VERTIV.™

@Lock

Solutions for Rack and Smart Solutions

Access control for data center, co-location, and distributed environments

Access control for data center, co-location, and distributed networks

Data centers are broken into on a regular basis. In many cases, the intention is simply to steal high-quality IT equipment. However, breaking in may only be a pretense for stealing data and/or putting in place a man-in-the-middle infrastructure.

@Lock Solution: *MLR handles in a colocation datacenter*

Controlling access to the data center is usually achieved through a combination of organizational measures, e.g. gates and turnstiles, in conjunction with a building access control system.

Working with various partners, Vertiv has developed system concepts which not only improve physical security through access controls within the data center but also simplify operative processes, making them less susceptible to errors. These concepts are known as "@Lock".

The MLR Series

Vertiv's @Lock MLR Series is used to secure and monitor data center server racks. These mechatronic locks only transmit encrypted communication, while implementing dual factor authentication at the reader. Each handle provides a tamper-proof solution that increases security and mitigates risk by delivering real time monitoring and auditability. By operating and still requiring authentication in both network and power down situations, the @Lock MLR Series completely eliminates the need for mechanical keys and creates a truly gapless audit trail. This solution gives the system administrator the ability to monitor, control, and report all activity occurring at each rack any time of the day—while keeping all unauthorized personnel out and reducing human error.

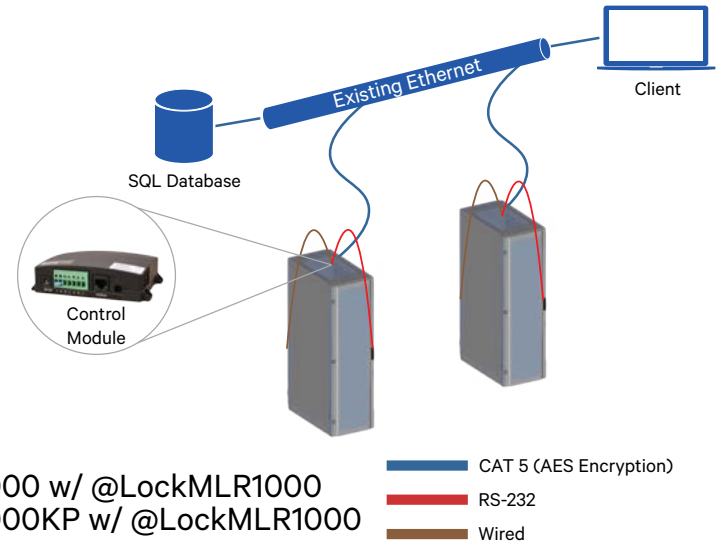
Administration Suite

The Administration Suite software is a tailored management platform which administers highly granular access control to the Vertiv @Locks and is capable of managing environments ranging from multi-tenant facilities to global enterprise deployments. This software increases security by encapsulating the data center floor from the building management system, but gives the possibility of relaying all information to the existing management system for status and alarm monitoring. The software provides individualized access control by time, day, week, person, rack door, and allows fully customizable user logins, mitigating the risk of internal threats and unauthorized entry. Lastly, Vertiv's @Lock MLR series meets and exceeds all current standards by ensuring a gapless audit trail of all entries into the rack and any changes made within the software.

OPTION 1: RACK LEVEL ACCESS CONTROL

- For use in low density or individual rack applications with 4 or fewer racks in one location
- Provides access control at the rack level with only one reader per rack

- Integrates into the Administration Suite software (encapsulating data center security)
- Master handle on the front door of the rack with a slave handle on the rear door
- Access is granted per cabinet
- Each rack is individually IP addressed
- Compatible with alll RFID card types (125kHz or 13.56MHz)
- Rack functions and audits in network down and power down state
- Dual-factor authentication (RFID +Keypad) *Two person initiative capable
- LEDs create visual alerts for authorization, temperature, alarm, and lock statuses
- Retrofit into any existing rack (customized adapters available)

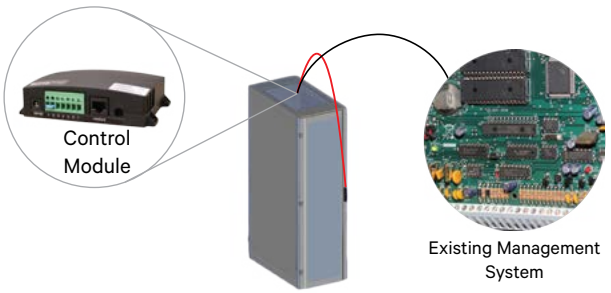


@LockMLR5000 w/ @LockMLR1000
@LockMLR5000KP w/ @LockMLR1000

OPTION 2: WIEGAND HANDLE DOOR LEVEL ACCESS CONTROL

- For use with existing management security systems via Wiegand protocol
- Provides access control at the door level for integration with existing Physical Access Control System (PACS)
- Access is granted per individual rack door

- Compatible with all RFID card types (125kHz or 13.56MHz) *iClass Elite Key available upon request
- Dual-factor authentication (RFID +Keypad) *Two person initiative capable
- LEDs create visual alerts for authorized/ unauthorized access
- Upper LED is configurable via dip switch for unique identification
- Retrofit into any existing rack (customized adapters available)



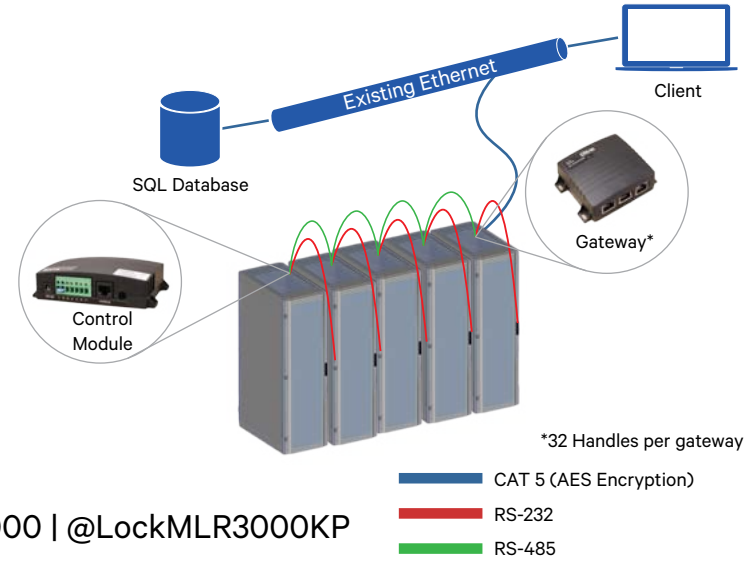
@LockMLR2000 | @LockMLR2000KP

RS-232
Wiegand data authorized/unauthorized signal

OPTION 3: DATA CENTER/CO-LOCATION DOOR LEVEL ACCESS CONTROL

- For use in high density data center applications with 16 or more racks in one location
- Provides access control at the door level with one reader per door, minimizing the use of static IP addresses
- Access is granted per individual rack door

- Integrates into the Administration Suite software (encapsulating data center security)
- RS-485 bus system allows for one IP addressed gateway to manage up to 32 handles
- Compatible with all RFID card types (125kHz or 13.56MHz)
- Handle functions and audits in network down and power down state
- Dual-factor authentication (RFID +Keypad) *Two person initiative capable
- LEDs create visual alerts for authorization, temperature, alarm, and lock statuses
- Retrofit into any existing rack (customized adapters available)

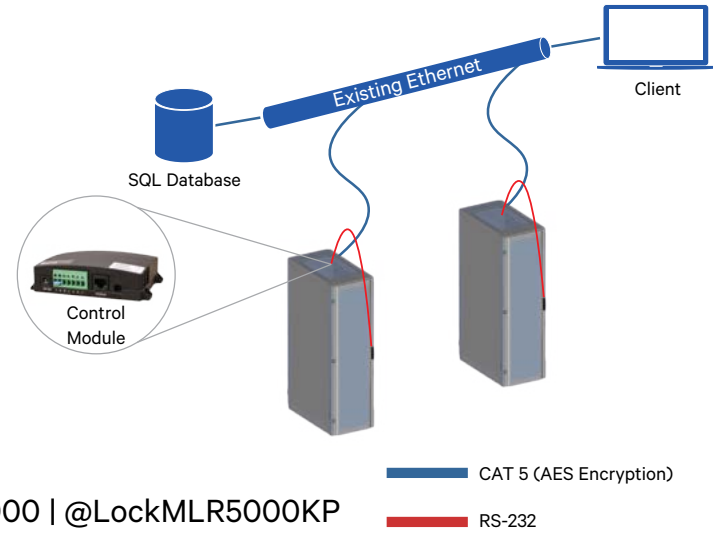


@LockMLR3000 | @LockMLR3000KP

OPTION 4: DOOR LEVEL ACCESS CONTROL

- For use in low density or individual rack applications with 16 or fewer racks in one location
- Provides access control at the door level with only one reader per door, while minimizing wiring installation
- Access is granted per individual rack door

- Integrates into the Administration Suite software (encapsulating data center security)
- Each handle is individually IP addressed
- Compatible with all RFID card types (125kHz or 13.56MHz)
- Handle functions and audits in network down and power down state
- Dual-factor authentication (RFID +Keypad) *Two person initiative capable
- LEDs create visual alerts for authorization, temperature, alarm, and lock statuses
- Retrofit into any existing rack (customized adapters available)



@LockMLR5000 | @LockMLR5000KP

ACCESSORIES:

1. 13.56 MIFARE Transponder Card
2. Desktop Reader
3. Zwipe Biometric Card
4. Administration Suite Software
5. Battery Pack

1.

2.

3.

4.

5.

Technical Data — @LockMLR1000

HANDLE	
Two-part hardware design	Handle and MLR1000 control module
Handle Visualization	Status LED
@LOCKMLR1000 CONTROL MODULE	
Housing	Plastic housing, can be fixed with screws or self-adhesive pad
Power supply	12 V ± 10% (DC) via screw clamps
Standby current (system ready)	40 mA (DC)
Max. current consumption (with connector tightening)	410 mA (DC)
Operating mode	100% ED
Relay control	12V DC
Operating time	Max. 3 seconds
Contact Output	250 V AC, 2 A
Installation position	Vertical
Connection type	Screw clamps , 2.5mm^2
Connecting cable (reader - handle electronics)	8-pole, 350 cm, UL stranded wire AWG 26, one side with gated RJ45 plug, one side with crimped JST ZH connector ZHR-8
Temperature range	-20°C – +70°C

Technical Data — @LockMLR2000

HANDLE	
Two-part hardware design	Swing handle with Reader and Control Module
Handle Visualization	Multicolored status LED
Reader	For 125kHz transponders (HID 26 bit system), alternatively 13.56 MHz (MIFARE)
CONTROL MODULE	
Housing	Plastic housing, can be fixed with screws or self-adhesive pad
Power supply	12 V ± 10% (DC) via low voltage socket or screw clamps
Standby current (system ready)	40 mA (DC)
Max. current consumption (with connector tightening)	440 mA (DC)
RS232 interface for MLR2000	RS232 cable (RXD, TXD, GND, Reader present, PC present), 38,400 baud
Interface	Wiegand Protocol
Connecting cable (reader - handle electronics)	8-pole, 350cm, UL standard wire AWG 26, one side with gated RJ45 plug, one side with crimped JST ZH connector ZHR-8
Relay output (via screw clamps)	2.5 mm^2, can be screwed in from plug side, relay contact: 12 V, 3 A, 60 W, 120
Temperature range	-20°C – +70°C

Technical Data — @LockMLR3000 & @LockMLR5000

HANDLE	
Two-part hardware design	Swing handle with Reader and Control Module
Handle Visualization	Multicolored status LED
Reader	For 125kHz transponders (HID 26 bit system), alternatively 13.56 MHz (MIFARE)

CONTROL MODULE	
Housing	Plastic housing, can be fixed with screws or self-adhesive pad
Power supply	12 V ± 10% (DC) via low voltage socket
Standby current (system ready)	40 mA (DC)
Max. current consumption (with connector tightening)	440 mA (DC)
RS232 interface for MLR3000	RS232 cable (RXD, TXD, GND, Reader present, PC present), 38,400 baud
Current increase for MLR5000 via Ethernet interface	125mA (DC)
TCP/IP interface	Ethernet, 10100 Autosense, up to 100 Mbaud
Connecting cable (reader - handle electronics)	8-pole, 350cm, UL standard wire AWG 26, one side with gated RJ45 plug, one side with crimped JST ZH connector ZHR-8
Relay output (via screw clamps)	2.5 mm^2, can be screwed in from plug side, relay contact: 12 V, 3 A, 60 W, 120
Door contact input (via screw clamps)	2.5 mm^2, can be screwed in from plug side, terminals 1 and 2
RS485 interface	RS485 cable to the E-LINE by DIRAK Gateway, (+/A, -/B), 38,400 baud
Memory capacity for transponder cards	2000 + 1 master transponder
Memory capacity for events	500 (ring memory)
Memory capacity for time profiles	30
Integrated real-time clock	With buffering of up to 60 min at 25 °C
Temperature range	-20°C – +70°C

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