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## Product Overview

The Latch Camera gives residents the enhanced security they want, and property managers the integrated solution they need. Designed for hallways, front doors, and other common areas, it integrates directly with LatchOS to enable a more holistic security experience that keeps buildings protected.

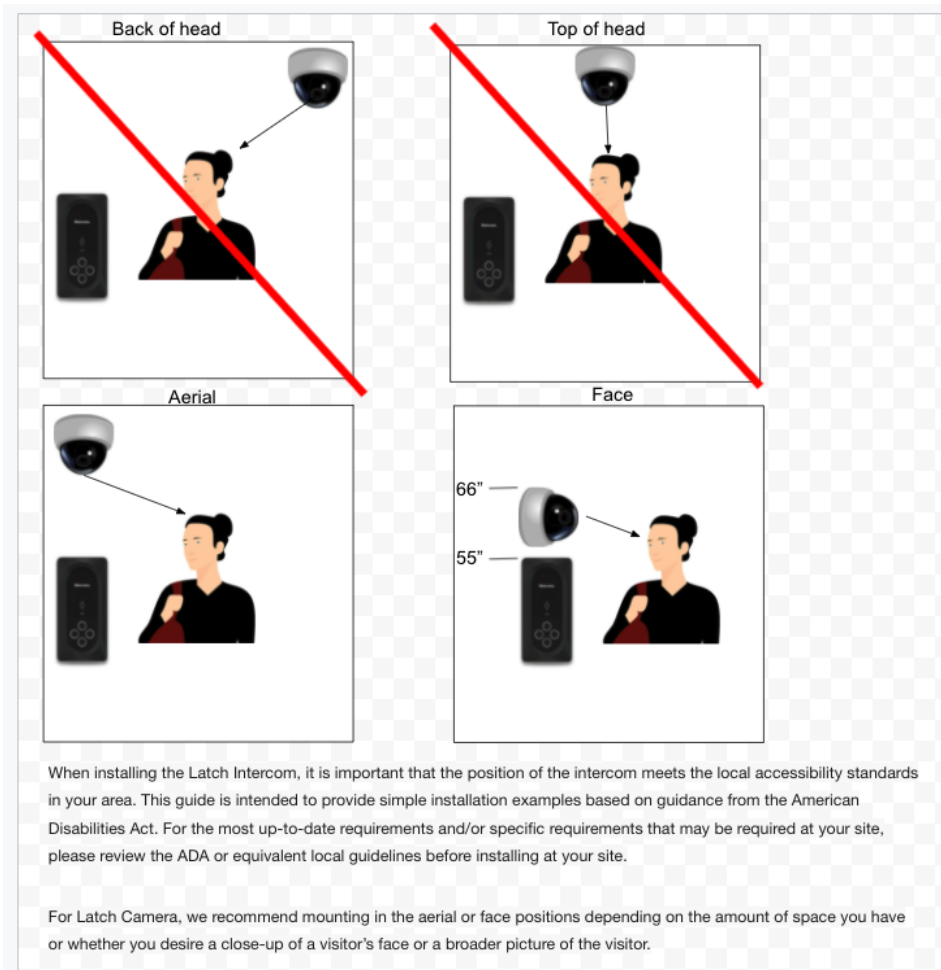
Latch Camera- [webpage](#)

Latch Camera- [Installation guide](#)

Latch Camera - [Spec Sheet](#)

## Best Practices and Field Notes

1. Use Provided Hardware
  - a. Use mounting screws provided where possible. If using different mounting screws, use flat-head screws.
2. Preparation is Key!
  - a. Drill the correctly sized holes and necessary depth for wires to avoid mounting difficulties.
3. Dust and Debris
  - a. Make sure the dome and lens are free from dust and debris before installing. Use a lint-free cloth when cleaning the lens and dome.
4. It's best practice to have the Camera configured and added to the network before mounting.
5. Positioning Best Practices:



## Field Notes

1. The most common issues experienced with the camera units are:
  - a. [Firewall blocking port traffic](#)
  - b. [Insufficient bandwidth allocation](#)

## For Install and Service

### 1. Tools

1. Phillips #2 Screwdriver
2. Torx T-10 Security Screwdriver/Bit
3. 1"-1.5" drill bit (for cable routing hole)
4. Multimeter
5. RJ-45 Cable Tester
  - a. Basic Cable Tester
  - b. Advanced Cable Verifier
6. [iOS Mobile Device](#)
  - a. [Supported devices](#)
  - b. The latest version of the [Latch Manager App](#)

### 2. Permissions (Confirm Access)

- a. Confirm user has the correct access permissions
- b. [Latch Manager App](#) (only available on iOS).
  - i. [Device Management Permissions](#)
  - ii. [Unit Unlock Access](#)
  - iii. Latch App ([iOS](#) and [Android](#))
    1. [Unit Unlock Access](#)
    2. This is needed to perform a test unlock on the unit - note PM will have to set this up.

## Onboarding

### Pre-install

1. Pre-install Setup & Requirements
  - a. Power
    - i. Will require POE or Ethernet with POE / Power Injector.
    - ii. Standard DC powering is not currently available.
  - b. Network / Internet
    - i. Requires Ethernet (DHCP).
  - c. Intercom
    - i. At this time, VMS features are not available.
    - ii. All cameras will require an associated intercom.
  - d. Cutsheet
    - i. The camera is surface mounted.
    - ii. The camera will require pilot holes to be drilled for mounting screws.

## Installation Process

### 1. Activation & Pairing Procedure

- a. Scan the QR code on the label with the [Latch Manager App](#) and follow the steps in the app to configure
  - i. The camera must be paired with the relevant door and Intercom.



## **2. Reset button**

- a. When pressed and held for over 15 seconds, the camera reboots, and the settings are restored to default values.

## **3. Remove the Dome and Protective Foam.**

- a. Use the L tool to remove the three retaining screws and dome.
- b. Remove the protective foam.
  - i. Note: Leave the dome detached until after the camera has been mounted.

## **4. Power up**

- a. Connect a standard Ethernet cable (not provided) to the LAN port of the camera cable and the LAN port on the gateway.
- b. Check the Status LED.
  - i. The Status LED should be solid green during startup, which takes 60 to 90 seconds. After the startup is completed, the LED begins to blink green. For the location of the Status LED, refer to the figure below

## 5. LED Chart

Color	LED Status	Description
<b>Green</b>	On	Powered on.
	Off	No power.
	Slow blinking	System is booting up.
	Fast blinking	System is downloading.
<b>Amber</b>	On	Firmware upgrade failure or heater is on.
	Slow blinking	Device firmware is updating.
	Fast blinking	System has reset to default.
<b>Blue</b>	On	Powered on.
	Slow blinking	Data is transmitting/receiving via the network.

## 6. Mounting the Camera

- a. **Please ensure the Mini Dome Camera is configured and added to the network before mounting.**
- b. Identify the location where you would like to mount the camera/junction box.
- c. Using the mounting template included in the box as a guide, drill three mounting holes in the ceiling or wall.
- d. If using the anchors, insert them into the mounting holes.
- e. Align the three mounting holes of the camera stand with the three holes, and then mount the camera stand onto the ceiling or wall using the provided screws.



If using a junction box, install the junction box to the ceiling/wall first and then install the camera onto the junction box.

## 7. Mounting Suggestion.

- a. The camera is very sensitive to motion and may even trigger a motion event with the movement of a small tree, bush, or other object in the wind.
- b. For this reason, be sure to mount the camera in a location where its field of view does not include small trees, bushes, or other objects that could move and unintentionally trigger a motion event.
- c. **Note:** Use the alignment marks to properly align the camera and bubble while attaching them together.

## 8. Rotate or tilt the Latch Camera for the desired optimal field of view

## 9. How do I know which door has a Latch Camera?

- a. The Latch Manager mobile app will show a status of “This door has a paired camera” in the settings menu of the door, if any Latch Camera is associated with the door.

## NVR: Adding the Latch Camera to a local network video recorder (NVR)

Once a Latch Camera has been installed, follow these directions to connect it to your local network video recorder (NVR) for continuous recording:

1. Connect your NVR to the same Local Area Network (LAN) as the Latch Camera.
2. Open the [Latch Manager App](#).
3. Navigate to the settings of the door which has the camera paired to it.
4. Navigate to the camera settings and go to “Set up NVR.”
5. Type a secure username, password, and NVR IP address in the provided fields. These credentials will be used to pair your camera with the NVR.
6. Type the IP address of the NVR, if the address is static. This is an optional step to ensure a more secure connection between the NVR and the Latch camera.
7. Save these settings and go through the user guide of your specific NVR to subscribe to the video stream of the Latch camera and start recording.

Other useful information:

- Network protocol: RTSP
- Port: 554
- Black camera stream (30fps) is `rtsp://<user name>:<password>@<ip address of camera>/img/video.sav?stream=1&video=H264`

- Black camera stream (3fps) is `rtsp://<user name>:<password>@<ip address of camera>/img/video.sav?stream=2&video=H264`
- White camera stream (30fps) path: `rtsp://<username>:<password>@<ip address of camera>/live1s2.sdp`
- White camera stream (5fps) path: `rtsp://<username>:<password>@<ip address of camera>/live1s3.sdp`

## Troubleshooting Workflow

**NOTE:** *If the below troubleshooting steps do not resolve your issue, please reach out to [Support@latch.com](mailto:Support@latch.com) and our Support Team will be happy to assist you.*

### **1. Check for any physical damage**

- a. Check for moisture/condensation in the camera housing.
- b. Look for any breaks or cracks in the camera housing.

### **2. Check the POE cabling**

- a. Inspect the wiring at the camera for any signs of water damage.
- b. Mismatching cable terminations can lead to network failure.
- c. Check the ethernet cable for any breaks or cracks in the wire.
- d. If the ethernet cable used in a PoE link is over 100 meters or has power loss due to the material and resistance of the cable itself, the camera will not get sufficient power, which could cause the network to fail.
- e. If the cables are not tested qualified, it will lead to errors as well.

### **3. Confirm PoE power is sufficient**

- a. Check whether the PoE switch or Power Injector supports the camera.
- b. Make sure the power for running the camera will not exceed the power budget of the PoE network switch. If a PSE (power supply equipment) has detected the camera power class is within its capacity, it will power the camera on.

### **4. Confirm PoE power management configuration**

- a. Check whether automatic PoE power management configuration is configured on the switch interface.
- b. If not, you will need to manually deliver PoE power to the camera connected to the PoE network switch.

### **5. Check the network switch port**

- a. Use a network tester to confirm the port you are trying to connect to is functioning.
- b. Moving the camera to a different switch port can help identify if the port is in good working condition.

## Network/Firewall Troubleshooting

- **The minimum network speed must be at least 10Mbps as tested by a network testing device.**
- If data is being transmitted via LAN, the color of the LED is blue.
- If the camera is being installed behind a firewall, modifications may need to be made for the camera to work properly. At a minimum, the following requirements must be met:
  1. Open all destinations on TCP ports 443, 3478, and 5349
  2. Open all UDP ports in both directions
  3. Add/Allow the following domains:
    - a. \*.latchaccess.com
    - b. \*.latch.com
    - c. \*.amazonaws.com
- Additionally, full cone NAT configuration is recommended. In summary, make sure your router, firewall, or networking device doesn't block incoming and outgoing traffic on the following ports and domains:
  1. TCP Outbound
    - a. 443
    - b. 3478
    - c. 5349
  2. UDP Inbound and Outbound
    - a. 1025-65535

**Note: If video feeds still aren't loading, all ports to the camera may need to be opened.**

**If video feeds are working <90% of the time or not at all, ask the integrator if they are using a SonicWall firewall. Contact Latch Support ([support@latch.com](mailto:support@latch.com)) for help with SonicWall firewalls.**

### **Firewalls**

- If camera video feed issues are occurring and the network has a firewall, please move the camera to a network without a firewall to repeat testing.
- If the camera must be installed permanently on a firewalled network, check that the following firewall settings are set as follows (if the firewall has them):
  - **Enable Fragmented Packet Handling** is checked.
  - **Ignore DF Bit** is unchecked.

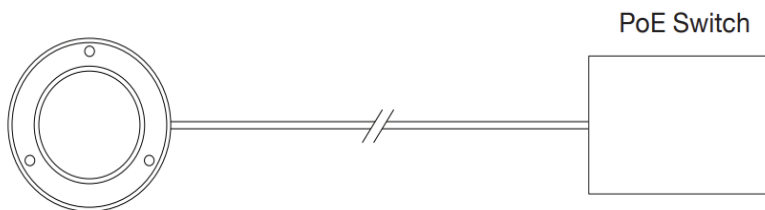
- **Enable NAT Traversal** is checked.

## Firewalls when using PBX receivers

- If the PBX that the SIP Server communicates with is located behind the firewall then SIP transformations should be disabled in most deployments. Consult with your VoIP vendor

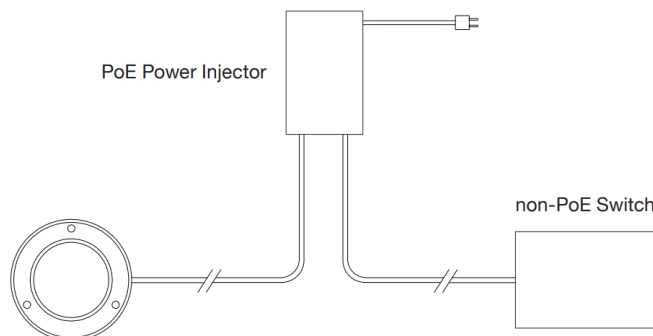
## When using a PoE-enabled switch

- The Latch Camera is PoE-compliant, allowing transmission of power and data via a single Ethernet cable. Connect the camera to a PoE-enabled switch via an Ethernet cable.



## When using a non-PoE switch

- Use a PoE power injector to connect between the Latch Camera and a non-PoE switch.



### Note:

1. Connect the camera to a PoE switch only and avoid external power supplies.

2. For PoE connection, use only UL listed I.T.E. with PoE output.

## Features

### **Dual Video Support**

- The camera supports H.264 and MJPEG video compression.

### **PoE Support**

- You can use PoE (Power over Ethernet) to provide power to the Mini Dome Camera, so only a single cable connection is required.

### **IR LED Support.**

- The two built-in infrared LEDs can provide illumination for up to 20 meters.

### **Built-in Heater**

- The built-in heater ensures that the camera will continue to operate even in extremely cold outdoor climates. The heater turns on when the temperature falls below 42°F (6°C).

### **User Authentication**

- If desired, access to live video can be restricted to known users. Users will have to enter their username and password before being able to view the video stream.

### **Password-Protected Configuration**

- Configuration data can be password protected so that it only can be changed by the Network Camera Administrator.

## Product Details

### **IR LEDs**

- These are used to provide illumination for nighttime viewing. Ensure that the two IR LEDs are not obstructed beneath the transparent dome bubble.

### **Light Sensor**

- This is a hardware sensor to detect lux. Ensure that the light sensor is not obstructed beneath the transparent dome bubble.

### **Lens**

- No physical adjustment is required for the lens. Ensure that the lens cover remains clean.

### **LAN Port**

- Use a standard Ethernet cable (not included) to connect the LAN port of the supplied cable to the gateway. This port supports PoE which provides both power and network connectivity via a single Ethernet cable.

### **Status LED (Green, Amber, Blue)**

- The color statuses are provided in the chart above.

## RMA Process

### Overview

In order to replace a defective device, receive a replacement unit, and return the defective unit to our QA team for evaluation, an RMA will need to be submitted through our RMA process.

### Process Overview

1. Contact Latch Support with RMA details:
  - a. [support@latch.com](mailto:support@latch.com)
  - b. +1 (888) 808-0670
2. Required Details
  - a. Device Serial
  - b. Associated Property Name
  - c. Associated Door Name
  - d. Issue Description / Symptoms
  - e. Troubleshooting Steps Attempted
  - f. Shipping Address (for a new device)
  - g. Shipping Contact Name
  - h. Shipping Contact Email
  - i. Shipping Contact Phone Number