

Feature Reference

Date: September 6, 2016









Auxiliary Forecourt Point of Sale

Using this Feature Reference

This Feature Reference provides detailed information on how to configure communications and use the Auxiliary Forecourt Point of Sale feature on the Commander Site Controller.

The Feature Reference contains the following subsections:

- Overview This section contains a brief description, requirements and the supported hardware configurations for the Auxiliary Forecourt POS.
- Configuring This section contains information on how to configure Auxiliary Forecourt POS on the Site Controller.
- Using This section describes usage of Auxiliary Forecourt POS.
- Reporting This section contains reporting information available for the Auxiliary Forecourt POS on the Site Controller.
- Troubleshooting This section provides basic troubleshooting steps.

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Revision History

Date	Description
04/13/2016	Initial Documentation Release
08/16/2016	Added setup note and troubleshooting tip regarding Fueling Position Pre-Paid Only flag - Not Checked.
	Added setup note and troubleshooting tip regarding PIC devices require null-modem cable for communications.
09/06/2016	Updated format.

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Auxiliary Forecourt Point of Sale

Overview

The Auxiliary Forecourt Point of Sale function offers fuel services from the Commander Site Controller for 3rd-party alternate payment terminals.

This feature document describes Verifone's implementation of Auxiliary Forecourt POS options within the Commander Site Controller. It serves as an Overview and a Configuration, Usage and Reporting Guide for the Auxiliary Forecourt Payment Systems feature.

Supported Verifone Solutions

- Commander Site Controller/RubyCi with Topaz
- Commander Site Controller/RubyCi with Ruby2



Auxiliary Forecourt Point of Sale implementation requires Commander Site Controller with Base 40+ production software.

Supported 3rd-Party Devices

- OPW's PetroVend
- FMI's Payment Island Cashier (PIC) requires a crossover or null modem cable
- Wetstock

Supported Communication Protocols

- PAM protocol over RS-232 connections for PIC and Wetstock devices.
- PetroNet protocol over RS-485 connections for PetroVend devices.



All communications to the fueling islands are transmitted over serial connections.

Configuring

Auxiliary Forecourt POS configuration to implement functionality is similar for all supported devices, regardless of the hardware manufacturer.

All system configuration is done through the Commander Configuration Client.

1. Select Tools >> Managed Modules.

Security	Initial Setup	Store Operations	Promos and Discounts	Forecourt	Devices	Payment Controller	Reporting	Tools	Help	Log Out	
								Rule Man:	ager		
								Managed I	Modules		
								Refresh C	Configurat	tion	
								Ping Utility	У		

2. Select Auxiliary Forecourt from the Select Module drop-down menu.

Security In	itial Setup Store Operations	Promos and Discounts	Forecourt	Devices	Payment Controller	Reporting	Tools	Help	Log Out
Managed	Modules								
Current Con	figuration Pending Configuration	System Resources							
Select Module	Audiary Forecourt Car Wash DCR Driver DVR Configuration Fuel Driver Fuel RFID Configuration GSM Kitchen Printer Service Money Order Feature Speedpass TANK Tank Level Sensor								

The Commander Site Controller offers four channels, with each channel supporting up to four devices over four different serial ports.

The following table provides nominal serial configurations settings:

	AUXPOS & Wetstock	PetroVend
Baud Rate	4800	9600
Stop Bits	1	1
Data Bits	7	7
Parity Bits	odd	even

Some older PetroVend devices use a baud rate of 1200 bps. The servicer should obtain and confirm correct serial device configuration settings from the Auxiliary POS device installer.

3. Select the Auxiliary Forecourt Channel to configure and click [Advanced Settings].

Managed Modules	;			
Current Configuration	Pending C	onfiguration	System	n Resources
Select Module Auxiliary For	recourt	•		
Auxiliary Forecourt	Channel 1	Advanced S	ettings	
Auxiliary Forecourt	Channel 2	Advanced S	ettings	
Auxiliary Forecourt	Channel 3	Advanced S	ettings	
Auxiliary Forecourt	Channel 4	Advanced S	ettings	

4. Click the Enable checkbox to activate the Auxiliary Forecourt Channel.

Auxiliary Forec	ourt Channel 1 Configuration
Enable	
Device Type	
Serial Port Name	•
Baud Rate	9600
Stop Bits	•
Data Bits	8
Parity Bit	None
Fueling Positions	Advanced Settings
Emulated PCTs	Advanced Settings
	Save Cancel

- 5. Select the Device Type:
 - AUXPOS: for devices using PAM protocol, does not include Pump Status Values. (Choose AUXPOS for FMI PIC devices.)
 - PetroVend: for proprietary PetroNet Protocol.
 - Wet Stock: for devices using PAM protocol, includes Pump Status Values.

Auxiliary Forec	ourt Channel 1 Configuration
Enable	
Device Type	-
Serial Port Name	AUXPOS
Baud Rate	PetroVend
Stop Bits	Wet Stock
Data Bits	8 💌
Parity Bit	None 💌
Fueling Positions	Advanced Settings
Emulated PCTs	Advanced Settings
	Save Cancel

6. Select the Serial Port Name.

Commander Site Controllers provides 16 available port connections, and is capable of being expanded as needed.

RubyCi controllers have a limitation of eight available port connections (Port A1-1 through Port A1-8).





Commander Site Controller serial ports on rear panel



RubyCi serial ports on rear panel

7. Select the appropriate Baud Rate.

Enable Device Type Serial Port Name Baud Rate Stop Bits Data Bits Parity Bit Emulated PCTs 19200 15 19200 1	Auxiliary Forec	ourt Channel 1 Configuration
Device Type Serial Port Name Baud Rate Stop Bits Data Bits Parity Bit Emulated PCTs Stop Contemporations Emulated PCTs Stop Contemporation Stop Bits 100 300 V 1200 14800 15 18200 15 18200 15 18200 15	Enable	
Serial Port Name Baud Rate Stop Bits Data Bits Parity Bit Fueling Positions Emulated PCTs 19200 115 19200 15 19 19 10 10 10 10 10 10 10 10 10 10 10 10 10	Device Type	•
Baud Rate 3600 Stop Bits 100 Data Bits 1200 Parity Bit 2400 Fueling Positions 3600 15 Emulated PCTs 13200 15 67600 15 11500	Serial Port Name	•
Stop Bits 100 Data Bits 1200 Parity Bit 2400 Fueling Positions 9600 15 Emulated PCTs 19200 15 67600 15 115200	Baud Rate	9600
Data Bits 1200 Parity Bit 4800 Fueling Positions 9600 15 Emulated PCTs 19200 15 38400 67600 115200	Stop Bits	100 300
Parity Bit 2400 4800 Fueling Positions 9600 15 Emulated PCTs 19200 15 38400 67600 115200	Data Bits	1200
Fueling Positions + <u>9600</u> Emulated PCTs + 19200 38400 57600 116200	Parity Bit	2400 4800
Emulated PCTs 19200 Is 38400 57600 115200	Fueling Positions	9600 ¹⁵
57600 115200	Emulated PCTs	19200 Is 38400
115200		57600
		115200

8. Select the number of Stop Bits.

Auxiliary Forec	ourt Channel 1 Configuration
Enable	
Device Type	•
Serial Port Name	¥
Baud Rate	9600
Stop Bits	1
Data Bits	2
Parity Bit	2
Fueling Positions	1.5 Advanced Dettings
Emulated PCTs	Advanced Settings
	Save Cancel

9. Select the number of Data Bits.

Auxiliary Foreco	ourt Channel 1 Configuration
Enable	
Device Type	•
Serial Port Name	
Baud Rate	9600
Stop Bits	1
Data Bits	3
Parity Bit	5
Fueling Positions	б 7 S
Emulated PCTs	8 s
	Save Cancel

10. Select the Parity Bit setting.

Auxiliary Foreco	ourt Channel 1 Configuration
Enable	
Device Type	•
Serial Port Name	•
Baud Rate	9600
Stop Bits	1
Data Bits	8
Parity Bit	None
Fueling Positions	Even IS
Emulated PCTs	Mark ps
	None
	Odd
	Space

11. Click Fueling Positions [Advanced Settings]

Auxiliary Forecourt Channel 1 Configuration	
Enable	
Device Type	•
Serial Port Name	•
Baud Rate	9600
Stop Bits	•
Data Bits	8
Parity Bit	None
Fueling Positions	Advanced Settings
Emulated PCTs	Advanced Settings
	Save Cancel

12. Click to select the Fueling Positions to be included.



All fueling positions to be included for Auxiliary Forecourt payment access must be selected.



Review all fueling positions to be included for Auxiliary Forecourt access. Verify Prepay Only setting is NOT selected.

Auxiliary Forecourt Channel 1 Configuration	Channel 1 Fueling positions
Enable	Position 1 🔽 Position 2 🔽 Position 3 🔽 Position 4 💟
Device Type AUXPOS Serial Port Name Port 41-1	Position 5 🗌 Position 6 📄 Position 7 📄 Position 8 📄
Baud Rate 9600	Position 9 🔲 Position 10 📄 Position 11 📄 Position 12 📄
Stop Bits	Position 13 🔲 Position 14 📄 Position 15 📄 Position 16 📄
Data Bits 8	Position 17 🔲 Position 18 📄 Position 19 📄 Position 20 📄
Fueling Positions Advanced Settings	Position 21 🗌 Position 22 📄 Position 23 📄 Position 24 📄
Emulated PCTs Advanced Settings	Position 25 🔲 Position 26 📄 Position 27 📄 Position 28 📄
Save Cancel	Position 29 🔲 Position 30 📄 Position 31 📄 Position 32 📄
	Position 33 🔲 Position 34 📄 Position 35 📄 Position 36 📄
	Position 37 🔲 Position 38 📄 Position 39 📄 Position 40 📄
	Position 41 🗌 Position 42 📄 Position 43 📄 Position 44 📄
	Position 45 🔲 Position 46 📄 Position 47 📄 Position 48 📄
	Position 49 🔲 Position 50 📄 Position 51 📄 Position 52 📄
	Position 53 🔲 Position 54 📄 Position 55 📄 Position 56 📄
	Position 57 🗌 Position 58 📄 Position 59 📄 Position 60 📄
	Position 61 🔲 Position 62 📄 Position 63 📄 Position 64 📄
	Save

13. Click [Save].



Emulated PCTs only apply to PetroVend devices, and is required for successful PetroNet communications.

14. Click Emulated PCTs [Advanced Settings].

Auxiliary Forecourt Channel 1 Configuration	
Enable	
Device Type	PetroVend 💌
Serial Port Name	PortA1-1
Baud Rate	9600
Stop Bits	1
Data Bits	8
Parity Bit	None
Fueling Positions	Advanced Settings
Emulated PCTs	Advanced Settings
	Save Cancel



Installers must coordinate with the Forecourt POS Provider, and match PCT configurations that exist on the PetroVend Fuel Pump Interface.

15. Select the Emulated PCTs from the four available options: PCT 1 through PCT 4.

16. Click [Save] in the Channel PCTs selection window.

Auxiliary Forecourt Channel 1 Configuration	Channel 1 PCTs
Enable Device Type Serial Port Name Baud Rate 9600 Stop Bits Data Bits Parity Bit Fueling Positions Advanced Settings Emulated PCTs Advanced Save Cancel	PCT 1 PCT 2 PCT 3 PCT 3 PCT 4 Save Cancel

17. Click [Save] in the Channel Configuration window.



Using

The Auxiliary Forecourt POS function offers fuel services from the Commander Site Controller for 3rd-party alternate payment terminals.

A customer initiates a fuel transaction from an alternate payment terminal, which communicates the request to the Verifone POS System. The POS System responds by turning on fuel dispensing. At the end of the sale, the POS System returns the sale data to the payment terminal system, where payment processing is handled for the transaction.

The Verifone POS System is only responsible for enabling and allowing the fuel sale to take place.

The cashier experience inside the store is similar to what is seen if a customer had initiated a pre-paid fueling transaction, or a DCR initiated fueling transaction.

Data Flow Exceptions

PAM Protocol

Differences exist for the PAM protocol in terms of how the Transaction Status is handled between Auxiliary POS and Wetstock devices.

AuxPOS (PIC) Devices

Auxiliary Payment Terminals using the PAM protocol can poll fueling dispensers and request the dispenser's status. At the end of a sale, the payment device would typically try to clear the sale.

With Auxiliary Forecourt POS implementation, tracking the dispenser status and the subsequent clearing of the sale handled by the Verifone POS System.

In order to avoid a conflict where multiple devices are attempting to process the sale, the Verifone POS System withholds the actual dispenser status from 3rd-party devices, if the transaction was not initiated by those devices.

For any transaction, the reported ending status is broadcast as CLOSED to all devices that did initiate the transaction. For the initiating device, the ending status is returned as END OF TRANSACTION (EOT), allowing that device to claim the sale, clear the sale, and complete the transaction.

Wetstock Devices

Wetstock devices also poll fueling dispensers and request the dispenser's status, which is required on those devices for inventory tracking purposes.

As Wetstock devices are not attempting to process sale transactions, and these devices are not attempting to claim and clear a sale, there is no conflict with providing the actual transaction status.

PetroNet Protocol

PetroNet Components

Standard PetroNet components consists of the following:

- Terminal(s) requires one payment terminal per island; supports multiple fuel dispensers.
- Controller one per site, equivalent to Verifone Payment Controller.
- Fuel Pump Interface roughly equivalent to Verifone Smart Fuel Controller (SFC), provides the PetroVend system with an interface to the fuel dispensers.

Fuel Pump Interface

The PetroVend Fuel Pump Interface:

- supports both mechanical and electronic dispensers
- supports logical groupings of pumps, by type, called Pump Control Terminal(s) (PCTs). Each PCT can include up to eight pumps.

In the Auxiliary Forecourt POS implementation, the PetroVend Fuel Pump Interface is replaced by the Verifone POS System.



Installers must understand how the PetroVend Fuel Pump Interface is configured, and the logical pump assignments per PCT. The Verifone POS System configuration must match the PetroVend PCT configuration.

Controller

The PetroVend Controller regularly polls the fuel dispenser(s) for a system aware reply, but does not query for availability. The PetroVend system has no internal concept of pump reservation, and always proceeds as if the pump is always ready. The only command then sent to the pumps is to turn on the pump, and the submitted command either succeeds or fails based on the fueling position's readiness status.

Time-Outs

PetroVend caters to unattended fueling sites, and offers useful timeout features specific for those unattended sites.

Handle-Up Timeout

Both the Verifone and PetroVend systems have internal Handle-Up Timeout values.

The Verifone and PetroVend configured values are compared, and the smaller of the two time values is accepted as the Handle-Up Timeout value.

If after a pre-approval, the pump handle is not raised within the Handle-Up Timeout range, the timeout status is returned from the Verifone POS System to the PetroVend controller and the pending transaction is cancelled.

Total Transaction Timer Timeout

To prevent a fuel dispenser from running for an extended period of time at an unattended site, a Total Transaction Timer exists as a configurable value.

The timer starts when the handle is raised and fueling begins. Fueling will automatically stop when the Total Transaction Timer value is reached.

To prevent a cashier from overriding the set Total Transaction Timer value, when the Total Transaction Timer value is reached, re-approving the pump from the POS inside the store has been blocked.

The only way to reset the pump after the Total Transaction Timer value has been reached is to return the pump handle to the down position.

Reporting

Fuel sales initiated from the Auxiliary Forecourt POS are included in the overall Fuel Totals Report.

Reconciliation can be done now by comparing the AUX POS device reports with the Verifone POS System reports. For example, PIC has its own reporting capability which could be compared to Verifone POS System reports. The delta between the fuel totals on the two reports would represent fuel sold through the Verifone POS components.

Detail reports specific to Auxiliary Forecourt POS only fuel sales are planned for future enhancements.

Troubleshooting

Communications

If the Auxiliary Forecourt POS device is not communicating as expected, the following basic troubleshooting steps are provided:

1. Check the serial port LEDs on the front panel of Commander/Ruby Cl.

Confirm the red and green LEDs, corresponding to the port(s) configured for the Auxiliary POS, are flashing to indicate a good communication link.

For PetroVend, as an RS-485 interface is used, check the red and green LEDs on the appropriate 485 board in the FCI. These LEDs should also be flashing.

For FMI PIC devices, a null modem cable is required. A straight through serial cable along with a Verifone RJ-45/DB9(F/F) null modem adapter (PN: 13638-02) may also be used.

- 2. If the LEDs are not flashing:
 - A. Check the cables and connections to the Auxiliary POS device to ensure all are properly attached.
 - B. Verify that the Auxiliary POS device is powered on.

If the device is still not communicating correctly, reset the communication link to the Auxiliary POS device through ConfigClient. Reset the device by disabling and reenabling the problematic Auxiliary POS channels via managed modules.

- 1. Navigate to Tools >> Managed Modules.
- 2. Select module: Auxiliary Forecourt.
- 3. Select the Auxiliary Forecourt channel and click [Advanced Settings].
- 4. Click to deselect the *Enable* checkbox.
- 5. Click [Save].
- 6. Select the Auxiliary Forecourt channel and click [Advanced Settings].

- 7. Click to re-select the *Enable* checkbox.
- 8. Click [Save].

All Transactions Cancelled

If the Auxiliary Forecourt POS device is communicating, but all transactions are being cancelled during the pump selection and payment process, review the Fueling Position Settings and verify *Prepay Only* is not selected.

uel Configuration - Pending	
Site Parameters Fuel Service Levels Fuel MOP:	s Fuel Tanks Fuel Blend Types Fuel Products Fueling Positions
Fueling Position Settings Select Fueling Position	
1	SPI IP Address
Duplicate Fueling Position	Default Attributes Default MOP Default Service Level Blend Type Slow Flow Offset CASH SELF NONE 2 Fueling Limit Settings Auto Collect 300.00 500.000 0.009 Hose Product Settings Hose 1 Product Hose 2 Product Hose 3 Product UNLD1 UNLD2 UNLD3 Hose 6 Product Hose 4 Product Hose 5 Product Hose 6 Product Hose 6 Product Hose 7 Product NONE NONE Hose 7 Product
	Options Auto Approval Auto Disapproval DCR In Dispenser First In First Out Full Service Preset Handle Up Calling Ignore Pump Error Pay At Pump Only Prepay Only Preset Postpay Preset Prepay Stacking View Buzzer Off

Verify *Prepay Only* is unchecked for all Fueling Positions to be included for Auxiliary Forecourt access.

Glossary of Terms

Term	Description
BPS	Bit(s) Per Second. Associated with serial communication baud rates.
EOT	End Of Transaction.
EPS	Electronic Payment Server.
FCC	Forecourt Controller.
FCI	Forecourt Controller Interface.
FMi	Flexible Manufacturing Innovations. LLC. Verifone AUXPOS solutions partner, manufacturer of Payment Island Cashier (PIC) hardware.
РСТ	Pump Control Terminal.
PIC	Payment Island Cashier.
POS	Point of Sale terminal.
POS System	Includes the POS (Point of Sale) terminal(s), site controller and the electronic payment system (EPS).
SFC	Smart Fuel Controller.