PURELL® ONVATION CXR PAN Module Setup and Validation
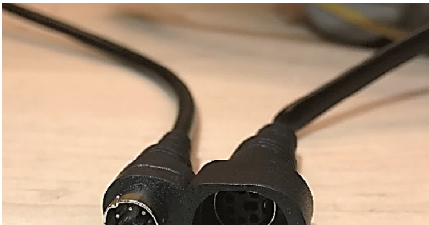
Objectives

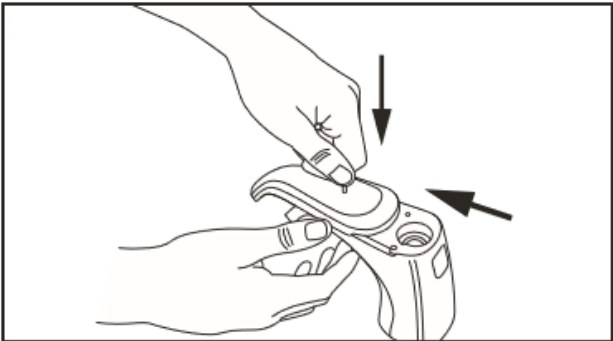You will learn how to perform the following system setup procedures:

- Recording required MAC ID of PURELL PAN Module
- Installing PAN Module into CXR Dispenser
- Provisioning the PAN Module to the ONVATION Hub
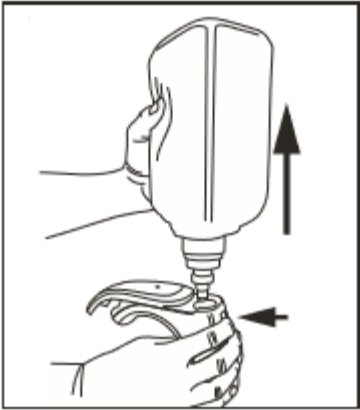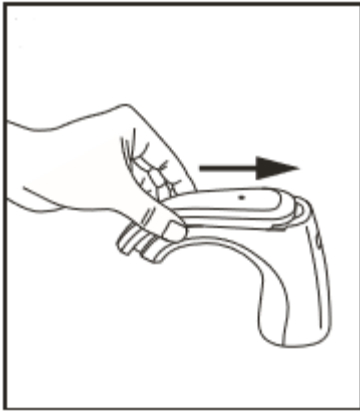- Validating PAN Module connectivity
- Troubleshooting setup issues

Equipment

- PURELL ONVATION CXR PAN Modules
- Recording device for MAC ID
- ONVATION Installer App

Module MAC ID Identification and Recording

Step	Illustration
1. Open module static bag and record MAC ID onto recorder with association to dispenser location. 2. Record Dispenser location on the static bag.	
3. Using recorded MAC ID's enter them into the ONVATION Installer App. 4. Install the Dispenser per the Dispenser Installation Guidelines.	
5. Plug the PAN Module into the SMARTLINK	

Connector on the dispenser.

6. Verify that the pins have connected correctly and that the connector is fully seated. The flat side of the module connector end should align with the flat edge of the CXR Connector end. If it is fully seated, the blue light will be blinking on the module, indicating it is ready to be setup if the CXR is connected to a power source.

7. If space is available, attach the PAN module to the CXR pumphouse by the module mount. If space is not available, the module can be affixed via screw to the wall.

8. Once the module is installed, and power is connected, the module should blink 3 LEDs at the same time, Red, Green, and Blue. Please reference the *PAN Module Light Patterns* section on page 4 for an explanation of all light patterns.

9. Confirm on the ONVATION Installer App that the module has 'checked-in" with the ONVATION Hub.

10. Install the Refill into the Reservoir by inserting the key into the hole in the top of the spout and sliding the spout forward.

Step	Illustration
11. Remove the dust cap from the soap refill, then insert the spout opening until the refill clicks into place. An Orange light will indicate the soap is flowing into the dispenser. If the orange light doesn't illuminate, adjust the position of the refill until it comes on. 12. Depress the refill release button on the back of the spout to release the refill and remove it. 13. Push spout door back into the locked position. 14. Pass your hand under the spout to dispense. 4 activations are required at startup to dispense foam soap.	

Wi-Fi/BLE Provisioning Exceptions

Issue	Code
Module Not Configured	All 3 LEDs on module will blink until a dispense has occurred. If you've performed a dispense and the LEDs are continuing to blink, then perform 1 more dispense. If the 3 LEDs are still blinking, then replace the module.
Dispenser Not Communicating with Onvation	If the dispenser is not communicating with Onvation, then try the following steps: 1. Hold a magnet near the {Special Location} on the module. The Red and Green LEDs will turn on. Remove the magnet immediately when the LEDs turn on. If the magnet is held for a short period of time, the

| | module will enter pairing mode. Once paired, the module will connect to Onvation. |
| | 2. Alternately a factory reset may be performed: |
| | If the magnet is held for a long period of time, all LEDs will turn on. This means a factory reset of the module is performed. All parameters are erased. The module enters a "Dispenser Detect" state where a dispense must be performed after a factory reset. |

PAN Module Light Patterns

Status

The 2 module board options function in consistent ways.

There are 3 LEDs on installed on the board. Red, Green, and Blue. These LEDs are turned on with specific patterns to indicate the board's status.

State: Unconfigured – Waiting for Dispenser
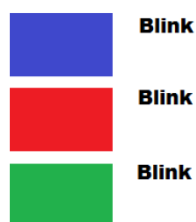
In this state, the module has not yet been configured for a specific dispenser type. It will blink 1X per second until the dispenser type is determined.

The module determines dispenser type when a dispense is performed. The Dispense (EOS) signal is toggled, and then status is sent to the module. Once the dispenser type is determined, it is saved and is only cleared upon a factory reset.

IMPORTANT: Once installed and powered in a dispenser, the module should not be left indefinitely in this state- as it will consume significantly more power than if it transitions out of this mode.

State: Dispenser Type Confirmation
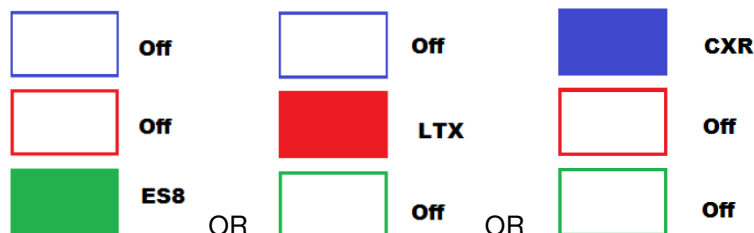
At startup, the dispenser enters the *dispenser type confirmation* state once it determines the dispenser type configuration for the module. The LED is turned on **solid** for a 1.5 second period to confirm the dispenser type. After the module enters this state, it will query the dispenser for its state, if possible, and then will begin initially advertising.

State: Advertising

|		
☐ Off	☐ Off	
🟥 Blink	🟥 Blink	
🟩 Blink	OR ☐ Off	
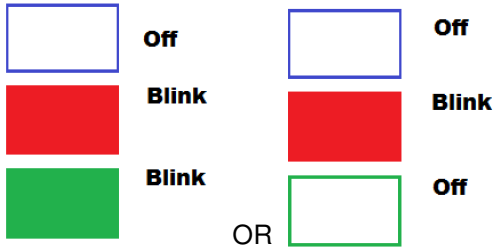
In advertising mode, either the Green and Red LED or only the Red LED blinks at a rate of 2X per second. If the green LED is blinking, this means that the module is in pairing mode and that it will accept a new bond.

This state transitions to a new state when advertising mode times out or when the module enters a connected state due to a connection.

On the first advertising state after a boot of the module, the timeout for advertising mode is 30 minutes. For subsequent advertising states, it times out after 1 minute. If advertising times out, it will not advertise for 2 minutes, and then will begin advertising again. If after 5 retries for advertising, the module will wait until the next scheduled advertising interval before advertising again.

In Production Firmware, this LED sequence is disabled for advertising without pairing. When pairing, this LED sequence is enabled.

State: Connected

☐ Off	
☐ Off	
🟩 Blink	
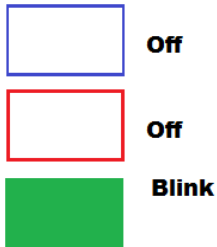
In the connected state, the Green LED will flash at a rate of 2X per second.

In this state, parameters are sent to a hub and this normally occurs within a 10 second period. This state will timeout after 5 minutes and will attempt to reconnect at the next scheduled advertising interval. This state transitions to the "Synchronization Complete" state if the synchronization is completed. It reschedules advertising if the central disconnects from the module without completing the synchronization process.

Once the Connected state is completed, the dispenser will wait until the next scheduled synchronization interval before synchronizing again. This synchronization interval may be scheduled immediately depending on the dispenser state.

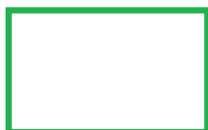In Production Firmware, this LED sequence is disabled.

All Other States

Off

Off

Off

In all other states, the LEDs are OFF to conserve power.

User Interface

Pairing Mode

If the magnetic switch is engaged for 500ms (1/2 second), the device will enter pairing mode. In this case, the LEDs will confirm the selection by blinking the Blue LED and turning the Green LED ON solid.

Blink

Off

On

When the button is released, the module will enter pairing mode and will attempt to make a connection to the hub. Note: We have seen instances where on the first connect to the hub, the hub will determine that it no longer has bond information and will automatically disconnect before parameters are sent. The module will then re-attempt a connection attempt 1 minute later and this time, the connection will succeed.

Pairing mode will be ignored in certain modes such as the connected mode.

Factory Reset

If the button or magnetic switch is engaged for 4 seconds, the device will perform a factory reset. When a factory reset is performed, any settings and bond information are erased from the module. In addition, the module will restart in a mode where it attempts to detect the dispenser type.

When the button or magnetic switch is held for 4 seconds, all 3 LEDs will turn solid, letting the technician know that when released, the module will perform a factory reset.

On

On

On

Defaults

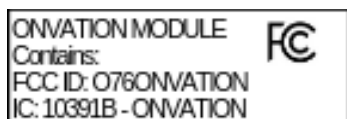The default settings for the module board are as follows:

Synchronization Interval: 60 minutes (may be set to any value [30-720])

Dispense Count Threshold: 50 dispenses (may be set to any value [5-255])

Device Compliance

Onvation Module FCC/IC Label

Please include on dispenser packaging or enclosure the following:

"Contains FCC ID: O76ONVATION, IC: 10391B-ONVATION"

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.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions. (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions. (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.