

CSI 3-Part Specification

Specifier Notes: This document has been provided to allow inclusion of certain paragraphs to support the necessary support, training, commissioning and specific hardware items for a Latch system implementation. This document is not intended to be all inclusive and does not address application specific details.

This section must be carefully reviewed and edited by the Architect/Engineer to meet the requirements of the project and local building code.

Coordinate this section with other specification sections and the Drawings. Delete all "Specifier Notes" after editing this section.

This product guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format, including MasterFormat, SectionFormat, and PageFormat, as described in The CSI Construction Specifications Practice Guide.

1. PART 1 – GENERAL

1.1 SECTION INCLUDES

- A. Providing, installing, and testing of electronic locking hardware, card reader/controller, audio-video intercom system, and cloud-based software services.

1.2 RELATED REQUIREMENTS

Specifier Notes: Edit the following list of related sections as necessary. Limit the list to sections with specific information that the reader might expect to find in this section but is specified elsewhere.

- A. Division 08 Section – Openings
- B. Division 26 Section – Electrical
- C. Division 26 Section – Operation and Maintenance of Low-Voltage Electrical Distribution
- D. Division 26 Section – Low-Voltage Electrical Power Conductors and Cables
- E. Division 26 Section – Low-Voltage Electrical Distribution
- F. Division 27 Section – Communications
- G. Division 27 Section – Conduits and Backboxes for Communications Systems
- H. Division 27 Section – Data Communications Network Equipment
- I. Division 28 Section – Electronic Safety and Security
- J. Division 28 Section – Access Control Interfaces to Access Control Hardware

- K. Division 28 Section – Access Control Interfaces to Elevator Controls
- L. Division 28 Section – Audio Video Intercom
- M. Division 28 Section – Security IP Network Compatible Intercom System

1.3 REFERENCE STANDARDS

Specifier Notes: List reference standards used elsewhere in this section, complete with designations and titles.

- A. M Series (phasing out):
 - 1. FCC Part 15 Subpart C
 - 2. IC RSS-310
 - 3. Bluetooth SIG
 - 4. IEC 61000-4-2
 - 5. UL 10B (90min)
 - 6. UL 10C (90min)
 - 7. ULC S104 (90min)
 - 8. FL TAS 201-94, 202-94, 203-94
- B. M2 Series:
 - 1. UL 10B/C (90 min)
 - 2. CAN/ULC S104
 - 3. FCC Part 15
 - 4. IC RSS
 - 5. FL TAS 201/202/203-94
 - 6. Built to ANSI/BHMA 156.13 Grade 1
- C. C Series (phasing out):
 - 1. FCC Part 15 Subpart C
 - 2. IC RSS-310
 - 3. Bluetooth SIG
 - 4. IEC 61000-4-2
 - 5. UL 10B (90min)
 - 6. UL 10C (90min)
 - 7. ULC S104 (90min)
 - 8. FL TAS 201-94, 202-94, 203-94
- D. C2 Deadbolt:
 - 1. UL 10B (90min)
 - 2. UL 10C (90min)
 - 3. CAN/ULC S104 (90min)
 - 4. FCC Part 15
 - 5. IC RSS

6. FL TAS 201-94, 202-94, 203-94
7. ANSI/BHMA 156.36 Grade 2 Certified

E. R Series:

1. FCC Part 15 Subpart C
2. IC RSS-310
3. Bluetooth SIG
4. IEC 61000-4-2
5. UL 60950-1
6. UL 294
7. UL 62368
8. IP65

F. Intercom:

1. FCC Part 15 Subpart B/C/E
2. FCC Part 24
3. IC RSS-130/133/139/247
4. PTCRB
5. UL 62368-1
6. UL 294
7. IP65

G. Camera:

1. CE
2. FCC Class B
3. UL
4. LVD
5. VCCI
6. C-Tick
7. IP66
8. IK10

H. Hub:

1. FCC Part 15C Class B
2. IC
3. PTCRB
4. UL 62368

I. Water Sensor:

1. FCC
2. IC
3. CE
4. ZigBee HA

1.4 SUBMITTALS

Specifier Notes: Edit submittal requirements as necessary. Delete submittals not required.

- A. Submit under provisions of Section 01 32 19 - Submittals Schedule.
- B. Submit ten (10) sets of product information on each product type to be used, as follows:
 - 1. Product data sheets and technical installation documents to the General Contractor.
 - 2. Storage and handling requirements and recommendations for each product.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Engage a Latch Authorized Service Provider (LCCP) to coordinate the installation and implementation of Latch hardware and Latch Manager software.
 - 1. LCCP is required to provide installation of Latch products in coordination with the Section 8 contractor.
 - 2. LCCP will install and implement Latch hardware and Latch Manager software.
 - 3. Section 8 contractor is required to have a minimum 2 years of experience installing similar products.
- B. Supplier Qualifications: LCCP with staff trained to supply, coordinate, commission, and on-board a complete Latch solution.
- C. Pre-installation Conference: Conduct a pre-installation conference to coordinate the installation requirements and provisioning of the Latch system. Review items impacting related trades.
 - 1. Inspect and discuss preparatory work performed by other trades.
 - 2. Inspect and discuss electrical roughing-in for system components and electrified door hardware.
 - 3. Review Latch hardware installation and programming details specific to the use of the product and Latch Manager App and Latch App during the construction process.
- D. Installer Training: Conduct product training for installers prior to installation of the locksets.
 - 1. Use of the Latch Manager App during installation and proper scanning of QR code.
 - 2. Field handling of the Latch M Series and proper installation of components.
 - 3. Use of the Latch system during the construction process.

4. Keying:
 - a. Latch M or C Series each keyed differently and operated by a single level master key. Latch devices are packaged with 3 keys per package. Master keys (ordered separately) shipped independently of Latch devices. Collect keys upon completion of project and return to the Owner.
- E. Latch Hub, Water Sensor, R Series, M Series, and C Series Warranty:
 1. 1-year limited warranty on electronics.
 2. 5-year limited warranty on mechanical trim.
- F. Latch M2 Series Warranty:
 1. 2-year limited warranty on electronic components.
 2. 5-year limited warranty on mechanical components.
- G. Latch Intercom Warranty:
 1. 2-year limited warranty on electronics.
 2. 2-year limited warranty on mechanical trim.
- H. Latch Camera Warranty:
 1. 12-month limited warranty

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver Latch products to project site in manufacturer's original, unopened packaging, with labels clearly identifying product name and manufacturer. Store products in a secure space free from dust, contaminants, and moisture. Maintain integrity of packaging and track the locations of keys as Latch devices are being installed. Coordinate handling of master keys with the Owner.
- B. Handle materials to avoid damage.
- C. Products must be maintained as follows:
 - Latch R Series, M Series, M2 Series, C Series, and C2 Series:
 - Exterior: -22°F to +158°F (-30°C to +70°C),
 - Interior: -4°F to +129.2°F (-20°C to +54°C); 0% to 95% relative humidity, non-condensing.
 - Latch Intercom: -22°F to +185°F (-30°C to +85°C)
 - Latch Camera:
 - Starting temperature: -10°C to 60°C (+14°F to +140°F)
 - Working temperature: -30°C to 60°C (-22°F to +140°F)
 - Humidity: 90%
 - Latch Hub: +32°F to +104°F (0°C to +40°C), Indoor Use Only
10% to 90% relative humidity, non-condensing.
 - Latch Water Sensor:
 - Operating Temperature: +32°F to +122°F (0°C to +50°C)
 - Operating Humidity: 10% to 80% relative humidity, non-

condensing.

Storage Temperature: +4°F to +140°F (-20°C to +60°C)

Storage Humidity: -20% - 60% RH (non-condensing)

1.7 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside of manufacturer's recommended limits.

1.8 SEQUENCING

- A. Ensure that the products of this section are supplied to affected trades in time to prevent interruption of construction progress.

2. PART 2 – PRODUCTS

2.1 MANUFACTURER

A. Manufacturer: Latchable, Inc., 508 West 26th Street, Suite 6G
New York, NY 10001.

Website: www.latch.com

E-mail: contact@latch.com

B. Substitutions: Not permitted.

2.2 MATERIALS

A. Mortise Electronic Lockset – M Series (phasing out)

1. Mechanical Lock Body
 - a. Mechanical: Mortise deadbolt
 - b. Handing: Field reversible
 - c. Door thickness Compatibility: 1 ¾"
 - d. Backset compatibility: 2 ¾"
 - e. Lever style options: Standard and return
 - f. Latchbolt throw: ¾"
 - g. Deadbolt throw: 1"
 - h. Strike plate: 1 ¼" x 4 ⅞, 1 ¼" lip
 - i. Cylinder: Schlage Type C keyway standard, with custom and specific cylinders available on request
2. Finish: Silver, Black.
 - a. Other standard and custom finishes are available upon request depending on order volume and project timing
3. Environmental:
 - a. Operating Temperature:
 1. Exterior: -22°F to +158°F (-30°C to +70°C)
 2. Interior: -4°F to +129.2°F (-20°C to +54°C)
 3. Camera: +32°F to +140°F (0°C to +60°C)
 4. Operating Humidity: 0-95% relative humidity, non-condensing
4. Technology Elements:
 - a. Power:
 1. Class 2 Isolated, UL Listed DC Power Supply
 2. Supply Voltage: 12VDC
 3. Operating Power: 2.4W (0.2A @12VDC)
 4. Battery Power Supply: 6 AA non-rechargeable alkaline batteries
 5. Battery Life: 12 months with normal usage

- 6. Battery Status: Monitoring and notifications in Latch software suite
- b. Wireless Standards:
 - 1. Near Field Communication (NFC)
 - 2. Bluetooth Low Energy (BLE)
 - 3. NFC Frequency: 13.56 MHz
 - 4. NFC Read Range: Up to 1.18"
 - 5. NFC Type: MIFARE Classic
- c. Credentials Types:
 - 1. Smartphone
 - 2. NFC Keycard
 - 3. Doorcode
 - 4. Mechanical Key
- d. Supported Smartphones: iOS and Android (see website for full supported smartphone list).
- e. Users: 1500
- f. Camera: 135° image capture
- g. Management: App and Cloud
- h. Visual Communications: 7 white LEDs
- i. Interface: Touchpad, web and mobile apps
- 5. Warranty:
 - a. 1-year limited warranty on electronic components
 - b. 5-year limited warranty on mechanical components
- 6. Certifications:
 - a. UL 10B (90min)
 - b. UL 10C (90min)
 - c. ULC S104
 - d. FCC Part 15 Subpart C
 - e. IC RSS-310
 - f. IEC 61000-4-2
 - g. FL TAS 201-94, 202-94, 203-94
 - h. Built to ANSI/BHMA 156.13 Series 1000 Grade 1
- 7. Compliance:
 - a. Complies with Americans with Disabilities Act

B. Mortise Electronic Lockset – M2 Series

- 1. Mechanical Specifications
 - a. Lock format: Mortise
 - b. Handing: Field reversible
 - c. Door thickness compatibility: 1 3/4" / 44.5mm
 - d. Backset compatibility: 2 3/4" / 69.9mm

- e. Lever style options: Standard and return
 - f. Deadbolt throw: 1" / 25.4mm
 - g. Faceplate: 8" x 1/4", 0.06" Thick / 203.2 x 6.4 mm, 1.5mm Thick
 - h. Strike plate: ANSI 4-7/8" x 1-1/4" / 123.8 x 31.75 mm
Curved Lip Strike
2. Finish: Latch Silver, Latch Black.
3. Environmental:
- a. Operating Temperature:
 - 1. Interior: -4°F to +129.2°F (-20°C to +54°C)
 - b. Operating Humidity: 0-95% relative humidity, non-condensing
 - c. Weather Resistance: Lens: IP65, Exterior/Interior Assemblies: IP55 — Interior assembly not intended for outdoor use
5. Technology Elements:
- a. Power:
 - 1. Power Supply: 6 AA non-rechargeable alkaline batteries
 - 2. Battery Status: Passive monitoring and active notifications via LatchOS
 - 3. Inductive Jumpstart: Qi-compatible power source can wireless power a Bluetooth unlock in the event of battery failure
 - b. Communication:
 - 1. Near Field Communication (NFC)
 - 2. Bluetooth Low Energy 5.0 (BLE)
 - 3. NFC Frequency: 13.56 MHz
 - 4. NFC Type: MIFARE DESFire Light
 - 5. Supported devices: iOS, Watch OS, and Android (see website for full supported smartphone list).
 - c. Credentials Types:
 - 1. Smartphone
 - 2. NFC Keycard
 - 3. Doorcode
 - 4. Mechanical Key
 - d. Users: 1500

- e. Management: App and Cloud
- 6. Warranty:
 - a. 2-year limited warranty on electronic components
 - b. 5-year limited warranty on mechanical components
- 8. Certifications:
 - a. UL 10B/C (90 min)
 - b. CAN/ULC S104
 - c. FCC Part 15
 - d. IC RSS
 - e. FL TAS 201/202/203-94
 - f. Built to ANSI/BHMA 156.13 Grade 1
- 9. Compliance: Complies with Americans with Disabilities Act

C. Cylindrical Lockset and Deadbolt – C Series (phasing out)

- 1. Mechanical Lock Body
 - a. Mechanical Chassis: Deadbolt
 - b. Handing: Field reversible
 - c. Door thickness compatibility: 1 3/4" and 1 3/8"
 - d. Backset compatibility: 2 3/4" and 2 3/8"
 - e. Lever style: Standard, return
 - f. Lever mechanical dimensions: 5.9" X 2.4" X 2.8"
 - g. Door preparation: 5 1/2" Center to Center
 - h. Lever set substitution: Permitted
 - i. Deadbolt Throw: 1"
 - j. Faceplate Options: 1" x 2 1/4" round corner,
1" x 2 1/4" square corner, drive-in
 - k. Strike Plate: 1 1/8" x 2 3/4" security strike
 - l. Cylinder: Schlage Type C keyway standard, with custom and specific cylinders available on request
- 2. Finish: Silver, Black
 - a. Other standard and custom finishes are available upon request depending on order volume and project timing
- 3. Environmental:
 - a. Exterior: -22°F to +158°F (-30°C to +70°C)
 - b. Interior: -4°F to +129.2°F (-20°C to +54°C)
 - c. Camera: 32°F to +140°F (0°C to +60°C)
 - d. Operating Humidity: 0-95% relative humidity, non-condensing
- 4. Technology Elements:
 - a. Power:

1. Power Supply: 6 AA non-rechargeable alkaline batteries
2. Battery Life: 12 months with normal usage
3. Battery Status: Monitoring and notifications in Latch software suite
5. Wireless Standards:
 - a. Near Field Communication (NFC)
 - b. Bluetooth Low Energy (BLE)
 - c. NFC Frequency: 13.56 MHz
 - d. NFC Read Range: Up to 0.75"
 - e. NFC Type: MiFare Classic
6. Credentials Types:
 - a. Smartphone
 - b. NFC Keycard
 - c. Doorcode
 - d. Mechanical Key
7. Supported Smartphones: iOS and Android (see website for full approved smartphone list)
8. Users: 1500
9. Camera: 135° image capture
10. Management: App and Cloud
11. Visual Communications: 7 white LEDs
12. Interface: Mobile apps, touchpad, NFC and web
13. Warranty:
 - a. 1-year limited warranty on electronic components
 - b. 5-year limited warranty on mechanical components
14. Certifications:
 - a. UL 10B (90min)
 - b. UL 10C (90min)
 - c. ULC S104
 - d. FCC Part 15 Subpart C
 - e. IC RSS-310
 - f. IEC 61000-4-2
 - g. FL TAS 201-94, 202-94, 203-94
 - h. Built to ANSI/BHMA 156.36 Grade 1
15. Compliance:
 - a. Complies with Americans with Disabilities Act

D. Latch C2 Deadbolt

1. Mechanical Specifications:
 - a. Lock format: Patent-pending turn mechanism deadbolt
 - b. Handing: Field reversible
 - c. Door thickness compatibility: 1 3/4" and 1 3/8"
 - d. Backset compatibility: 2 3/4" and 2 3/8"
 - e. Door preparation: 5 1/2" Center to Center with a 1" crossbore
 - f. Deadbolt Throw: 1"
 - g. Faceplate Options: 1" x 2 1/4" round corner, drive-in
 - h. Strike Plate: 1 1/8" x 2 3/4" rounded corner security strike
2. Finishes:
 - a. Latch Black Exterior, Latch Black Interior
 - b. Latch Black Exterior, Latch White Interior
 - c. Satin Chrome Exterior, Latch White Interior
 - d. Latch White Exterior, Latch White Interior
3. Environmental:
 - a. Exterior: -22°F to +158°F (-30°C to +70°C)
 - b. Interior: -4°F to +129.2°F (-20°C to +54°C)
 - c. Operating Humidity: 0-95% relative humidity, non-condensing
4. Power:
 - a. Power Supply: 6 AA non-rechargeable alkaline batteries
 - b. Battery Status: Passive monitoring and active notifications via Latch OS
 - c. Inductive Jumpstart: Qi-compatible power source can wirelessly power a Bluetooth unlock in the event of battery failure
5. Communication:
 - a. Near Field Communication (NFC)
 - b. Bluetooth Low Energy 5.0 (BLE)
 - c. NFC Frequency: 13.56 MHz
 - d. NFC Type: DESFire Light
 - e. Supported devices: iOS, Watch OS, and Android (see website for full list of supported devices)

6. Credentials Types:
 - a. Smartphone
 - b. NFC Keycard
 - c. Doorcode
7. Users: 1500
8. Management: App and Cloud
9. Warranty:
 - a. 2-year limited warranty on electronic components
 - b. 5-year limited warranty on mechanical components
10. Certifications:
 - a. UL 10B (90min)
 - b. UL 10C (90min)
 - c. CAN/ULC S104 (90min)
 - d. FCC Part 15
 - e. IC RSS
 - f. FL TAS 201-94, 202-94, 203-94
 - g. ANSI/BHMA 156.36 Grade 2 Certified
11. Compliance:
 - a. Complies with Americans with Disabilities Act

E. Reader, Door Controller, and Management System – R Series

1. Mechanical Dimensions: 5.49" x 3.18" x 0.76"
2. Mounting: Surface mount or wall-box mount
3. Environmental:
 - a. Temperature: -40°C to +66°C (-40°F to +15.8°F)
 - b. Humidity: 0-93% at 32°C, non-condensing
 - c. Ingress protection code: IP65
 - d. Impact protection grade: IK04
4. Power: Class 2 Isolated, UL Listed DC Power Supply
 - a. Supply Voltage: 12VDC to 24VDC
 - b. Operating Power: 3W (0.25A@12VDC, 0.12A@24VDC)
5. Credentials Types: Smartphone, NFC Keycard, Doorcode
6. Users: 5000
7. Camera: 135° image capture
8. Configuration: With existing access control panel or standalone
9. Lock Relay: Configurable SPST normally open relay, 1.5A @24VDC or @24VAC

- 10. Inputs and Outputs: maximum
3 configurable inputs/outputs
- 11. Termination: 10 conductor cable with pre-tinned leads
- 12. Management: App and Cloud
- 13. Wireless Standards:
 - a. Near Field Communication (NFC)
 - b. Bluetooth Low Energy (BLE)
 - c. WiFi: 802.11 b/g.
- 14. Wired Standards:
 - a. Ethernet: 10/100Mbps, RJ45 Male Plug
 - b. Serial: RS-485
 - c. Wiegand: Output only
 - d. NFC Frequency: 13.56 MHz
 - e. NFC Read Range: Up to 0.75"
 - f. NFC Type: MiFare Classic
- 15. Supported Smartphones: iOS and Android (see website for full supported smartphones list)
- 16. Visual Communications: 7 white LEDs
- 17. Interface: Touchpad, web and mobile apps
- 18. Warranty: 1-year limited warranty on electronic components, 5-year limited warranty on mechanical components
- 19. Certifications:
 - a. FCC Part 15 (US)
 - b. IC RSS (Canada)
 - c. UL/CSA 62368-1
 - d. UL 294
 - e. RoHS

F. Latch Intercom

- 1. Mechanical Dimensions: 12.82" X 6.53" X 1.38"
325.6mm X 166.0mm X 35.1mm
- 2. Mounting: Surface mount
- 3. Materials: Stainless steel, glass fiber reinforced resin, and impact-resistant glass
- 4. Environmental:
 - a. Operating Temperature: -30°C to +60°C (-22°F to +140°F)
 - b. Humidity: 95%, non-condensing
 - c. Dust and Water Resistance: IP65
- 5. Power: Class 2 Isolated, UL Listed DC

- | | | |
|-----|---|--|
| | | Power Supply |
| a. | Supply Voltage: | 12VDC to 24VDC |
| b. | PoE: | 802.3bt with 50W+ |
| c. | Power Consumption: | Typical: 20W, Max: 50W |
| 6. | Communication: | |
| a. | Ethernet: | Cat5e/Cat6 10/100/1000 Mbps |
| b. | WiFi: | 2.4/5 GHz, 802.11a/b/g/n/ac |
| c. | Cellular: | Category 1 |
| d. | Bluetooth: | Bluetooth 4.2 |
| e. | IP Address: | DHCP or Static IP |
| 7. | Audio and Video: | |
| a. | Loudness: | 90dB max volume |
| b. | Microphone: | Dual microphone, echo cancellation,
and noise reduction |
| c. | Supported Camera: | Can be paired with Latch Camera |
| d. | Supported In-Unit VoIP PBX terminal: | Fanvil i10D SIP Mini
Intercom |
| 8. | Screen: | |
| a. | Brightness: | 1000 nits |
| b. | Viewing Angle: | 176 degrees |
| c. | Size: | 7" diagonal |
| d. | Coatings: | Anti-reflection, anti-fingerprint |
| 9. | Certifications: | |
| a. | FCC Part 15 Subpart B/C/E | |
| b. | FCC Part 24 | |
| c. | IC RSS-130/133/139/247 | |
| d. | PTCRB | |
| e. | UL62368-1 | |
| f. | UL294 | |
| g. | IP65 | |
| 10. | Compliance: | |
| a. | Complies with Americans with Disabilities Act | |

G. Latch Camera

- | | | |
|----|------------------------|----------------------------------|
| 1. | Mechanical Dimensions: | 5.3" x 4.1" |
| 2. | Weight: | 819 g. |
| 3. | Mounting: | Surface mount |
| 4. | Environmental: | |
| a. | Operating Temperature: | -30°C to +60°C (-22°F to +140°F) |
| b. | Humidity: | 90%, non-condensing |

- c. Dust and Water Resistance: IP66, IK10
 - d. Power: IEEE 802.3af PoE Class 0
 - e. Power Consumption: Max. 12.95 W (IR on)
Max. 9 W (IR off)
5. System:
- a. Model: LC9368-HTV
 - b. CPU: Multimedia SoC (system-on-chip)
 - c. Flash: 128MB
 - d. RAM: 256MB
 - e. Storage: 256GB SD card
6. Camera Features
- a. Image Sensor: 1/2.9" progressive CMOS
 - b. Max. Resolution: 1920x1080 (2MP)
 - c. Lens Type: Motorized, vari-focal, remote focus
 - d. Focal Length: f = 2.8 ~ 12 mm
 - e. Aperture: F1.4 ~ F2.8
 - f. Auto-Iris: Fixed-iris
 - g. Field of View: Horizontal: 32° - 93°
Vertical: 18° - 50°
Diagonal: 37° - 110°
 - h. Shutter Time: 1/5 second to 1/32,000 second
 - i. WDR Technology: WDR Pro
 - j. Day/Night: Yes
 - k. Removable IR-cut Filter: Yes
 - l. IR Illuminators: Built-in IR Illuminators up to 30 meters
with Smart IR, IR LED*2
 - m. Minimum Illumination: 0.055 lux @ F1.4 (Color)
<0.005 lux @ F1.4 (B/W)
0 lux with IR illumination on
 - n. Pan Range: 353°
 - o. Tilt Range: 75°
 - p. Rotation Range: 350°
 - q. Pan/Tilt/Zoom Functionalities: ePTZ: 48x digital zoom (4x
on IE plug-in, 12x built-in)
 - r. On-Board Storage: Slot type: MicroSD/SDHC
7. Video:
- a. Video Compression: H.265, H.264, MJPEG
 - b. Maximum Frame Rate: 30 fps @ 1920x1080

- c. S/N Ratio: 68 dB
 - d. Dynamic Range: 120 dB
 - e. Video Streaming: Adjustable resolution, quality, and bitrate
 - f. Image Settings: Time stamp, text overlay, flip & mirror, configurable brightness, contrast, saturation, sharpness, white balance, exposure control, gain, backlight compensation, privacy masks; scheduled profile settings, HLC, defog, 3DNR, video rotation
8. Audio:
- a. Audio Capability: One-way audio
 - b. Audio Compression: G.711, G.726
 - c. Audio Interface: Built-in microphone
 - d. Effective Range: 5 meters
9. Network:
- a. Protocols: 802.1X, ARP, CIFS/SMB, CoS, DDNS, DHCP, DNS, FTP, HTTP, HTTPS, ICMP, IGMP, IPv 4, IPv 6, NTP, PPPoE, QoS, RTSP/RTP/RTCP, SMTP, SNMP, SSL, TCP/IP, TLS, UDP, UPnP
 - b. Interface: 10 Base-T/100 Base-TX ethernet (RJ-45)
 - c. ONVIF: Supported
10. Certifications:
- a. CE
 - b. FCC Class B
 - c. UL
 - d. LVD
 - e. VCCI
 - f. C-Tick
 - g. IP66
 - h. IK10

H. Latch Hub

- 1. Mechanical Dimensions: 8" X 8" X 2.25"
- 2. Mounting: Single gang box, wall, and ceiling mount
- 3. Materials: Glass fiber-reinforced mounting plate

4. Environmental:
 - a. Operating Temperature: +32°F to +104°F (0°C to +40°C),
Indoor Use Only
 - b. Operating Humidity: 10% to 90% relative humidity,
non-condensing
5. Power:
 - 5.1 Local DC Power Adapter (sold separately):
 - a. Input voltage: 90 - 264 VAC
 - b. Input frequency: 47 - 63 Hz
 - c. Output voltage: 12 VDC +/- 5%
 - d. Max load: 2 AMPS
 - e. Min load: 0 AMPS
 - f. Load regulation: +/- 5%
 - 5.2 External Power Supply:
 - a. Class 2 Isolated, UL Listed Power Supply
 - b. Wire Supply Voltage: 12VDC, 2A
 - c. Power over Ethernet: 802.3bt (30W+)
 - d. Operating Power: 20W-50W
(Max: 4A @12VDC, Min: 1.75A @12VDC)
6. Communication:
 - a. Ethernet: 1 Gigabit WAN Port (10/100/1000
Mbps)
 - b. WiFi: 2.4/5 GHz (Selectable),
802.11a/b/g/n/ac
 - c. Cellular: 4G LTE Cat 1
 - d. Bluetooth: BLE 4.2
 - e. IP Address: DHCP
 - f. ZigBee: 3.0
7. Certifications:
 - 7.1 US:
 - a. FCC Part 15B / 15C / 15E / 22H / 24E
 - b. UL 62368
 - c. CEC/DOE
 - d. PTCRB
 - e. IEC62133 (Battery)
 - 7.2 Canada:
 - a. IC RSS-210 / 139 / 133 / 132 / 130 / 102 (MPE)
 - b. ICES-003
 - c. NRCAN

I. Latch Water Sensor

1. Mechanical Dimensions: 1.89" X 1.89" X 0.8"
2. Mounting: Surface mount, using provided adhesive strip
3. Material: ABS Material CHIMEI PA-757
4. Environmental:
 - a. Operating Temperature: +32°F to +122°F (0°C to +50°C)
 - b. Operating Humidity: 10% to 80% relative humidity, non-condensing.
 - c. Storage Temperature: +4°F to +140°F (-20°C to +60°C)
 - d. Storage Humidity: -20% - 60% RH (non-condensing)
5. Power: 3VDC, 1xCR2 battery
6. Battery Life: 5 years
7. Temperature Sensor Accuracy: $\pm 1^{\circ}\text{C}$
8. Communication: ZigBee HA 1.2.1
9. Radio Frequency: 2.4GHz
10. RF Communication Range: Open Air: 350m (Max.)
11. Certifications:
 - a. FCC
 - b. IC
 - c. CE
 - d. ZigBee HA

J. Latch Manager software

1. Cloud-based software solution allowing remote management of Latch products. Software shall be a solution capable of managing an owner's full portfolio of buildings. Provide a single software platform to manage connected and offline locks
 - a. Manage access rights for all users
 - b. Create virtual buildings which consist of virtual doors
 - c. View audit trail including image capture
 - d. View battery status of devices
 - e. Construct user groups or door groups (Keys) for assignment of access rights
 - f. Manage credential types
 - g. Generate door codes

K. Latch Manager App

1. Provide iOS-based app allowing full credential and locking device management support by mobile device
 - a. Create Doors

- b. Activate and deactivate devices
- c. Configure locking devices:
 - 1. Relay configuration
 - 2. Setting relock time
 - 3. Ethernet configuration
 - 4. Wi-Fi configuration
 - 5. Door State Notifications configuration
- d. Update user list
- e. Firmware upgrade
- f. See battery life
- g. See internet connection status
- h. See firmware version

L. Latch App

- 1. Provide iOS or Android-based app allowing full credential and device management support by mobile device
 - a. Bluetooth unlock locking devices
 - b. Tap to unlock
 - c. Hold-near to unlock
 - d. Unlock from Widget in iOS
 - e. See your door codes
 - f. Share access
 - g. See access history, including photos when applicable
 - h. See battery life
 - i. Update user list and access logs

7.3 FINISHES

Provide metal finishes from the list below on Latch M and C Series devices as defined by the owner

- 1. Silver
- 2. Black

Provide metal finishes from the list below on Latch C2 Deadbolt as defined by the owner

- 1. Latch Black Exterior, Latch Black Interior
- 2. Latch Black Exterior, Latch White Interior
- 3. Satin Chrome Exterior, Latch White Interior
- 4. Latch White Exterior, Latch White Interior

Other standard and custom finishes are available upon request depending on order volume and project timing.

3. PART 3 - EXECUTION

Specifier Notes: Please insert the following paragraphs into your existing Part 3 Execution section of the 08 71 00 Specification

3.1 INSTALLATION, TESTING, COMMISSIONING, AND ADMINISTRATOR TRAINING

- A. Installation/mounting (physical installation of hardware).
- B. Administrator training.
- C. Administrator construction access setup: Creating virtual Doors.
- D. Activation: Pairing installed devices to virtual Doors.
- E. Configuration: Configuring devices settings.
- F. Testing configured devices operation.
- G. Commissioning: Upon completion of project, engage a LCCP to commission the Latch Manager software system and locking devices. Process shall remove all temporary access that was granted during the construction process and add users and access roles as dictated by building operator. Commissioning shall include the assignment of access rights, schedules, groups, and users. Document issues found during installation and immediately report to LCCP.
- H. Administrator resident access setup: Engage an authorized LCCP to conduct a four-hour training session on the use and management of Latch Manager software. Ensure Owner's agent and property management representatives are in attendance. Document names of attendees and dates of training.
- I. Testing: Test access control openings with assigned credentials to ensure proper operation and function. Correct operational issues preventing the opening or hardware from operating.

3.2 COMPLETION ACTIVITIES

- A. Provide as-built electrical drawings for openings with Latch R Series and M Series devices.
- B. Provide a list of contacts involved in the installation of system and what their role has been.
- C. Protect installed products until completion of project.
- D. Touch-up, repair, or replace damaged products before Substantial Completion.
- E. Provide three sets of Latch installation manuals.

NOTES

HARDWARE SETS:

Specifier Notes: Please insert the following paragraphs into your existing Part 3 Execution section of the 08 71 00 Specification

Latch C, C2 Series (Specify at Unit Entries)

Insert the Latch C Series in hardware sets where a cylindrical lock would be required and appropriate for function. Engage Owner to identify openings required to have access control. List of finish and lever designs is required.

Latch M, M2 Series (Specify at Unit Entries)

Insert the Latch M Series in hardware sets where a mortise lock would be required and appropriate for function. Engage Owner to identify openings required to have access control. List of finish and lever designs is required.

Latch R Series (Specify at Common Areas, Main Entries, and Amenity Spaces)

Add the Latch R Series reader at openings requiring an electric strike, magnetic lock, or electrically retracted exit device application. R Series configurable SPST normally open relay provides the switches required to operate the electrified components. Specifier to review all applications and ensure other components of hardware are provided for a complete and operational system. A power supply is required to support the Latch R Series reader. Engage Owner to identify openings required to have access control.

Latch Intercom (Specify at Main Entries)

Add the Latch Intercom at openings where an intercom would be required and appropriate for function. In order to install and activate the Latch Intercom, the opening must also have Latch R paired with the device. Engage Owner to identify openings required to have an Intercom.

Latch Camera (Specify at Main Entries)

Add the Latch Camera at openings with Latch Intercom to enable video calling. Engage Owner to identify openings required to have a video calling.

Latch Hub (Specify at Unit Entries)

Add the Latch Hub where Ethernet, Wi-Fi, Bluetooth, ZigBee, or LTE connectivity is required. Engage Owner to identify spaces required to have a Hub.

Latch Water Sensor (Specify at laundry rooms, near hot water tanks, under the kitchen sinks, etc.)

Add the Latch Water Sensor at spaces with high flood probability. Engage Owner to identify spaces required to have a Water Sensor.

END OF SECTION