

AL54-MS

Bring access control
to every door



Overview

The AL54-MS Mortise Lock empowers organizations to upgrade traditional lock-and-key systems with a smart, connected solution. With access control across every door, organizations can centrally manage all doors and immediately trigger changes — like initiating lockdowns — with a single click via web or mobile.

All locks can be easily set up right within Verkada Command, requiring no additional software. Admins can receive proactive alerts about low battery status and offline devices. Coupled with over-the-air firmware updates, these features help maximize uptime.

End users can enjoy a seamless unlock experience, using a variety of credentials — including hands-free Bluetooth intent unlock — to access doors, with clear LED feedback to confirm the door's status.

Organizations can choose from three variations with different key cores: conventional, full-size interchangeable, and small format interchangeable.

Key features

Local schedule override

Trigger immediate changes to a door's schedule — like access controlled to unlocked, and unlocked back to access controlled — with a simple button press directly on the lock.

Proactive alerts

Receive proactive alerts for system health issues like offline devices or low battery, and for security events, including when doors are held or forced open. All alerts are customizable by recipient, schedule, and channel.

Long-range wireless connection

Using Verkada's VLink protocol, immediately connect up to 16 locks with the WH32 wireless hub. The hub is wired to a Verkada access controller and can support any lock within a 150 feet radius or up to 2000 feet with a clear line of sight.

Built to last

With a ten-year warranty, UL10C's fire rating (pending), and extensive cycle testing, the AL54 is a robust solution for a variety of doors and environments.

LF-, HF-, Bluetooth, and NFC support

Unlock doors with a wide array of credentials, from low-frequency proximity cards and high-frequency NFC credentials such as Apple Wallet. A built-in reflective sensor also supports Bluetooth Intent Unlock.

Intuitive interior and exterior LED feedback

Gain instant visual confirmation of a door's status — access granted, access denied, lockdown states, and connectivity status — on either side of the door based on the color and blinking pattern of the LED indicator.



AL54-MS

Tech specs

Variations

Note: The conventional core SKU will ship with a core and a unique key. The SFIC and FSIC locks will not ship with key cores, but will include a plastic construction key core. See “Compatible Cylinders and Keys” for more information on existing cores which are supported.

AL54-MS-CC-01-26-HW



Mortise Lock, Conventional Core

AL54-MS-FC-01-26-HW

Mortise Lock,
Full Size Interchangeable Core

AL54-MS-SC-01-26-HW

Mortise Lock,
Small Format Interchangeable Core

General

Dimensions (with handle)	Exterior assembly: 286.3 x 171.7 x 87.1 mm Interior assembly: 323.8 x 172.4 x 88.0 mm	Dimensions (without handle)	Exterior assembly: 286.3 x 82.3 x 35.2 mm Interior assembly: 323.8 x 83.6 x 52.8 mm
Weight	15lb / 6.8kg	Operating temperature	-31° to 131°F / -35° to 55°C
Operating humidity	5-90%	Ratings	IP65, IK08

Mechanical Compatibility

Door thickness	1-5/8" to 2"	Backset	2-3/4"
Handing	Field reversible	Door position indicator	Included in box, needs installation
Lever	Zinc die cast, plated	Finish	Satin chrome plated
Strike plate	Included in the box: -9110 with lip 1-15/16" x 4-7/8" -9112 1-1/4" x 4-7/8"	Bolt monitor	-
Compatible cylinders and keys	Schlage conventional core: 6 Pin Schlage FSIC: 6 Pin, 7 Pin SFIC: 6 Pin, 7 Pin Any key designed for one of the cores listed above is compatible		



AL54-MS

Tech specs

Power

Power supply	8xAA L91 lithium batteries (nominal voltage ≥ 1.5V)	Battery life	18 months ¹
Backup power	Provided via a USB-C cable connected to a 5V power bank	Voltage range	5V to 7.2V
Maximum current requirement	1.8A (peak), 5.5 mA (average)		

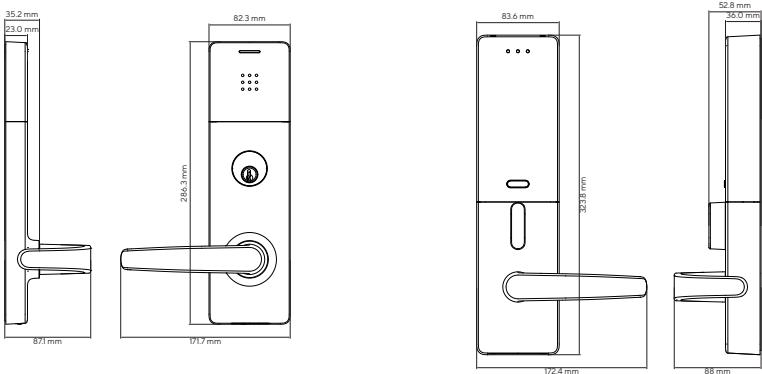
Connectivity & communication

System interface	Wireless communication via VLink protocol to Verkada wireless hub & access controller or wireless access controller	Wireless frequency range	915.0 - 915.7 MHz
Wireless communication range	Up to 150 ft with obstructions Up to 2000 ft with clear line of sight	Audio-visual communication	LED feedback (interior and exterior), buzzer feedback

Credentials

Credential technologies	Low frequency (125 KHz) High frequency (13.56 MHz) Mobile NFC (13.56 MHz) Bluetooth low energy (2.4 GHz)	Read range	Low frequency (125 KHz): up to 8cm High frequency (13.56 MHz): up to 4cm Mobile NFC (13.56 MHz): up to 4cm Bluetooth low energy (2.4 GHz): up to 8cm
Credential calibration time	<1 second		

Dimensions



Compliance & availability

Compliance	For hardware certification information, please visit verkada.com/compliance	Availability	USA, CAN
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1. Battery life depends on the radio environment and usage. The battery life featured on this datasheet has been calculated using the following assumptions: clean radio environment, polling time of 10 seconds, 60 access events per day, and door open events on ingress and egress.

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Communication architecture

Variation 1

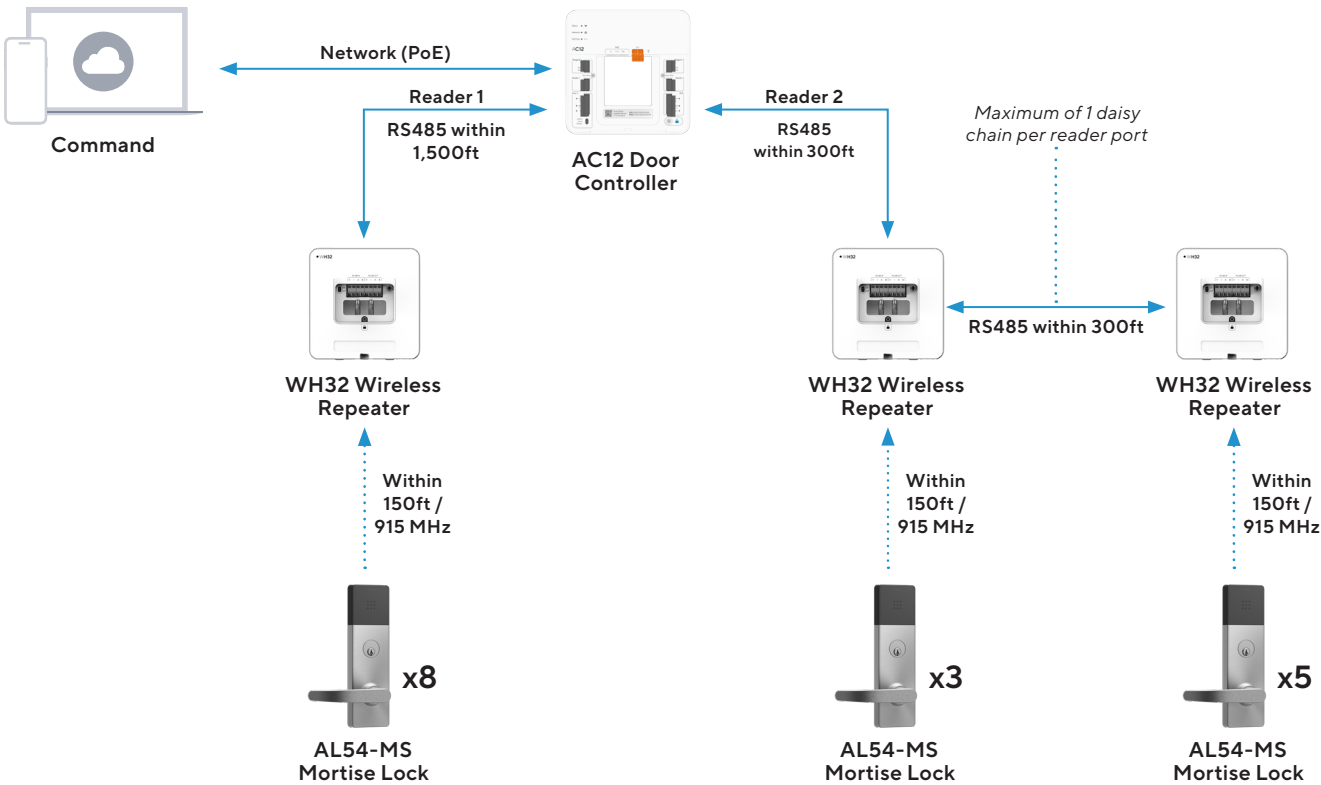
The AL54-MS can be used with a dedicated AC12 access controller and a WH32 wireless hub to set up the lock. Each AC12 controller can support up to 16 locks and can connect to 1-4 WH32 wireless hubs. WH32 hubs connect to the AC12 controller via RS485.

There are two primary configurations:

Direct connection (1-2 hubs)	Daisy-chaining (3-4 Hubs)
Organizations can directly connect one or two WH32 hubs to the reader ports on the AC12. In this setup, the hubs must be within 1,500 feet of the AC12.	For configurations requiring three or four hubs, two hubs are connected directly to the AC12 reader ports, and each of these two hubs can then be daisy-chained to one additional hub via RS-485. In this scenario, the hubs must be within 300 feet of the AC12 or any adjacent WH32 hub.

The VLink wireless range between the locks and the hub can vary depending on the environment. In typical indoor environments, the locks must be within 100-150 feet of the WH32 hub. In unobstructed environments with clear line of sight, this range can extend up to 2,000 feet from the hub.

See below for an example set up:



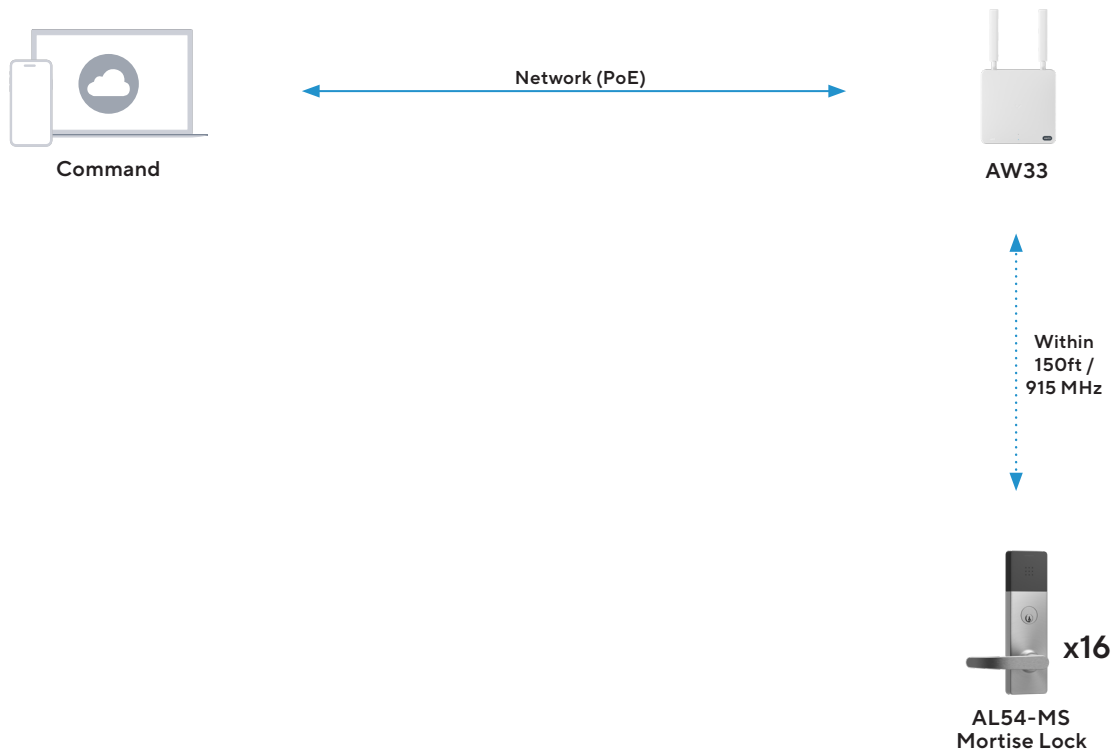


Communication architecture

Variation 2

The AL54-MS can be used with a AW33 wireless access controller to set up the lock. Each AW33 wireless access controller can support up to 16 locks. The VLink wireless range between the locks and the AW33 can vary depending on the environment. In typical indoor environments, the locks must be within 150 feet of the AW33.

See below for an example set up:





WH32 Wireless Repeater

Tech specs

Power and network

Power consumption	0.18W standby, 27W maximum (5mA - 750mA current draw)	Power input	Hub mode: 10-36V DC via RS485
Backup battery (internal)	1200 mAh 24 hours of backup with typical use		

General

Dimensions	Height: 5.5in / 14.0 cm Width: 5.5in / 14.0 cm Depth: 1.3in / 3.4 cm	Operating temperature and humidity	32 to 122° F (0 to 50° C) 0-90% RH non-condensing
Tamper detection	Yes	Warranty	10 years
Certifications	FCC, ICES, UL 10C, UL 294, ULC 60389-11-1, ANSI/BHMA A156.13 Grade 1, ANSI/BHMA A156.25 (pending), FY2019 NDAA compliant	Weight	1.3 lb (0.6 kg)

Installation

Included accessories	Mount plate, T10 Security Torx screwdriver, 4x wall screws, 4x wall anchors	Mounting options	Wall or ceiling mount
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Ordering information

Wireless locks pricing

Model number	Description	US cost (MSRP) ^{USD}	WW cost (MSRP) ^{USD}
AL54-MS-CC-01-26-HW	AL54 ANSI Grade 1 Mortise Lock, Conventional Core	\$1,799	\$1,799
AL54-MS-FC-01-26-HW	AL54 ANSI Grade 1 Mortise Lock, Full Size Interchangeable Core	\$1,799	\$1,799
AL54-MS-SC-01-26-HW	AL54 ANSI Grade 1 Mortise Lock, Small Factor Interchangeable Core	\$1,799	\$1,799

Controller and hub pricing

Model number	Description	US cost (MSRP) ^{USD}	WW cost (MSRP) ^{USD}
AC12-HW	AC12 One-Door Controller	\$899	\$899
WH32-HW	WH32 Wireless Hub	\$299	\$299
AW33-HW-NA	AW33 Wireless Access Controller	\$1,299	N/A

Accessories pricing

Model number	Description	US cost (MSRP) ^{USD}	WW cost (MSRP) ^{USD}
ACC-RS485-2M	Verkada 2m RS485 Cable	\$10	\$10
ACC-DR-MS-1	AL54 Mortise Door Reinforcer (2.75" Backset, 1.75" Door Thickness)	\$99	\$99
ACC-WH-ANT-1	AW33 VLink External Antenna - Directional	\$799	N/A



Ordering information

Access Control software license pricing (new/capacity increase)

Model number	Description	US cost (MSRP) ^{USD}	WW cost (MSRP) ^{USD}
LIC-AC-1Y-CAP	Verkada 1-Year Door License, Capacity Increase	\$249	\$249
LIC-AC-3Y-CAP	Verkada 3-Year Door License, Capacity Increase	\$599	\$599
LIC-AC-5Y-CAP	Verkada 5-Year Door License, Capacity Increase	\$999	\$999
LIC-AC-10Y-CAP	Verkada 10-Year Door License, Capacity Increase	\$1,999	\$1,999

Access Control software license pricing (renewal)

Model number	Description	US cost (MSRP) ^{USD}	WW cost (MSRP) ^{USD}
LIC-AC-1Y-RNW	Verkada 1-Year Door License, Renewal	\$249	\$249
LIC-AC-3Y-RNW	Verkada 3-Year Door License, Renewal	\$599	\$599
LIC-AC-5Y-RNW	Verkada 5-Year Door License, Renewal	\$999	\$999
LIC-AC-10Y-RNW	Verkada 10-Year Door License, Renewal	\$1,999	\$1,999



Ordering information

Mobile NFC software license pricing (new/capacity increase)

Note: Apple Wallet is not compatible with AD31, AD32, or third party reader hardware. Verkada can only support Corporate Badges on Apple Wallet. Verkada cannot issue Resident Cards for Multi Family Units, Room Keys for Hospitality, or Student IDs for Higher Education.

Model number	Description	US cost (MSRP) ^{USD}	WW cost (MSRP) ^{USD}
LIC-MNFC-20-1Y-CAP	Add up to 20 users with a mobile NFC credential for 1 year, Capacity Increase	\$199	\$199
LIC-MNFC-20-3Y-CAP	Add up to 20 users with a mobile NFC credential for 3 years, Capacity Increase	\$599	\$599
LIC-MNFC-20-5Y-CAP	Add up to 20 users with a mobile NFC credential for 5 years, Capacity Increase	\$999	\$999
LIC-MNFC-20-10Y-CAP	Add up to 20 users with a mobile NFC credential for 10 years, Capacity Increase	\$1,999	\$1,999

Mobile NFC software license pricing (renewal)

Model number	Description	US cost (MSRP) ^{USD}	WW cost (MSRP) ^{USD}
LIC-MNFC-20-1Y-RNW	Add up to 20 users with a mobile NFC credential for 1 year, Renewal	\$199	\$199
LIC-MNFC-20-3Y-RNW	Add up to 20 users with a mobile NFC credential for 3 years, Renewal	\$599	\$599
LIC-MNFC-20-5Y-RNW	Add up to 20 users with a mobile NFC credential for 5 years, Renewal	\$999	\$999
LIC-MNFC-20-10Y-RNW	Add up to 20 users with a mobile NFC credential for 10 years, Renewal	\$1,999	\$1,999