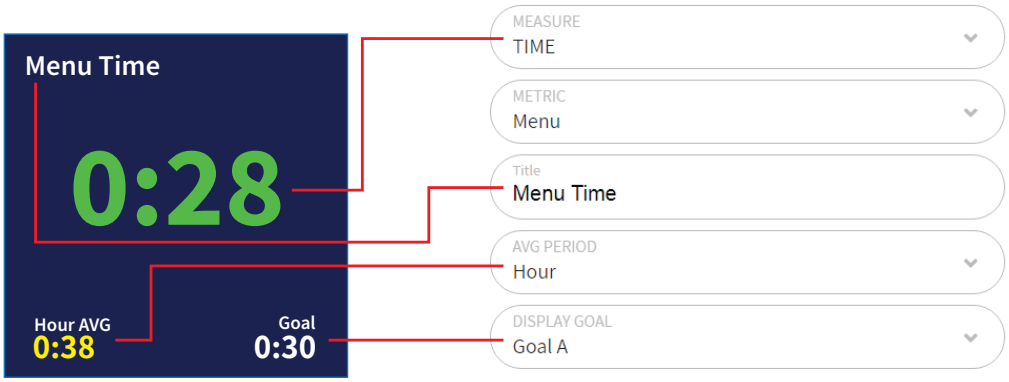
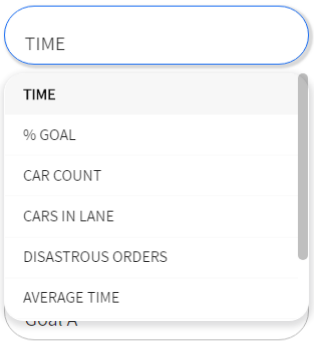


Fig. 3.17

Menu Item	Description
Section1 MEASURE TIME	This value is the large number displayed in the center of the Data Section (0:28 in Fig. 3.17). Click the down arrow on the right of the MEASURE field to expand the options menu. The drop-down list provides you with several choices. Other fields in this section change to match the choice selected.

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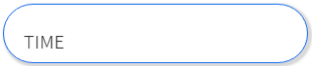
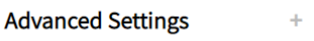
Menu Item	Description
 **Note:** The above drop-down list does not show all options available. It serves only as an example for this field but is not repeated for each field. However, every entry in the drop-down list is defined in this table.	MEASURE - drop-down list: **Time:** This is the elapsed time for an event happening, such as a vehicle being detected at a detection point or the Lane Total for a Lane. **% Goal:** Shows the percentage of vehicles over/under the goal at the selected event. **Car Count:** The total number of vehicles that have gone through the drive-thru lane and departed from the last detection point. **Cars in Lane:** This is the total number of vehicles in the lane that have arrived at or passed the first detection point but have not yet departed the last detection point of the lane. **Disastrous Orders:** This is the number of vehicles or orders that have exceeded the user-determined Disastrous Orders Goal. For example, if speed goal D has the longest time value of goals A, B, C, and D (where A = 30, B =60, C = 90, D = 120), then any vehicle or order exceeding 120 seconds is considered a Disastrous Order. **Drive Offs (if applicable):** These are vehicles in the Pre-Menu Stack/Pre-Menu zone that drive off before ordering. See details on page 14, Fig. 3.9 and 3.10. This option is only available when using Nitro Vision AI. **Average Time:** The sum of the amount of time for each vehicle departure within the user-selected periods, divided by the number of vehicle departures. **Drive Thru-Put:** Calculates the number of cars each hour the drive-thru can serve based on the slowest detection point average and the time remaining in the hour. **Period Bottleneck:** This shows the bottleneck event for the set time period (Half Hour, Hour, Daypart, Day). **Current Bottleneck:** This tells you what event/detection point is causing the current bottleneck. The result is based on the number of vehicles configured in the Rolling Avg. settings. **Leaderboard Ranking:** This shows your store's ranking based on the number of stores it is monitored against. For example, a "1 of 5" ranking means you are currently in first place out of five stores monitored. **Leaderboard List:** This shows a list of all the stores monitored, beginning with the top-ranked store. In the Leaderboard Ranking example (1 of 5), your store will be the first line on the displayed list (see Fig. 3.18). **Lead Car Order Summary:** This provides an overview of the order associated with the lead vehicle in the drive-thru lane. (Only visible when POS is enabled.) **Menu Stack Car Count:** This is the total number of vehicles in the Menu Stack area, i.e., the entire monitored area before the menu ordering point which includes the sum of: menu queue, pre-menu, and pre-menu stack (which includes extended stack if installed).

Rank	Restaurant	Avg Time (Curr Hr)
1	My Store	1:10
2	123456	1:29
3	Store619	1:39
4	Store858	1:57
5	54321	0:00

Fig. 3.18

Note: The Leaderboard feature is a service-based option. To modify the Leaderboard ranking and period, sign in to your HME CLOUD account and use the portal to make any changes.

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Menu Item	Description
	MEASURE - drop-down list continued: **Statistical Summary (if applicable):** This shows the selected summary data for the current Hour, Daypart, and Day periods. This option is only available for specific section panes within select Dashboard Templates; see Dashboard Templates under "Dashboard Layout" on page 10 for more details.
	METRIC - drop-down list: Choose your metric to display from the drop-down list. These metrics are defined under the Car Detection Settings section (see Chapter 7 - Car Detection Settings) and user-defined under "DISPLAY NAME" of LANE DETECTORS. **Lane Total** and **Lane Total 2** are also included.
	TITLE Add your title to a Data Section. This title appears in the upper left corner of the Data Section. This is useful if you wish to display the same metric twice, but with different data types or measured parameters displayed. Since the same metric label is used twice, you can assign each one a unique title to differentiate them. For example, if the metric you choose to use is labeled Menu 1, you might wish to display a time value in one Data Section and an average value in the other. To differentiate one from the other, you might call one "Menu 1 Time" and the other "Menu 1 Avg".
	AVG PERIOD - drop-down list: **15 min:** This is 15 minutes of the clock hour, beginning on the 15-minute mark. **15 min trailing:** This is a continuous rolling 15 minutes of the last 15 minutes trailing the current time and updates every minute. **Half hour:** This is half of the clock hour, beginning on the half-hour mark. **Half hour trailing:** This is a continuous rolling half-hour of the last 30 minutes trailing the current time and updates every minute. **Hour:** This is the clock hour and begins on the hour mark. **Hour trailing:** This is a continuous rolling hour of the last 60 minutes trailing the current time and updates every minute. **Daypart:** This is a day segment that is user-defined in Store Settings. **Day:** This is the current store day during hours of operation. **OFF:** Turns this field off so that it's not visible in the Data Section.
	DISPLAY GOAL - drop-down list: **Goal A, B, C, D:** Select the goal* you wish to display in the Data Section. **OFF:** Turns this field off so that it's not visible in the Data Section.
	Clicking the + sign expands this setting and provides you with the same options covered under the Advanced Settings** of Lane Settings.

* Goals are user-defined under "**STORE**" (see "Speed Goals" on page 29).

** See Advanced Settings under "**Lane Settings**" on page 16.

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Data Sections - Example 2

This Data Section (middle of the bottom row) displays a **Car Count**. Clicking it opens a column of associated fields on the right (**Section5**), allowing you to edit what is displayed (see Fig. 3.19).

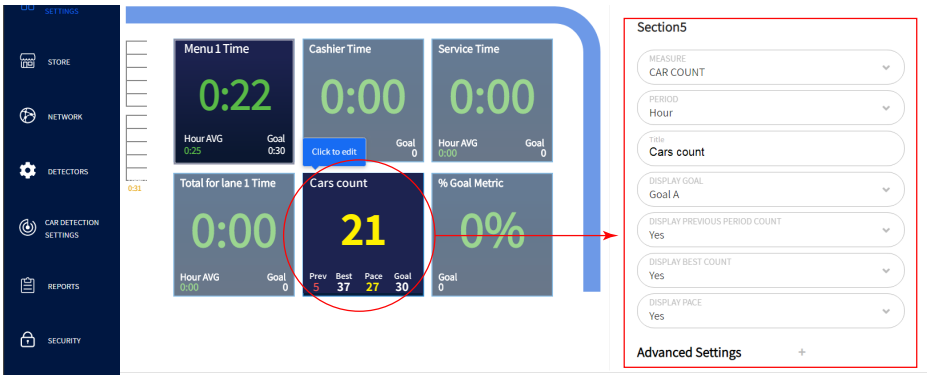


Fig. 3.19

The row of numbers at the bottom of the Data Section in Fig. 3.20 is as follows:

Prev: This is the result achieved for the previous hour (or the period selected in the PERIOD field). In this example, it is 5, and the value is red because it didn't reach the lower limit set by goal B.

Best: This is the best result ever achieved for an hour (or whatever period is chosen in the PERIOD field). In this example, it is 37.

Pace: Uses an algorithm to predict the number of transactions that may be completed during the selected period based on the current vehicle count, which may differ from the main value shown. In this example, based on the time left in this hour, Pace predicts that you may reach 27 transactions.

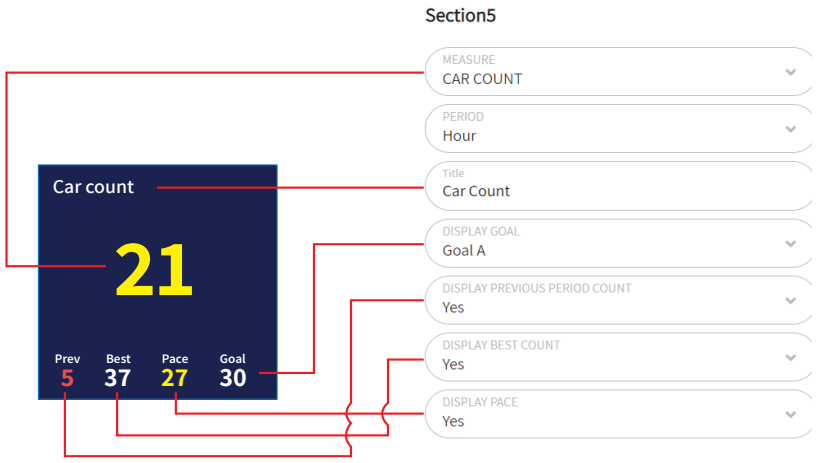


Fig. 3.20

Goal: This goal was established in the Car Count Goals section of **STORE** settings. Only goal A is displayed.

In Fig.3.20, the current vehicle count for this hour is 21. Since this value falls within the range defined by goals A (30 vehicles) and B (20 vehicles), it is on target and therefore displayed in yellow. Since only one goal value can be displayed, goal B is not visible. Goal values are set in "Car Count Goals" on page 31 and then selected in the Advanced Settings of this section (Section5 in this example).

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Data Sections - Example 3

This Data Section shows a Curbside-Only Dashboard for stores that use reserved mobile spaces or parking stalls for mobile orders or curbside pickup instead of a drive-thru lane. Fig. 3.21 shows a store with two spaces/stalls reserved for mobile orders.

> ***NOTE:*** *Vision AI is required for a Curbside-Only configuration.*

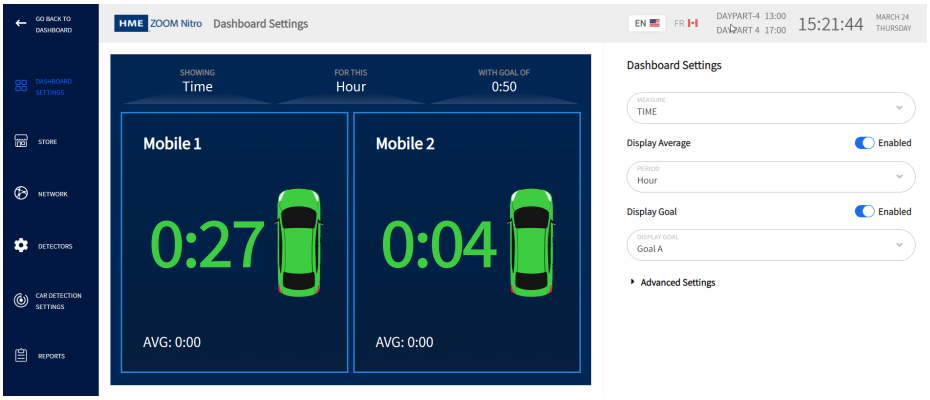
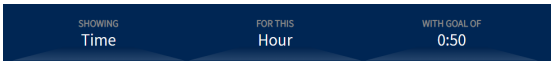


Fig. 3.21

> ***NOTE:*** *Each space/stall does not need to be configured individually. Once the Dashboard Settings are configured, those same settings are applied to all the active spaces/ stalls (two in this example). The selected settings are displayed at the top, above the Data Sections as shown in the graphic below, while the actual values for each stall are displayed within their corresponding Data Section (e.g., 0.27 for Mobile 1, 0.04 for Mobile 2).*



Menu Item	Dashboard Settings Description
MEASURE TIME Display Average Enabled	This value is the large number displayed in the center of the Data Section MEASURE - drop-down list: TIME, AVERAGE TIME. **Time:** This is the default option and represents the elapsed time since a vehicle was first detected at the stall. When TIME is the selected option, you can enable "**Display Average**" so that it also displays the AVERAGE TIME option in the Data Section as well, see Fig. 3.21. **Average Time:** This is the sum of the measured times for each vehicle within the user-selected period, divided by the number of vehicle departures.
PERIOD Hour	This option sets the period you wish to measure. PERIOD - drop-down list: Half-hour, Hour, Daypart, or Day. Daypart is a day segment defined by the user in STORE settings.
Display Goal Enabled DISPLAY GOAL Goal A	When Display Goal is enabled, you can select the goal to display. In this example, it is "Goal A," which has a value of 0:50 seconds (the value displayed under "WITH GOAL OF" above the Data Sections in Fig. 3.21).
Advanced Settings	These settings allow you to choose your Goal range. See "Advanced Settings - Goals" on page 18 for more information.

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Chapter 4 - Store

Installer Manager

Only Installers and Managers can access and edit the features on this screen.

Details

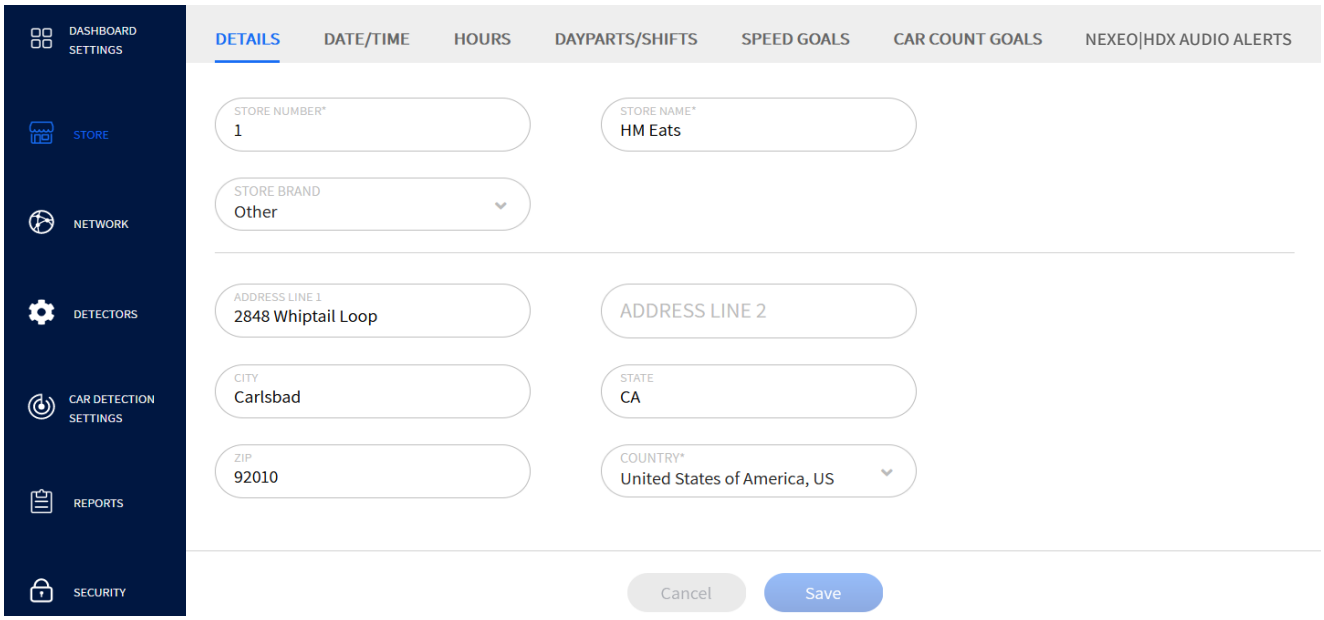


Fig. 4.1

What is this screen for? This screen allows you to enter store details such as Store Name, Store Number, Store Brand, and Store Address. The Store Number field accepts alphanumeric entries.

Why is it needed? This information identifies your store, which may be one of several in a given area. Because this information is also stored in the cloud, HME Technical Support can quickly locate your store and provide assistance when needed.

Example: You are one of five stores owned by the same franchise and located in the same city. You wish to modify or upgrade your system, so you contact us at HME technical support. We can remotely access this information and promptly respond to your specific needs because we can identify your store, system configuration, and location.

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Date/Time

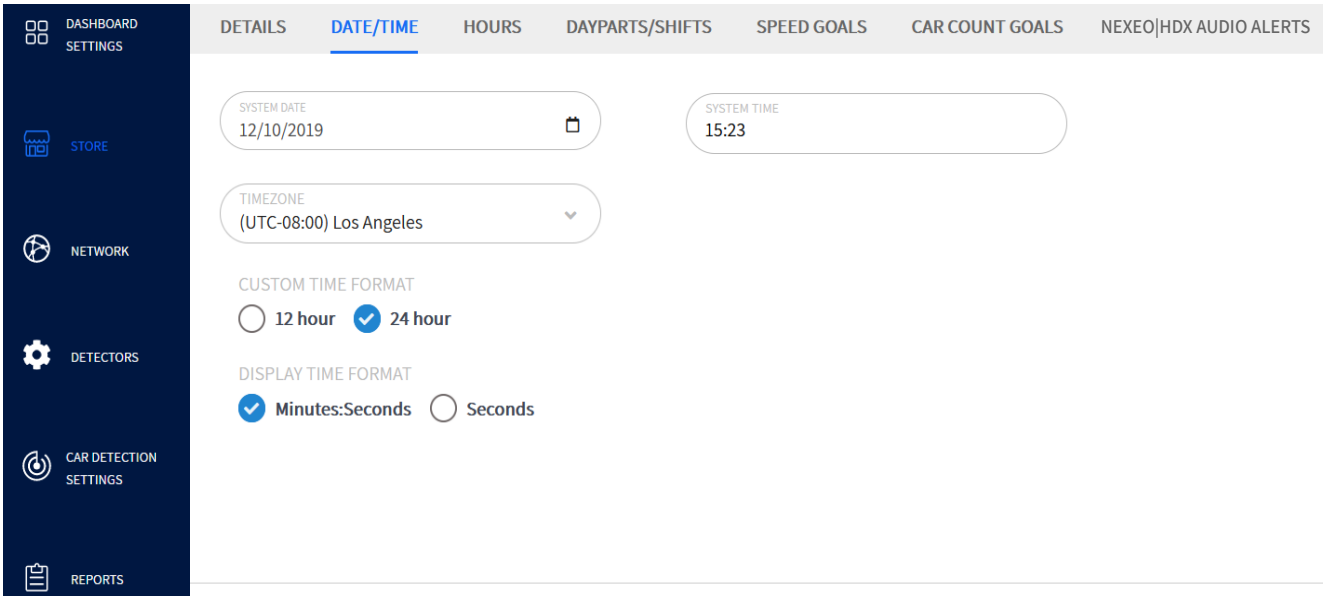


Fig. 4.2

What is this screen for? This screen is used to set the local date and time for your store's location. These settings are generally completed during installation.

Why is it needed? Most features in this system operate on time-based events. Daily operations and monitored parameters, such as Dayparts and Shifts, are based on the system time configured here. This screen gives you flexibility as to how this time is configured and displayed.

Example: Fig. 4.2 shows the SYSTEM DATE and TIME. The TIMEZONE in this example is (UTC-08:00) Los Angeles. Daily operations and monitored parameters, such as Dayparts and Shifts, are based on the system time configured here (UTC-08:00 is Coordinated Universal Time with an offset of minus eight hours).

Under CUSTOM TIME FORMAT, the 24 hour option is selected, which displays times using a 24-hour clock. Select the 12 hour option to display times using AM and PM notation.

Under DISPLAY TIME FORMAT, the Minutes:Seconds option is selected, which will display timed events in minutes and seconds. Select Seconds if you want to display timed events in seconds only.

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Hours

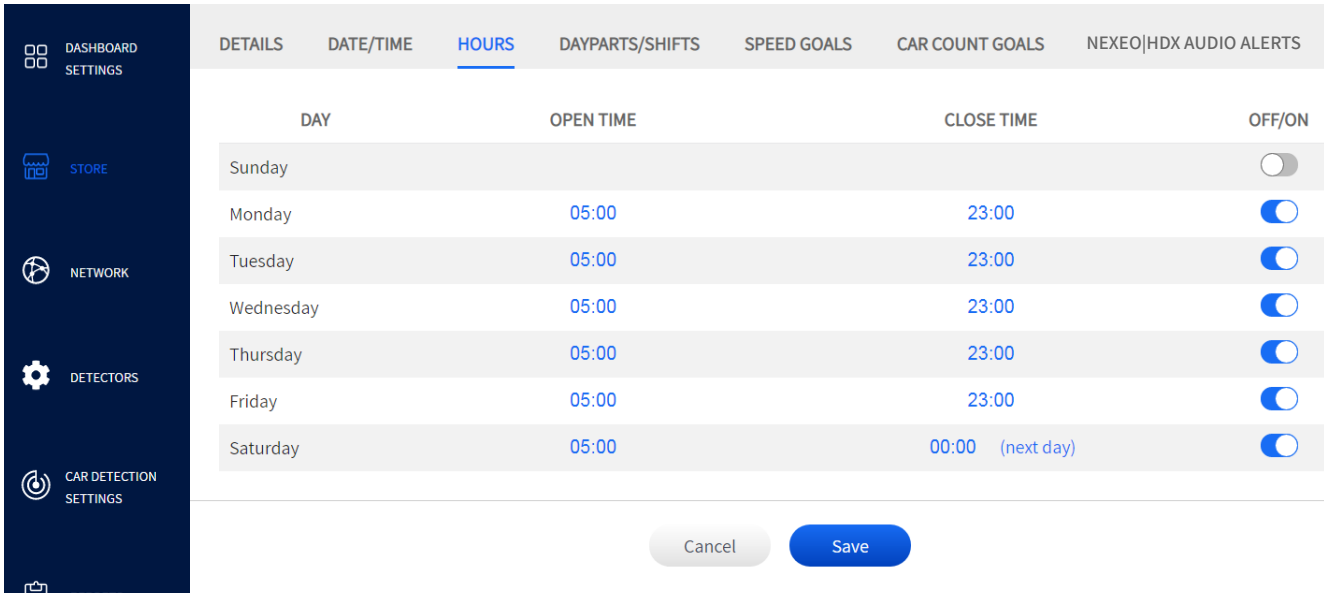


Fig. 4.3

What is this screen for? This screen allows you to configure your store's business hours and days.

Why is it needed? Your system only needs to be operational during business hours. Each day can be configured separately if your business hours differ from one day to another. You can also turn days on or off if you are closed on certain days.

Example: The store in Fig. 4.3 is open from 5:00 AM to 11:00 PM Monday to Friday, but 5:00 AM to Midnight on Saturday, and is closed on Sunday. To configure this schedule (24-hour clock used):

1. Click the OFF/ON ( ) switch to turn Sunday off because the store is closed on that day. The OPEN TIME and CLOSE TIME fields disappear.
2. Move on to Monday; click the time in the OPEN TIME column. This opens the time field. Enter 05:00, then click on the "Copy to All" button to populate all fields in the OPEN TIME column with this time.
3. Repeat step 2 for the CLOSE TIME column, setting close time to 23:00.
4. Go to Saturday and adjust the close time to 00:00 (midnight). Click the "Done" button to apply it only to that day.



TIP: If your store's Open Time or Close Time is the same every day of the week, change the first Open Time or Close Time on the list, then click the Copy to All *button beneath the time field to populate the other days with this same time.*

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Dayparts/Shifts

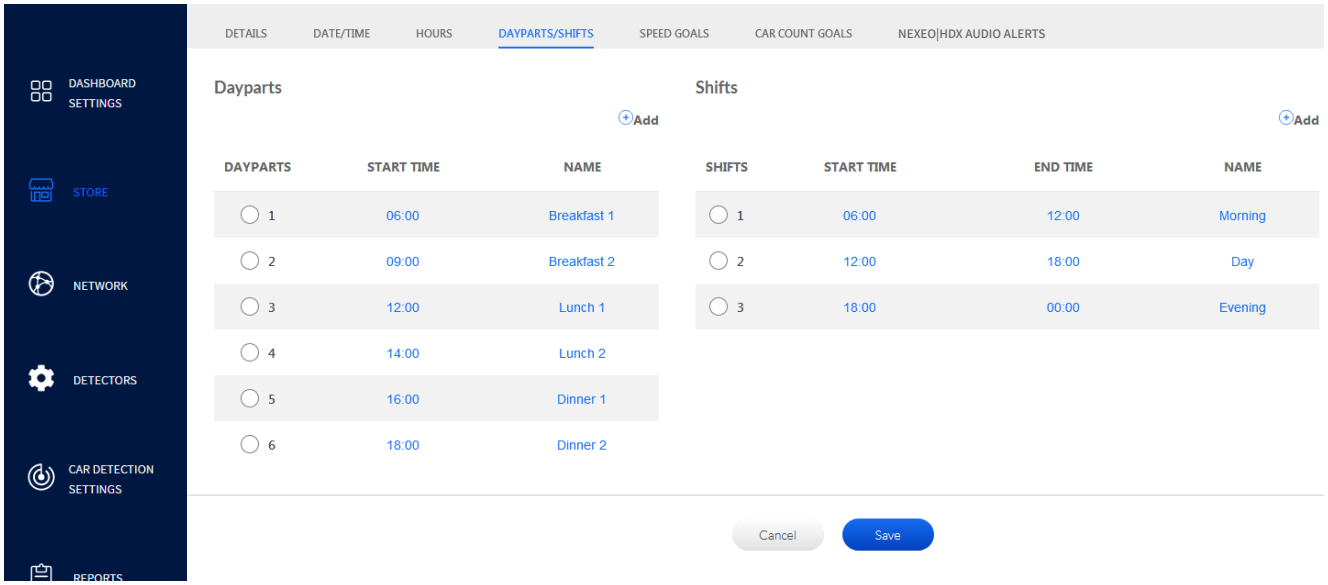


Fig. 4.4

What is this screen for? It allows you to partition your business day into manageable segments. This screen is divided into two sections, Dayparts and Shifts**.**

Dayparts are parts of the day you can break into smaller segments to monitor. A daypart end time is not required because Dayparts are contiguous; it automatically ends at the start time of the next daypart segment. The last daypart ends at the store's closing hour (for a 24-hour store, the store's closing time is the same as its opening time).

Shifts are blocks of time typically assigned to employee work periods, such as the morning, afternoon, and night shifts. Unlike dayparts, shifts may overlap with other shifts or begin later than the end of a previous shift; this is why they are assigned a start time and an end time.

> ***NOTE:*** *While a shift period can overlap with another shift that began before it, it cannot begin earlier than the shift before it. A shift can begin after the store opens but cannot begin before opening time. Likewise, a shift can end before the store closes but cannot extend beyond closing time.*

Why is it needed? Dayparts and Shifts enable you to monitor your store's activity at different times of day, which can range from slow to busy and vice versa. Monitoring these periods helps you maximize efficiency, allocate resources effectively, and identify daily trends. Understanding these trends allows you to anticipate changes in business activity and better meet customer demand.

Example: In Fig. 4.4 under **DAYPARTS,** there are six dayparts of various lengths (24-hour clock used). Daypart-2 is labeled "Breakfast 2." It begins at 09:00 and ends at the beginning of Daypart-3 (i.e., Lunch 1 at noon). **Dayparts can be equal periods or vary in duration**. If your day is broken into many small dayparts, you may have to scroll down to see all the dayparts displayed.

Fig. 4.4 also shows three 6-hour shift periods under the **SHIFTS** section. They begin with the Morning shift at 06:00 and end with the Evening shift, which runs from 18:00 to 00:00 (midnight). The system automatically assigns sequential numbers to the **DAYPARTS** and **SHIFTS** columns as more dayparts or

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shifts are added. The **START TIME, END TIME** and **NAME** columns are user-defined.

To add a daypart or a shift period, click the ⊕ **Add** icon. A new row is added to the bottom of the table with generic labels or values. Click a field to edit.

To remove a daypart or a shift period, check the circle next to the sequential number in the **DAYPARTS** or **SHIFTS** column of the row you wish to delete. This causes the 🗑 **Remove** icon to appear next to the ⊕ **Add** icon. Click on it to delete the selected daypart.

Conditions: Daypart times cannot overlap, while shift times can overlap. Dayparts and Shifts cannot begin before opening time or end after closing time (see previous note). Dayparts can be divided into a maximum of 23 segments. Shifts can be divided into a maximum of eight segments.

> ***NOTE:*** *If you have a Leaderboard service and you plan on using daypart time periods with your Leaderboard, Dayparts must first be configured here so that the Leaderboard has valid data to display.*

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Speed Goals

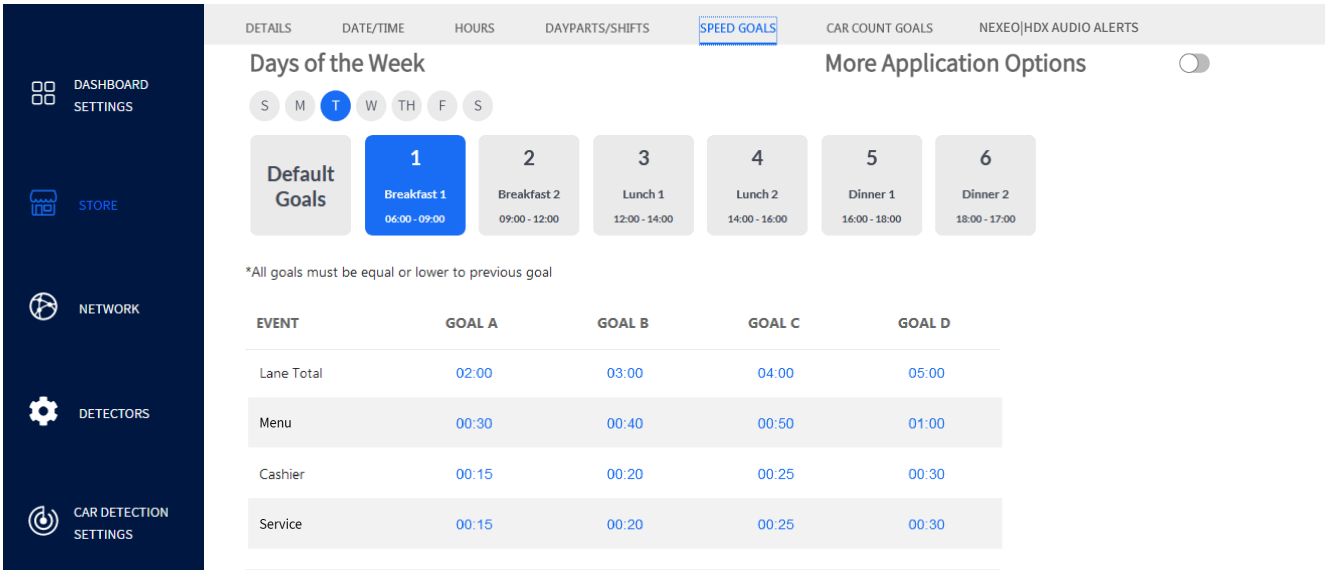


Fig. 4.5

What is this screen for? Speed Goals allows you to set up time-based goals using adjustable thresholds.

Why is it needed? Setting goals is a great way to monitor and motivate performance for a specific daypart at any event location (detection point) or Lane Total. Goals are identified by letters, and user-defined values are assigned to each goal. Color-coded values are then displayed on your Dashboard to indicate performance levels against these goals.

The color codes are: Green indicates that performance is exceeding goals, yellow indicates that performance is meeting goal expectations, and red indicates that performance is not meeting goals.

Example: Fig. 4.5 shows days of the week followed by dayparts for that day. The table shows events with four goal values assigned to goals A, B, C, and D. There are five events listed in the **EVENT** column for this table: Lane Total, Menu, Cashier, and Service (two lane-total events plus three detection-point events).

In this example, the current day of the week is Tuesday. The current daypart is 1 (Breakfast 1 06:00 - 09:00). The first event is Lane Total 1, while the first detection point event is “Menu.” Each event has four goals set (seconds/minutes), which can then be applied to the metric they are associated with.

The resulting values are color-coded to easily identify an event’s performance against these goals (see “Lane Settings” on page 16 and “Data Sections - Example 1” on page 19 for details).

Conditions: Minimum time goal = one second. Maximum time goal = 999 seconds (16 minutes and 39 seconds). Up to four goals can be set for any daypart event. Goal A must be less than or equal to Goal B, B less than or equal to C, C less than or equal to D. For example: if you set a value in Goal A and it is higher than B, it will force B to this same value (it will also force C and/or D to the same value if it is higher than these goals too). These goals must then be readjusted to create a valid range.



TIP: To apply the same event change across all dayparts of a day, all days of the week, or both, enable the “More Application Options” feature and select an option from the drop-down list. See the following explanation of options.

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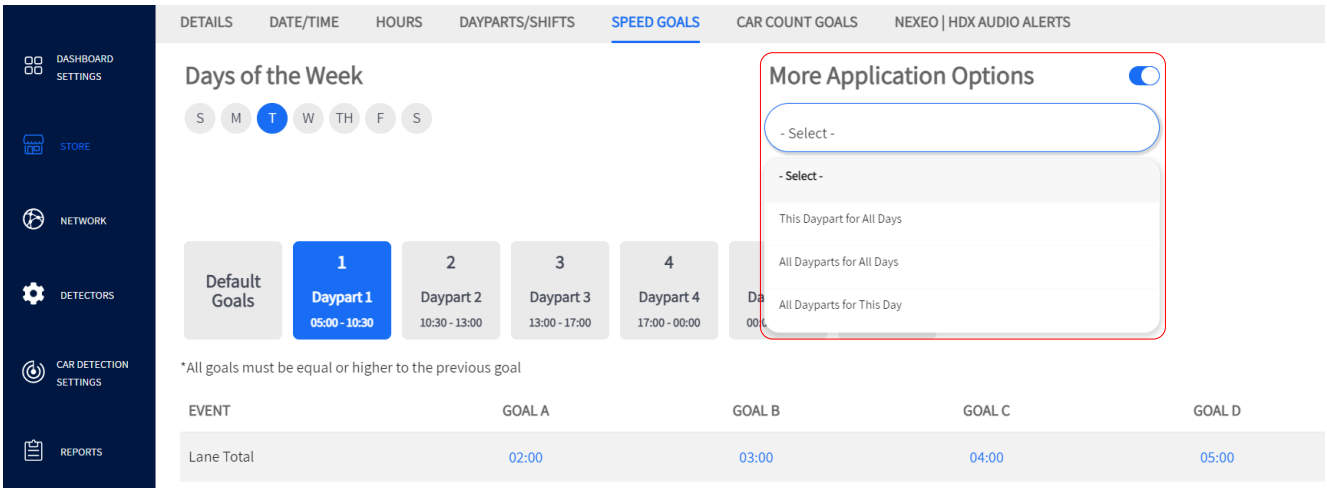


Fig. 4.6

Fig. 4.6 shows the drop-down list of options available when More Application Options is enabled. These options allow you to apply speed goal changes across multiple dayparts, days, or both, saving you from manually repeating the change for each targeted daypart or day. These options are as follows:

This Daypart for All Days: This option lets you modify the speed goals for the selected daypart and apply those changes to the same daypart across all active days of the week.

For example, if your store operates every day of the week, and you wish to change your Lane Total Goal D to 05:30 but only for Daypart 1 (Fig. 4.6). This change will only be applied to Daypart 1 for all seven days (i.e., Dayparts 2–6 in this example will not be affected by the change).

All Dayparts for All Days: This option lets you change speed goals for a daypart and apply them to all dayparts across all active days in your business week.

For example, if your store operates every day of the week, and each day is split into six dayparts. Your change will then be applied to all 42 dayparts in your business week (7 days × 6 dayparts).

All Dayparts for This Day: This option lets you change speed goals for a daypart and apply them to all dayparts on that active day.

For example, suppose your store's day is divided into six dayparts (as it is in Fig. 4.5 and 4.6). Then, you change your Lane Total Goal D to 05:30 for the current Daypart 1 (in Fig. 4.6). All Dayparts for that day only (i.e., Tuesday in this example) will have their Lane Total Goal D changed to 05:30; the other days will not be affected.

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Car Count Goals

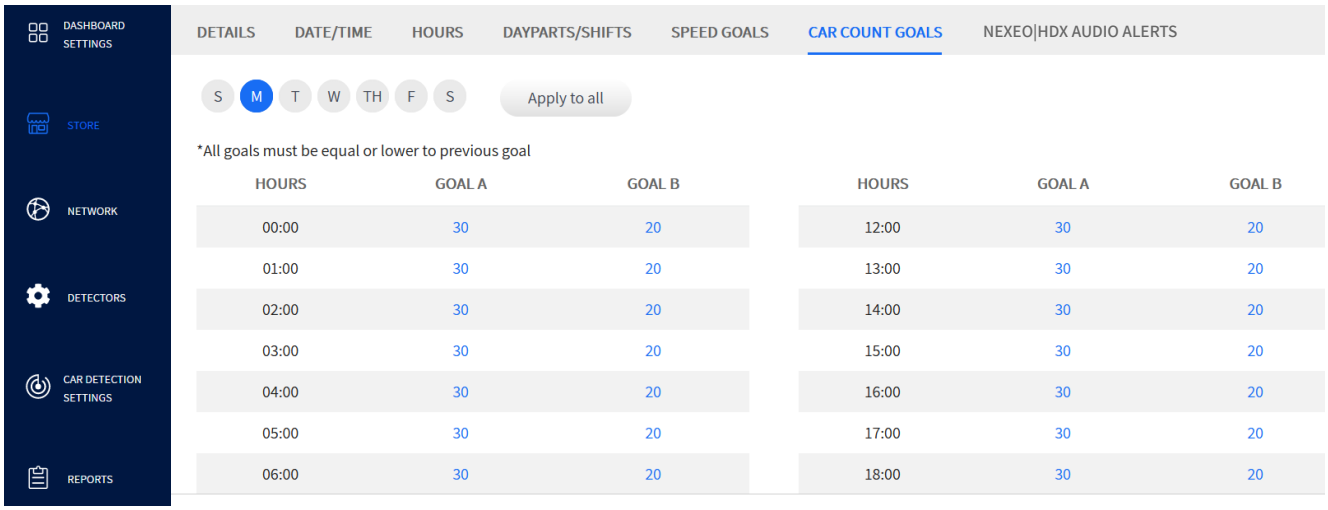


Fig. 4.7

What is this screen for? It allows you to configure car-count goals using adjustable thresholds.

Why is it needed? Setting goals is a great way to motivate and monitor performance. Goals are identified by letters, and user-defined values are assigned to each goal. When configured on the Dashboard, the resulting values are displayed using color-coding to indicate performance. Color-coded values make it easy to identify performance against the set goals.

The color codes: Green indicates exceeding a goal, yellow indicates meeting a goal or being within goal limits, and red indicates not meeting a goal.

Example: Fig. 4.7 shows the days of the week and hours of the day (a 24-hour clock is used, with only a partial table of hours visible). The table on the left represents AM hours and is divided into 12 one-hour segments. The table on the right represents PM hours and is also divided into 12 one-hour segments. In both tables, Goal B represents the minimum target (lower value), while Goal A represents the preferred target (higher value). Car count values on your Dashboard are red until goal B is reached. Then, once goal B is reached and exceeded, they become yellow, indicating you are meeting your goal. The values between goals A and B remain yellow, and then if goal A is met or exceeded, the value turns green, indicating you are now exceeding your preferred goal.

In this example, the current day of the week is Monday. The hour beginning at 00:00 (the first entry in the table) has a desired goal of 30 vehicles for A and 20 for B. So, if the count is less than 20 vehicles for this hour, the value displayed is red, 20 to 29 vehicles yield a yellow value, and 30 vehicles or more yield a green value. See the example of “Car Count” (Fig. 3.23) in “Data Sections - Example 2” on page 22.

Conditions: Minimum vehicle count goal = one. Up to two goals can be set for each hour. **Unlike speed goals, they do not apply to individual detector points**. Goal A must be greater than or equal to goal B. If a lower value is applied to goal A than exists in Goal B, then the value in goal B is forced to the same value as goal A. Goal B must then be readjusted to create a valid range.



TIP: To apply the same changes to all active days of the week, click the Apply to all *button.*

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NEXEO | HDX Audio Alerts

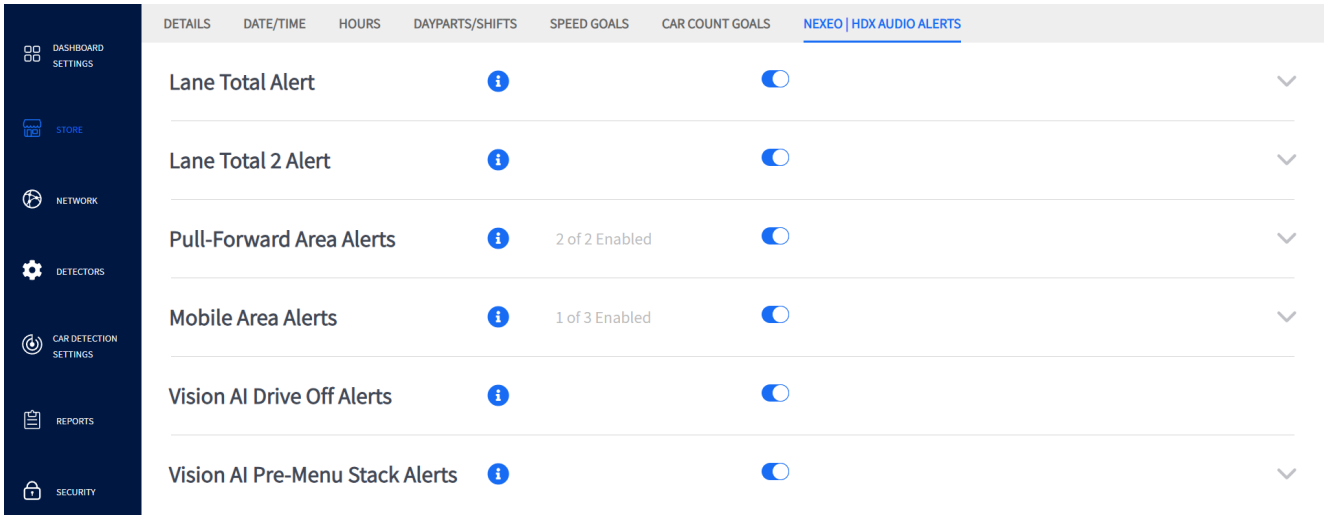


Fig. 4.8

> ***NOTE:*** *Since these audio alerts are shared across two systems, they must also be enabled on the NEXEO® base station before they will function.*

What is this screen for? If your store also uses a NEXEO | HDX™ system for crew communication, this option allows you to set audible alerts for crew members using NEXEO | HDX headsets.

Why is it needed? These alerts inform crew members when a parameter or goal limit is reached, allowing them to respond quickly when corrective action is needed.

Lane Total Alert: Enable this and select a goal from the drop-down list to receive an audible alert when a vehicle exceeds the selected goal.

Pull-Forward Area Alerts: Enable this and select a location from the drop-down list to receive an audible alert when a pull-forward is detected. Select from the Play Alert drop-down list when to play the alert. Also select the goal that triggers the alert.

Mobile Area Alerts: Enable this option and select a location from the drop-down list to receive an audible alert when a vehicle is detected at an independent detector. Select from the Play Alert drop-down list when to play the alert.

Vision AI Drive-Off Alerts: Enable this option to trigger an audible alert when a vehicle drives off from the Pre-Menu Stack.

Vision AI Pre-Menu Stack Alerts: Enable this to trigger an audible alert when the Pre-Menu Stack reaches a specified number of vehicles (the range is 1 to 10). Select when the alert will play from the Play Alert drop-down list (options range from immediately to After 2 minutes).

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Chapter 5 - Network

Installer

Only Installers can access and edit the features on this screen.

Local Network

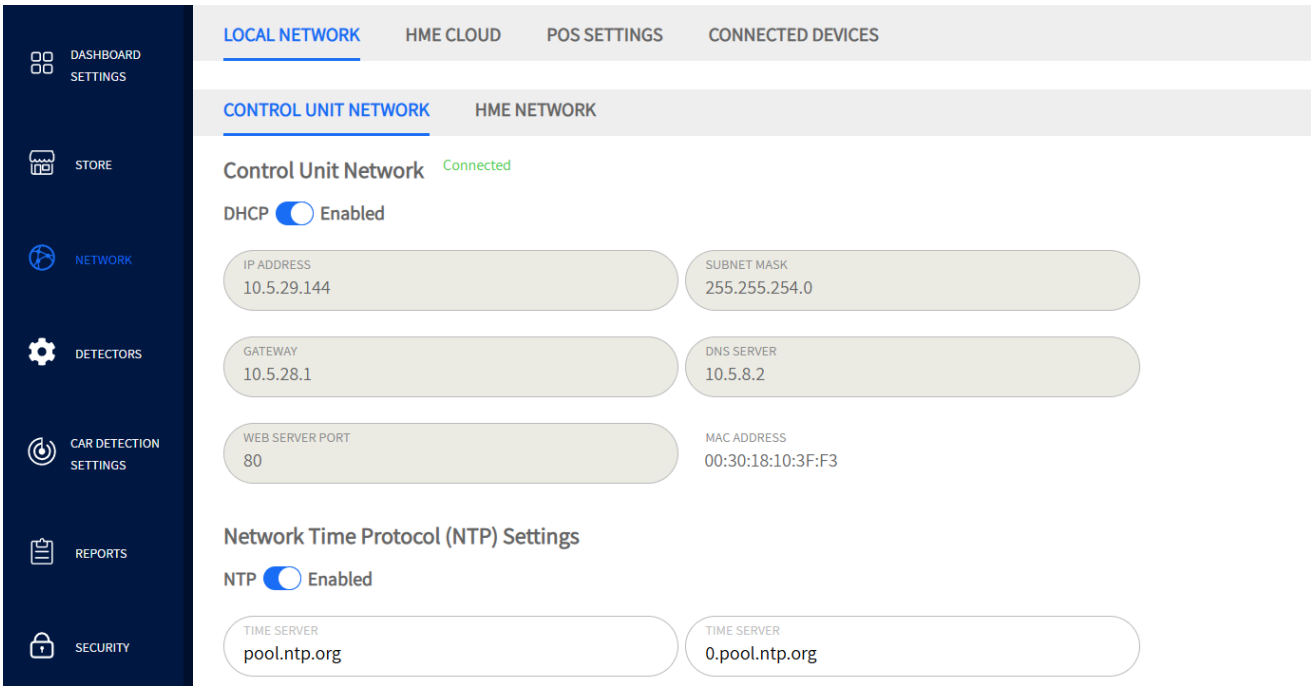


Fig. 5.1

What is this screen for? This is where you configure your system when connecting to your local network. Your installer generally configures this screen during the initial installation and setup.

Why is it needed? If you wish to access and control your system from a back-office PC, you will first need to connect your system to the same local network used by your PC. This will allow your back-office PC to interface and communicate with your ZOOM Nitro system. You have a choice of automatic or manual IP configuration.

Control Unit Network:

DHCP Enabled : **Dynamic Host Configuration Protocol** allows a network administrator to supervise and distribute IP addresses from a central point. When the DHCP switch is enabled, the system automatically populates the required fields.

IP ADDRESS: **Internet Protocol Address**. A unique computer address that some electronic devices (such as computers or routers) use to identify and communicate with each other on a computer network.

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SUBNET MASK: Splits the network into a series of subgroups or subnets to speed up the delivery of data by the routers.

GATEWAY: A device (usually a router) that connects one or more computers on a network to other networks.

DNS SERVER: A Domain Name System (DNS) server is a directory of domain names and their corresponding Internet Protocol (IP) addresses.

WEB SERVER PORT: The network port used by ZOOM Nitro to communicate with the TSP on the network.

MAC ADDRESS: The unique identifier for the ZOOM Nitro CU when connected to a network.

Network Time Protocol (NTP) Settings

NTP is a protocol used to synchronize clocks across multiple computer systems. It supports synchronization over local area networks and the Internet.

NTP Enabled **:** This switch enables/disables NTP settings. When enabled, four Time Server fields are visible with at least one field populated.

TIME SERVER: This is the server computer used to synchronize time.

> ***NOTE:*** *Timers must remain synchronized so that reports from multiple locations can be easily correlated.*
>
> *When NTP is enabled, the Date/Time settings cannot be edited manually.*

Conditions: The **DHCP** and **NTP** settings are enabled by default. If DHCP is disabled, the associated network fields must be populated manually. The NTP Settings support up to four servers.

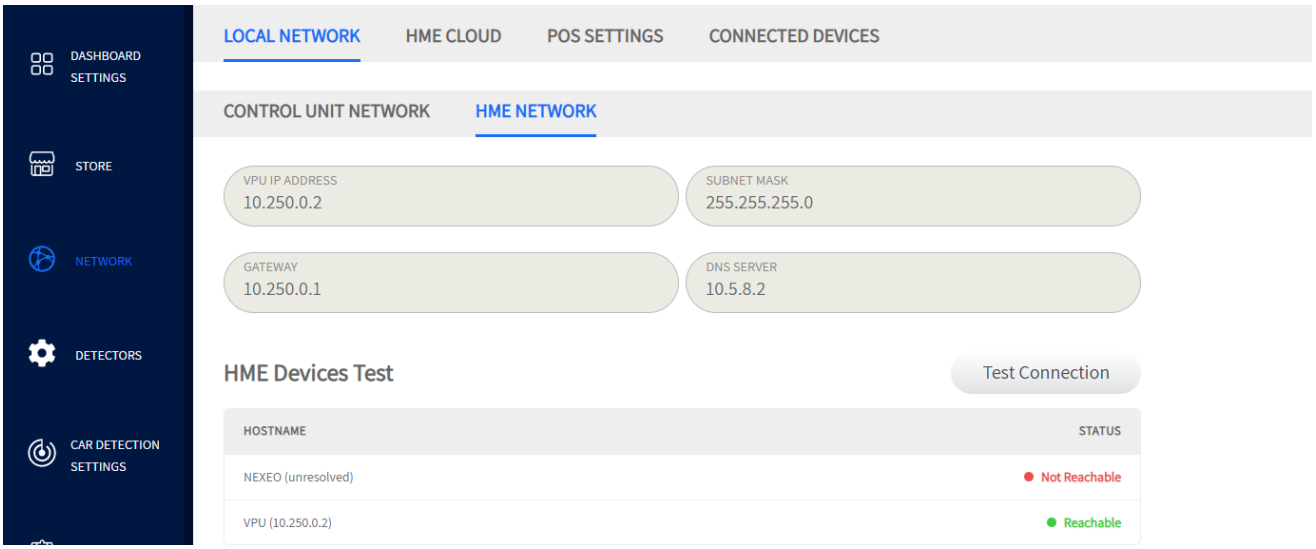


Fig. 5.2

Fig. 5.2 only shows the VPU IP ADDRESS because it is the only device connected. If a NEXEO | HDX™ system is connected, an additional field displaying the NEXEO® IP ADDRESS appears.

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HME CLOUD

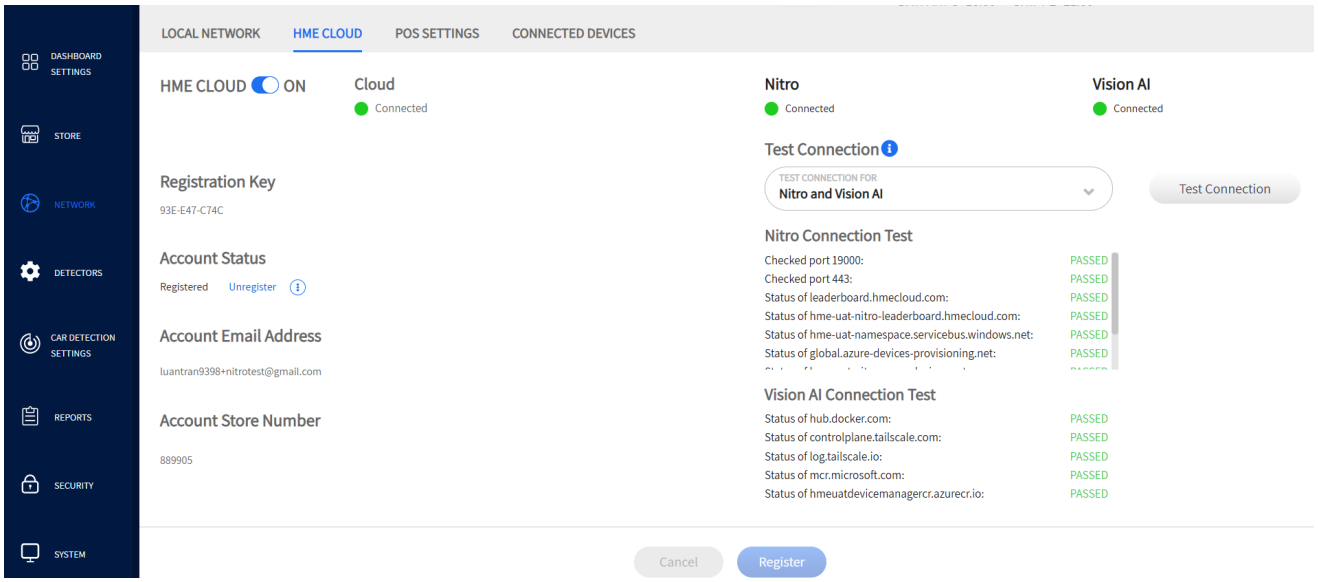


Fig. 5.3

What is this screen for? This screen is used to connect your system to HME CLOUD. Your installer generally configures this screen during the initial installation and setup.

Why is it needed? A cloud connection allows you to send diagnostic reports, troubleshoot connection issues, and receive additional support, such as software updates. Also, your records and data history are backed up and stored in the HME CLOUD.

Example: Fig 5.3 shows the HME CLOUD feature enabled. The Nitro Connection Status indicates that the system is connected to the cloud. The Registration Key is a unique identifier for your store. All HME products installed at the store use this registration key. The Account Email Address is populated when you are registered. To change this email address, you must first unregister by clicking on the word Unregister. An email address only needs to be entered if an account has been created. Otherwise, leave the field blank and click **Save**.

The **Connection Status** fields at the top of the screen indicate whether connected systems are online (green) or offline (red). The store shown in Fig. 5.3 is connected to the cloud and has Nitro Vision AI installed, so all three **Connection Status** indicators are green. The **Test Connection** drop-down list allows you to select which systems you would like to run a connection test on. This test can identify potential connectivity issues. Even if Nitro Vision AI is not installed, its connection test can still be run to verify network readiness for a future installation. Fig. 5.3 shows an example of the connections checked during this connection test. In this example, both Nitro and Vision AI were tested, and all tests displayed beneath the **Test Connection** field passed, indicating that both system connections are functioning correctly.

Conditions: While a registered account is not required to operate the system, HME recommends registering an account. A registered account provides access to a range of additional benefits and support.

You can record your account information/email address here for reference: _____

_____

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POS Settings

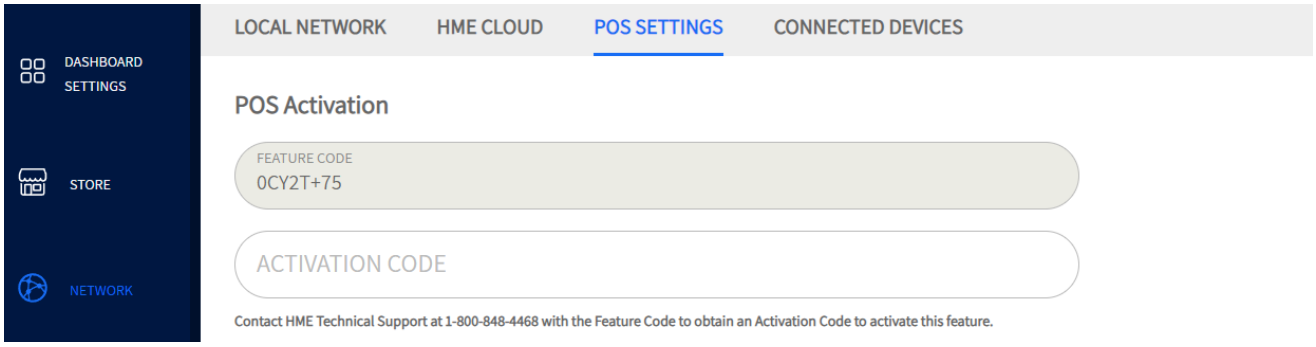


Fig. 5.4

What is this screen for? This screen allows you to integrate the ZOOM Nitro timer with a POS system.

Why is it needed? Orders taken at the order point can be associated with a vehicle and tracked throughout the lane. The crew can select to display this information on the Dashboard.

Example: An ACTIVATION CODE is required to activate this feature. Call the Technical Support number displayed on this screen and provide the FEATURE CODE to receive an activation code. Enter this activation code and click Activate. A screen like the one in Fig. 5.5 will appear.

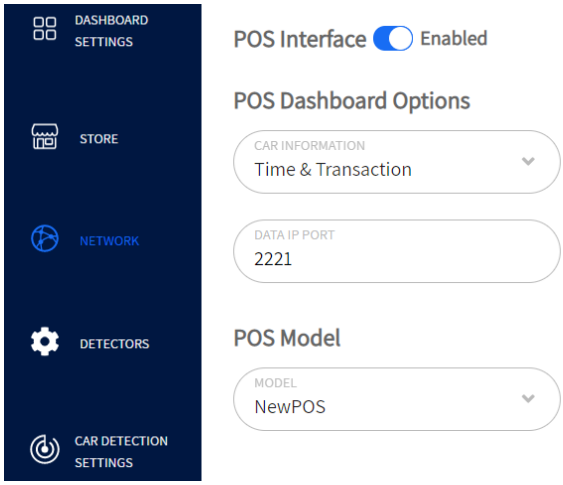


Fig. 5.5

Once the POS activation is completed, the POS Settings must be configured.

The POS Interface enables or disables the use of POS mode:

- **Disabled:** No POS options are available.
- **Enabled:** POS options can be configured, and POS data can be displayed on the Dashboard and in Raw Car Data Reports.

The Data IP Port is a configurable port that ZOOM Nitro listens on for POS data. This port is defined

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by the POS system. ZOOM Nitro receives only the POS data sent to the specified port.

Conditions: POS integration works with Single Lane and Y Lane configurations.

POS integration is an optional feature that must be purchased and activated. You must use the Feature Code under POS Activation, call HME Technical Support, and enter the Activation Code provided to activate this feature.

Only POS systems available in the POS Model drop-down list can be integrated with ZOOM Nitro. This list includes NewPOS, Oracle Simphony, Xpient, and NCR Radiant.

Dashboard options allow you to choose which information is displayed. The Car Information drop-down list includes Time Only, Transaction # Only, Time & Transaction, or Time & Order.

Confusion can arise in the case of pullouts:

- If a vehicle pulls out before an order is tendered, the order number is assigned to the next vehicle detected in the queue. The remaining vehicles are then resequenced with their respective order numbers.
- If a pullout is not detected and the order taker cancels the order, the timer must receive a Canceled Order event from the POS system. The system then removes the order number and associated vehicle before resequencing the remaining vehicles.

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Geofence Settings (not available for all stores)

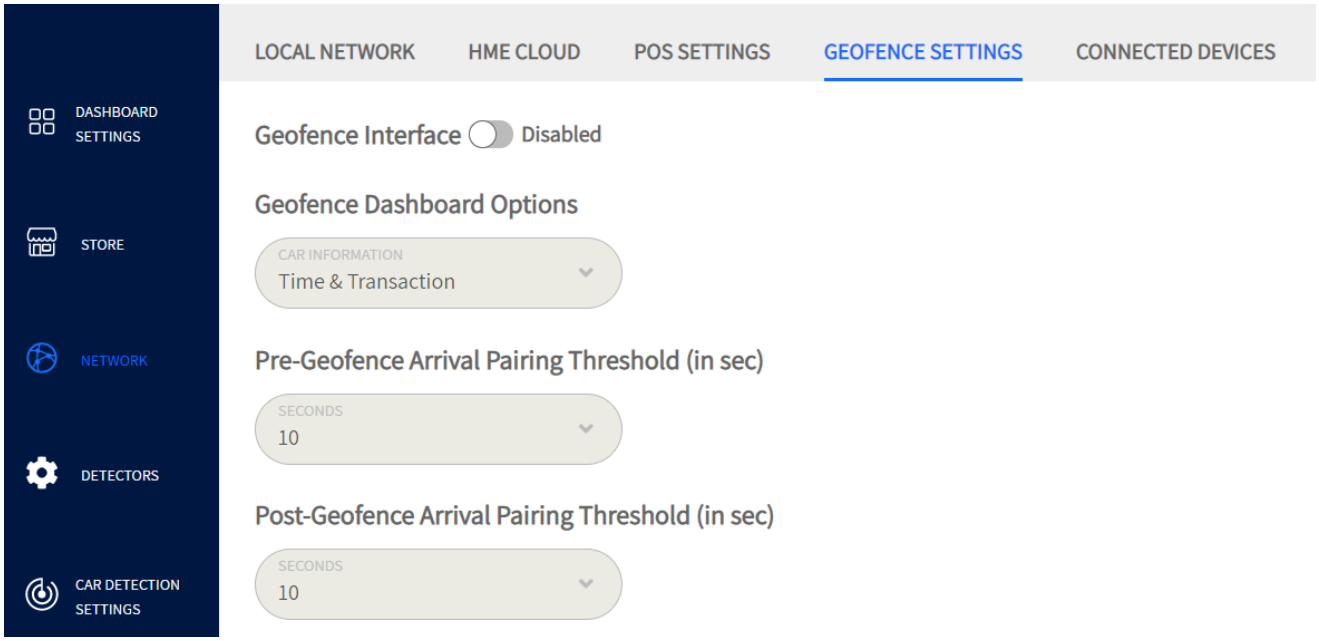


Fig. 5.6

> ***NOTE:*** ***Geofence Settings*** *is an optional feature. If not displayed on your screen, it is not available for your store.* ***To use this feature, a store must have an in-app ordering service that supports location intelligence****. Contact HME if you would like to know more about this feature.*

What is this screen for? If your store uses geofencing for remote or mobile orders, this screen allows you to configure those settings.

Why is it needed? Once a geofence is enabled, you can choose what geofence options are displayed on the Dashboard. Pairing threshold times can also be adjusted to compensate for communication latency unique to each store.

Geofence Interface Disabled/Enabled: Enable this option to turn this feature on.

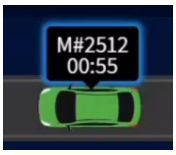


Fig. 5.7

Geofence Dashboard Options: These appear in a dialog label next to the associated vehicle displayed on the Dashboard. A geofence label is distinguished by a neon-blue border (see Fig. 5.7) to differentiate it from a standard label that does not have this border.

Time: This is the time triggered by the vehicle's arrival at the detection point. It is displayed next to the animated vehicle on the Dashboard.

Transaction: This is the transaction number associated with a customer's order. It is displayed next to the animated vehicle on the Dashboard.

Time & Transaction: This is a combination of both time and transaction displayed next to the animated vehicle on the Dashboard.

Pre-Geofence Arrival Pairing Threshold (in sec): There is a latency period involved when using a geofence. Due to varying communication speeds between devices and networks, a geofence message may arrive before the vehicle enters the geofence perimeter. This message will queue

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for 1 to 15 seconds (depending on the setting) until the visitor enters the geofence, ensuring it is paired with the correct visitor.

Post-Geofence Arrival Pairing Threshold (in sec): Due to varying communication speeds between devices, a geofence message may be sent to the device after the vehicle has arrived and departed from the geofence perimeter. This setting allows the transaction to be paired with the visitor 1 to 15 seconds (depending on the setting) after the vehicle has departed the geofence perimeter.

Conditions: Pairing threshold time can be one to fifteen seconds long.

Connected Devices

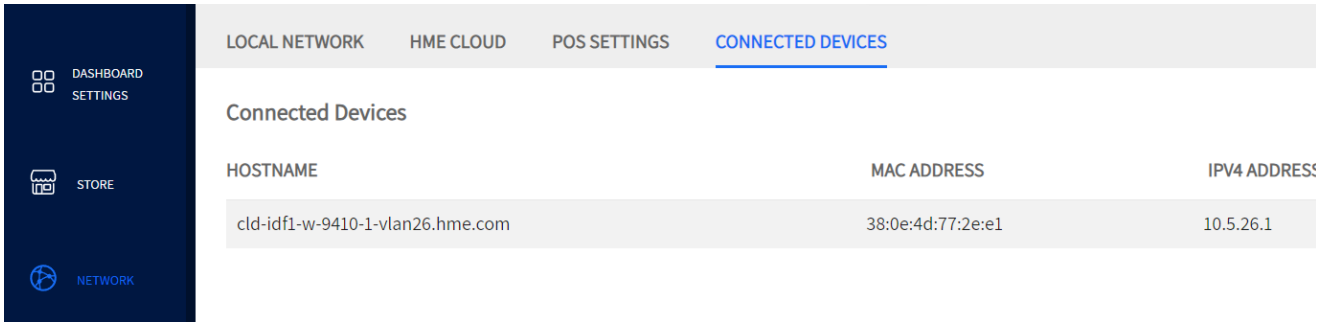


Fig. 5.8

What is this screen for? The Connected Devices screen displays all devices connected to the ZOOM Nitro system, including Vision AI components when installed. Device information, including MAC and IP addresses for Vision AI components, can be viewed here.

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Chapter 6 - Detectors

Installer Manager

Only Installers and Managers can access and edit the features on this screen.

Camera

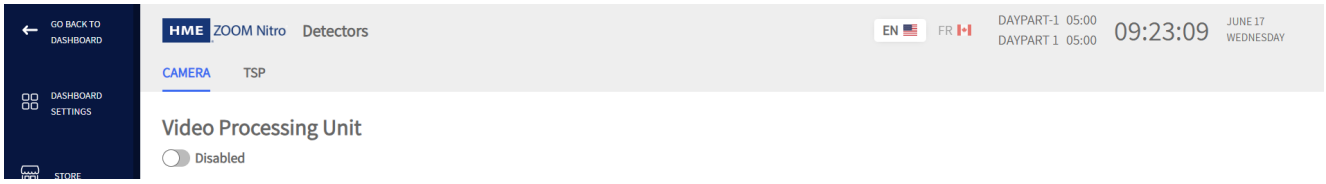


Fig. 6.1

What is this screen for? This screen displays the camera-based vehicle detection and configuration used by the system. It identifies the camera locations and detection zones configured for Vision AI operation. The system supports two types of detector technology: Camera (Vision AI) and TSP. TSP is a standard and commonly used technology and can be used in the drive-thru lane at a Menu and Service window. Vehicle detection using cameras is a newer technology that allows vehicles to be identified and tracked in drive-thru environments or designated wait area zones (either mobile pick-up or pull-forward spaces). A store must meet a set of prerequisites to have Vision AI installed. Stores with a **Single Lane** or **Y Lane drive-thru** are currently supported. Mobile spaces and Pull-Forward spaces are also supported (however, **Pull-Forward windows** are not yet supported using this technology).

When the Nitro Vision AI Processing Unit is enabled, the screen populates (see Fig. 6.2). The features displayed on this screen are configured by the installer. Camera locations can be set up as a Drive-Thru, a Pick-Up Zone (for mobile or pull-forward spaces), an Extended Stack, or a combination of locations when multiple cameras are used.

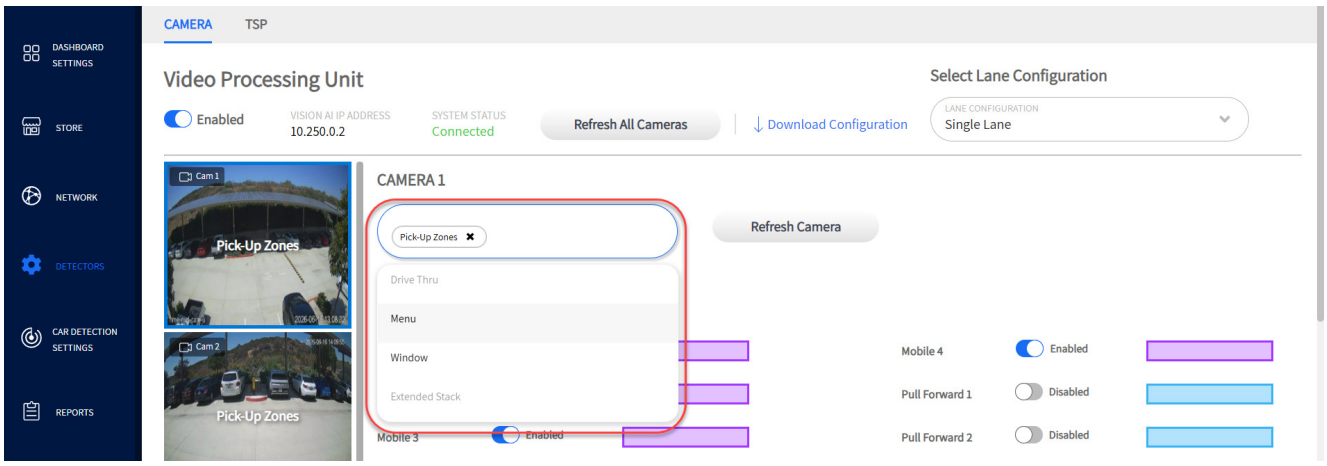


Fig. 6.2

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Drive-Thru

Fig. 6.3 shows an enabled Single Lane drive-thru setup, which allows cars in the Pre-Menu (orange foreground area) and Pre-Menu Stack (red area) to be detected and displayed on the dashboard. On the dashboard, both zones are combined under a single label called Menu Stack.

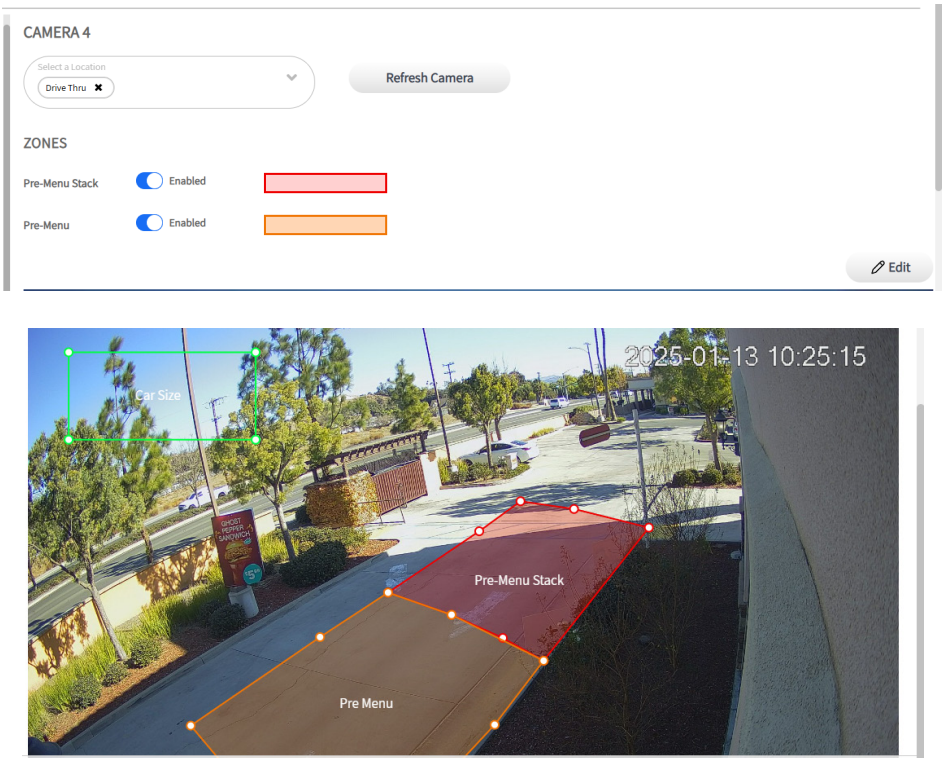


Fig. 6.3

Fig. 6.4 shows an enabled Y Lane drive-thru setup, which allows cars in two Pre-Menus (orange foreground areas) and the Pre-Menu Stack (red area) to be detected and displayed on the dashboard.

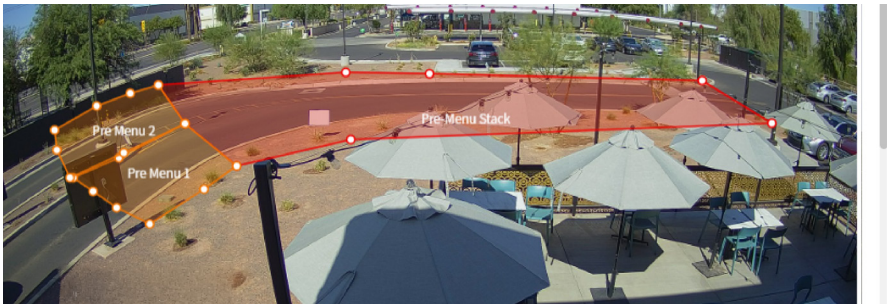


Fig. 6.4

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Menu

Fig. 6.5 shows Menu selected from the dropdown list.

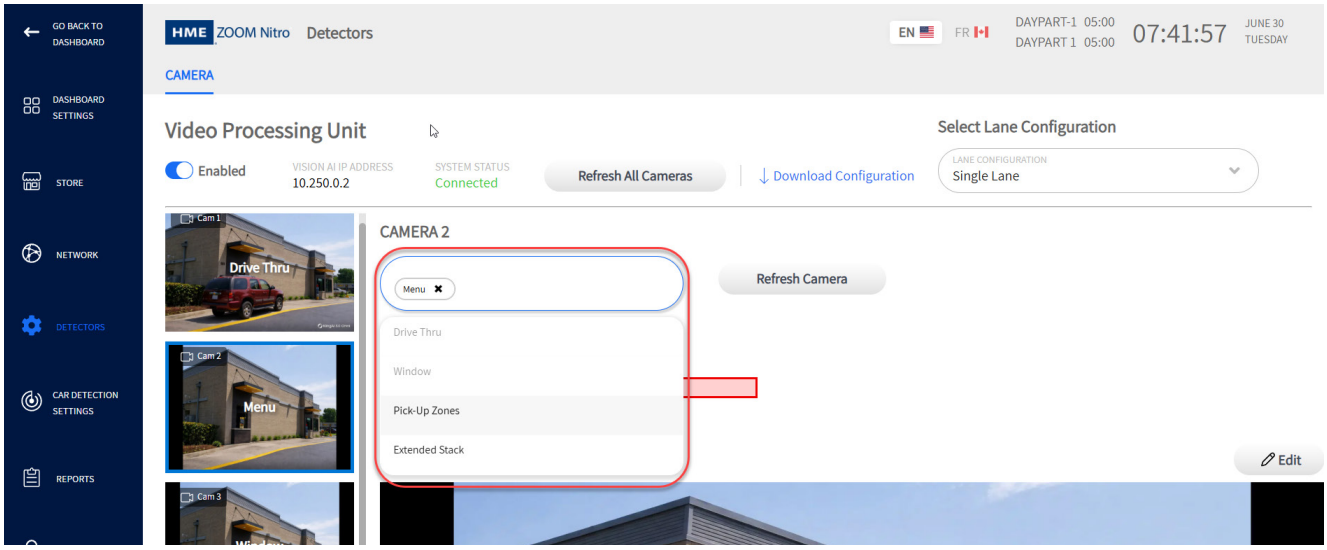


Fig. 6.5

Fig. 6.6 shows an example of a Menu zone when it is enabled. This is a single monitored zone. You can also enable Greet if you desire a greeting be played when the customer arrives at the menu.

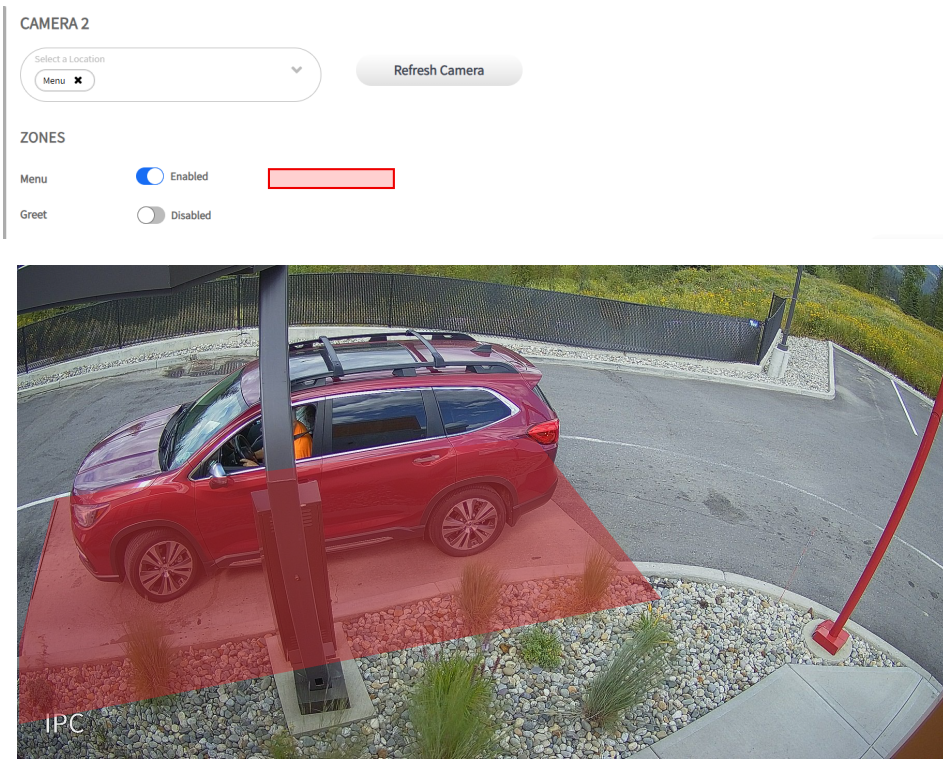


Fig. 6.6

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Window

Fig. 6.7 shows Window selected from the dropdown list.

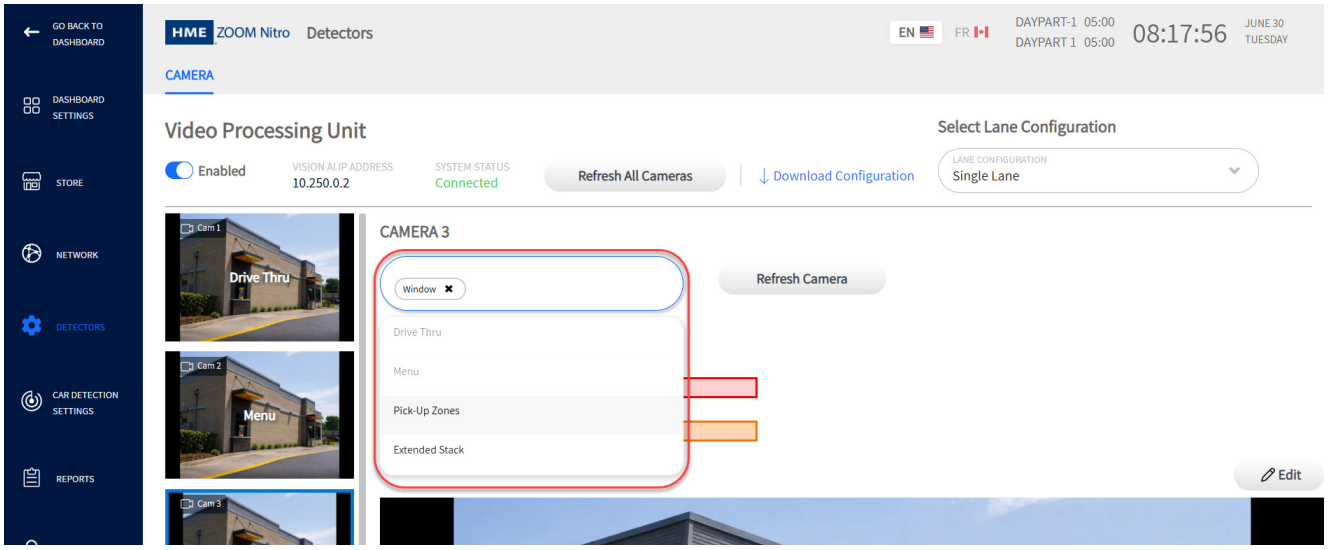


Fig. 6.7

Fig. 6.8 shows an example when a Window zone is enabled. One window labeled Service is monitored with this camera.

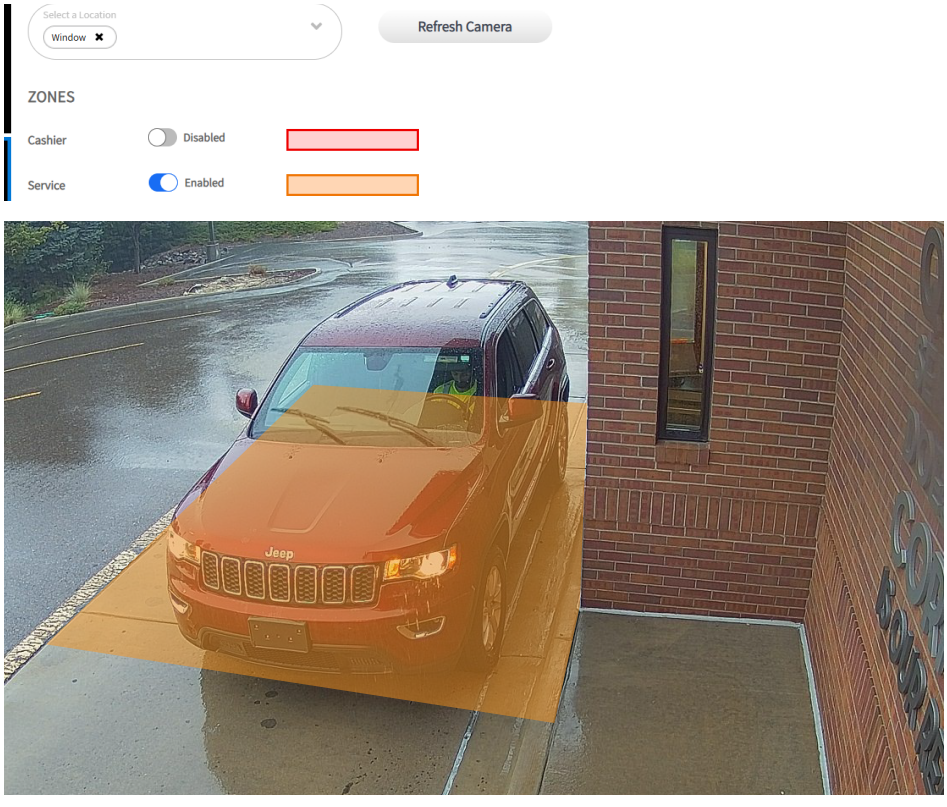


Fig. 6.8

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Extended Stack

Fig. 6.9 shows the **CAMERA 3** drop-down list when the Extended Stack is enabled. Extended Stack requires a dedicated camera and must be used in conjunction with another drive-thru camera (i.e., it does not function independently). Extended Stack allows a store to capture vehicles beyond the Pre-Menu Stack, providing an extended range of metrics. It is combined with the Pre-Menu Stack data and treated as a single metric on the dashboard rather than a separate metric.

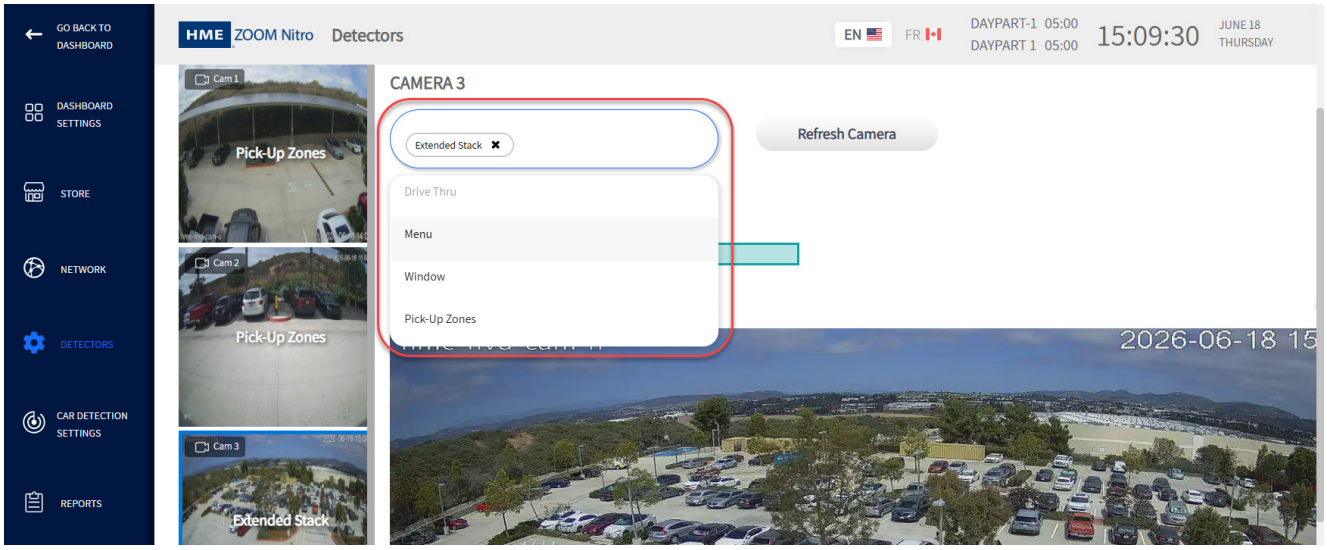


Fig. 6.9

Fig. 6.10 shows an Extended Stack with a vehicle entering it from the right. The Drive-Thru Pre-Menu/ Pre-Menu Stack camera and zones (not visible) are to the left of this zone, allowing the vehicle to pass through the Extended Stack and then the Pre-Menu Stack before reaching the Pre-Menu.

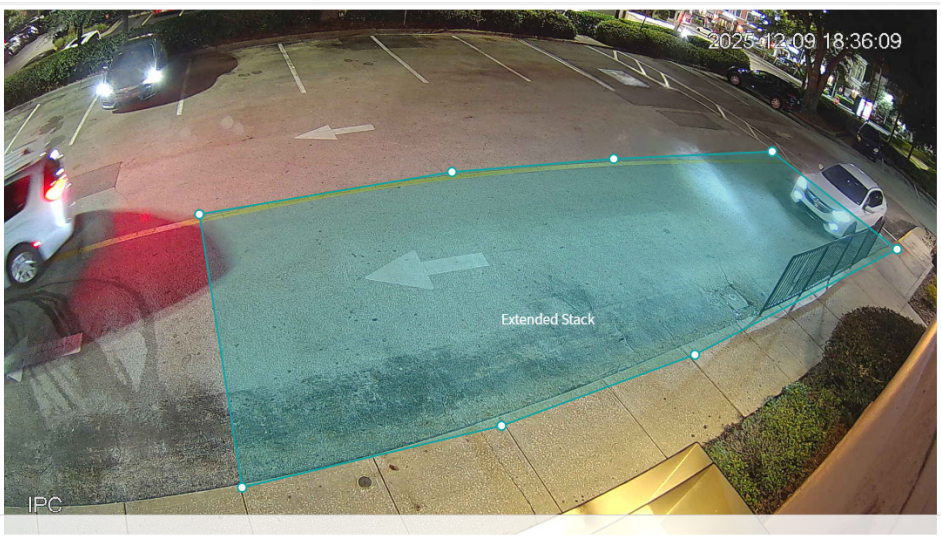


Fig. 6.10

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Pick-Up Zones and Pull-Forward Spaces

Fig. 6.11 shows three enabled mobile spaces (violet areas), allowing vehicles in these spaces to be detected and displayed on the dashboard. The system supports a maximum of eight mobile spaces if two cameras are used.

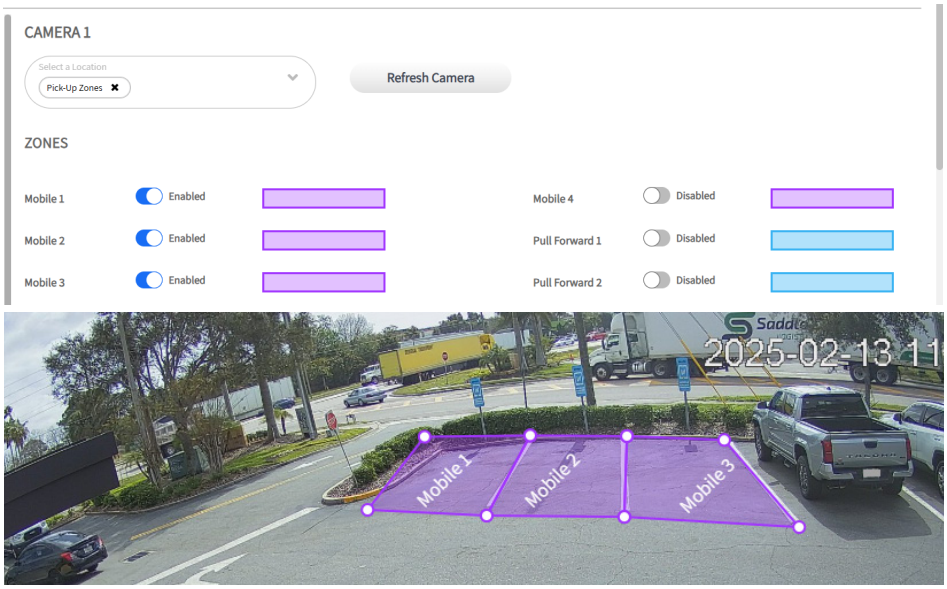


Fig. 6.11

Fig. 6.12 shows two enabled pull-forward spaces (blue areas), allowing vehicles in these spaces to be detected and displayed on the dashboard. The system supports a maximum of two pull-forward spaces.

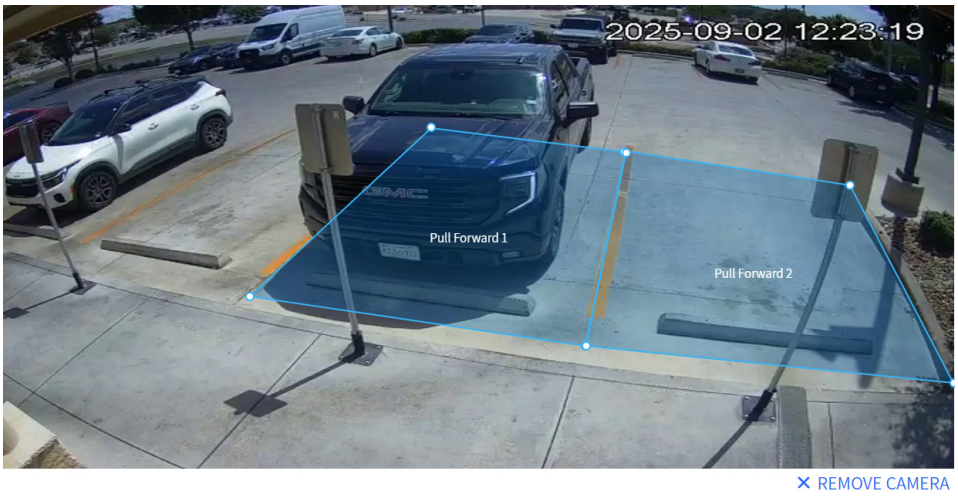


Fig. 6.12

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Relabeling Zones

Fig. 6.13 shows four configured zones with generic labels (Mobile 1, Mobile 2, Pull Forward 1, and Pull Forward 2). To relabel these zones, click the Edit button above the camera view.

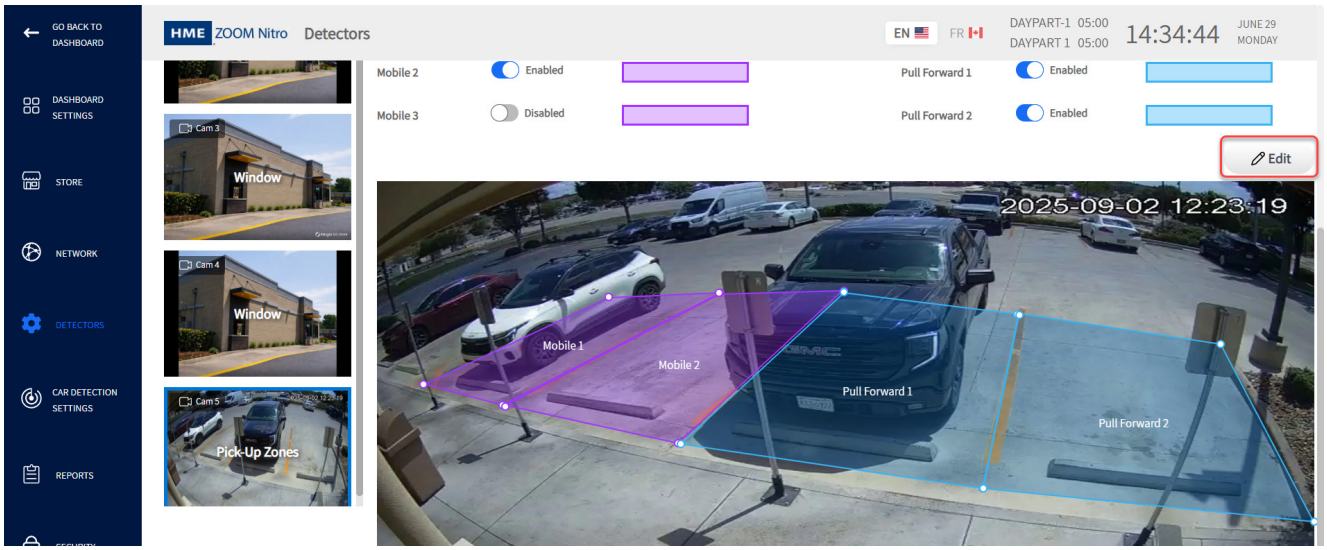


Fig. 6.13

The polygon colors disappear. Click a label to rename it. Once you have relabeled the zones, click Save Changes.

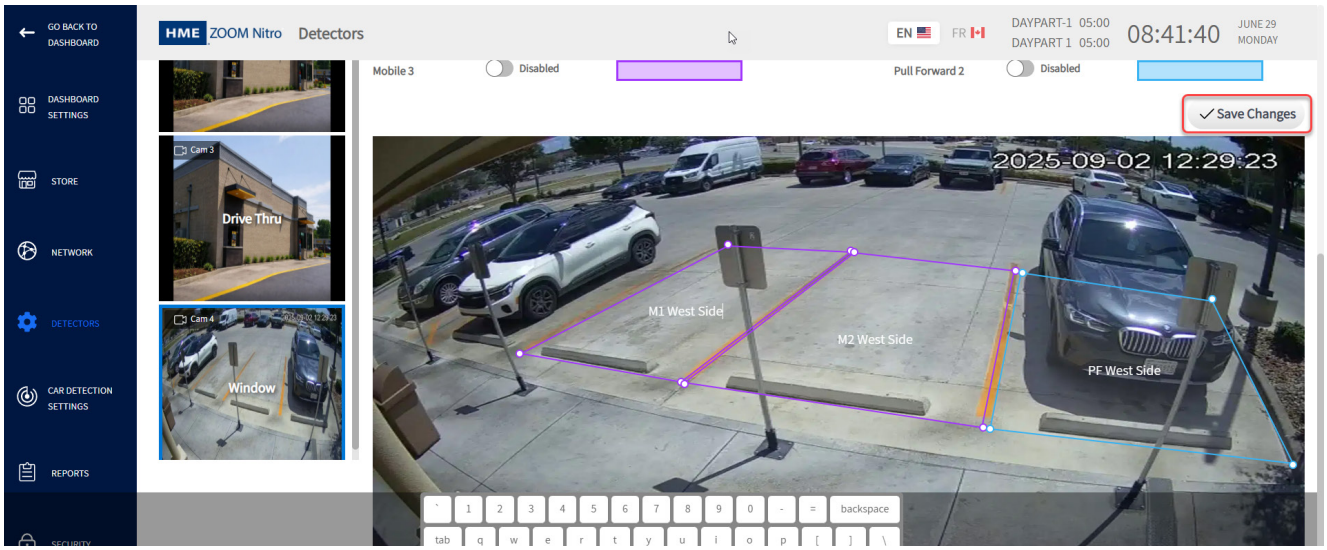


Fig. 6.14

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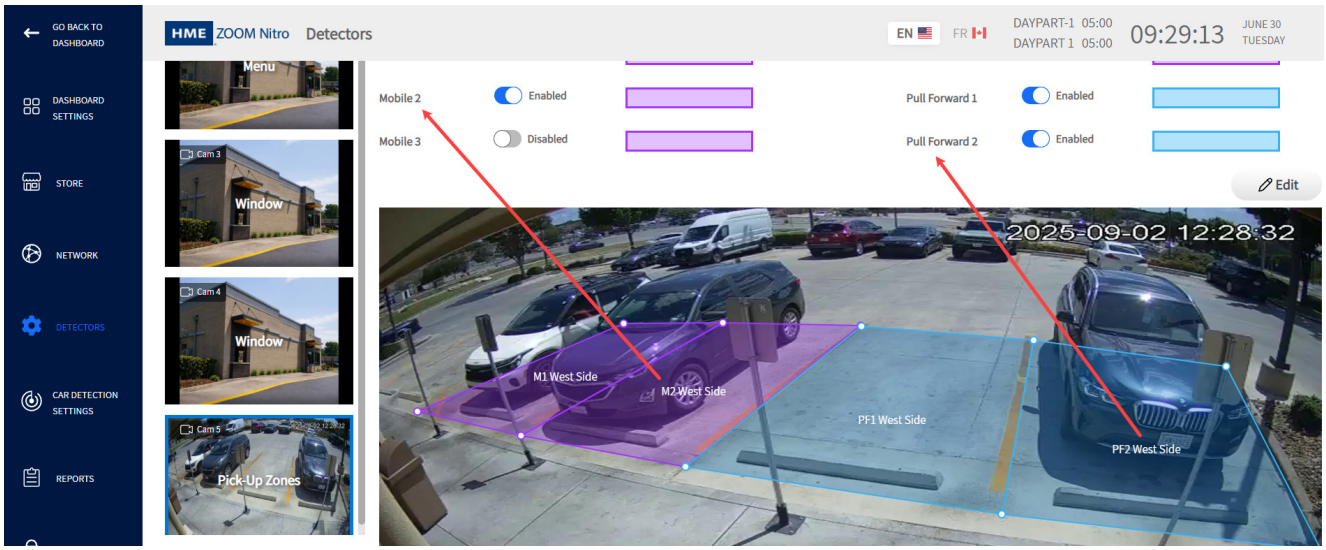


Fig. 6.15

> **NOTE:** *Even after the zones are relabeled in the camera view, they remain listed as Mobile 1, Mobile 2, Pull Forward 1, and Pull Forward 2 in the Zones section above the camera view. See Fig. 6.15.*

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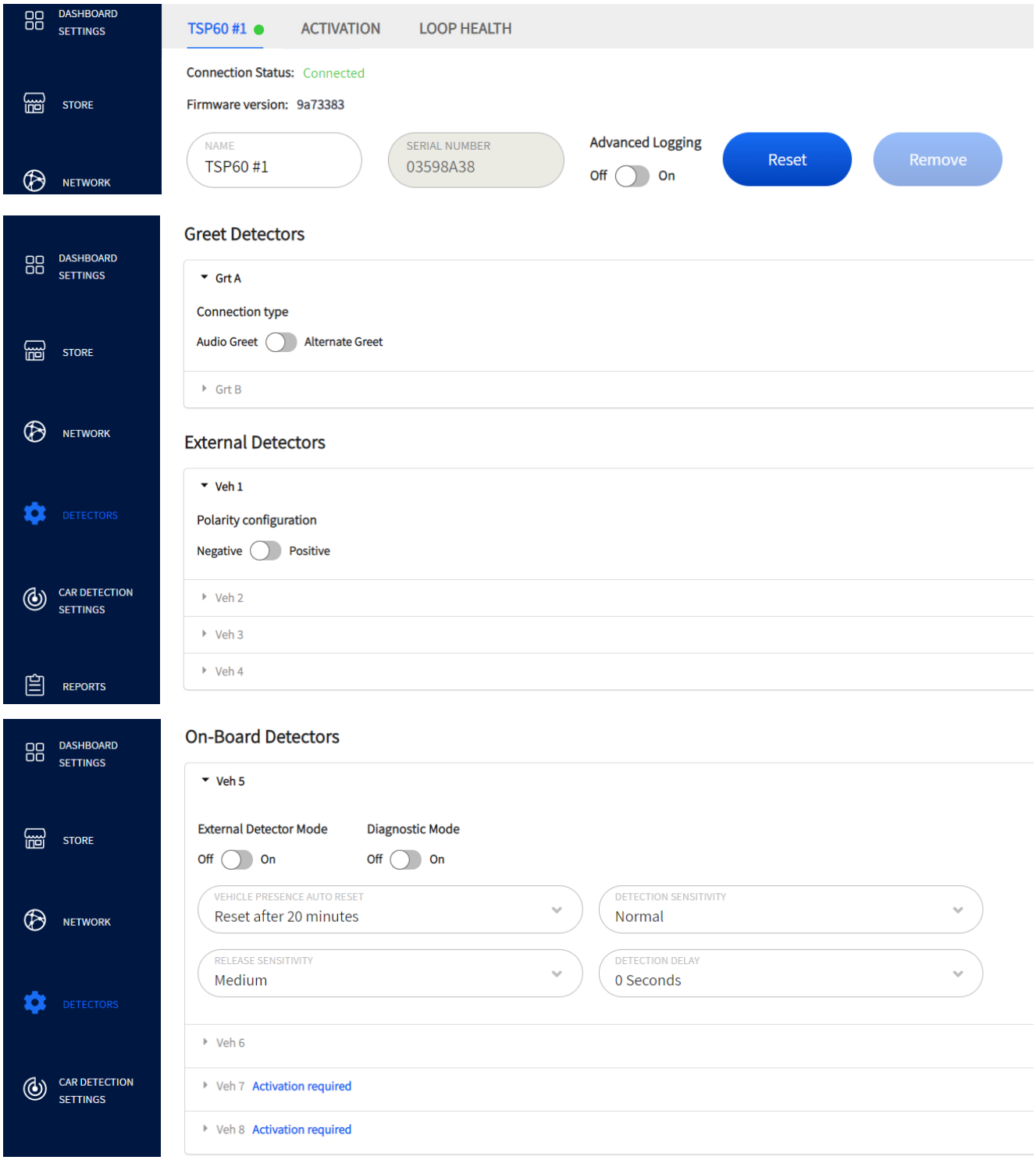


Fig. 6.16

What is this screen for? When loop detectors are used, a TSP60 is required. This screen allows you to check the status of your TSP60.

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Why is it needed? This screen lets you check connection status, rename the TSP, and configure detectors. The green indicator next to TSP60 #1 in Fig. 6.16 indicates it is connected. If an issue arises with the TSP, you can reset it by using the Reset button. **Caution! Resetting the TSP temporarily closes the lane**. Any active lane-event data is lost if vehicles are present in the lane when the Reset button is used. The TSP will begin monitoring lane events again once it reboots.

> ***NOTE*** *The ZOOM Nitro system is capable of supporting multiple TSPs (a maximum of eight TSP60s). The legacy TSP50 is no longer supported. Each additional TSP appears at the top of the screen.*

In Fig. 6.16, TSP60 #1 is displayed. If, for example, you were to add another TSP60 to your system, it would also be displayed here.

Use the NAME field to assign a descriptive name to the TSP, which is useful when multiple TSPs are connected. The SERIAL NUMBER field contains a unique identifier for the TSP and cannot be changed. It corresponds to the PCBA SN label located inside the TSP60 hinged cover.

The green indicator next to the TSP60 tab in Fig. 6.16 indicates that the TSP60 is physically connected. If the TSP is physically disconnected, the indicator turns red and a notification is displayed.

A disconnected TSP remains visible on-screen until it is removed from the system. Use the Remove button to accomplish this. This button becomes active only when a TSP is disconnected, helping prevent accidental removals. For example, in Fig. 6.16, TSP60 #1 is connected, so the Remove button is deactivated (indicated by a faded blue color). If TSP60 #1 is disconnected, the green indicator turns red, and the Remove button becomes active. Once clicked, TSP60 #1 will disappear from the top of the screen. Reconnecting the TSP causes it to reappear with a green indicator.

Greet Detectors

The system supports two greet detectors.

Connector type - Audio Greet or Alternate Greet: This switch correlates to how J8 is wired on the TSP. Audio Greet is the default setting for standard greet signals received from the audio lines. Enable the switch to select Alternate Greet when using digital inputs from another source.

External Detectors

The TSP60 supports up to four external detectors.

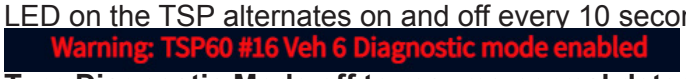
Polarity configuration - Negative or Positive: Negative signal polarity is the default setting for HME inputs; however, the system also supports positive-polarity signals used by non-HME inputs. Enable the switch to select Positive polarity, if required.

On-Board Detectors

Up to four onboard detectors are available. Veh 5 is activated by default. For Veh 6 - 8, click on Activation required and follow the instructions to purchase and activate the detector. Use the ACTIVATION screen for this. Once an onboard detector is activated, the Activate button appears next to the Veh #. Click the button to activate that onboard detector. If an activated onboard detector malfunctions, use the same button to deactivate it and activate another onboard detector (this will also require a physical wiring change on the TSP to match the new onboard detector selected).

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External Detector Mode: If you use an external detector instead of an onboard detector, turn this switch on. This also disables all fields associated with the onboard detector.

Diagnostic Mode: Turn this switch on to test the onboard detector without requiring a vehicle to be present at the detection point. The associated onboard-detector LED on the TSP alternates on and off every 10 seconds. A warning prompt like this 

appears at the top of the Dashboard. **Turn Diagnostic Mode off to resume normal detector operation.**

VEHICLE PRESENCE AUTO RESET (No Timeout, After 20 minutes): The default is No Timeout. If a vehicle remains detected after it has left the detection point, you can configure an automatic reset after a specified time period. **CAUTION! When an auto reset occurs, any active vehicle data is closed out if vehicles are present in the drive-thru lane**.

DETECTION SENSITIVITY (Normal, low): Adjusts detector sensitivity when a vehicle arrives at the detection point. The factory default setting is Normal. If set to Low, detection occurs more slowly and small signal fluctuations may result in missed detections.

RELEASE SENSITIVITY (low to extra high): Release sensitivity indicates how quickly the system signals vehicle departure. The factory default setting is Medium. Higher sensitivity causes vehicle departures to be detected more readily.

DETECTION DELAY (0 to 10 seconds): This sets the delay before the system recognizes a vehicle at the detection point. It is used to eliminate false detections. This delay is cumulative with any delay configured for the same detector under Lane Detectors in Car Detection Settings (see “Lane Detectors” on page 53). For example, if 5 seconds is selected here for Veh 6 and a 5-second delay is also selected for Veh 6 in Car Detection Settings, the total delay will be 10 seconds.

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Activation

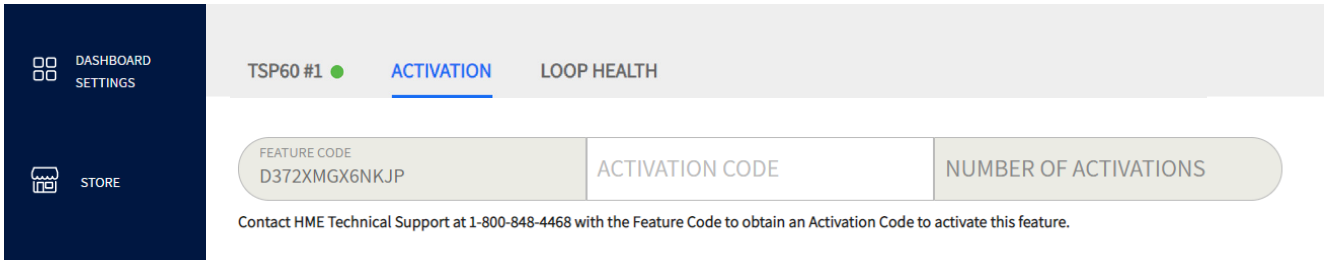


Fig. 6.17

What is this screen for? The Activation screen is used to activate additional onboard detectors and appears only when a TSP60 is connected.

Why is it needed? The TSP60 is designed with four onboard detectors. The TSP60 comes with one detector activated by default. You can purchase additional activations if your store uses more than one detector.

Call the number displayed on the screen and provide HME with the code listed in the FEATURE CODE field. HME will provide an activation code that you enter in the ACTIVATION CODE field.

The number of activations purchased is shown in the NUMBER OF ACTIVATIONS field, and the Activate button appears next to the Veh # under On-Board Detectors on the TSP60 screen. After one or more detectors are activated, a new row containing a new FEATURE CODE appears. This will be used to activate additional detectors at a future date if needed (see Fig. 6.18).

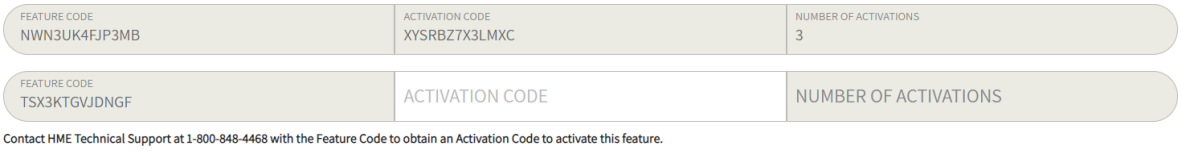


Fig. 6.18

> ***NOTE*** *The ZOOM Nitro system supports up to 64 detectors. Achieving this maximum configuration requires additional TSPs, a powered USB hub, and activation of the additional detectors.*

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Loop Health

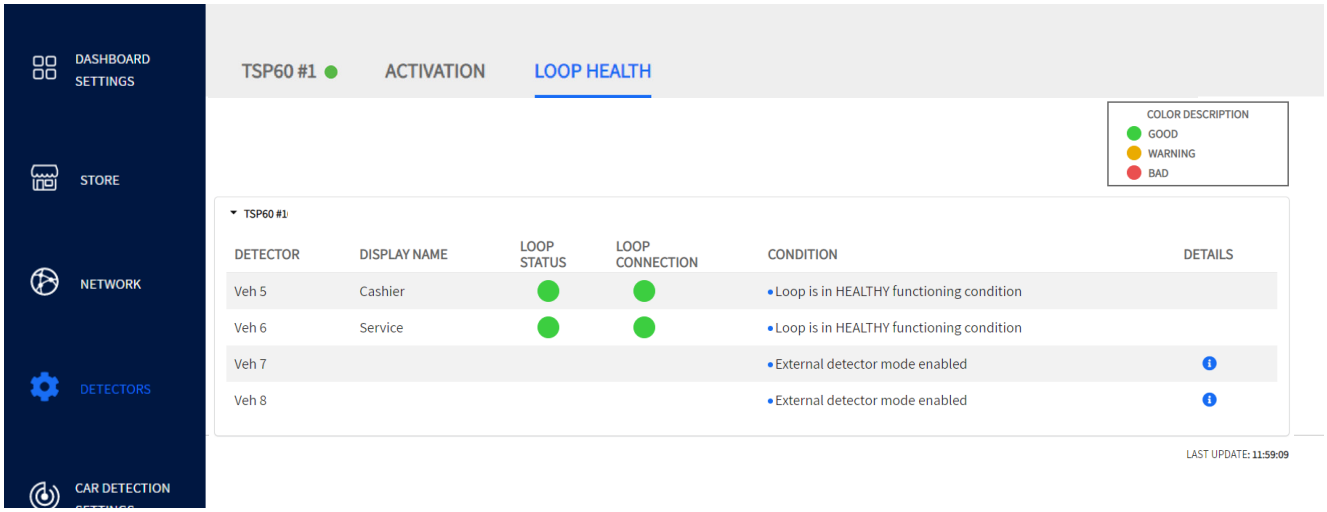


Fig. 6.19

What is this screen for? Loop Health provides the current status of your detector loops.

Why is it needed? Monitoring loop health helps keep the system operating reliably. Detector loops naturally deteriorate over time due to wear and tear. A change in loop health may signal that maintenance is required. This helps identify potential failures before they occur, minimizing downtime through preventive maintenance.

Color-coded indicators are used to provide you with the status of your loop health.

- A green indicator means the loop is in good condition and functioning properly.
- An amber indicator means the loop is in moderate condition but is still functioning properly. If this indicator was initially green, it might indicate that the loop's condition is starting to deteriorate. Preventive maintenance is recommended at this stage. Allowing the loop to deteriorate further may eventually result in a critical failure if corrective action is not taken.
- A red indicator means the loop is in poor condition and may not be functioning properly or may have completely failed. Immediate maintenance is required to repair or replace the loop.

Move the cursor over the blue information icon in the Details column to view additional information.

LOOP STATUS: This checks the loop's inductance. The resulting indicator ranges from good to moderate to bad.

LOOP CONNECTION: This checks the loop's physical connection. It is either good or bad.

CONDITION: This column provides an overall assessment based on both LOOP STATUS and LOOP CONNECTION and may include recommended actions. For example, in Fig. 6.19, Veh 5 has two green indicators, meaning the loop is functioning properly and is in good health. However, two red indicators indicate a critical problem and require contacting HME Technical Support.

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Chapter 7 - Car Detection Settings

Installer

Only Installers can access and edit the features on this screen.

Lane Detectors

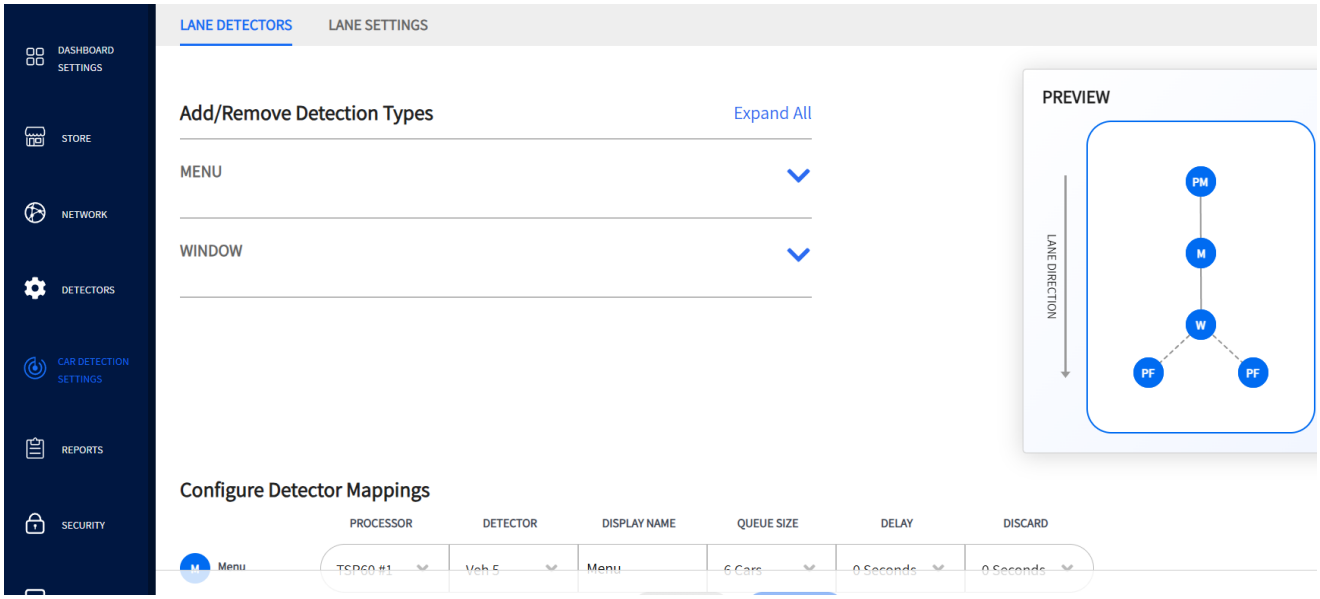


Fig. 7.1

What is this screen for? If your store also uses loop detectors, then this screen lets you customize your system to your store's unique layout. Use the **Add/Remove Detection Types,** and **Configure Detector Mappings** options to configure detectors.

Why is it needed? If your store uses a combination of loops and cameras, the lane layout must be configured properly to provide meaningful data.

Example: Fig. 7.1 shows a Single Lane store with one Pre-Menu (PM), one Menu (M), one Window (W), and two pull-forward detectors (PF). The PM and PF detectors shown in the Preview pane are camera-based detectors and are configured on the **DETECTORS** screen, not here. So only Menu and Window are displayed under Add/Remove Detection Types as they are controlled by the TSP60.

To make adjustments, click the down arrow next to **MENU** to expand it (see Fig. 7.2). Toggle the **Include Greet** switch on. The menu tile beneath the switch updates to reflect the change (see Fig. 7.3).

NOTE *Take a snapshot of the dashboard before making changes so the original settings can be restored if any configuration is lost or accidentally changed.*

A CU reboot is required whenever any Lane Configuration settings or Detection Types are added or removed. CU cable swaps to Ports 1 and 2 also require a CU reboot.

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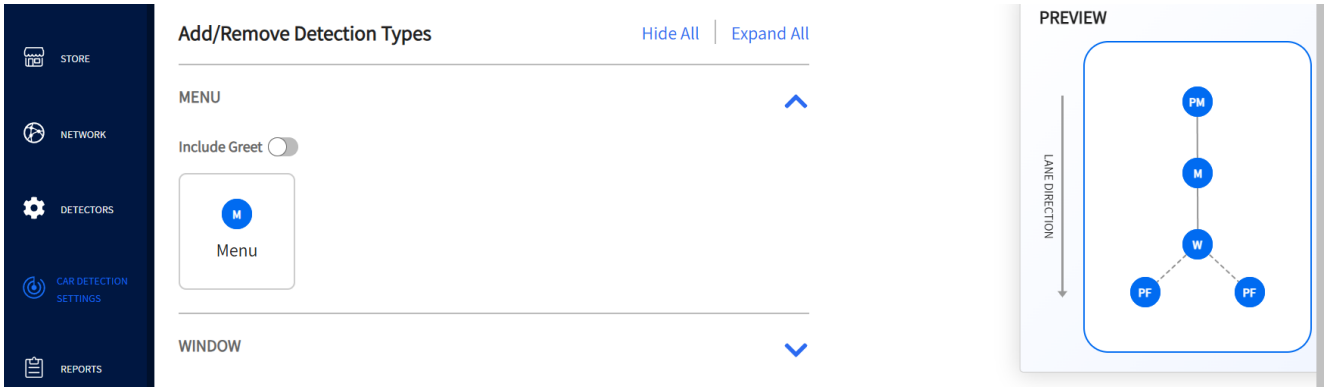


Fig. 7.2

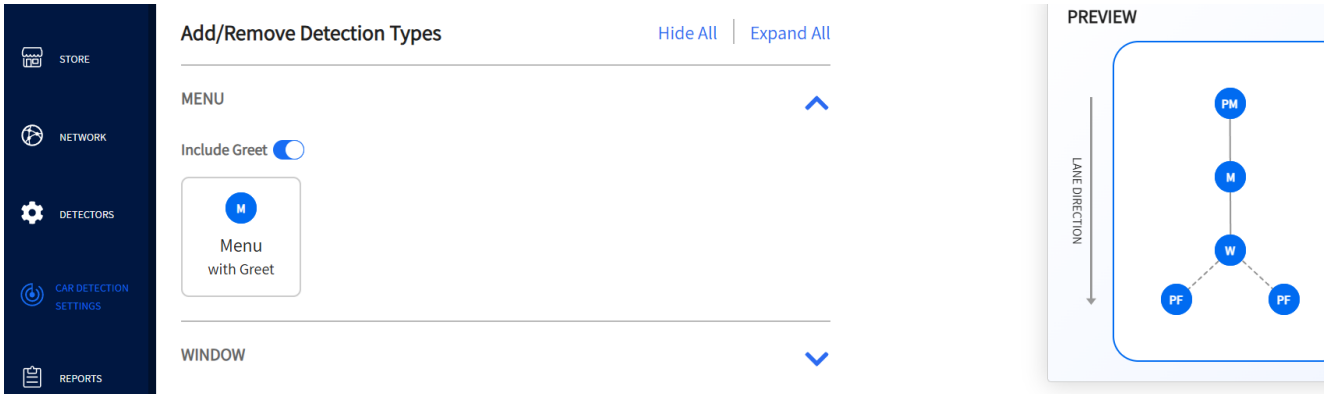


Fig. 7.3

The **Configure Detector Mappings** section allows you to map your detectors to a Vehicle Number (Veh #). This Veh # corresponds to the Veh # on the TSP and must match the actual detector connection. You can assign a descriptive name in the DISPLAY NAME field and select a QUEUE SIZE from the drop-down list. Queue Size is the number of vehicles that can fit between this detection point and the next.

For example, in Fig. 7.4, Menu (M) is mapped to Veh 5, assigned the display name “Menu,” and configured with a queue size of 6 Cars. This indicates that six vehicles can fit between this detection point and the next detection point (Service). Greet does not require a queue size. Service (SV) is mapped to Veh 6 and assigned the display name “Service.” Since this is the last detector in the lane, no queue size is required beyond this point. (Pull Forward spaces are excluded).

> ***NOTE:*** ***Queue size does not include the vehicles at the detection points, only those between them****. An estimated spacing of 20 ft (6.1 m) per vehicle is used.*

In Fig. 7.4 the two last active fields at the end of the Menu and Service rows allow you to set a delay or discard time.

DELAY: This sets the minimum time the car must remain in the zone before it is detected and processed.

DISCARD: Set a time limit if you need to verify that the vehicle present is a real customer and not an accidental trigger caused by a passing vehicle. Any triggers not meeting this time limit are discarded.

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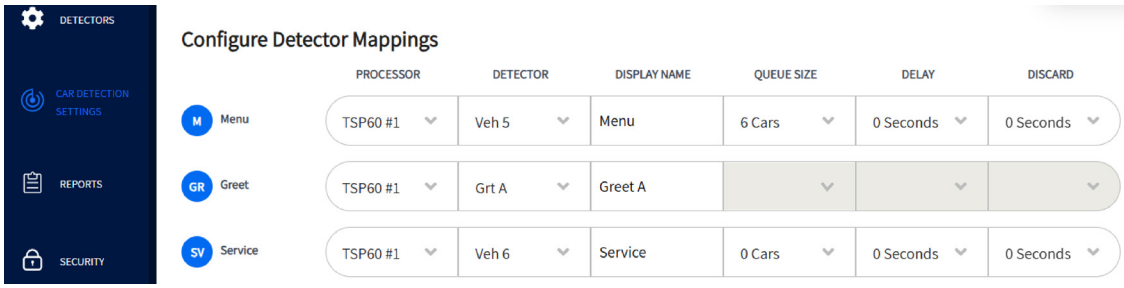


Fig. 7.4

Conditions: Detector labels are predetermined during installation, so you must use the correct Detector label when mapping detectors. For example, if the detector you are configuring is connected to Veh 3 on the TSP, you must assign it to Veh 3 from the DETECTOR drop-down list.

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Lane Settings

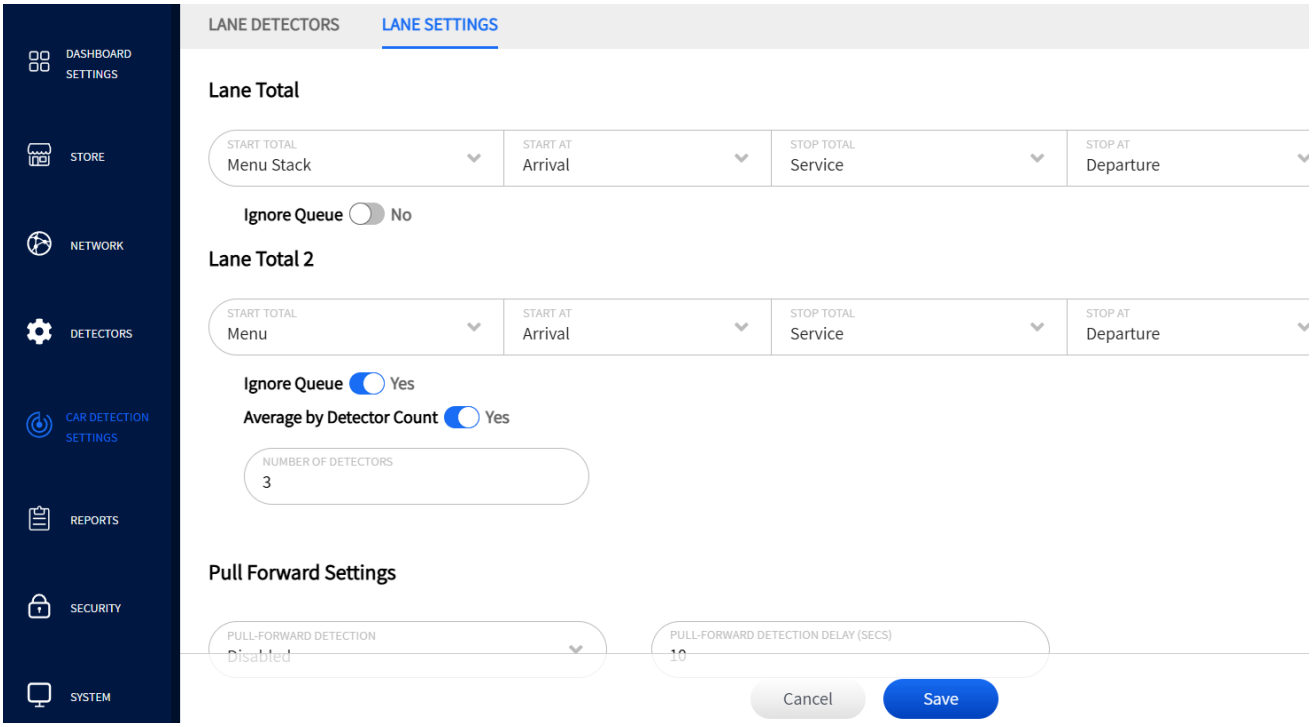


Fig. 7.5

What is this screen for? The Lane Totals are configured on this screen. This screen lets you define how Lane Total is calculated for a lane. ou can choose the detection points where Lane Total begins (START TOTAL) and ends (STOP TOTAL). For each detection point, you can choose whether timing begins or ends at Arrival or Departure.

Two Lane Totals are available. In a Single Lane configuration, they can represent two separate event totals.

Ignore Queue No: Queue times are included in Lane Total by default. Toggle this switch to YES to exclude queue time.

Average by Detector Count No: This feature applies only to Lane Total 2. When this toggle is switched to "Yes," the NUMBER OF DETECTORS field opens and defaults to the number of detectors configured. However, you can manually change this value to calculate the average using a different number of detectors. This field only accepts a number ranging from 2 to 5. For example, if Lane Total 2 is two minutes and you want to average it across four detectors, enter 4 in this field. The average displayed will be 30 seconds.

Pull Forward Settings: When PULL FORWARD DETECTION is set to "Enabled," the "Pull Forward" time is included as part of the Lane Total. Pull Forward reports whether a vehicle leaving the lane reaches the pull-forward detection point within the configured delay time. This allows Pull Forward time to be associated with the vehicle record. When "Disabled," the pull-forward time is excluded from the Lane Total.

"PULL FORWARD DETECTION DELAY (SECS)" sets the time in which a car leaving the lane must reach the Pull Forward detector for the Pull Forward Detection time to be included in the car record for Lane Total. The default delay is 5 seconds, but the available delay range is between 0 and 120 seconds. Click in the field and use the pop-up keypad to change the delay as needed.

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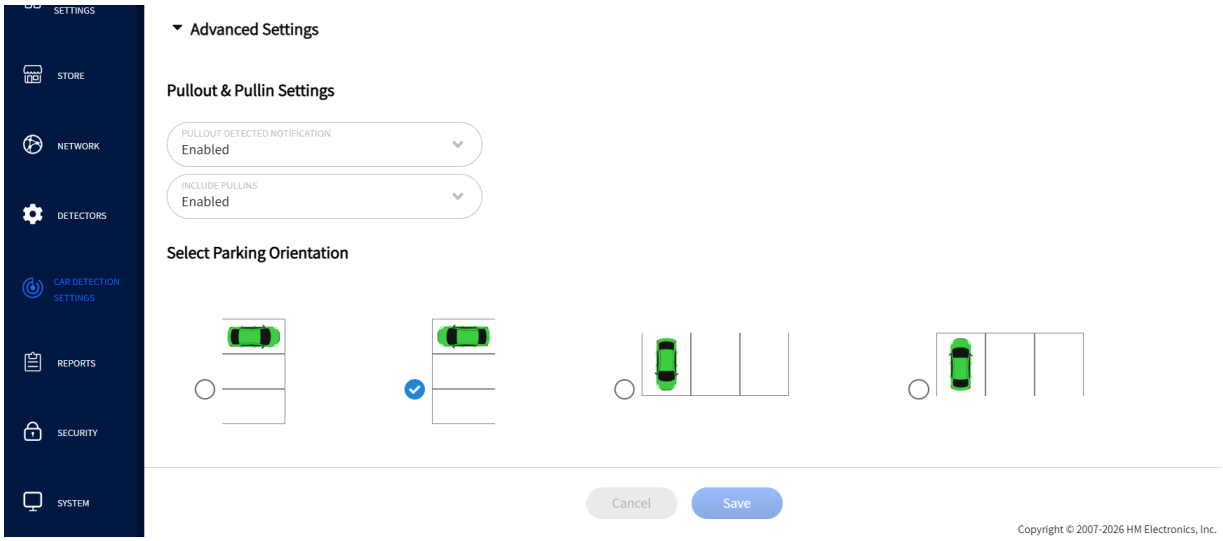


Fig. 7.6

Advanced settings

Pullout & Pullin Settings: A pullout occurs when a vehicle is detected entering the drive-thru lane, but is not detected at the last detection point. A pullin occurs when a vehicle enters the drive-thru lane beyond the Menu detection point without being detected at the Menu.

PULLOUT DETECTED NOTIFICATION: Choose "Enabled" to receive notifications of pullouts when they occur.

INCLUDE PULLINS: When enabled, pullin time is included in Lane Total events. When "Disabled," the pullin time is excluded from the Lane Total, Dashboard metrics, and summary reports. Raw Car Data (RCD) is not affected. All data is displayed regardless of this setting.

Select Parking Orientation: Select your parking orientation here. Your selection affects how Wait Areas and Mobile Pickup areas are displayed on your dashboard. Four orientation options are available: horizontal with vehicles facing left or right, and vertical with vehicles facing up or down (in Fig. 7.6, the horizontal orientation with vehicles facing left is selected, also see Fig. 2.1 for how it looks on the dashboard).

Why is it needed? Setting Lane Totals beginning at one active detection point and ending at another allows you to analyze the efficiency of lane events at your store. This helps identify detection points or zones that may require adjustment to improve lane efficiency and traffic flow. Pullout and Pullin settings also allow you to include or exclude pullouts and pullins from your system calculations.

Example: Fig 7.5 has Lane Total starting when a vehicle *arrives* at the Menu Stack detection point and ends when it *departs* from the "Service" detector point, with the queue time included (NO to IGNORE QUEUE). Lane Total 2 includes starting when a vehicle *arrives* at the Menu detection point and ends when it *departs* from the "Service" detector point, but with the queue time excluded (YES to IGNORE QUEUE).

Conditions: Disabling the PULLOUT DETECTED NOTIFICATION feature removes notifications from your monitor but does not affect how the system handles pullouts.

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Lane Settings using Vision AI

If the customer wants to include Menu Stack events as part of their lane total, use the drop-down lists to select: “Menu Stack” in the START TOTAL field, and “Arrival” in the START AT field. See Fig. 7.7.

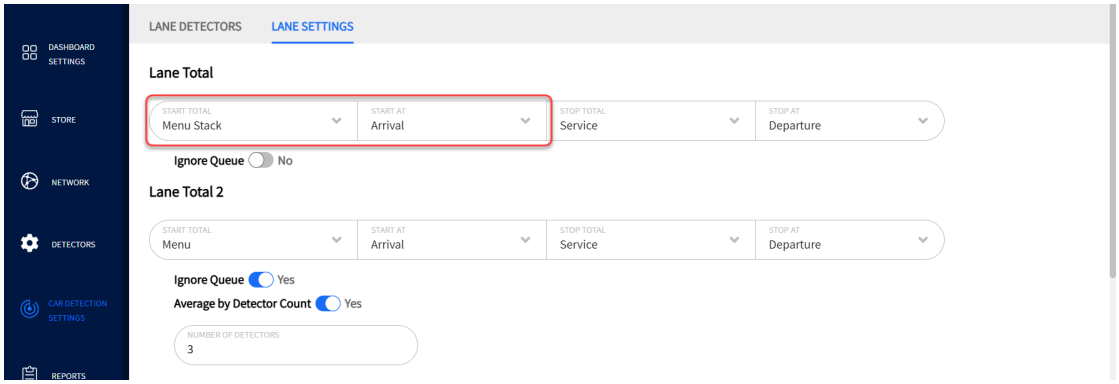


Fig. 7.7

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Chapter 8 - Reports

Summary

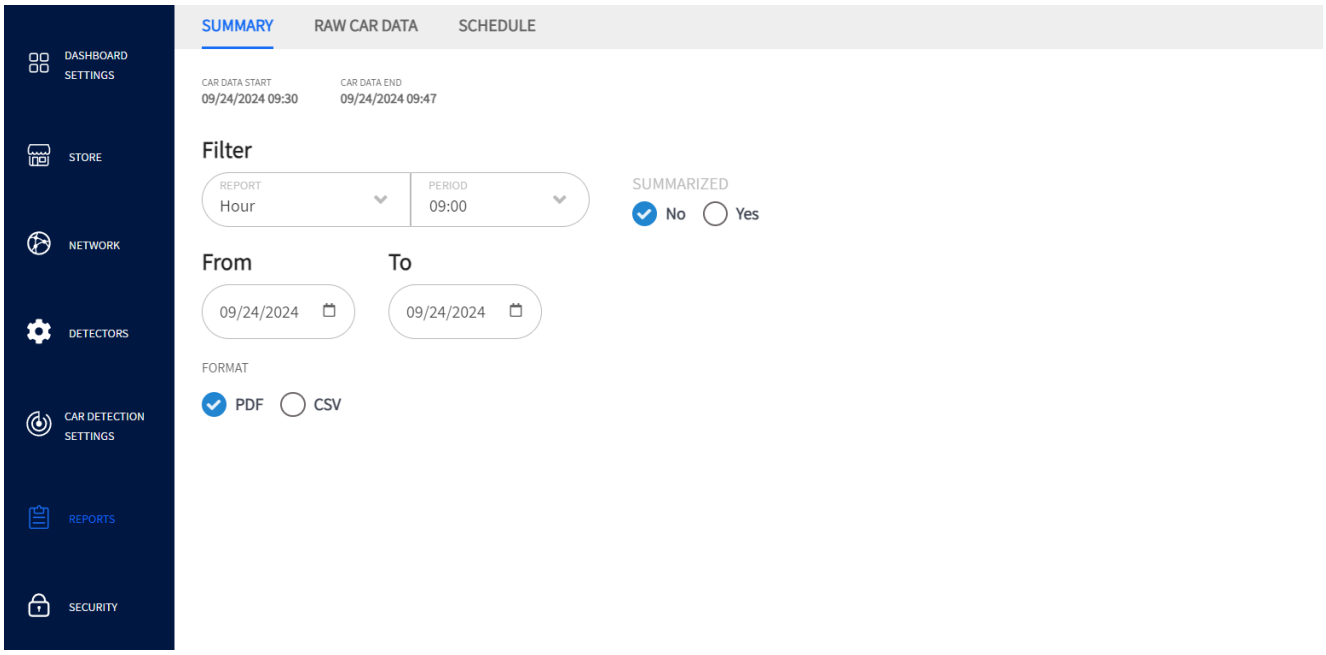


Fig. 8.1

What is this screen for? The Summary screen allows you to generate reports for Hour, Daypart, Shift, Day, Week, Month, or Year-to-Date periods.

Why is it needed? Use this screen to analyze measured events over specific time periods. Use the REPORT and PERIOD drop-down lists to filter your report. Then select a date range in the "**From**" and "**To**" fields.

Example: Fig. 8.1 shows an hourly report for 09:00 on September 24, 2024.

Under the SUMMARIZED option, select "No**"** to generate a separate page for each selected period. Select "Yes**"** to generate a single-page report containing summarized data for all selected periods.

Under the FORMAT, select the output format (PDF or CSV), then click "Get Report."

Conditions: A PDF can be generated on-screen but can only be downloaded from a remote computer or back-office PC. CSV reports can only be viewed from a remote computer or back-office PC. Available records depend on data-retention limits and available storage space. This limit shown in the CAR DATA START date and time just above the Filter field of this screen. It corresponds to the Database date found under STATUS on page 66.

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Raw Car Data

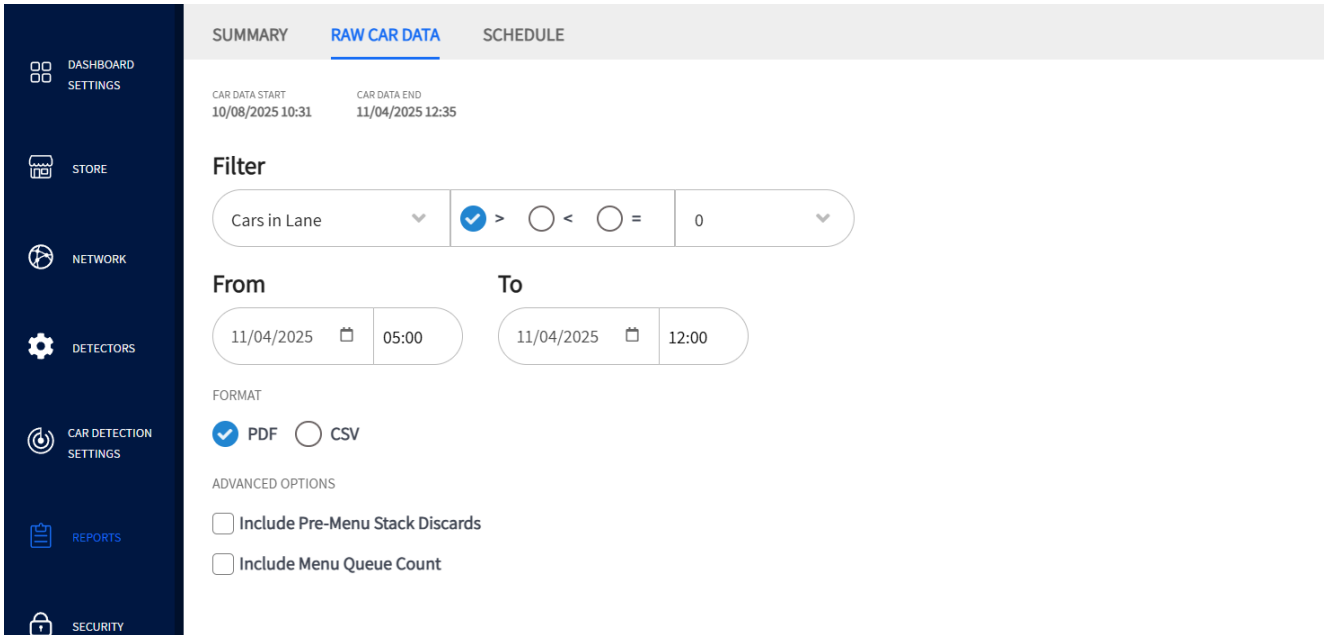


Fig. 8.2

What is this screen for? The Raw Car Data (RCD) feature allows you to generate a detailed record for every vehicle that passes through the drive-thru lane. It enables you to filter results by location or event using the Filter drop-down list and a specified date and time range.

Why is it needed? You may wish to analyze specific detection locations during selected time periods using a chosen filter. This can help identify trends or issues that may require adjustment. RCD also displays mobile orders separately from lane-placed orders.

Example: Fig. 8.2 shows an RCD report filtered for Cars in Lane greater than zero between 05:00 and 12:00 on November 4, 2025. PDF is the selected export format.

Include Pre-Menu Stack Discards: If using Vision AI, you can also choose to include Pre-Menu Stack Discards in your report. The default is Off (do not include). Select the checkbox to include Pre-Menu Stack Discards in the report.

Discards defined: If a vehicle is detected for 10 seconds or less and is not detected again after that period, the event is discarded by the system. For example, vehicles passing through a parking lot may briefly cross a drive-thru lane. Because the vehicle is not entering the drive-thru lane to place an order, the detection is considered invalid and is discarded.

Include Menu Queue Count: Selecting this checkbox adds the menu's queue count to the metric selected in the Filter field.

Conditions: Same as the conditions found in the **Summary** section of this chapter.

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Schedule

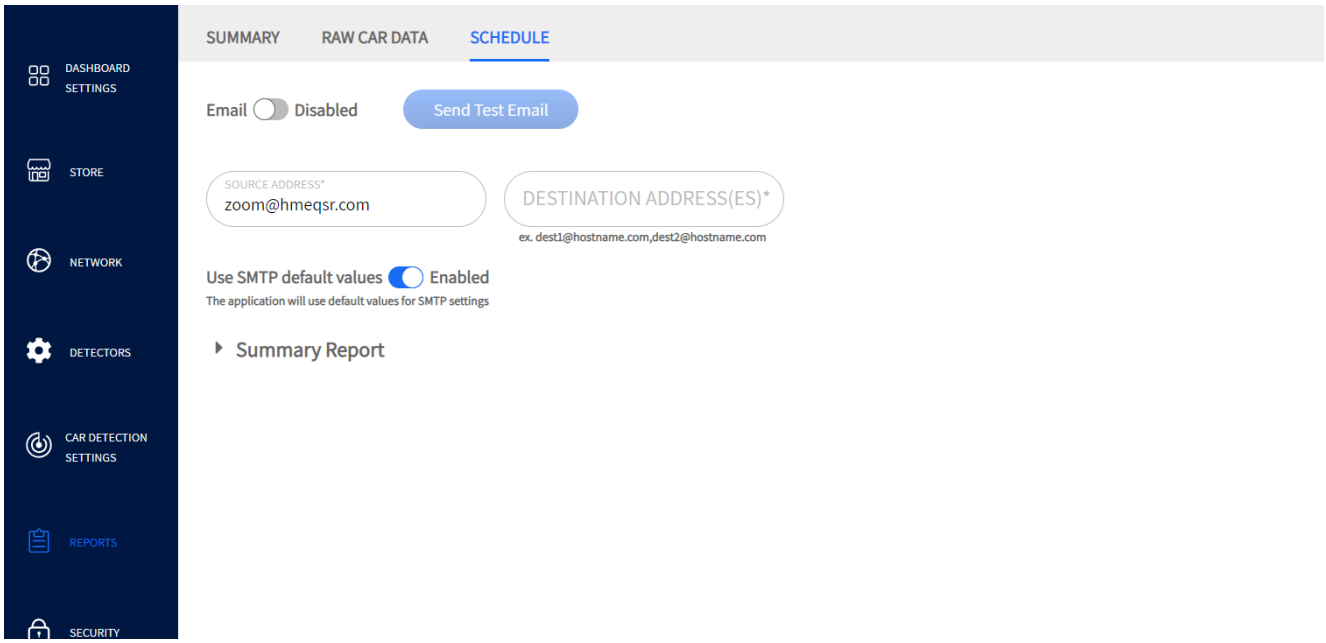


Fig. 8.3

What is this screen for? This screen allows you to schedule reports using parameters defined in the Summary Report section.

Why is it needed? You may wish to collect, analyze, and compare business data for specific time periods. This can help identify daily, weekly, monthly, or yearly trends and determine whether adjustments to staffing, operations, or business hours are needed.

Email Enabled : The Send Test Email button becomes active when Email is enabled, allowing you to verify that the addresses entered in the Destination Address field are valid.

The Source Address and Destination Address fields are populated automatically. Enter different addresses if customization is required.

Source Address: Using a valid source address helps prevent reports from being rejected or routed to a spam folder.

Destination Address: The location to which the scheduled report is sent. Multiple destination addresses can be entered in this field. Separate each address with a comma and do not include spaces.

Use SMTP default values Enabled : SMTP (Simple Mail Transfer Protocol) is enabled by default and is automatically configured for a standard SMTP server environment. Some organizations, however, may wish to use their own SMTP server configuration for security or other reasons. To use a custom SMTP configuration, disable this option and complete the additional fields that appear.

Click on "**Summary Report**" to expand this section (see Fig. 8.4). Enable the time periods for which you want reports generated and adjust the settings as needed. If the ☐ Send reports at the end of the day checkbox is unchecked for Hour, Dayparts, or Shifts, the report is sent when the time specified in the END field is reached. Select the checkbox if you prefer to receive the report at the end of the day (e.g.,

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as with the Hour option in Fig. 8.4).

Use the + icon to the right of a field to add an additional row of options (e.g., the Hour option in Fig. 8.4 is expanded to include an additional row).

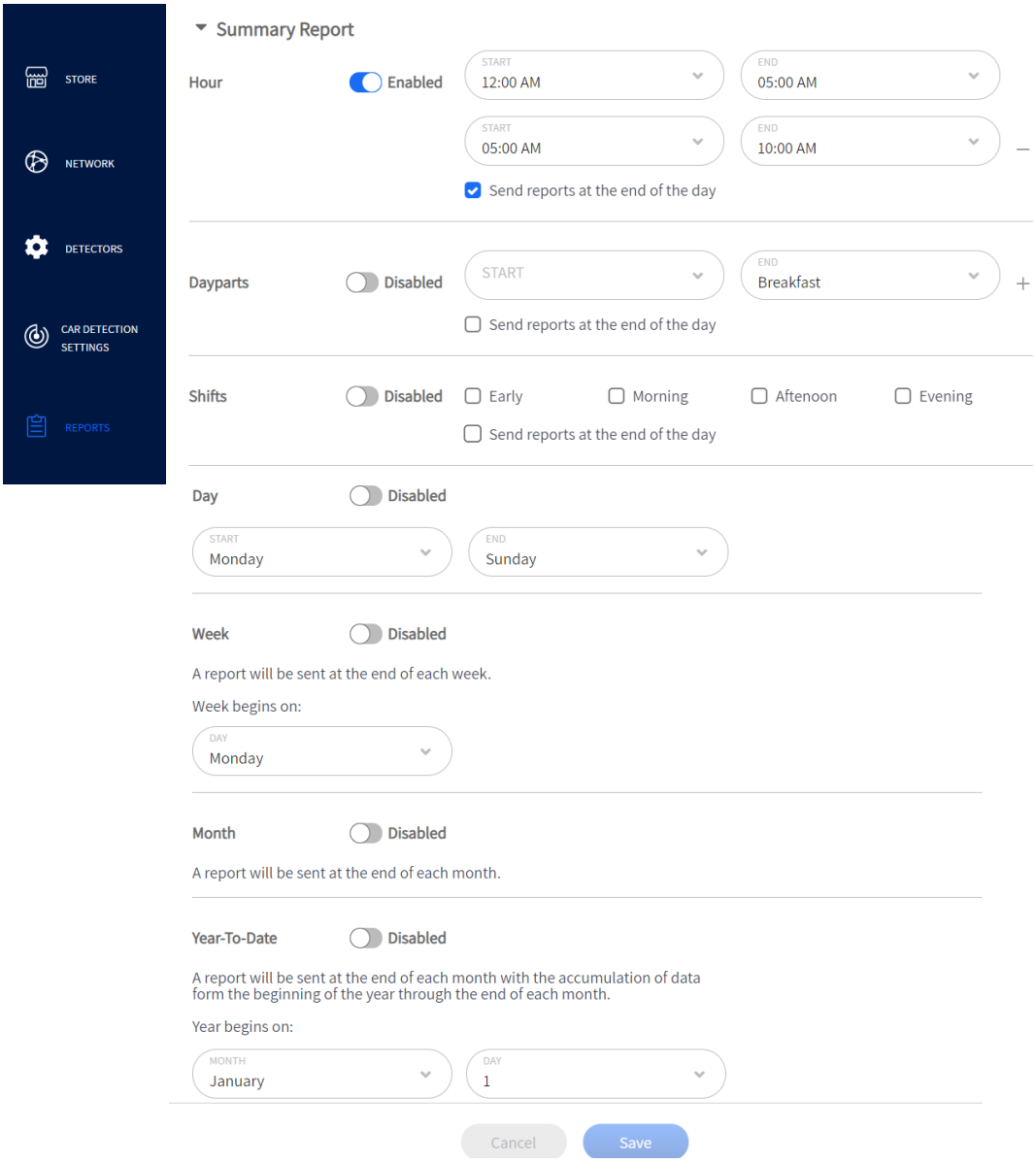


Fig. 8.4

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Only Installers and Managers can access and edit the features on this screen.

Login

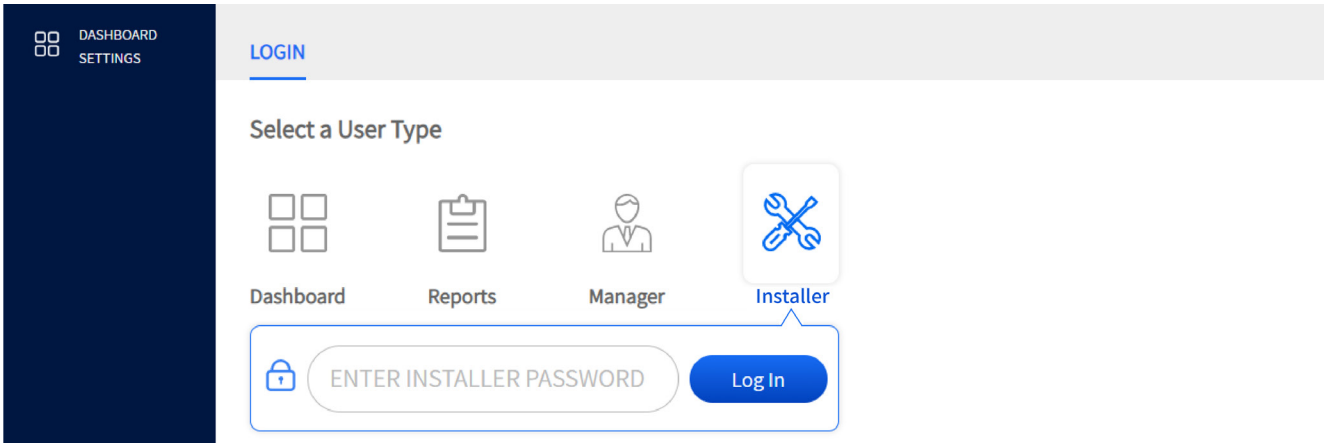


Fig. 9.1

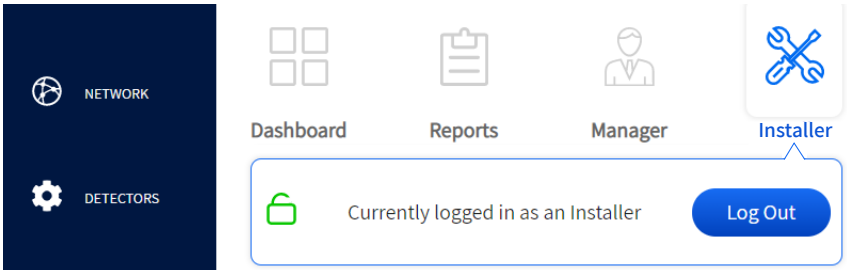


Fig. 9.2

What is this screen for? It is used to sign in and gain access to system features.

Why is it needed? Permission rights allow you to restrict access to certain features or screens on your system. This is a security measure that also helps prevent unauthorized users from changing parameters. There are four user levels, each granting permissions to specific features of the ZOOM Nitro system. These user levels are Dashboard, Report, Manager, and Installer.

Dashboard User: Access to the Dashboard settings.

Reports User: Access to the Dashboard settings and the Reports screen to generate reports.

Manager: Access to the Dashboard, Store, Report, Security, and System screens.

Installer: Access to the entire system. This is the highest level of access permitted and is required to configure the system, to perform maintenance, and to upgrade.

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Example: Fig. 9.1 shows the Installer user level selected. After logging in, the current user is displayed (Fig. 9.2). Clicking on "Log Out" logs the current user out and causes the PASSWORD screen to disappear.

Conditions: Your assigned user level determines what features are accessible on the system. The Manager creates and manages login credentials for Dashboard and Reports users. The system only allows one user to be logged in at a time. You must have a password to use this system. The PASSWORD screen only becomes available when the Installer or Manager logs in.

> ***NOTE:*** *If you need a temporary password to get started, call HME Technical Support at 1-800-848-4468. The system times out after 15 minutes of inactivity, and your temporary password is valid only for the clock hour you receive it. If you delay using this password and either of these two conditions is met, you will require another temporary password. Use the temporary password as soon as you receive it and then create a new permanent password.*
>
> *Another user can access the store via the HME CLOUD without requiring the current user to log off.*

Automatic Log Out: After eight minutes of inactivity, a dialog box appears with a three-minute countdown timer (Fig. 9.3). This dialog box prompts the user to select the option Yes, stay logged in or No, log me out. If neither option is selected, the timer continues to count down to zero, after which the system automatically logs out the current user.

> ***NOTE:*** *Any unsaved changes are lost if you are automatically logged out or choose the No, log me out option. Your settings will revert to the previously saved settings. Therefore, save your settings beforehand if you anticipate periods of inactivity.*

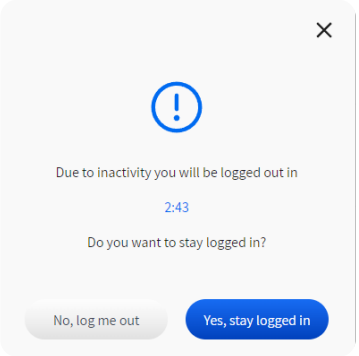


Fig. 9.3

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Password

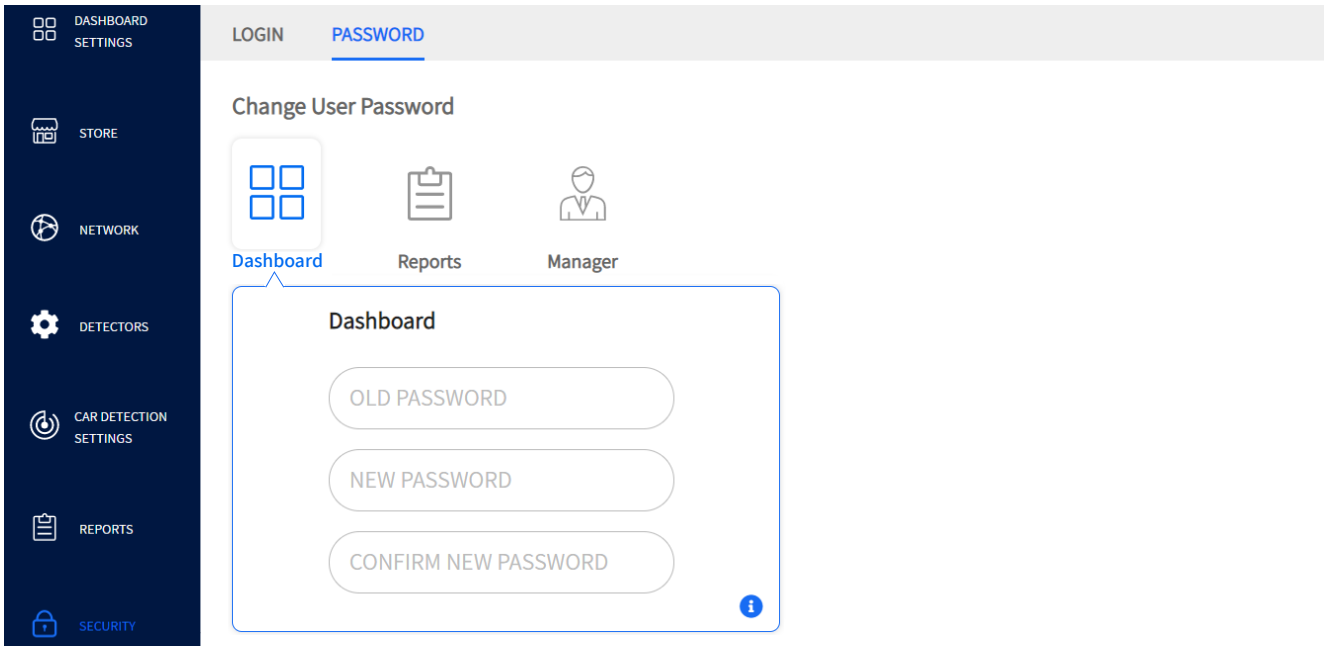


Fig. 9.4

What is this screen for? Use this screen to assign or change passwords for users of this system.

Why is it needed? Passwords help ensure that only authorized personnel can access the system and can also be used to restrict access to specific features. In Fig. 9.4, the Dashboard Password screen is displayed.

Conditions: Passwords are assigned by the Installer and then by the Manager. Passwords must contain at least **eight alphanumeric characters,** containing a combination of all of the following**:**

- **At least one uppercase letter**
- **At least one lowercase letter**
- **At least one number**

See note under LOGIN on page 63 for information on receiving a temporary password if you need it.

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Chapter 10 - System

Installer Manager

Only Installers and Managers can access and edit the features on this screen.

Status

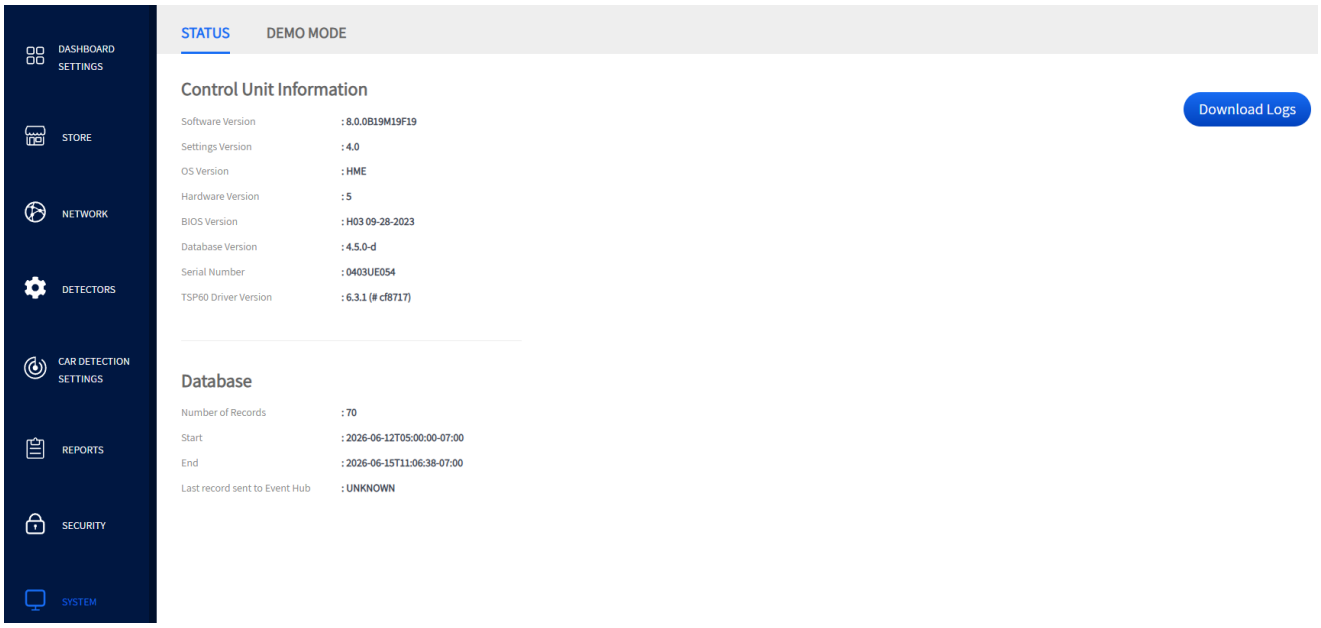


Fig. 10.1

What is this screen for? The Status screen is primarily intended for HME Technical Support. It provides information about the system, including serial numbers, database records, software versions, hardware versions, and OS versions.

Why is it needed? It is used during installation, setup, maintenance, troubleshooting, and upgrades. It provides installers and Technical Support with system information that may be required for troubleshooting or upgrading.

The **Database** section lists the current *Number of Records* stored for the period between the *Start* and *End* dates. The Start Date reflects when the system was first installed and began collecting data. The The End Date reflects the most recent stored record while the system is operating. The number of stored records is cumulative and depends on factors such as available storage space and maintenance activities.

The **Download Logs** button downloads system logs as a ZIP file and provides a history of system activity. This feature is intended primarily for troubleshooting by HME Technical Support.

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Demo Mode

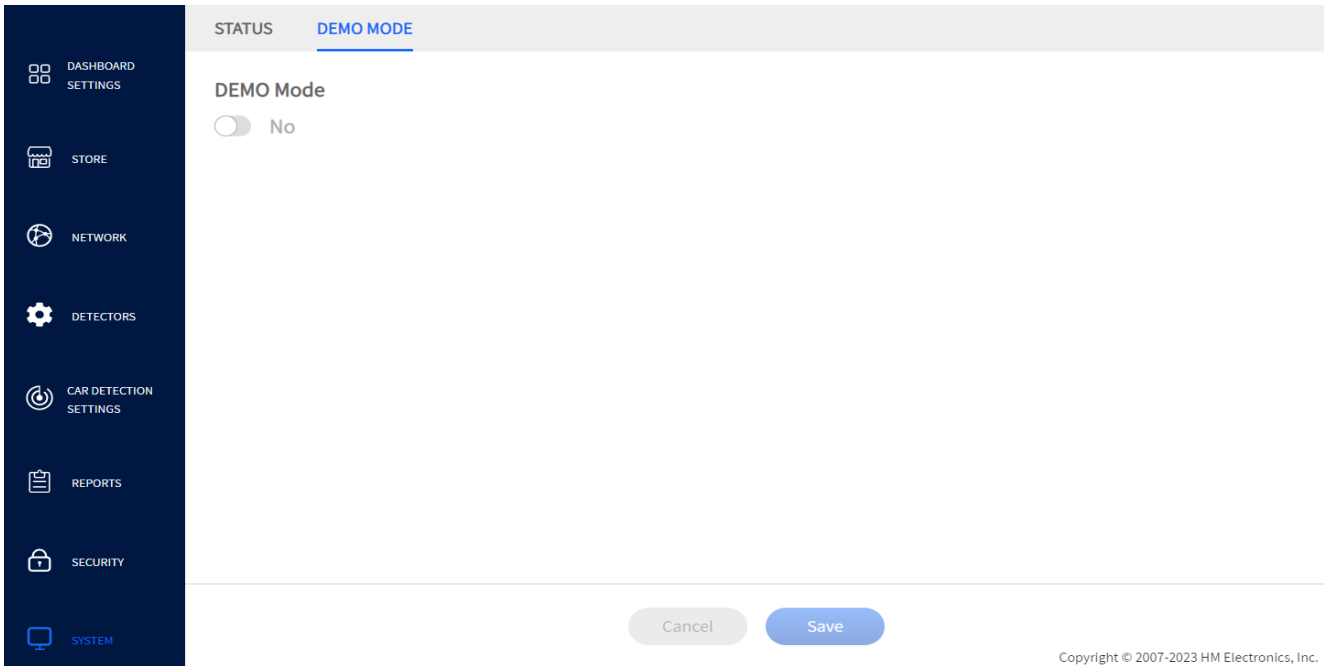


Fig. 10.2

What is this screen for? This is an installer-only feature. Demo Mode allows users to view a simulated drive-thru environment without requiring a complete physical system installation.

Why is it needed? It is primarily used in corporate labs to simulate high volumes of vehicle traffic and populate drive-thru metrics, dashboards, and reports with simulated data.

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Chapter 11 - Help

Electrical Power Outage: If the system fails to function properly after a power outage, power it off and unplug the AC power adapters from their electrical outlets. Wait a few seconds, plug the adapters back in, and then power the system on.

Additional Troubleshooting can be found in the online Installation Guide

If you cannot resolve an issue using the information provided here, contact HME Technical Support at 1-800-848-4468.

General Troubleshooting

Problem	Solution
Camera is not connected	• Refresh Camera • Refresh All Cameras • Reboot PoE • Call HME Technical Support
VPU is not online	• Verify VPU has power and is turned on. • Verify the link lights are on at the VPU • Check that the VPU IP address is correct • Call HME Technical Support
ZOOM Nitro is not online	Log in to the Zoom Nitro • Select the Network option and under the Local Network tab: o Verify the Control Unit Network is "Connected" o Verify the IP information is correct • Go to the HME CLOUD tab o Verify that it is turned ON o Verify the account email is correct o Verify that the Account Status is registered o Run Test Connection • If the test passes, reboot the CU and try again
Equipment will not power on	• Check Connections at equipment and outlet • Test the outlet using an electrical outlet tester o If the outlet passes, re-seat the cables and retry o If the outlet fails, move to a functional outlet
Cameras not showing on ZOOM Dashboard	• Verify that Zoom Nitro is online and connected to the HME CLOUD o If No, see "ZOOM Nitro not online" problem o If yes, continue • Verify VPU is online • Verify Nitro Vision AI is enabled and shows "Connected." If not: o Toggle the setting to disable. Wait 30 seconds, then toggle the setting to enable again o Click on "Refresh All Cameras"

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Problem	Solution
Nitro Vision AI not working to show car movement	• Refresh cameras • Reboot VPU/system • Call HME Technical Support
Physical obstructions to camera view (e.g., trees, bushes, etc.)	• Can the obstacles or obstructions be moved or trimmed? • Call HME Technical Support
Poor detection in a zone	• Check for occlusions blocking car • Clean camera lens • Call HME Technical Support
Cannot save zones	• Clear red polygon error • Correct polygon issue and redraw zone according to rules

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Glossary of Terms

Bottleneck: This is the choke point in a drive-thru lane, or any event/detection point that causes delays or prevents service goals from being met.

Car Count: The total number of vehicles that have passed through the drive-thru lane and departed from the last active detector or detection point.

Cars in Lane: The number of vehicles that have arrived at, or passed, the first active detection point in the drive-thru lane, but have yet to leave the last active detection point.

CSV: Comma-Separated Values, is a file format containing values separated by a delimiter, and formatted as a database table. If application software such as Microsoft Excel® is installed on your computer, the CSV will open as a spreadsheet.

CU: Control Unit, is generally followed by the model number (e.g., CU60 is CU model 60). The CU receives and processes lane event data from the TSP. The device then sends the real-time information to be displayed in a visual format on the system monitor. Also, the CU sends information to the HME CLOUD for historical reporting and comparative analysis between other stores.

Dashboard: The main display on your monitor that shows real-time drive-thru activity.

Database: This is a collection of records electronically organized and filed in a central location.

Data Export: A report feature enables a store to send report data to a local network location.

Data Section: These are square or rectangular panes on your Dashboard displaying user-defined event data or metrics for a detection point or event in a drive-thru lane. For example, see “Data Sections - Example 1” on page 19 or “Data Sections - Example 2” on page 22.

Daypart: A customizable segment of your business day that you would like to monitor. You can set up to 23 Dayparts per day. Each Daypart automatically ends when the next Daypart begins; Dayparts cannot overlap. Common Daypart examples are “breakfast,” “mid-morning,” “lunch,” “dinner,” and “late-night hours.”

Delay: The time delay applied at a detection point before a vehicle detection is processed.

Detector/Detection Point: A location, generally in a drive-thru lane, where a vehicle’s presence is detected using a loop or other detection hardware such as a camera. Detection points are typically located at the Menu Board, Cashier/Pay Window, and Service/Present Window. These detection points are dependent on other detection points in the lane to provide measured events for the lane. A detection point can also be located outside the lane. Detection points of this type are called “independent detectors” because they exist as standalone detectors. E.g., a mobile pickup or wait area.

Detection Time: The time from a vehicle’s arrival at a specific active detection point until its departure from that point.

DHCP: Dynamic Host Configuration Protocol is a network management protocol used on TCP/IP networks whereby a DHCP server dynamically assigns an IP address and other configuration parameters to each device on a network so they can communicate with other IP networks.

Disastrous Orders: This is the number of vehicles or orders that have exceeded the user-determined Disastrous Orders Goal. For example, if speed goal D has the longest time value of goals A, B, C, and D (where A = 30, B =60, C = 90, D = 120), then any vehicle or order exceeding 120 is considered a Disastrous Order. The order exceeds the longest configured goal threshold.

Discard: This is the minimum amount of time a vehicle must be present at a detection point to be treated as valid. Anything under this time is an invalid detection and is discarded. It is used to eliminate false triggers such as those caused by a passing vehicle.

DNS Server: Domain Name System Server is a directory of domain names and their corresponding

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Internet Protocol (IP) addresses. This is the Internet's equivalent of a phone book.

Drive Off: This is when a vehicle is in line to order (pre-menu) but then leaves the drive-thru lane before placing an order. This can be due to long wait times or a change of mind.

Event Time: The time associated with Lane Events, including Queue time, Lane Total, Detection Point time, and Greet time.

Extended Stack: If your system has a Vision AI camera set up to capture the Pre-Menu and Pre-Menu Stack zones in a drive-thru lane, Extended Stack uses another dedicated camera to capture vehicles further back in the queue before they enter the Pre-Menu Stack camera's field of view.

Gateway: A device (usually a router) that connects one or more computers on a network to other networks.

Geofence: A virtual geographical boundary or perimeter defined by GPS or RFID technology, that enables software to trigger a response when a mobile device enters or leaves this boundary.

Goals: Ideal service times that you can set as objectives for measurement of efficiency in drive-thru service. For example, you can set goals for Service, Menu, Greet, and Lane Totals.

Greet Time: The time from a vehicle's arrival at the Menu Board detection point until the order taker begins speaking to the customer.

HME CLOUD: This is an optional service offered by HME that allows your enterprise to correlate data from multiple locations. As a computing term, the cloud refers to servers that are accessed over the Internet and the software and databases that run on those servers.

Independent Detector: A standalone detector that is not part of the general drive-thru lane configuration. They are generally used for mobile orders and curbside pickups.

IP Address: Internet Protocol Address is a unique computer reference that some electronic devices (e.g., computers or routers) use to identify and communicate with each other on a computer network.

Lane and lane type: A lane is a drive-thru service lane monitored by the system. Lane types are generally one of the following:

- Single Lane: one entry point detector and one exit point detector.
- Y Lane/Mobile Lane: two entry point detectors and one exit point detector.

Lane Event: Any drive-thru event or series of events in which time is measured at active detection points. A Lane Event can be measured by lane, Queue time, Lane Total, Detection point time, and Greet time.

Lane Total: The time from a vehicle's arrival at or departure from the first active Detection Point, until the vehicle's arrival at or departure from the last active Detection Point.

Leaderboard: This is a visual representation of your store's specified data and measured events displayed against the same data points of other stores in your area.

MAC Address: (Media Access Control Address) is a unique identifier for a device on a network. It's a 12-digit alphanumeric attribute that is usually found on the device network interface card (NIC). It helps identify devices on a network and enables network communications.

Menu Stack: This is a Vision AI feature. It is the default label used for the drive-thru lane graphic displayed on the dashboard. It combines the "Pre-Menu" and "Pre-Menu Stack" labels into a single label for a simplified layout. Technically, it is the sum of the Pre-Menu Stack, Pre-Menu, and Menu Queue (Menu Queue is the space between the Pre-Menu and Menu).

Mobile Pickup: A designated or reserved parking space or stall in the customer parking lot for mobile orders placed using a smart device. Mobile Pickup spaces use independent detectors (not dependent on other detectors).

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NTP: Network Time Protocol is a networking standard for clock synchronization between computer systems; NTP is intended to synchronize all participating systems within milliseconds of Coordinated Universal Time (UTC).

Nitro Vision AI: Is a newer technology using cameras that allows vehicles to be detected, identified and tracked through a drive-thru environment or designated spaces used for pull-forward, curbside or mobile pickup orders.

PDF: Portable Document Format is a file format designed to present documents consistently across multiple devices and platforms.

Pick-Up Zones: These are zones supported by Nitro Vision AI. They can be either mobile spaces or pull-forward spaces or a combination of both. The system can support a maximum of eight mobile spaces (four per camera) and two pull-forward spaces.

POS: Point of Sale is referenced in this guide as a system that generates customer transactions. ZOOM Nitro can integrate with some industry-standard POS systems.

Pre-Menu: A Nitro Vision AI term, this is a detection point where a car next in line is waiting to order. It is located just before reaching the menu ordering point. See Menu Stack.

Pre-Menu Stack: A Nitro Vision AI term, this is an area behind the pre-menu where customers queue but can potentially exit the area and drive off if they decide not to wait. See Menu Stack.

Pullin: A vehicle that enters the drive-thru lane after the menu detection point without being detected at the menu detection point.

Pullout: A vehicle is detected entering the drive-thru lane, but is not detected at the last detection point.

Pull-Forward: This term refers to the space offset from the drive-thru lane with a conditional detector point. It is used to enhance lane flow and reduce congestion. It only tracks a vehicle from a previous detector point if it reaches this detection point within a set amount of time (selected from the Pull-Forward Detection Delay menu). This detector can either be enabled or disabled for use in Lane Total calculations. A Pull-Forward window is a window on the building rather than a space separate from the lane. The Pull-Forward window detection point is physically located after the last window in the lane. Pull-Forward windows are not currently supported by Nitro Vision AI.

Queue Size: This is the number of vehicles that will fit between two detection points (beginning from the front of a vehicle on one detector and ending at the rear of a vehicle on the next detector). An estimated spacing of 20 ft (6.1 m) per vehicle is used. For example, if the distance between two detection points is sixty feet, then your queue size for this section is three vehicles.

Queue Time: The time from a vehicle's departure from any active detection point until its arrival at the next active detection point.

QSR: Quick Service Restaurant, an industry-standard term used in the hospitality industry for restaurants specializing in the quick preparation and service of food.

Raw Car Data: Vehicle times automatically stored in the system every time a vehicle leaves the last active detection point. Raw Car Data is collected over a period of time and is used by the system to compile reports.

Registration Key: This is unique identifying key generated when a new store is initiated by the sales department. It allows HME products to be linked to a specific store ensuring easier installations with reduced errors.

Report: A generated document that compiles a specific set of data or measured events for a specified period of time. It can be generated in formats available for that report type (e.g., PDF or CSV).

Service Goals: A time limit that a vehicle should not exceed for a given Lane Event. Service goals can be applied to any Lane Event, such as the time that a vehicle spends at a detection point.

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Subnet Mask: Splits the network into a series of subgroups or subnets, to speed up the delivery of data by the routers.

Shift: Scheduled work hours for your store's crews. Up to eight shifts can be set in a 24-hour period representing a day between opening and closing times. Shifts can overlap. For example, Shift 1 could be set from 6 AM to 2 PM, while Shift 2 could be set from 11 AM to 7 PM. Also, a shift can go past midnight and overlap two days.

SMTP: Simple Mail Transfer Protocol is a communication protocol for electronic mail transmission. For this protocol, port 25 is the traditional default port used to communicate email across the Internet. But other ports such as port 587 are also used as SMTP ports.

Statistical Summary: A dashboard pane that displays the selected summary data for the current Hour, Daypart and Day periods.

Store Hours: Your store's opening and closing times for each day of the week. Store hours for any two days cannot overlap. There can be only one store opening time for each day of the week. Store hours can span midnight. For 24-hour stores, the store open and close times are the same.

System: Refers to all the individual components (such as the CU, Software, TSP, detectors, cables, and monitor, etc.) connected and working as a whole, unless otherwise specified.

Time Server: A server computer that reads the actual time from a reference clock and distributes the time to its clients via a computer network. The Time Server may be set to a local network time server or an Internet time server.

Trailing Hour/Half-hour: This is a continuous rolling hour, or half-hour, of the last 60/30 minutes that updates every minute. As opposed to Hour, or Half-hour, which is based on the clock hour/half-hour time (updates on the hour, or half-hour marks).

TSP: The Timer Signal Processor (TSP, also called a timer) is generally followed by the model number (e.g., TSP60 is model 60). It receives and sorts Lane Event detection signals from the peripheral detectors and sends the information to the CU for processing.

UNC: Universal Naming Convention, is a standard for identifying servers, printers and other resources in a network.

VPU: Video Processing Unit is a specialized electronic device used for processing image and graphical data intended for output to a display device.

Wait Area: A designated pullover area where vehicles can wait for orders to be fulfilled.

Web Server Port: The network port used by ZOOM Nitro to connect to the TSP via the network.

ZOOM Nitro: ZOOM® is a registered trademark brand name owned by HME. ZOOM Nitro is a specialty drive-thru timing system primarily used in the hospitality industry, including QSRs and other stores with drive-thru lane environments.

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Chapter 12 - Specifications

CU60	
Dimensions	4.33” × 4.57” × 1.93” (110 × 116 × 49 mm)
Power Supply	12 V, 60 W, AC Adapter, US Power Cord
Chipset	Intel® Celeron® N2930 1.83 GHz, 2.16 GHz Burst Quad-core SoC
Memory	4 GB total memory, low-voltage 1.35 V required
Storage	128 GB mSATA solid-state storage
LAN	Realtek RTL8119I GbE
Front Panel	Power button, Power/HDD LED, 1 × USB 3.0 port, 1 × USB 2.0 port, RS232/422/485 serial port
Rear Panel	2 × USB 2.0 ports, 2 × HDMI ports, 2 × RJ45 ports, 9–24 VDC input jack
Compliance	CE, FCC, RoHS, ErP Ready
Operating Temperature	0 – 35 ℃ (32 to 95 ℉)
Storage Temperature	-20 – 85 ℃ (–4 to 185 ℉)

TSP60	
Dimensions	8.8” × 5.95” × 2.01” (224 × 151 × 51 mm)
Power Supply	Powered by the CU60 via a USB cable, 5 VDC, max current draw < 300 mA
Weight	13.5 oz (383 g)
Ports	1 x USB type-B port
Miscellaneous	2 Greet signals, 4 External detectors, 4 Onboard detectors

NOTE: *For specifications for other components, such as the monitor or cables, refer to the OEM (Original Equipment Manufacturer) documentation. Nitro Vision AI component specifications are available in the standalone Nitro Vision AI Datasheet on the HME website.*

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Chapter 13 - HME CLOUD

HME CLOUD provides several features that are not available through the ZOOM Nitro Dashboard. This section covers commonly used HME CLOUD features.

Snapshots

Snapshots save system settings for reuse, transfer to other devices, or backup purposes. They can also be used to restore settings if configuration changes are made accidentally.

To Create a Snapshot

1. When you first log in to HME CLOUD, the WELCOME page is displayed.

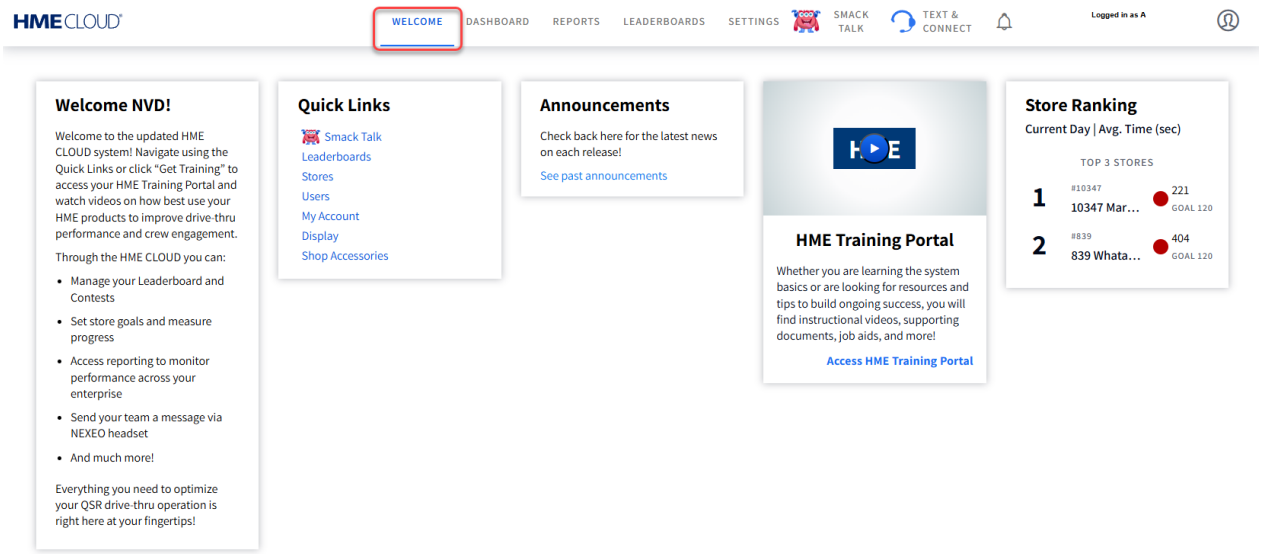


Fig. 13.1

2. Tap or click SETTINGS.

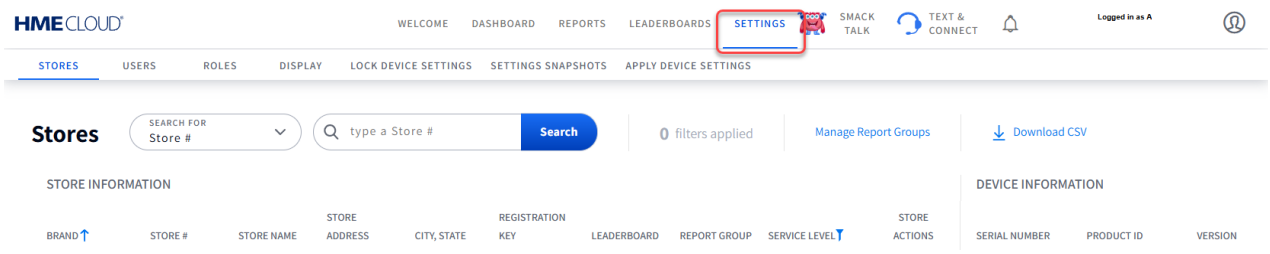


Fig. 13.2

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3. On the lower menu bar, tap or click SETTINGS SNAPSHOTS, and then tap or click Create Snapshot.

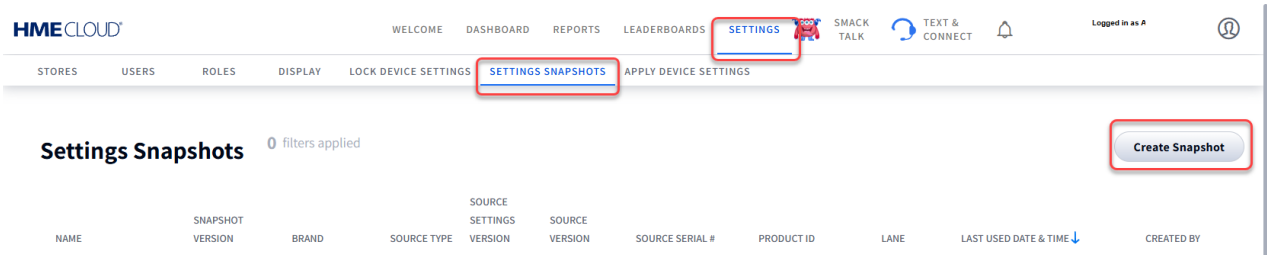


Fig. 13.3

4. The Create Snapshot dialog box appears. Complete the fields. A prompt appears if any required fields are incomplete or contain invalid information. Tap or click Create Snapshot in the lower right to save your snapshot.
5. The new snapshot appears on the Settings Snapshot page shown behind the dialog box.

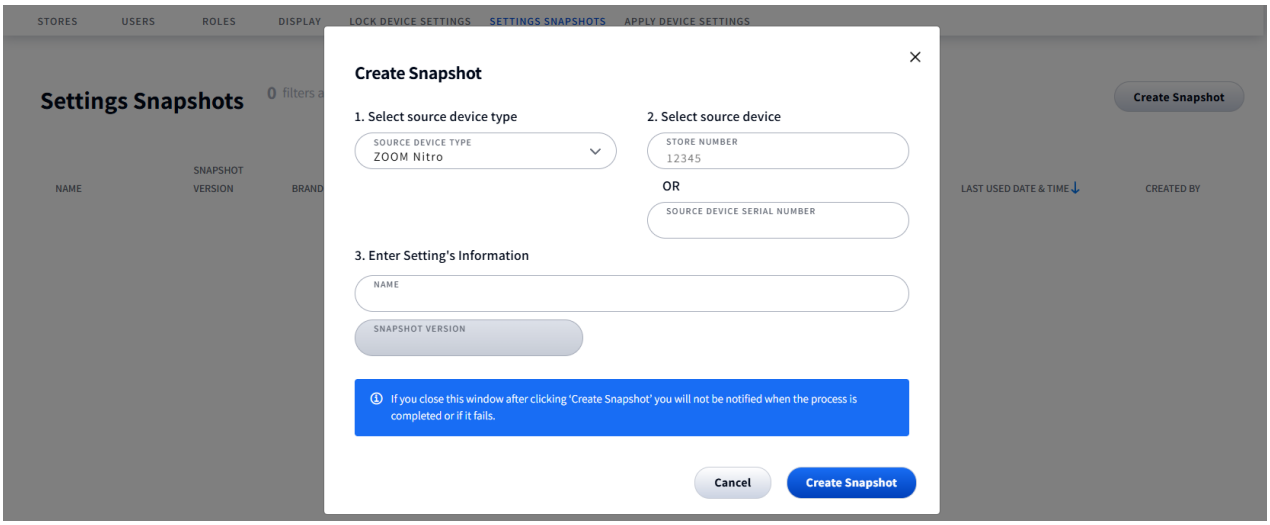


Fig. 13.4

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To Apply a Snapshot

1. From the SETTINGS page, select DEVICE SETTINGS from the lower menu bar.

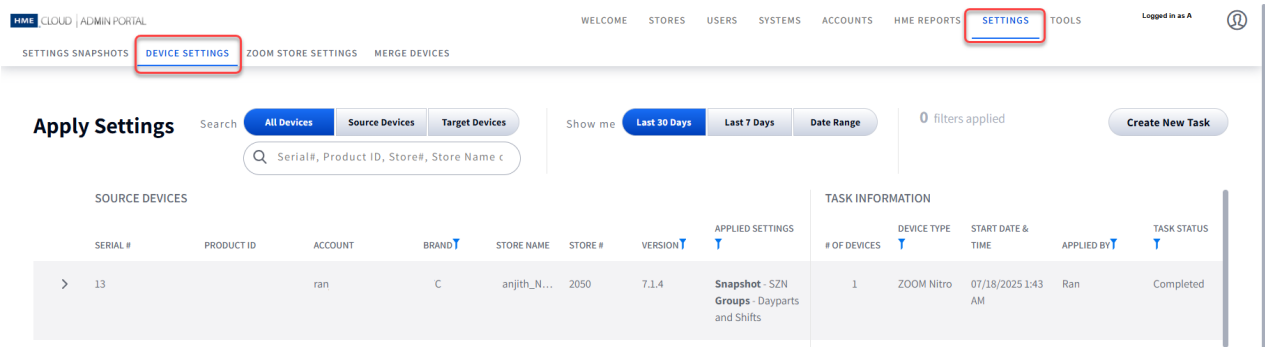


Fig. 13.5

2. Tap or click Create New Task on the right side of the page.

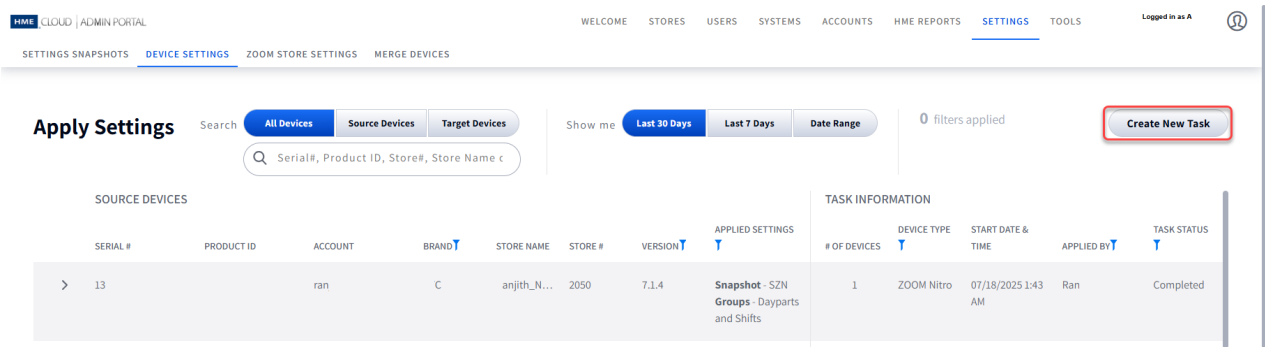


Fig. 13.6

3. The Create New Task page opens. Select your desired DEVICE TYPE (ZOOM Nitro in this example).

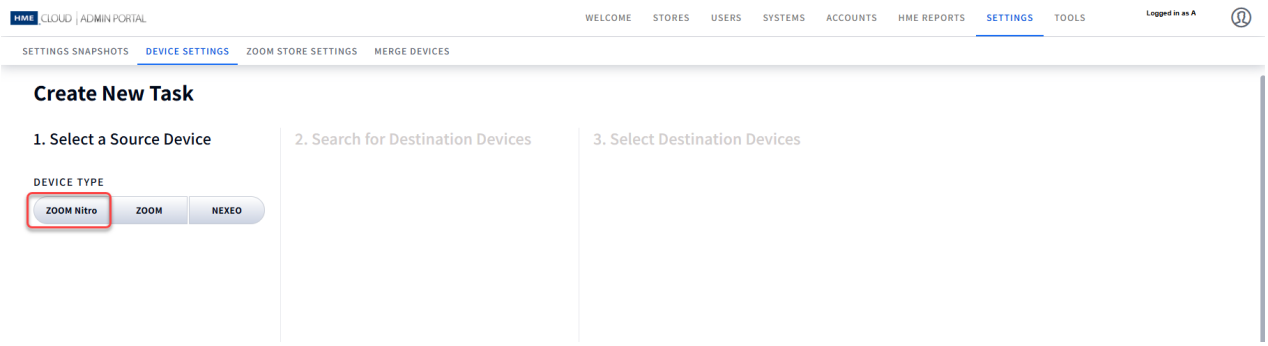


Fig. 13.7

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4. Additional options appear. Under SELECT BY choose an option (Settings Snapshot in this example).

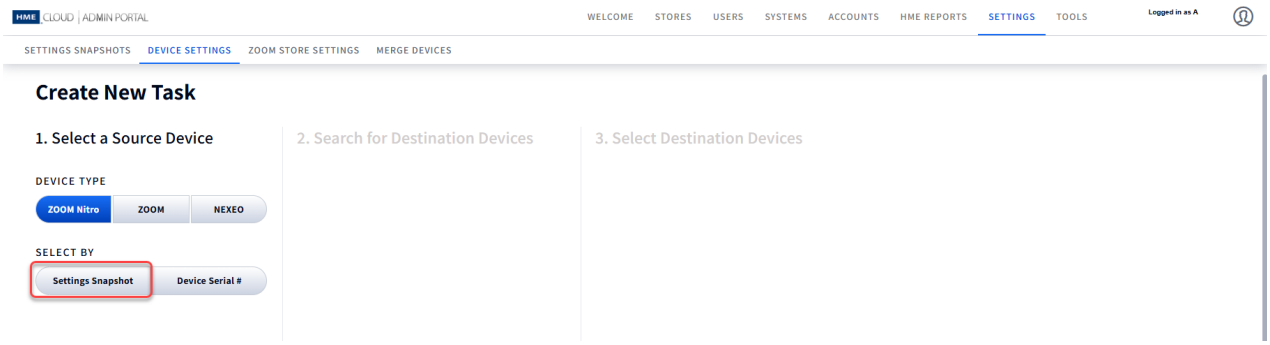


Fig. 13.8

5. If you know the snapshot filename, you can enter it directly into the SNAPSHOT field (Fig. 13.9). Alternatively, tap or click **Select a Snapshot** below the field to display a list of available snapshots (Fig. 13.9).

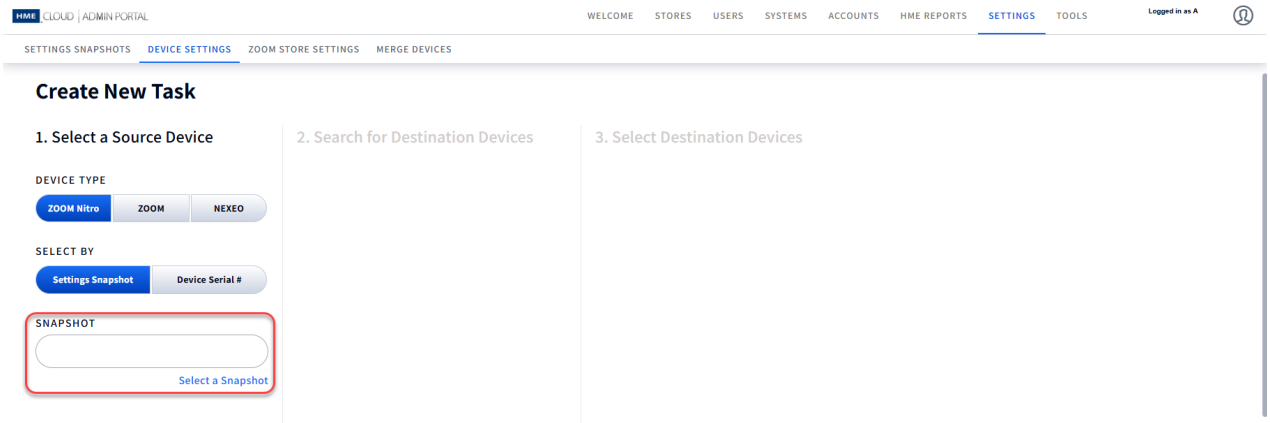


Fig. 13.9

6. Tap or click Select at the end of the row for the Snapshot you wish to apply.

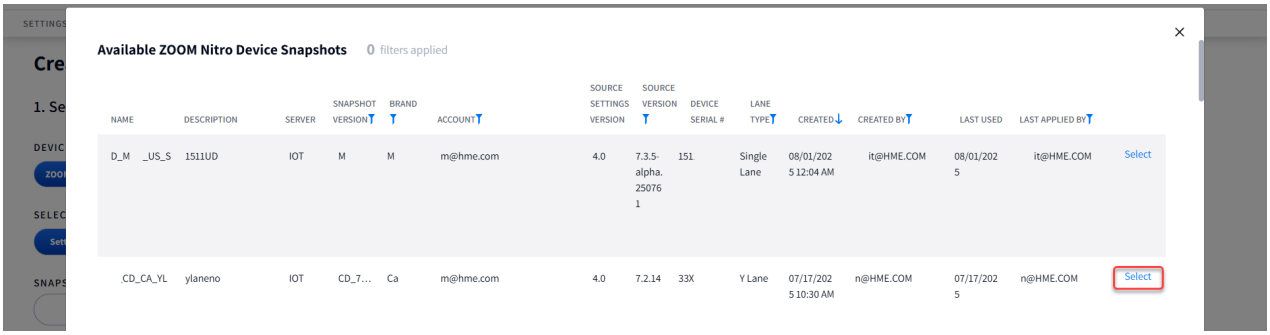


Fig. 13.10

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7. The SNAPSHOT field is populated with the selected snapshot. The green checkmark indicates the selection is valid. Next, choose an option under CHOOSE DEVICE SETTINGS TO APPLY.
   - All Settings: Applies all available settings from the selected snapshot.
   - Groups of Settings: Allows you to select individual settings from the list. (The Groups of Settings option is selected in this example.)

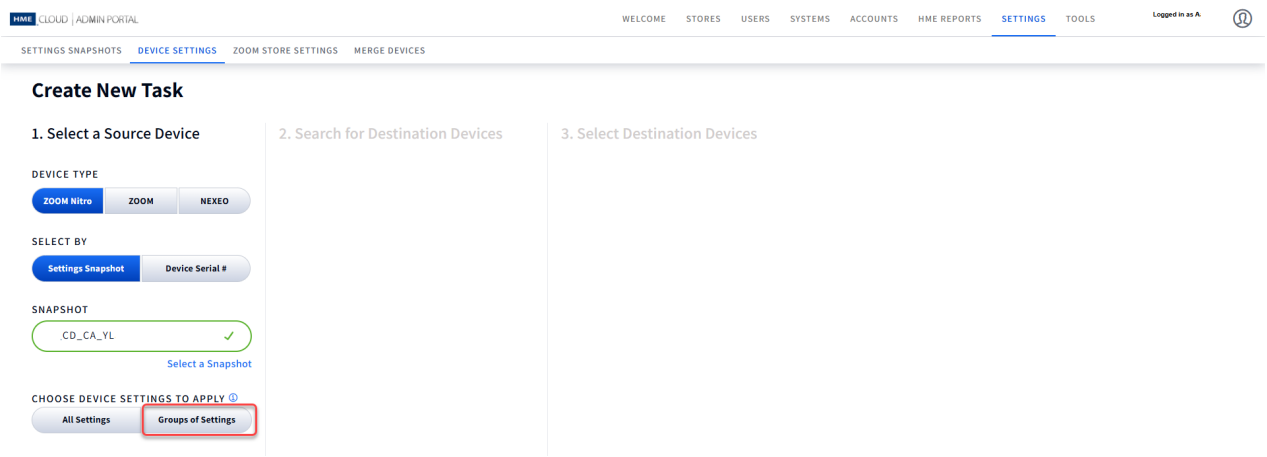


Fig. 13.11

8. The available settings are displayed. Select the checkboxes for the settings you want to apply. (Store Hours is selected in this example.)

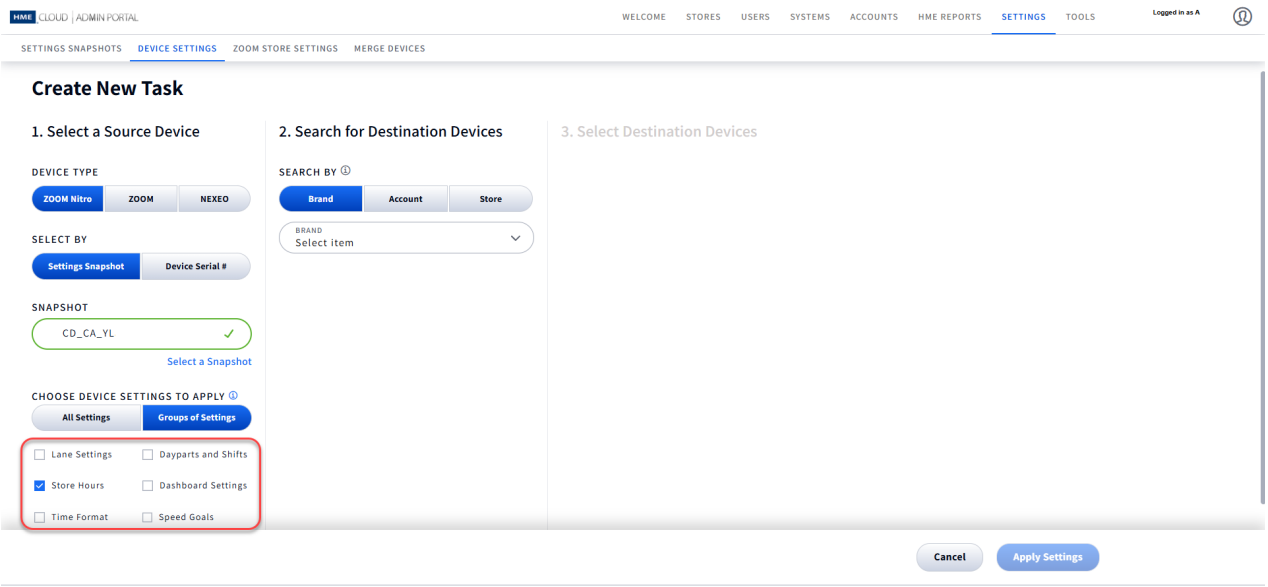


Fig. 13.12

9. All the listed settings in Fig. 13.12 are configured through the ZOOM Nitro dashboard. Here is a brief description of each of the settings.

   Lane Settings: Configures the lane layout and what is displayed on your dashboard. This feature is found under the Dashboard Settings and Car Detection Settings menu options.

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Store Hours: Configures store opening and closing times. This feature is found under the Store menu option - Hours tab.

Time Format: Configures the time zone, 12- or 24-hour clock format, and minutes or seconds display format. This feature is found under the Store menu option - Date/Time tab.

Dayparts and Shifts: Sets the daypart and shift periods. Dayparts divide the business day into smaller segments, while Shifts define employee work periods. This feature is found under the Store menu option - Dayparts/Shifts tab.

Dashboard Settings: Configures the dashboard layout and displayed data sections. Your lane settings and data sections are configured here. This feature is found under the Dashboard Settings menu option.

Speed Goals: Sets time goals using adjustable thresholds. Enables performance monitoring using configurable time thresholds. It uses color codes for goals underperforming, on target, and exceeding expectations. This feature is found under the Store menu option – Speed Goals tab.

These settings are described in detail in their respective chapters of this guide.

10. Next, select the destination device or devices to which the settings will be applied. This is done in Column 2. Select an option from the SEARCH BY drop-down list (Brand is selected in this example).

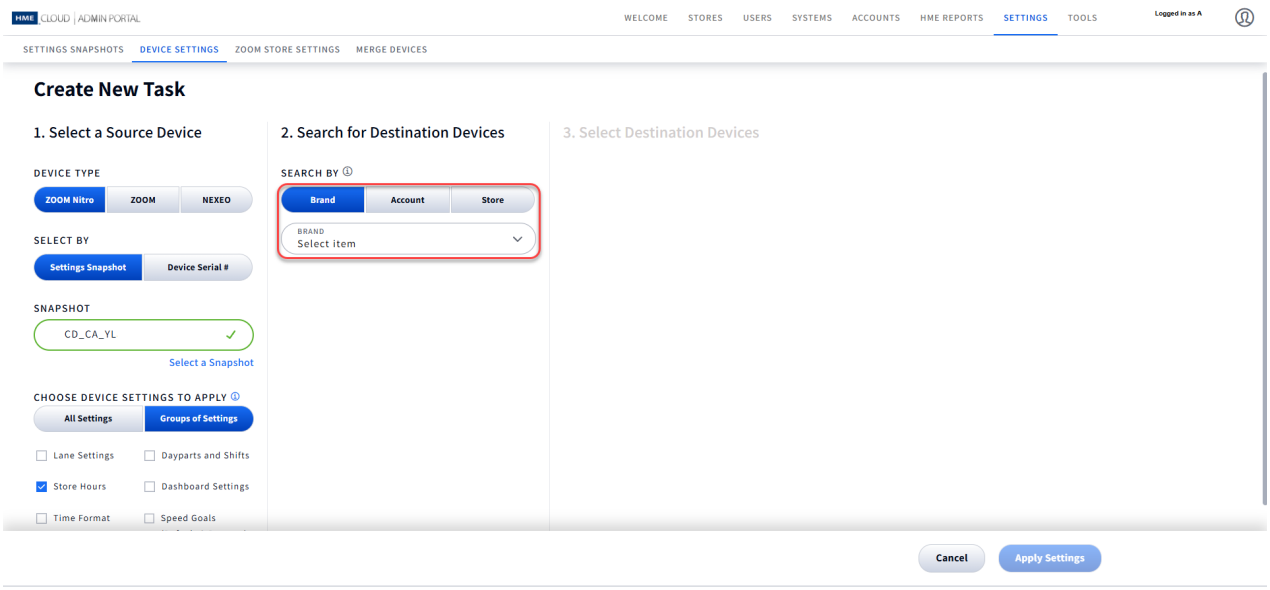


Fig. 13.13

11. After the SEARCH BY fields are populated (Ca for Brand and US for Country in this example; see Fig. 13.14), Column 3 appears to the right and lists the available destination devices. Select the checkboxes for the devices to which you want to apply the settings.
12. After at least one device is selected, Apply Settings becomes active in the lower-right corner. Tap or click Apply Settings to apply the selected configuration.

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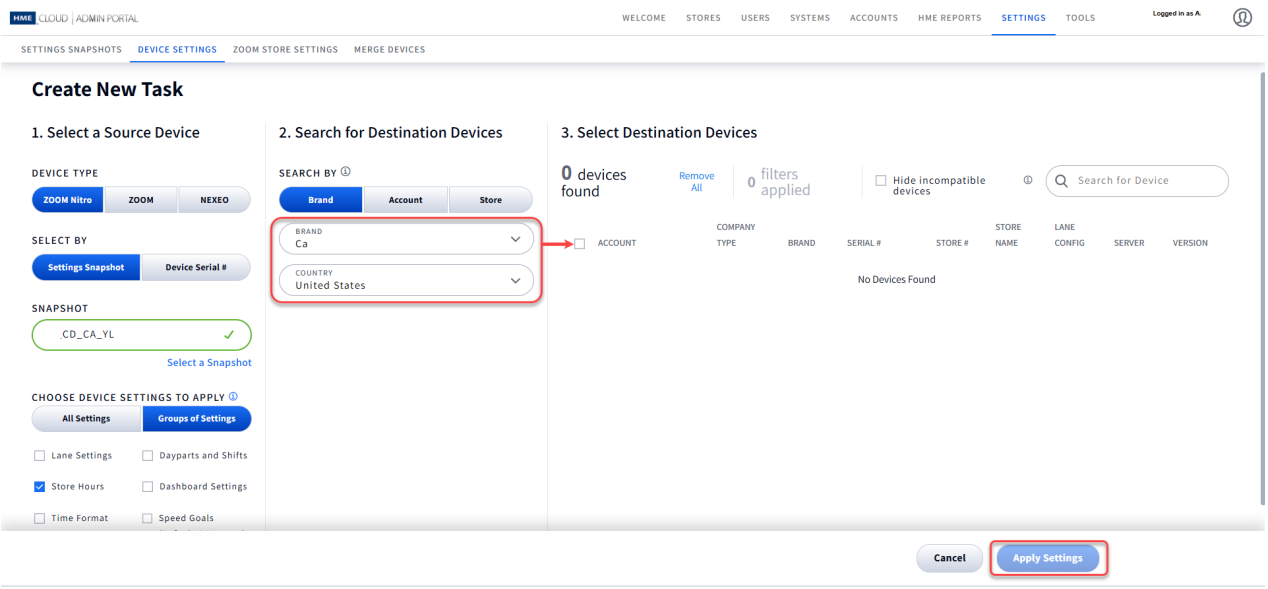


Fig. 13.14

Lock Device Settings

Locking settings is a new feature that allows the administrator/account owner the ability to lock settings on ZOOM Nitro for any or all of your stores via the HME CLOUD.

1. Once you log in to HME CLOUD, click/tap on the SETTINGS tab.
2. Click/tap on the LOCK DEVICE SETTINGS tab.
3. The blue and red buttons allow you to lock/unlock all stores with one click. But to be more selective and only lock certain stores, check the box to the left of any listed store to lock it. The SETTINGS STATUS field will change from unlocked to locked. Uncheck the box to unlock.
4. Save your selection.

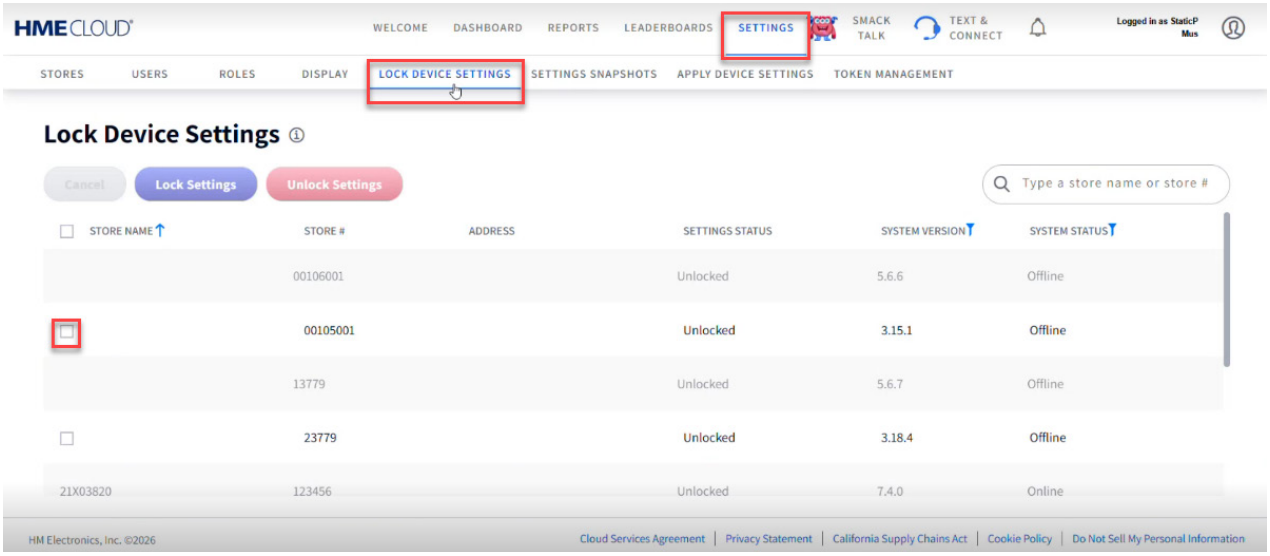


Fig. 13.15

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When this feature is applied to a store, the settings that are locked are:

- Dashboard Settings - Locked
- Store
  - Dayparts/Shifts - Locked
  - Speed goals - Locked
  - Car Count goals - Locked
- Detectors
  - TSP - Locked
  - Camera - Locked
- Security
  - Password - Locked

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