Introduction

Purpose

This manual provides instructions for upgrading a dispenser to Dispenser Communication Module [DCM2.1 (M14576A001) or DCM2.2 (M15737A001)] with remote management functionality provided by the Secure System on Module (SSoM) board.

This manual is applicable to SmartCRIND®, UX410, and Applause™ Media System installations. For more information on Insite360™ Encore® environments, refer to *MDE-5314 Insite360 Encore Remote Management Installation, Start-up, and Service Manual*.

Intended Users

This manual is intended for Gilbarco® trained and certified Authorized Service Contractors (ASCs).

Table of Contents

Required Tools

The following is the list of tools required for DCM2.1/DCM2.2 upgrade:
- Phillips® and Flat-blade Screwdrivers
- 7-mm Socket (Nut Driver or Socket Set)
- Diagonal Cutters
- Needle Nose Pliers

Parts List

The following table lists parts required to upgrade to DCM2.1/DCM2.2:

Item #	Description	Part Number	Quantity
1	Assembly Cloud Connection Processor (CCP) and SSoM (DCM2.1)	M15399A001	1
a	Bracket, Assembly CCP	M14953A001	1
b	Printed Circuit Assembly (PCA), CCP	M14576A001	1
c	PCA, SSoM, (Prod-Disp)	M14579A101	1
2	DCM2.2 Assembly	M15737A001	1
3	Connection Jumper 100 CTR	Q11011-01	2
4	Cable, Remote Management, CCP (DCM2.X) to FCB (FP II only)	M15242A001	1 per side
5a	Cable, Two-wire Pump and CRIND (FP II only)	M02993A005	1
5b	Cable, Two-wire Pump and CRIND (Dedicated High Speed)	M02993A006	1
6	Cable, 100 In Centers, Two Position, 26 (American Wire Gauge) AWG Ribbon	M00491A001	1
7	Cable, Remote Management DCM2.X ZMODEM Interface	M15241A001* M15241A002*	1
8	Screw, Phillips Pan Head Sems Metrics M3.5 X 8	Q12845-46	8
9	Stand-offs, M3.5 X 12 (FP IV only)	M14960B001	8
M15241A001 is applicable for DCM2.1 and M15241A002 is applicable for DCM2.2.			
10	Cable, Cash Acceptor	M03184A011 (Optional)	1 per side

Related Documents

Document Number	Title	GOLD℠ Library
MDE-4699	Applause Media System Installation, Service, and Parts Manual	• Encore and Eclipse™ • Applause Media System • SMART Connect
MDE-5314	Insite360 Encore Remote Management Installation, Start-up, and Service Manual	• FlexPay™ EPP and SCR • FlexPay IV
MDE-5349	Insite360 Encore Power Supply Retrofit Kit Installation Instructions	• Encore and Eclipse • Service Manual

Abbreviations and Acronyms

Term	Description
AFP	Auxiliary Feature Processor
ASC	Authorized Service Contractor
AWG	American Wire Gauge
CAT-5	Category 5
CCP	Cloud Connection Processor
CPR	Cardiopulmonary Resuscitation
CRIND®	Card Reader in Dispenser
D-Box	Distribution Box
DCM	Dispenser Communication Module
DEF	Diesel Exhaust Fluid
EPP	Encrypting PIN Pad
ESD	Electrostatic Discharge
GSoM	Gilbarco System on Module
HIP	Hub Interface PCB
MOC	Major Oil Company
MTA	Mass Terminal Assembly
NEC®	National Electrical Code
NFPA	National Fire Protection Association
OSHA	Occupational Safety and Health Administration
PCA	Printed Circuit Assembly
PCB	Printed Circuit Board
PCN	Pump Control Node
PIP	Peripheral Interface PCB
POS	Point of Sale
SCR	Secure Card Reader
SSoM	Secure System on Module
TAC	Technical Assistance Centre
UPM	Universal Payment Module
VDC	Voltage Direct Current

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/dispenser 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 the console's ALL STOP and PUMP STOP or similar keys.

Total Electrical Shut-Off Before Access

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

Evacuating, Barricading, and Shutting Off

Any procedure that requires access to the pump/dispenser or STPs requires the following actions:

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

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 the Gilbarco Technical Assistance Center (TAC) at 1-800-743-7501. It is imperative to your safety and the safety of others to understand the procedures before beginning work.

Follow the Regulations

Applicable information is available in National Fire Protection Association (NFPA) 30A; *Code for Motor Fuel Dispensing Facilities and Repair Garages*, NFPA 70; *National Electrical Code (NEC)*, Occupational Safety and Health Administration (OSHA) regulations and federal, state, and local codes. All these regulations 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 Gilbarco replacement parts and retrofit kits on your pump/dispenser. Using parts other than genuine Gilbarco 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 below must be followed to prevent death, injury, or damage to the equipment:

DANGER: Alerts you to a hazard or 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 explode or burn, if ignited. Spilled or leaking fuels cause vapors. Even filling customer tanks will cause potentially dangerous vapors in the vicinity of the dispenser or island.

DEF is non-flammable. Therefore, explosion and fire safety warnings do not apply to DEF lines.

No Open Fire

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 fuel vapors. Every time you get 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. Familiarize yourself with Cardiopulmonary Resuscitation (CPR) methods, if you work 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 Lockout/Tagout procedures. If you are not familiar with this requirement, refer to this information in the service manual and OSHA documentation.

Working With Electricity Safely

Ensure that you use safe and established practices in working with electrical devices. Poorly wired devices may cause a fire, explosion, or electrical shock. Ensure that grounding connections are properly made. Take care that sealing devices and compounds are in place. Ensure that you do not pinch wires when replacing covers. Follow OSHA Lockout/Tagout 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. Ensure that you clean hands after handling equipment. Do not place any equipment in the mouth.

> **⚠ WARNING**
>
> The pump/dispenser 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.

Gilbarco Veeder-Root encourages the recycling of our products. Some products contain electronics, batteries, or other materials that may require special management practices depending on your location. Please refer to your local, state, or country regulations for these requirements.

In an Emergency

Inform 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/DEF 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**
>
> DEF generates ammonia gas at higher temperatures. When opening enclosed panels, allow the unit to air out to avoid breathing vapors.
> If respiratory difficulties develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention.

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

> **⚠ WARNING**
>
> Gasoline/DEF spilled in eyes may cause burns to eye tissue. Irrigate eyes with water for approximately 15 minutes. Seek medical advice immediately.

> **⚠ WARNING**
>
> Gasoline/DEF spilled on skin may cause burns. Wash area thoroughly with clear water. Seek medical advice immediately.

> **⚠ WARNING**
>
> DEF is mildly corrosive. Avoid contact with eyes, skin, and clothing. Ensure that eyewash stations and safety showers are close to the work location. Seek medical advice/recommended treatment if DEF spills into eyes.

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. Subpart S of 29 CFR Part 1910 - Electrical Hazards, 29 CFR Part 1910.333 contains specific Lockout/Tagout provision for electrical hazards.

Federal Communications Commission (FCC) Warning

This equipment has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate this equipment.

Before You Begin

CAUTION

A properly grounded Electrostatic Discharge (ESD) wrist strap must be worn while servicing any electronic devices or components. Failure to use electrostatic precautions may damage electronic components and void warranty.

To prepare the site and dispenser for the installation, proceed as follows:

1 Inform the manager.

2 Barricade the unit to be worked on.

3 Remove power to the unit at the breaker panel. Follow OSHA lockout/tagout procedures.

4 Open the main dispenser door.

5 Match the parts received in the kit with "Parts List" on page 2.

⚠ WARNING

Failure to turn off the unit during the kit installation may cause injury or bodily harm from electrical shock. Ensure that all power to the unit is switched off before opening the door to the unit and during kit installation.

IMPORTANT INFORMATION

The original Hub Interface PCB (HIP), HIP2, Auxiliary Feature PCBA (AFP), or DCM2 assembly will be removed and replaced with the DCM2.1 or DCM2.2.

If the old board was HIP or HIP2, several new cables must be installed. Several of the cables look similar but have different part numbers. For more information on cable part numbers, refer to "Parts List" on page 2. DO NOT TRY TO REUSE THE OLD CABLES BECAUSE DC POWER ROUTING IS DIFFERENT.

If the DCM2 assembly has Gilbarco System on Module (GSoMs) installed, transfer the GSoMs to the new DCM2.1/DCM2.2 assembly using the new hardware in the kit (M15315K007) prior to installation.

If the dispenser includes a cash acceptor with FlexPay II and a DCM2, additional steps are required. For more information, refer to "Appendix B: Cable Connections for Cash Acceptors" on page 19.

Upgrading to DCM2.1/DCM2.2: HIP/AFP/DCM2 Mounted on the T-Rail

To remove the HIP assembly or Auxiliary Feature Processor (AFP) if existing in the unit, proceed as follows:

Note: For The Advantage™ Series units, the board to be removed is either on the CRIND tray for FlexPay II or suspended under the CRIND printer tray for FlexPay IV. For more information, refer to "Upgrading to DCM2.1/DCM2.2: Advantage with FlexPay IV" on page 10 and "Upgrading to DCM2.1/DCM2.2: Advantage with FlexPay II" on page 11.

1 Disconnect all the cables from the HIP/AFP/DCM2.

2 Remove the three 7-mm nuts underneath the HIP/AFP/DCM2 assembly.
Note: Retain the nuts for reuse.

**Figure 1: Removing HIP/AFP/DCM2 Assembly**
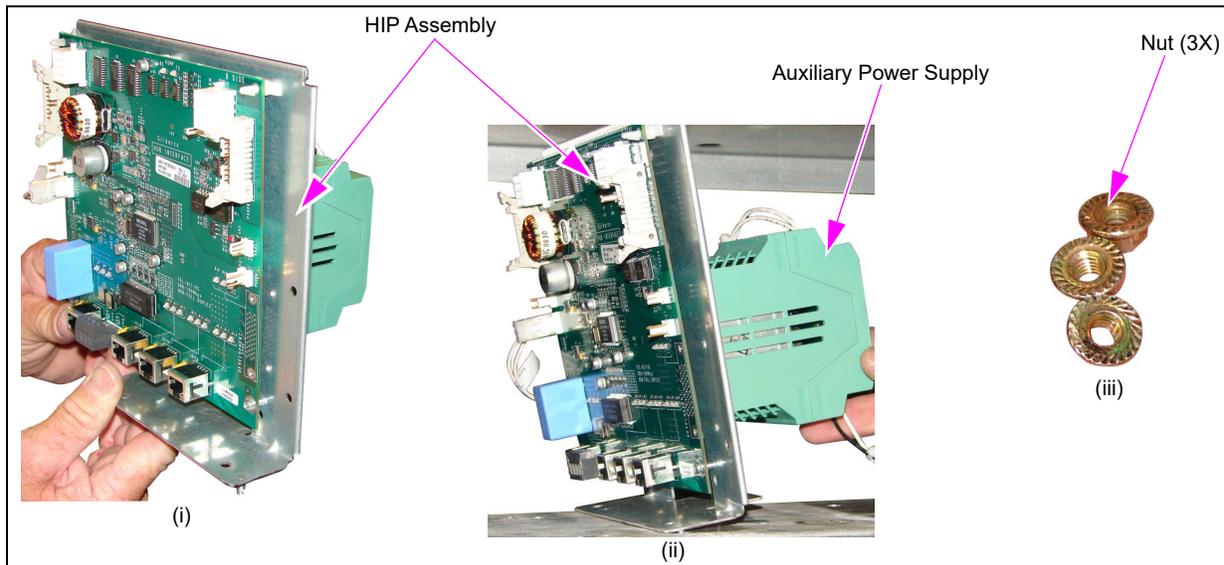
If the dispenser has a Phoenix power supply, you can transfer it to the new DCM2.X. For more information on power supply, refer to *MDE-5349 Insite360 Encore Power Supply Retrofit Kit Installation Instructions*.

3 Remove the power supply and bracket, fuse board, DCM, and stand-offs (if present) from the removed assembly. Transfer those parts on to the new DCM2.1/2.2 assembly prior to installation.
Note: If the site has more than 16 dispensers, you must use a direct Ethernet® Category 5 (CAT-5) run (if units are less than 280 feet away) or FlexPay Connect v1.

4 Remove GSoMs (FlexPay IV only), if present. Use 3.5-mm Stand-offs (M14960B001) and 3.5-mm Screws (Q12845-46) supplied in the kit to mount to DCM2.1/2.2 assembly. The stand-offs are longer to accommodate the new assembly. Remount DCM2.1/2.2 to the T-rail.

5 Connect cables. For more information on cable connections, refer to "Cable Connections for DCM2.1/DCM2.2" on page 12, and then continue to step 6 on page 9.

6 (DCM2.2) Replace the 24 VDC M07973A006 Power Cable in place of M07973A004 and make the following connections:
- Connect P305 to J305.
- Connect J401 to P301 on the DCM2.2 assembly.
- Connect power to each CRIND (J301A to P301A/B and J301B to P301A/B).

7 (For Insite360 Encore only) Connect the new ZMODEM cable to P1111 on the Pump Control Node (PCN), to P315 (also labeled as ZMODEM Pump) on the DCM2.1/DCM2.2.
Note: ZMODEM is for Encore 500/S units only.

Figure 2: Connecting ZMODEM Cable (Insite360 Encore only)
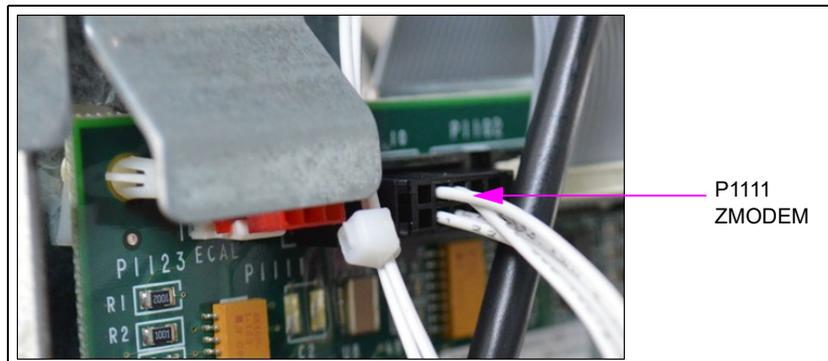
IMPORTANT INFORMATION

The ZMODEM is a new connection to PCN (laptop port) for Insite360 Encore that is required to perform many remote PCN functions. Ensure that the ZMODEM cable is reconnected after performing any laptop tasks on PCN or after part replacement. Additionally, after part replacement (for example, PCN or CRIND replacement), ensure that the software on the new component meets minimum requirements.

8 Program the Universal Payment Modules (UPMs), SSoM, and dispenser IP addresses.

IMPORTANT INFORMATION

It is recommended that you program the UPMs for all dispensers first, and then program the SSoM for the required two external CRIND IP addresses. To configure dispenser IP addresses, refer to *MDE-5314 Insite360 Encore Remote Management Installation, Start-up, and Service Manual*.
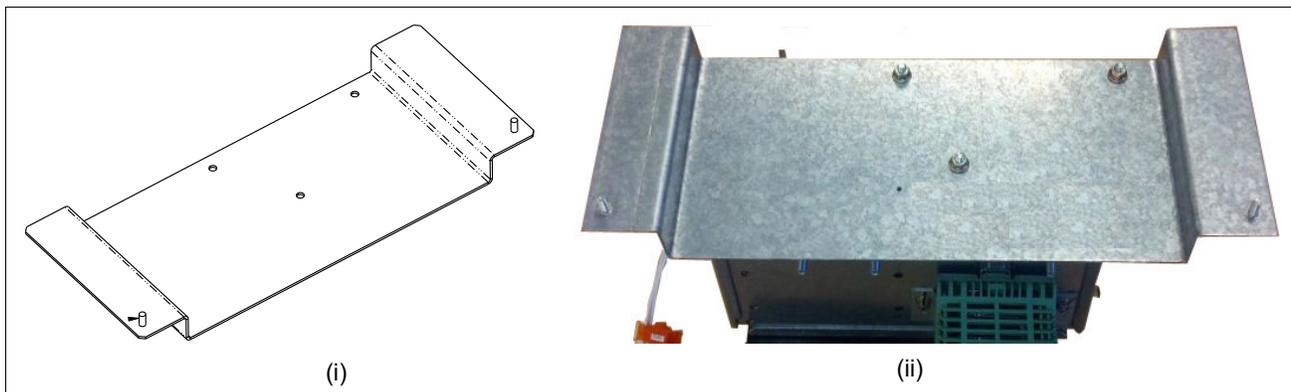
Upgrading to DCM2.1/DCM2.2: Advantage with FlexPay IV

The DCM2 is mounted to the Advantage printer shelf using an adapter bracket.

To upgrade DCM2 in Advantage with FlexPay IV, proceed as follows:

1 Disconnect all cables to the DCM2.

2 Remove the two nuts securing the adapter bracket to the printer shelf.

Figure 3: DCM2 with Bracket

(i)　　　　　　　　　　　　　(ii)

3 Remove the three nuts that secure the DCM2 assembly to the bracket.

4 Mount the new DCM2.1/DCM2.2 assembly onto the bracket.

5 Transfer GSoMs from the existing board onto the new DCM2.1/DCM2.2, if present.

6 Mount the new DCM2.1/DCM2.2 with SSoM to the printer tray.

Figure 4: DCM2 with Bracket

Printer Shelf

Adapter Bracket
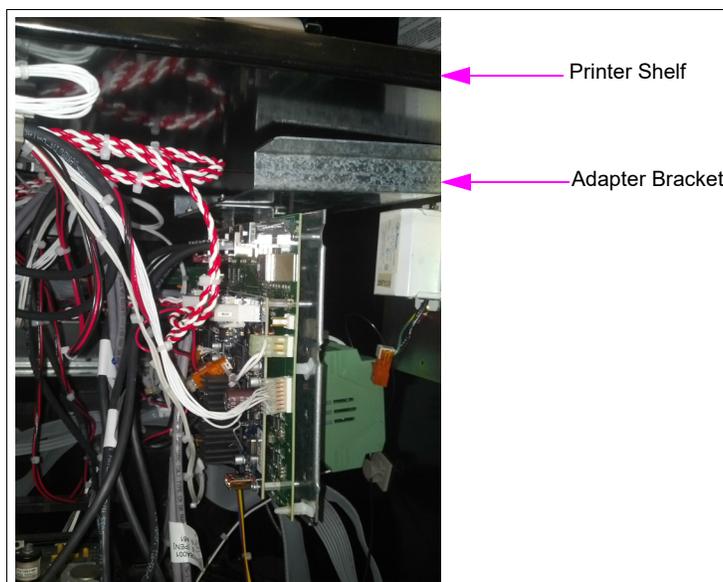
7 Reconnect cables to the DCM2.1/DCM2.2. For more information on cable connections, refer to "Cable Connections for DCM2.1/DCM2.2" on page 12, and then continue to step 8.

8 Program the UPMs, SSoM, and dispenser IP addresses.
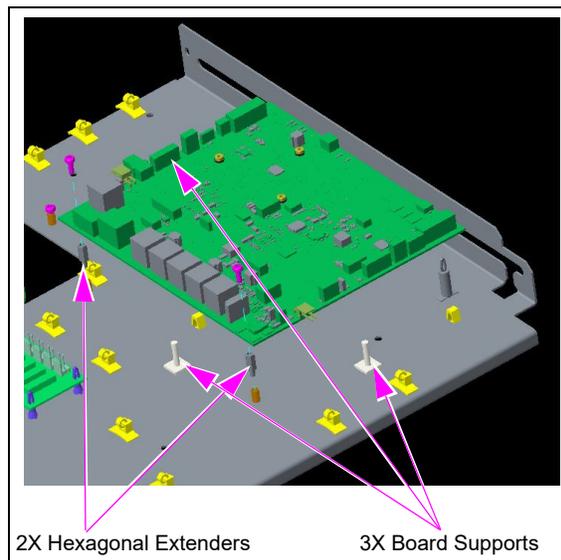
IMPORTANT INFORMATION

It is recommended that you program the UPMs for all dispensers first, and then program the SSoM for the required two external CRIND IP addresses. To configure dispenser IP addresses, refer to *MDE-5314 Insite360 Encore Remote Management Installation, Start-up, and Service Manual*.

Upgrading to DCM2.1/DCM2.2: Advantage with FlexPay II

To upgrade DCM2 in Advantage with FlexPay II, proceed as follows:

1 Pull out the CRIND tray.

2 Disconnect cables from the existing HIP, AFP, or DCM (without SSoM), and then remove the board from the tray.

3 Add two hexagonal extenders to the existing metal board stand-offs.

4 Add three board supports as shown in Figure 5, ensuring that the corresponding underneath of the board is clear of components.

5 Connect cables. For more information on cable connections, refer to "Cable Connections for DCM2.1/DCM2.2" on page 12, and then continue to step 6.

6 Program the UPMs, SSoM, and dispenser IP addresses.

Figure 5: Adding Extenders and Supports to Metal Board

2X Hexagonal Extenders   3X Board Supports
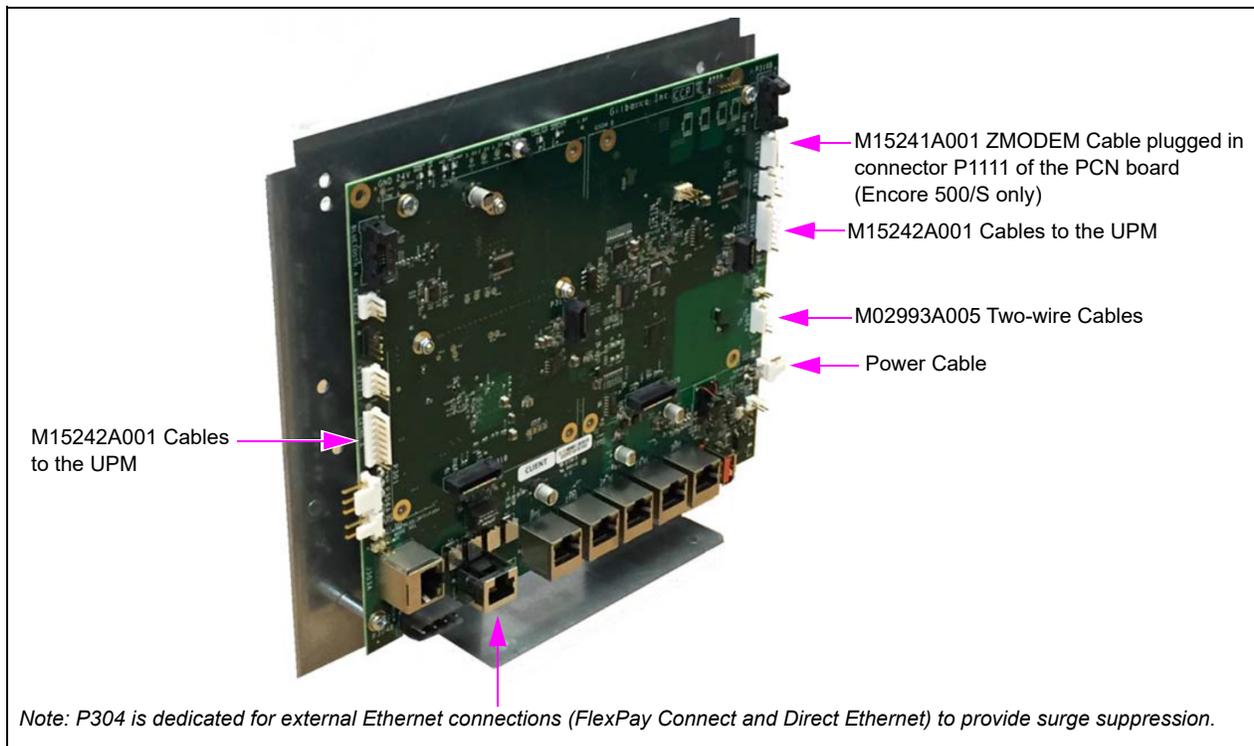
IMPORTANT INFORMATION
It is recommended that you program the IP addresses for the UPMs for all dispensers first. Then program the SSoM for the required two external CRIND IP addresses. To configure dispenser IP addresses, refer to *MDE-5314 Insite360 Encore Remote Management Installation, Start-up, and Service Manual*.

Cable Connections for DCM2.1/DCM2.2

DCM2.1 Assembly

The DCM2.1 Assembly Board (M15399A001) mounts in the same location as the HIP/AFP/DCM2 Board, with the same cable connections. The DCM2.1 Board provides a high-speed data connection for the Applause Media System, Insite360 Encore, and future EMV applications. The M15399A001 DCM2.1 Board can host two GSoM boards for Applause Media System. On the rear side of the M14576A001 DCM2 Board, there is an SSoM for Insite360 Encore.

Figure 6: Wiring Diagram for Field-installed Wiring (DCM2.1)

M15241A001 ZMODEM Cable plugged in connector P1111 of the PCN board (Encore 500/S only)

M15242A001 Cables to the UPM

M02993A005 Two-wire Cables

Power Cable

M15242A001 Cables to the UPM

Note: P304 is dedicated for external Ethernet connections (FlexPay Connect and Direct Ethernet) to provide surge suppression.

For cable block diagram, refer to "Appendix A: Block Diagrams" on page 18.

To connect the cables:
- If the DCM2.1 assembly has a Phoenix power supply:
  - Connect J301 of the M07973A003 Power Cable to P301 on the DCM2.1.
  - Connect P301A/B of M13120A001 on side A to J301A of M07973A003.
  - Connect P301A/B of M13120A001 on side B to J301A of M07973A003.

Note: Ensure to route the AC wiring away from DC.
- If the DCM2.1 assembly does not have a Phoenix power supply:
  - Connect P305 of M07973A004 to J305 on the M05547A00X.
  - Connect J401 of M07973A004 to P301 on the DCM2.1.
  - Connect P301A/B of M13120A001 side A to J301A of M07973A004.
  - Connect P301A/B of M13120A001 side B to J301A of M07973A004.

1   Connect J302A/B of M15242A001 to P302A of DCM2.1.

2   Connect J302A/B of M15242A001 to P302B of DCM2.1.
    Note: Connect J315 of M15241A001 to P315 on the DCM2.1. Connect J1111 to PC serial connection on the PCN or P1111. This enables pump logs to be gathered as part of remote management.

DCM2.1 Connectors

The following table lists the port numbers and functions of DCM2.1 connectors:

DCM2.1 Connector	Port Number	Function
3-pin Mass Terminal Assembly (MTA) .156"	P301	24 VDC power input
2-pin MTA .156"	P306A	24 VDC power output (fused). This is primarily used to power the DCM in Applause Media System.
2-pin MTA .156"	P306B	24 VDC power output (fused)
5-pin MTA .100"	P300	Two-wire connection from Distribution Box (D-Box) [CRIND and Pump (Generic only)].
2-pin MTA .100"	P303	Two-wire connection to PCN
8-pin MTA .100"	P302A	RS-232 pump and CRIND to Peripheral Interface PCB (PIP)3 A
8-pin MTA .100"	P302B	RS-232 pump and CRIND to PIP3 B
	P315	ZMODEM
	P304A/B	Ethernet connection to the back room. P304B is the optional discreet wire connection.
RJ-45	J305C	Ethernet connection to UPM Side A
	J310A UX300A	
	J310B	Ethernet connection to UPM Side B
	J303B UX300B	
	J310A	Laptop Service port
	J303A	

DCM2.1 Jumpers

The following table lists the status and functions of jumpers:

	On	Off	Function
J3	x		High-speed connection active. P304 A/B disabled.
		x	High-speed connection inactive. P304A and P304B connects to CAT-5 running through the conduit for high speed connection (if used).
J4	x		Unit is connected to a Passport™ Point of Sale (POS) Major Oil Company (MOC).
		x	Unit is connected to a third-party POS (Generic).

DCM2.2 Assembly

The DCM2.2 assembly (M15737A001) is mounted in the same location as the HIP/AFP/DCM2/DCM2.1. Figure 7 shows the connections on the DCM2.2 assembly.

Figure 7: Connecting Cables to DCM2.2 Assembly
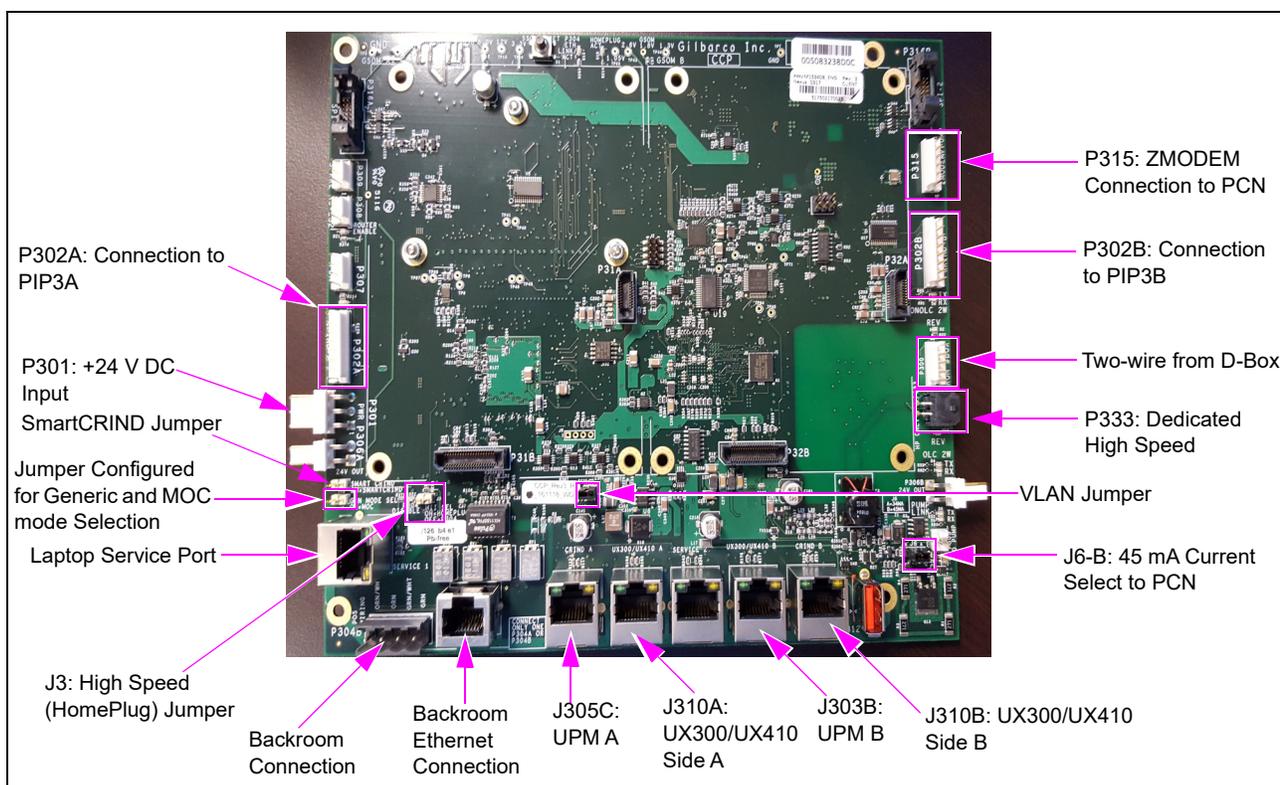
DCM2.2 Connectors

The following table lists the port numbers and functions of DCM2.2 connectors:

DCM2.2 Connector	Port Number	Function
3-pin MTA .156"	P301	24 VDC power input
2-pin MTA .156"	P306A	24 VDC power output (fused). This is primarily used to power the DCM in Applause Media System.
5-pin MTA .100"	P300	Two-wire from D-Box [CRIND and Pump (Generic only)].
2-pin MTA .100"	P303	Two-wire to PCN
8-pin MTA .100"	P302A	RS-232 pump and CRIND to PIP3 A

DCM2.2 Connector	Port Number	Function
4-pin	P333	Dedicated High Speed
8-pin MTA .100"	P302B	RS-232 pump and CRIND to PIP3 B
	P304A/B	Ethernet connection to the back room. P304B is the optional discreet wire connection.
	P315	ZMODEM (Insite360 Encore only)
	J305C	Ethernet connection to UPM A
RJ-45	J310A	Ethernet connection to UX300/UX410 A
	J310B	Ethernet connection to UPM B
	J303B	Ethernet connection to UX300/UX410 B
	J303A	Laptop Service port 1
	J310A	Laptop Service port 2

DCM2.2 LED Indicators

Check the following LED indicators after DCM2.2 is powered ON:

| Function	Color	Control
CCP Power_Good LED	Green	Driven when 24 V-DC is present
HomePlug Power LED	Green	ON: J3 installed Flashing: Loading firmware OFF: J3 not installed
HomePlug Status LED	Green	ON: High-Speed link detected Flashing: TX or RX activity OFF: High-Speed link not detected
Two-wire	Orange	Flashing: TX and RX (two-wire) detected ON: RX is solid and TX is OFF if there is an Open connection. Wire is not connected. OFF: No communication. Both TX and RX are OFF.
SSoM Activity	Green	ON: SSoM is detected Flashing: After SSoM registered
Router Enable	Green	ON: SSoM is installed and has Cloud connectivity
P304 ETH Link/Act	Orange	ON: Using CAT-5 configuration OFF: Using High Speed

DCM2.2 Jumpers

The following table lists the status and functions of jumpers:

Connector	ON	OFF	Function
J3	X		High-speed connection active. P304 A/B disabled.
		X	High-speed connection inactive. P304A and P304B connects to CAT-5 running through the conduit for high speed connection (if used).
J4	X		Unit is connected to a Passport POS MOC.
		X	Unit is connected to a third party POS (Generic).
J5	X		VLAN is enabled
		X	VLAN is disabled
J6	B		Install the Jumper on the B position for the 45 mA Current loop.

Non-Dedicated High-Speed Field Wiring (DCM2.2 Only)

If you are not using the dedicated high-speed connection, refer to the following diagram:

Figure 8: Block Diagram for DCM2.2 Two-wire Configuration (Non-Dedicated)
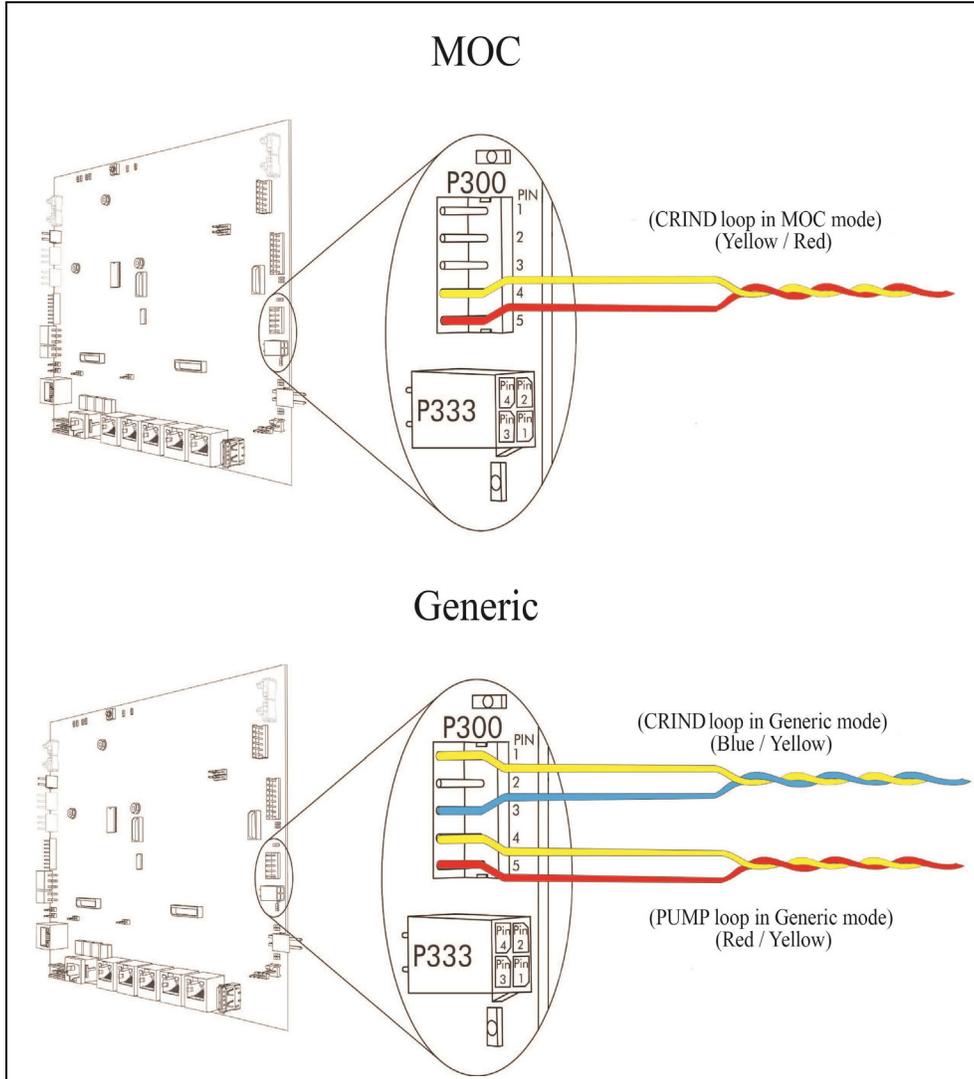
Dedicated High-Speed Field Wiring (Non-POS) Instructions (DCM2.2 only)

MOC

If you are using the dedicated high-speed connection (MOC type configuration), refer to the following:
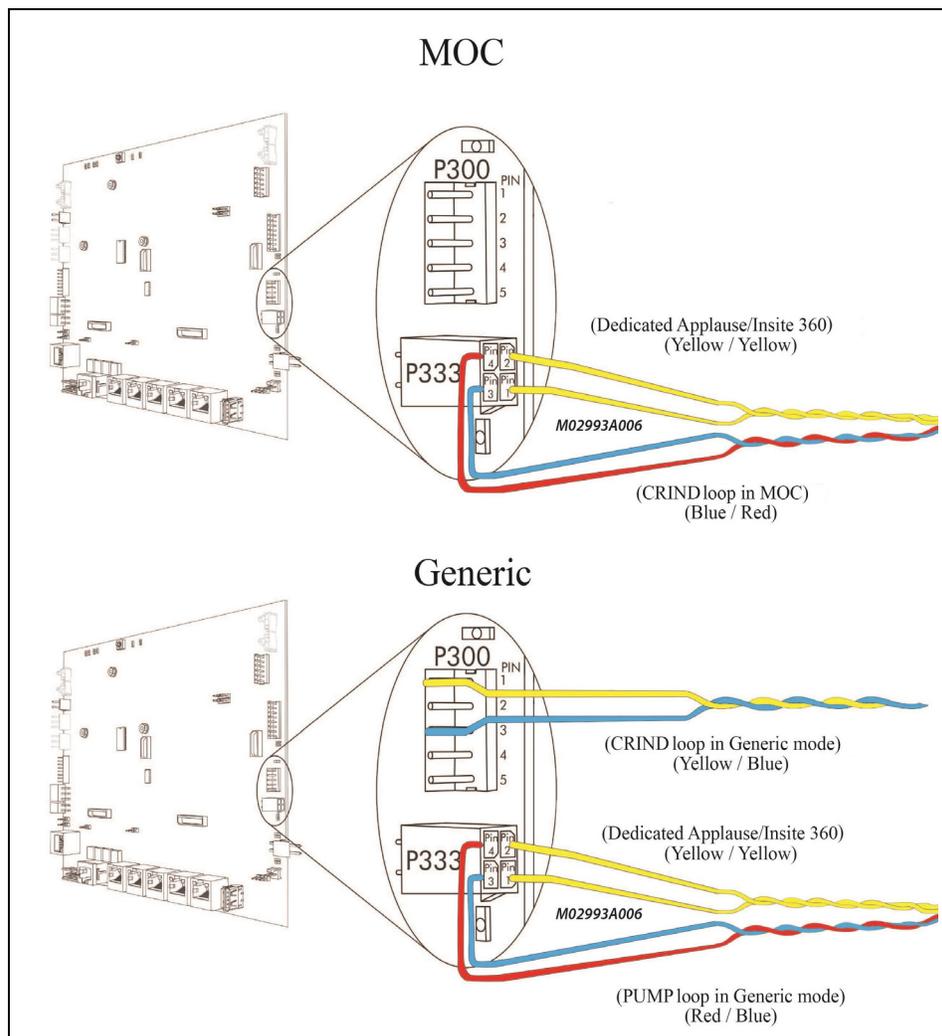
The following table lists wiring details for MOC mode:

Cable Part	Connector	Color	Description
M02993A006	P333.1	Yellow	High Speed
M02993A006	P333.2	Yellow	High Speed
M02993A006	P333.3	Red	CRIND+
M02993A006	P333.4	Blue	CRIND-

Generic

If you are using the dedicated high-speed connection (Generic type configuration), refer to the following:

Connect the M02993A006 Dedicated High-Speed Cable (M02993A006) from P333 on DCM2.2 to the dedicated high-speed connection from the back room as shown in Figure 9.

Figure 9: Block Diagram for DCM2.2 Two-wire Configuration (Dedicated)

The following table lists wiring details for Generic mode:

Cable Part	Connector	Color	Description
M02993A005	P300.1	Red	CRIND+
M02993A005	P300.3	Yellow	CRIND-
M02993A006	P333.1	Yellow	High Speed
M02993A006	P333.2	Yellow	High Speed
M02993A006	P333.3	Red	Pump+
M02993A006	P333.4	Blue	Pump-

Appendix A: Block Diagrams

PIP 2, DCM2.2, and BEEP Board Cable Connections

### Figure 10: PIP 2/DCM2.2/BEEP Board - Cable Connections

Appendix B: Cable Connections for Cash Acceptors

Dispensers with FlexPay II, DCM2, and a cash acceptor require a specific cable (M03184A011) with a built-in voltage converter to support the cash acceptor.

Instructions

1 Power down the dispenser and open the main door.

2 Locate the M03184A004 cable from the cash acceptor (J404 used to plug into the HIP or HIP2).

3 Plug M03184A004-J404 into the M03184A001-P404 connector.

4 Plug M03184A011-J202 into the P202 connector on the PIP board.

5 Dress the cables in the dispenser, and ensure that the data cables routed around the door hinge are separated from the ground cables.

6 Repeat steps 2-5 for the other side of the dispenser.

7 Power up the dispenser. Confirm that the installed cash acceptors go through a bill-stack operation.

Figure 11: Plug and Jack Connections
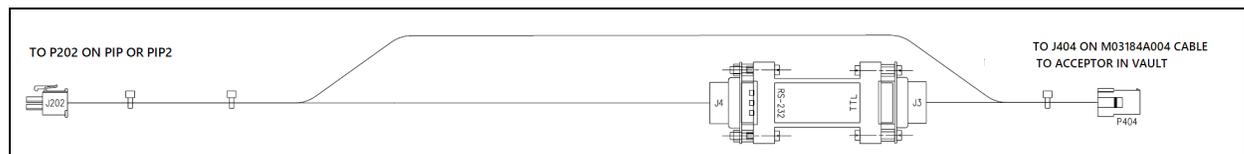
After the dispenser has completely powered up, both communication LEDs near P202 on the PIP board should be blinking. If only one is blinking, suspect a connection problem, and power down and inspect the cable connections. If neither of the two LEDs are blinking, go into CRIND diagnostics and confirm the acceptor is enabled.