



Introduction

Purpose

This document provides instructions to install additional serial ports on an Integral Profit Point system (PA03660XXX).

IMPORTANT INFORMATION

If you do not have a PA03660XXX Integral Profit Point system or if you are unsure, do not proceed with the installation. Contact your Service Representative or Gasboy® Customer Service to verify the type of Profit Point system. If you have a PA03700XXX Integral Profit Point system, use the C10040 PCI 4 Port Card.

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Required Tools

A Phillips® screwdriver is required for the installation of the kit.

Parts List

The following table lists the parts included in this kit.

Item	Description	Part Number	Quantity
1	PC Comm. Port Board (ISA)	C01271	1

Related Documents

Document Number	Title	GOLD Library
C35929	Gilbarco Pump Interface	CFN Series Networks, Card Handlers & Pump Interface
MDE-4299	CFN Series Profit Point Plus Installation Manual	CFN Series Controllers and POS
MDE-4337	CFN Series Gilbarco CRIND Interface for SC III with Windows NT	CFN Series Networks, Card Handlers & Pump Interface
MDE-4501	Wayne CAT PC Interface, SCIII, Windows NT	CFN Series Networks, Card Handlers & Pump Interface
MDE-4651	Wayne Pump PC Interface for SC III Windows NT	CFN Series Networks, Card Handlers and Pump Interface
MDE-4599	Insight Interface Installation Guide	CFN Series Networks, Card Handlers and Pump Interface

Abbreviations and Acronyms

Term	Description
CRIND®	Card Reader in Dispenser
FIFO	First In First Out
GSM	Gilbarco Security Module
ISA	Industry Standard Architecture
NT	Network Technology
OS	Operating System
PC	Personal Computer
PCB	Printed Circuit Board
POS	Point of Sale

Warranty

For information on warranty, refer to MDE-4255 Gasboy's Warranty Policy Statement. If you have any warranty-related questions, contact Gasboy's Warranty Department at its Greensboro location.

Important Safety Information

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

Preliminary Precautions

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



Emergency Total Electrical Shut-Off

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

WARNING



The EMERGENCY STOP, ALL STOP, and PUMP STOP buttons at the cashier's station WILL NOT shut off electrical power to the pump/dispenser.

This means that even if you activate these stops, fuel may continue to flow uncontrolled.

You must use the TOTAL ELECTRICAL SHUT-OFF in the case of an emergency and not only these cashier station "stops."

Total Electrical Shut-Off Before Access

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

Evacuation, Barricading and Shut-Off

Any procedures requiring accessing the pump/dispenser or STPs requires the following three actions:



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

Read the Manual

Read, understand and follow this manual and any other labels or related materials supplied with this equipment. If you do not understand a procedure, call a Gasboy Authorized Service Contractor or call the Gasboy Service Center at 1-800-444-5529. It is imperative to your safety and the safety of others to understand the procedures before beginning work.

Follow the Regulations

There is applicable information in NFPA 30A; *Automotive and Marine Service Code*, NFPA 70; *National Electrical Code (NEC)*, OSHA regulations and federal, state, and local codes which must be followed. Failure to install, inspect, maintain or service this equipment in accordance with these codes, regulations and standards may lead to legal citations with penalties or affect the safe use and operation of the equipment.

Replacement Parts

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

Safety Symbols and Warning Words

This section provides important information about warning symbols and boxes.

Alert Symbol



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

Signal Words

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



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



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



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

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

Working With Fuels and Electrical Energy

Prevent Explosions and Fires

Fuels and their vapors will become explosive if ignited. Spilled or leaking fuels cause vapors. Even filling customer tanks will cause explosive vapors in the vicinity of dispenser or island.

No Open Flames



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



No Sparks - No Smoking

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

Working Alone

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

Working With Electricity Safely

Be sure to use safe and established practices in working with electrical devices. Poorly wired devices may cause a fire, explosion or electrical shock. Be sure grounding connections are properly made. Make sure that sealing devices and compounds are in place. Be sure not to pinch wires when replacing covers. Follow OSHA Lock-Out and Tag-Out requirements. Station employees and service contractors need to understand and comply with this program completely to ensure safety while the equipment is down.

Hazardous Materials

Some materials present inside electronic enclosures may present a health hazard if not handled correctly. Be sure to clean hands after handling equipment. Do not place any equipment in mouth.

WARNING

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

WARNING

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

In an Emergency

Informing Emergency Personnel

Compile the following information and inform emergency personnel:

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

WARNING



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

WARNING



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

WARNING



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

WARNING



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

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

Lockout/Tagout

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

Installation Instructions

To install additional serial ports on an Integral Profit Point system, proceed as follows:

CAUTION

Static electricity can damage computer components and the serial port COM board. It is recommended that you keep the COM Printed Circuit Board (PCB) in its protective bag until you are ready to install it. In addition, observe anti-static precautions when you handle the PC and/or COM board.

- 1 Log on to Windows NT® as the System Administrator.
- 2 Click **Start > Settings > Control Panel > Ports**.
- 3 Delete all ports, except Port 1 and Port 2.
- 4 Shut down the Operating System (OS) and turn off power to the PC.
- 5 Disconnect the cables from the PC.
- 6 Remove the outside cover of the PC by removing the screws that secure it.
- 7 There are several ISA expansion slots on the PC motherboard. Find an unused ISA slot and remove the slot covers next to it by removing the screw (see [Figure 1](#)).

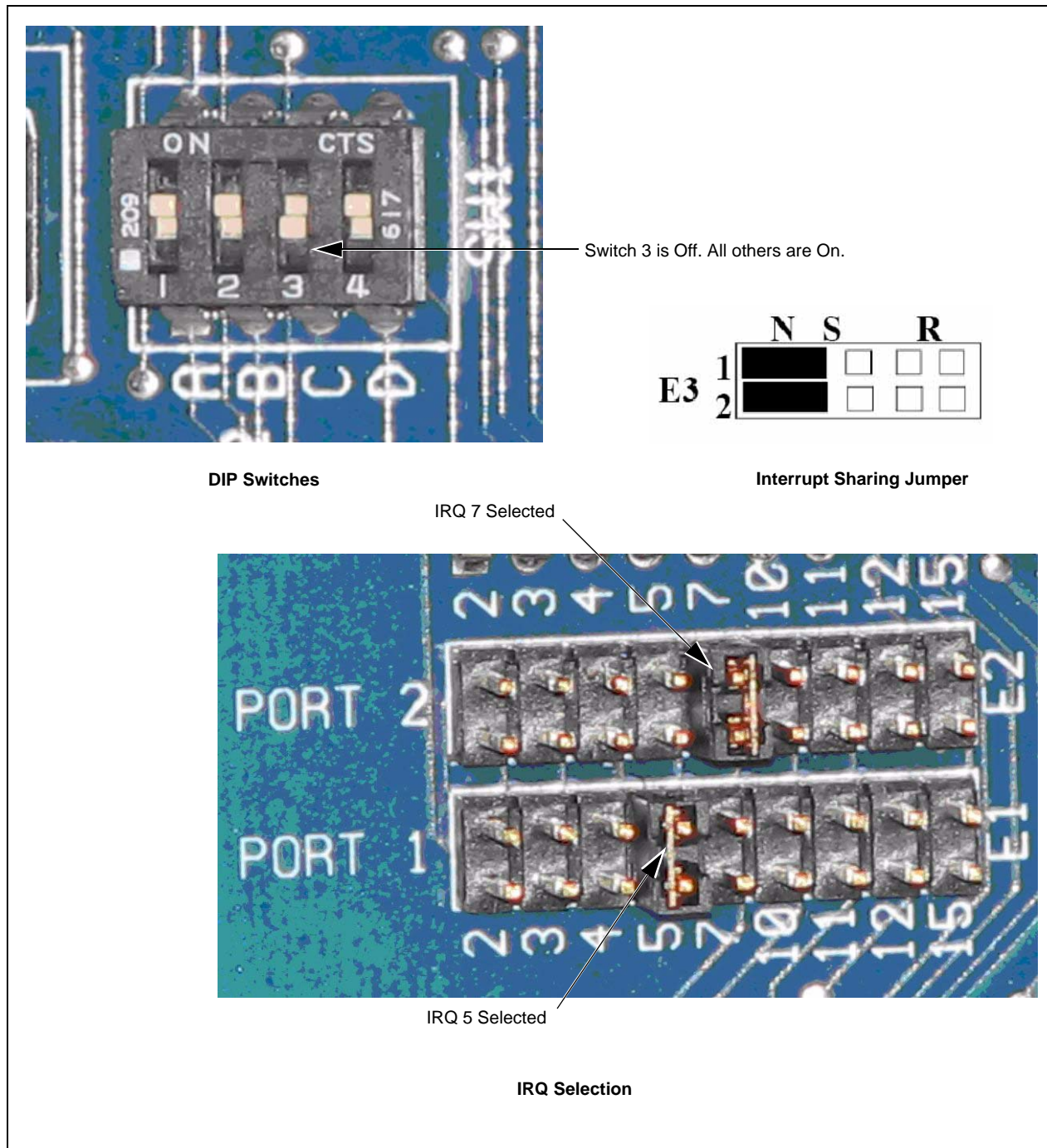
Figure 1: Removing the ISA Slot Cover



- 8 Before you install the serial port COM board, set the jumpers and DIP switches on the board. Ensure that you set the jumpers as shown in [Figure 2](#).

Port	Address	IRQ
Port 1	COM 3 (03E8)	5
Port 2	COM 4 (02E8)	7
Interrupt Sharing		None

Figure 2: DIP Switch and Jumper Settings



- 9 Insert the COM PCB into the unused ISA slot such that the connectors on the PCB protrude through the expansion slot. Secure the board using the screw that was removed in step 7.
- 10 Reassemble the Integral Profit Point PC by replacing the outside cover. Secure it with screws removed in step 6.

Note: Ensure that you do not pinch any cables or wires when you replace the outside cover.

IMPORTANT INFORMATION

Due to the addition of this ISA Serial Port Board, the existing serial ports will be re-numbered.

- 11 Attach the Monitor, Keyboard, Mouse, Port 1, Port 2, and 4-port fan-out cables as they were connected previously, on the back of the PC. The cables currently connected to the 4-port fan-out cable 9-pin connectors have to be reconnected as shown in the table below.

Cable	Old Connection	New Connection
PIN Pad Communications (Serial 3 of POS Distribution Box)	Connector labeled S1	First port on new Serial Board (connector on right, viewed from rear of PC)
Receipt Printer Communications	Connector labeled S2	Second port on new Serial Board (connector on left, viewed from rear of PC)
Reader or Pump Interface Communications	Connector labeled S3	Connector labeled S1
Reader or Pump Interface Communications	Connector labeled S4	Connector labeled S2

- 12 Turn on the PC and enter the CMOS setup (press **DELETE** while PC is initializing).
- 13 Under Integrated Peripherals, disable the Onboard Parallel Port. Under PNP/PCI Configurations, assign IRQ 5 and 7 to Legacy ISA. Save these changes and exit CMOS setup.
- 14 Once the PC has booted, log on to NT as the System Administrator.
- 15 Click **Start > Settings > Control Panel**. The control panel window will have one of the following two icons for the existing PCI 4-port board in the PC - Siig Cyber PCI 20X or Advanced Ports. Once you identify the icon, double click it.

Note: Follow the steps listed in the section [“Siig Cyber PCI 20X” on page 8](#) if the icon you see is Siig Cyber PCI 20X. If the icon is Advanced Ports, skip to the section [“Advanced Ports \(Sealevel\)” on page 10](#).

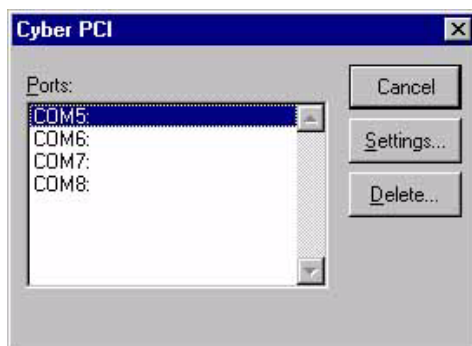
Siig Cyber PCI 20X



Note: If the icon above is not in the control panel window, skip to [“Advanced Ports \(Sealevel\)” on page 10](#) or contact your Service Representative or Gasboy Customer Service, to verify the type of 4-port board.

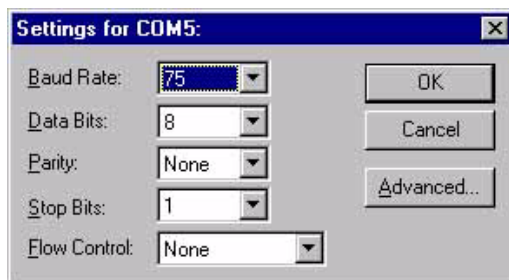
- 1 When the Cyber PCI window opens, four ports are listed; Port 5 to Port 8. Click on the first port and then click **Settings**.

Figure 3: Cyber PCI Window

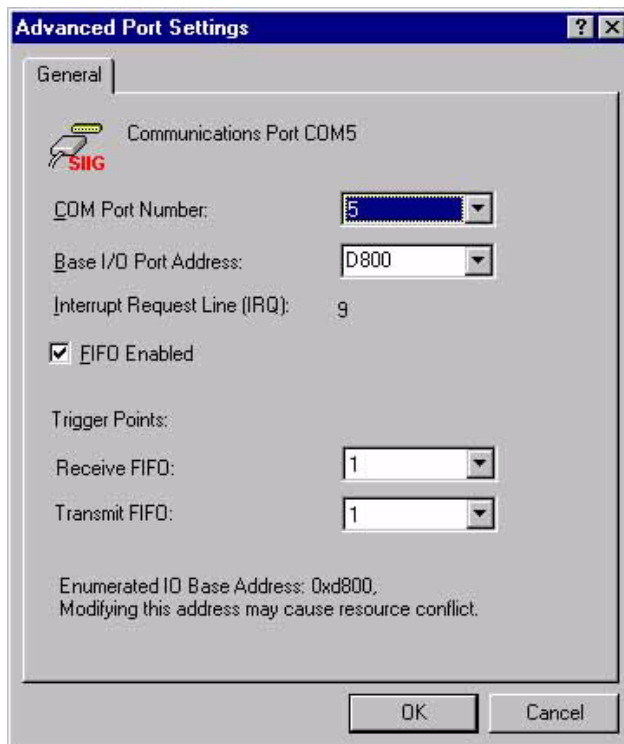


- 2 In the Settings window, click **Advanced**.

Figure 4: Settings Window



- 3 In the Advanced window, verify if FIFO is enabled (box is checked) and Receive FIFO is set to 1. Change it as required and click **OK**.

Figure 5: Advanced Port Settings Window

- 4 A dialog box appears prompting you to reboot the PC. Click **Don't Restart Now**.

Figure 6: System Setting Change Dialog Box

- 5 Click **OK** in the Settings for COMX: window.
- 6 Repeat steps 1 to 4 for each of the 4 ports.
- 7 When the last port is configured, click **Restart Now** to reboot the PC.
- 8 Once the PC has booted, log on to Windows NT as the System Administrator.
- 9 Go back to the Cyber PCI window again and verify if the settings are correct on all the ports. If the settings are not correct, you may have to change them, one at a time, rebooting each time, until all ports are set correctly. If the settings are not correct after doing this, contact your Service Representative or Gasboy Customer Service.

Advanced Ports (Sealevel)



Note: If the icon above is not in the Control Panel window, refer to “Siig Cyber PCI 20X” on page 8, or contact your Service Representative or Gasboy Customer Service to verify the type of 4-port board.

- 1 When the Advanced Ports Configuration window opens, eight ports are listed; Port 1 to Port 8. Click on the Advanced tab at the top of the window.
- 2 In the Advanced window, verify if ports 5 to 8 are set up correctly. To do this, click the Port Name and verify if FIFO is enabled (box is checked) and Receive FIFO is set to 1. Change as required. Once the settings of all 4 ports (5-8) have been verified and/or changed, click **OK**.

Figure 7: Advanced Ports Configuration

Port Name	Address	IRQ	UART	Model	Port
COM5	E000	9	16854	7406	1
COM6	E400	9	16854	7406	2
COM7	E800	9	16854	7406	3
COM8	EC00	9	16854	7406	4

Advanced UART Options

UART Type: 16854 Receive FIFO
 FIFO Size: 128 Transmit FIFO

☐ Suppress Modem Control ☒ FIFO Enabled

RS-485 Options

☐ Automatic RS-485 ☐ Real Time 485 Control
☐ RS-485 Echo Off ☐ 16854X RS-485 Enable

16950 ISO Synchronous

☐ Enable Isochronous mode ☐ 9 Bit Protocol

RS-422 / 485 Control for PCMCIA Card ONLY

☐ RS-422 Enabled ☐ No Echo in RS-485

Software Selectable Cards ONLY

☐ RS-422/485-default RS-232
☐ Termination-default none
☐ RS-422-default RS-485
☐ Echo Enable-default no echo

Oscillator Frequency

 Effective Frequency

OK Cancel Help

- 3 A dialog box appears prompting you to reboot the PC. Click **Yes** to reboot the PC.

Figure 8: Restart Windows



- 4 Once the PC has booted, log on to Windows NT as the System Administrator. Go back to the Advanced Ports Configuration window again and verify if the settings are correct on Port 5 to Port 8. If they are not, contact your Service Representative or Gasboy Customer Service.

The installation is complete.

Verifying Connection and Operation of Interface Devices

Verify if PIN pad, Receipt printer, and previously installed interfaces [for example, Card Reader in Dispenser (CRIND), Gilbarco® pump, and so on] are working correctly. New interfaces [for example, Gilbarco Security Module (GSM), Gilbarco pump, and so on] will be added to Port 7 (labeled as S3 or Port 3 on the 4-port fan-out cable 9-pin connectors) or Port 8 (labeled as S4 or Port 4 on the 4-port fan-out cable 9-pin connectors).

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7300 West Friendly Avenue · Post Office Box 22087
Greensboro, North Carolina 27420

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