

LATCH[®]

Latch Basic Estimating Guide

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R Series Reader – stand-alone configuration with same power supply for both R Series and the locking hardware

1. Labor:
 - 1.1. Run 2 conductor wire and Cat6 to each edge R Series from network closet (Cat5e/Cat6 wire length limit 328 feet)
 - 1.2. Mount, trim, and terminate an R Series reader/controller
 - 1.3. 2 conductor to electronic door hardware
 - 1.4. Optional: 2 conductor to Door Contact and 4 conductor to REX motion (locally)

2. Peripheral Hardware:
 - 2.1. Power Supply:
 - a. Supply Voltage: Class 2 Isolated, UL Listed, 12VDC to 24VDC power supply
 - b. Operating Power: 3W (0.25A@12VDC, 0.12A@24VDC)
 - c. Lock Relay: Configurable SPST/normally open relay, 1.5A max, @24VDC or @16VAC maximum
 - d. Battery backup

 - 2.2. Network:
 - a. Can be building’s multi-purpose with VLAN for security or separate LAN hardware
 - b. Option to build Wi-Fi network when Ethernet is cost prohibitive
 - c. UPS battery backup

 - 2.3. Internet Service:
 - a. Provide and install Internet service for common area LAN, otherwise state “Provided by others”

 - 2.4. Minimum wiring recommendations:

Distance		Up to 50ft	Up to 200ft	Up to 500ft	Up to 1000ft
Power	12V	22AWG	20AWG	18AWG	14AWG
	24V	22AWG	20AWG	20AWG	20AWG
Relay		22AWG	20AWG	18AWG	Not recommended

R Series Reader – stand-alone configuration with separate power supply for fire alarm integration

1. Labor:
 - 1.1. Run 2 conductor wire and Cat5e/Cat6 to each edge R Series from network closet (Cat5e/Cat6 wire length limit 328 feet)
 - 1.2. Run 2 conductor wire from R Series relay output to a Power Supply input
 - 1.3. Mount, trim, and terminate an R Series reader/controller
 - 1.4. Run 2 conductor wire from power supply to electronic door locking hardware
 - 1.5. Optional: 2 conductor wire to door contact and 4 conductor wire to REX motion (locally)

2. Peripheral Hardware:
 - 2.1. Power Supply:
 - a. Supply Voltage: Class 2 Isolated, UL Listed, 12VDC to 24VDC power supply
 - b. Operating Power: 3W (0.25A@12VDC, 0.12A@24VDC)
 - c. Lock Relay: Configurable SPST/normally open relay, 1.5A or @16VAC maximum
 - d. Battery backup

 - 2.2. Network:
 - a. Can be building’s multi-purpose network with VLAN for security or separate LAN hardware
 - b. Option to build Wi-Fi network when Ethernet is cost prohibitive
 - c. UPS battery backup

 - 2.3. Internet Service:
 - a. Provide and install Internet service for common area LAN, otherwise state “Provided by others”

 - 2.5. Minimum wiring recommendations:

Distance		Up to 50ft	Up to 200ft	Up to 500ft	Up to 1000ft
Power	12V	22AWG	20AWG	18AWG	14AWG
	24V	22AWG	20AWG	20AWG	20AWG
Relay		22AWG	20AWG	18AWG	Not recommended

R Series Reader – third-party access control panel integration

1. Labor:
 - 1.1. Run 2 conductor wire and Cat5e/Cat6 to each edge R Series from network closet (Cat5e/Cat6 wire length limit 328 feet)
 - 1.2. Mount, trim, and terminate an R Series reader/controller
 - 1.3. Wiegand output: run 2 wires w/Gnd to Access Control panel reader input
 - 1.4. R Series activation and configuration ~30 minutes

2. Peripheral Hardware:
 - 2.1. Power Supply
 - a. Supply Voltage: Class 2 Isolated, UL Listed, 12VDC to 24VDC power supply
 - b. Operating Power: 3W (0.25A@12VDC, 0.12A@24VDC)
 - c. Battery backup

 - 2.2. Network:
 - a. Can be building’s multi-purpose network with VLAN for security or separate LAN hardware
 - b. Option to build Wi-Fi network when Ethernet is cost-prohibitive
 - c. UPS battery backup Internet Service:
 - d. Provide and install Internet Service for common area LAN, otherwise state “Provided by others”

 - 2.3. Minimum wiring recommendations:

Distance		Up to 50ft	Up to 200ft	Up to 500ft	Up to 1000ft
Power	12V	22AWG	20AWG	18AWG	14AWG
	24V	22AWG	20AWG	20AWG	20AWG
Relay		22AWG	20AWG	18AWG	Not recommended
Wiegand (Shielded)		22AWG	22AWG	18AWG	Not recommended

Latch Intercom

1. Labor:
 - 1.1. Run Cat5e/Cat6 only for PoE option
 - 1.2. Run Cat5e/Cat6 and 2 conductor wire for non-PoE option
 - 1.3. Run 2 conductor wire only for cellular data option
 - 1.4. Mount, trim, and termination of Latch Intercom
 - 1.5. Latch Intercom activation and programming ~30 minutes

2. Peripheral Hardware:
 - 2.1. Power Supply:
 - a. PoE Plus or separate wired power supply
 - b. Supply Voltage: Class 2 Isolated, UL Listed, 12VDC to 24VDC power supply
 - c. Power Consumption: Typical: 20W, Max: 50W

 - 2.2. Network:
 - a. Can be building's multi-purpose network with VLAN for security or separate LAN hardware, PoE enabled
 - b. Option to build Wi-Fi network when Ethernet wiring is cost prohibitive
 - c. Option to use cellular data

 - 2.3. Minimum wiring recommendations:

	Up to 25ft	Up to 50ft	Up to 100ft	Up to 200ft
12 VDC Power	22AWG	18AWG	16AWG	Not recommended
24 VDC Power	24AWG	22AWG	18AWG	16AWG

Note: Latch Intercom should be always installed next to an R Series reader controller.

Latch Camera

1. Labor:
 - 1.1. Run Cat5e/Cat6
 - 1.2. Mount, trim, and termination of Latch Camera
 - 1.3. Latch Camera activation and programming ~15 minutes
2. Peripheral Hardware:
 - 2.1. Network PoE enabled switch:
 - a. Power: IEEE 802.3af PoE Class 0
3. Latch Camera Power Consumption:
 - a. Max. 12.95 W (IR on)
 - b. Max. 9 W (IR off)

Latch Hub

1. Labor:
 - 1.1. Run Cat5e/Cat6 if Ethernet network communication will be used
 - 1.2. Install Sim card if cellular communication will be used
 - 1.3. Run 2 conductor wire for power, or install PoE splitter if PoE capable switch used
 - 1.4. Mount, trim, and termination of Latch Hub
 - 1.5. Latch Hub activation and programming ~15 minutes
2. Peripheral Hardware:
 - 2.1. Power Supply:
 - a. PoE, or separate wired power supply
 - b. Class 2 Isolated, UL Listed, 12VDC power supply
 - 2.2. Network:
 - a. Can be building's multi-purpose network with VLAN for security or separate LAN hardware
 - b. Option to build Wi-Fi network when Ethernet wiring is cost prohibitive
 - c. Option to use cellular data

Latch Water Sensor

- 1. Labor:
 - 1.1. Mount, trim, and termination of Latch Water Sensor
 - 1.2. Latch Water Sensor activation and programming ~15 minutes
- 2. Power:
 - 2.1. 1 x CR2 battery, 3VDC, battery life 5 years
- 3. Communication:
 - 3.1. Paired with Latch Hub through ZigBee protocol

Unit Entry Doors – M (phasing out) & M2 Series Mortise, C (phasing out) & C2 Series Deadbolt

- 1. Labor for the M & M2 Series Mortise, C & C2 Series Deadbolt:
 - 1.1. Install on door; upgrade firmware to the latest version to ensure the most secure and reliable device with improved battery life and the latest features; link devices to on-site access point as previously defined in the build-out
 - 1.2. Estimate about 30 minutes per unit, including all of the above, for prepped doors
- 2. Optional for M Series (phasing out):
 - 2.1. Run 2 conductor wire to each M Series from a network closet or in-unit power supply. Electrified hinge per door and door prep will be required, which takes approx. 1 hour per unit if the door prep includes the through-hole for wiring
 - 2.2. Power supply (M Series only)
 - a. Supply Voltage: Class 2 Isolated, UL Listed, 12VDC power supply
 - b. Operating Power: 2.4W (0.2A @12VDC)
- 3. Minimum wiring recommendations:

Wire Length	Up to 50ft	Up to 200ft	Up to 500ft
AWG	22AWG	20AWG	18AWG

Activation and Training

1. Programming of access groups, known as Keys and Units, and enrolling resident with name and email address
 - a. Factor time in proportionally:
500 users enrolled and 10 access groups made ~4 hours
2. Train the property administrator / manager ~4 hours
3. Recommended tenant education to ensure a happy customer
 - a. ~30 minutes per unit
 - b. Includes posting flyers and Latch & Learn events

Ongoing Maintenance

1. ~15 Minutes / Year / Tenant
 - a. Firmware upgrades: after six months, another after one year, then once every year
 - b. Battery replacement: as neededBoth optional for a dealer or on-site maintenance (customer choice)