COMMSCOPE®

RUCKUS®

Solution Overview

RUCKUS® controlled access solutions for hospitality

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Guest and staff safety

For hotel operators, the mission has grown to not only provide a pleasurable guest experience with the latest in technology, but to leverage that technology to provide a safe and secure environment for both guests and staff in the facility. CommScope combined with our controlled access partners create a best-in-class ecosystem for any hospitality property.

Advantages of the CommScope ecosystem

- All IoT devices are on a single transport network
    - Single IoT access through the RUCKUS IoT-ready APs
    - Multiple IoT protocols, Zigbee/BLE supported on the same RUCKUS IoT Suite
- Wi-Fi superiority
    - Best-in-class Wi-Fi for security cameras, both indoor and outdoor options
    - Carrier-grade Wi-Fi calling features for both staff and guest phones
    - Single SmartZone management suite for multiple hotel properties
- Best-in-class switching
    - ICX switches provide secure Ethernet for all wired connections
    - ICX switches can be monitored and controlled on the RUCKUS SmartZone platform
- Key and lock management
    - Authorize and deauthorize any credential from a central location, instantly
    - There is never a need to send a truck and a locksmith
    - A computerized audit trail of all access can be maintained

Networked locks introduce functions not previously possible

- Lock and unlock doors at scheduled times, or on command
    - No need for a custodian to make rounds in the morning to unlock doors, or lock them in the evening
- Remotely lock/unlock a door
    - Emergency access never requires more than a call to an administrator or the office, if that
- Issue temporary keys, good for one day or any desired time limit
    - Guest users can have precise access set for specific doors and for a specific time window
- Give guests access to business centers and gyms at specified times
- Precise audit trails possible in an era that demands more and more accountability

Emergency situations—instant property-wide responses are enabled

- Administrators can trigger school-wide responses with a few clicks
- Evacuation event—the administrator can unlock all evacuation doors, guest rooms, etc., instantly
- Lockdown event—lock all guest rooms, unlock emergency doors for first responders, instantly

Highly connected "smart hotels" enable connected access control

It has been said, "when you have a problem, you have a problem; but, when you have many problems, sometimes they can solve each other." Technology trends have ways of introducing new solutions. We made the case for connected locks above, but what truly makes this solution manageable and cost effective is the fact that our hotels are already required to be highly connected. Reliable Wi-Fi and the necessary back-haul network are well past the "nice-to-have" stage and well into the "must-have" stage.

Only a few years ago, connected door locks had the expensive disadvantage of needing a connection to a wired network, with the necessary additional cable runs, power connectors, and switch ports that went with that. Now, battery-powered wireless locks eliminate all that. The network is already deployed and paid for and management software can track battery replacement needs—a much simpler task than rekeying a lock.

This kind of device connectivity falls under the heading internet of things or IoT. IoT devices usually don't belong to an individual like a smart phone does, and usually have more specific uses. Connected door locks and similar IoT devices are characterized by low-bandwidth network traffic with a very high tolerance for network latency and uncertainty, so they can even have a low priority and work well.

Although a wired device could certainly fall within IoT, it's the advent of inexpensive wireless protocols that have resulted in a technological breakout. Wi-Fi is one option, but there are several related low-bandwidth protocols that often fit better—Bluetooth Low Energy (BLE), ZigBee for controlled access.

Unfortunately, different radio technologies require their own radio receivers. An IoT device needs a radio hub (called a gateway) using the matching radio protocol. Then that IoT gateway needs to connect to the wired network, meaning an Ethernet cable and a switch port, usually PoE, etc.

This is where the RUCKUS IoT suite comes in. RUCKUS IoT-ready APs accept plug-in IoT modules that work with multiple low-energy IoT-type protocols, minimizing the deployment effort for all these technologies—no new cables at all, no additional switch ports, no additional PoE budget. (Note: PoE+ AP models need to be fully powered.) The RUCKUS IoT Suite consolidates multiple physical layer technologies onto a single converged (and already existing) network. Furthermore, by tunneling all IoT traffic into the RUCKUS IoT controller, the RUCKUS IoT Suite secures the network with traffic isolation, uniform security protocols, and uniform IoT policy setting.*

CommScope and the advantage of controlled access

CommScope is a leader in enterprise networking and a top provider for Hospitality. CommScope builds access networks that get staff and guest devices on the network easily and securely, keep them on reliably, and deliver the highest capacity and scalability while requiring minimal training of IT personnel. These advantages can help drive efficiency, enabling staff and guests to focus on their main purpose—hospitality.

- Converged IoT support enables not only controlled access applications, but asset tracking, guest access and emergency staff alerts

- Secure device onboarding that streamlines the process of getting new devices onto networks through a self-service portal that dramatically reduces the number of helpdesk calls without compromising on security
- Innovation and a relentless drive to build networks that "just work" brings carrier-grade performance, reliability and scalability to critical network needs
- Smart algorithms and heuristics allow the network to make optimization decisions without requiring constant IT attention—reducing overhead costs to deploy and manage as well as reducing troubleshooting needs

Access control solutions are designed specifically for enterprise environments. Security, safety and sustainability are essential elements of modern hospitality facilities. Incorporating these components into a hotel can be simple—with CommScope and our controlled access partners.

With many advanced access control options, CommScope can help your hospitality facility address protection specifically for each door opening—by combining multiple credentials, leveraging existing network infrastructure, integrating discrete components, or adding decision making capabilities.

Our access control partners provide a wireless platform that reduces the cost and inconvenience of traditional access control—without the hassle of complex site surveys. It utilizes local wireless communication between the lock and a communications hub to connect to an online electronic access control system. This offers facilities an easy, affordable way to expand the reach of existing access control systems and secure additional openings.

- Locks that support multiple technologies to manage a hotel's transition from one to another
- Use of IEEE 802.15.4 wireless communication between the lock and a RUCKUS IoT module
- Real-time communication with the access control system for greater security and control
- Real-time door status monitoring
- Advanced data security with standard encryption techniques
- AES 128-bit encryption
- Global wireless platform that addresses a wide range of applications and security requirements

Combined, the sum is greater than the parts. CommScope top performing Wi-Fi and wired networking with our partners' connected access control, with the RUCKUS IoT Suite to simplify and secure the network– no duplication of network functions and with secure segmentation of IoT traffic.
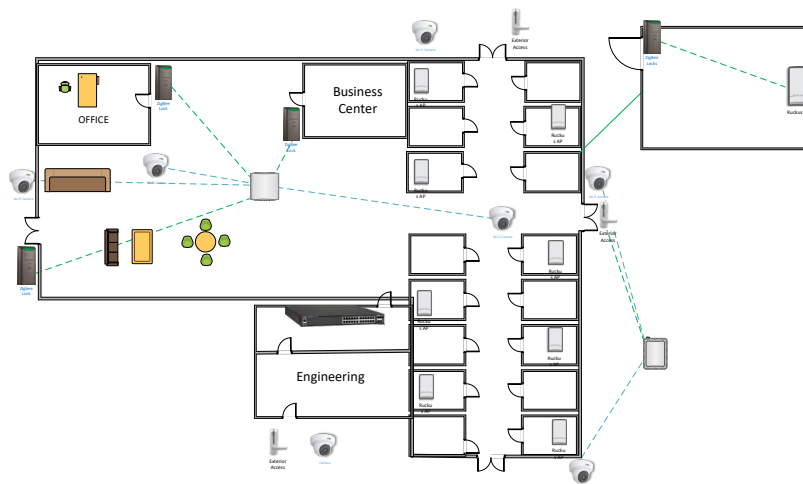
Hotel safety: connected locks

Times are challenging for the hospitality industry; guest and staff safety are continuously in the spotlight and in the minds of hotel operators. Hospitality operators and facility managers have a new primary responsibility: making sure the environment for their guests and staff is safe and secure. The need to keep unauthorized individuals out without inhibiting the daily freedom of movement of guests and staff is of the highest priority. Building an ideal environment requires careful balance of security and safety.

Our controlled access partners and CommScope offer solutions to make that job easier. Available doors, frames and locking solutions that address both the code requirements and guest needs that drive facility design. The design of a doorway must address challenges such as guest and staff safety, fire control, tornado and hurricane protection, ADA compliance and facility hygiene. Controlled access experts are ready to help hospitality operators.

Reacting appropriately—with purpose and intent—means finding products and partners that provide safe, appropriate and effective solutions to make hotels safer. It means establishing a plan for how to handle emergency events. It requires training and diligence in ensuring those solutions and plans are effective for mitigating all threats.

Deploying IoT—the CommScope advantage

There are many ways in which IoT technology, such as controlled access and connected door locks, can aid hotels. However, each IoT system brings individual challenges. When combined with other network vendors, IoT systems typically work in isolation from each other. Each requires a radio hub or gateway device specific to the protocol it uses, and that device requires a network port and power. It is better than wiring each IoT device, but every new cable run costs hundreds of dollars, at least. Then each IoT system is logically isolated from every other one with proprietary management systems.

For the physical layer, the RUCKUS IoT Suite moves all gateway functions onto our IoT-ready APs by adding an IoT module. The snap-in IoT module becomes the gateway for all IoT devices and piggybacks power and network connectivity on the AP cable. No additional cable runs or closet switch ports are required.

For the logical layer, IoT devices are secured and unified by the RUCKUS IoT controller, a virtual machine. IoT devices use a lightweight message protocol called MQTT (think "https for IoT"). Because all such traffic is encrypted and forwarded to the RUCKUS IoT controller (acting as an MQTT broker), messages from different IoT systems can trigger functions on each other. A door left open for too long can trigger an adjustment to the air conditioner, enabling green and sustainability initiatives.

IoT redefined: RUCKUS IoT Suite

The RUCKUS IoT Suite solves many of the problems currently present in networking and IoT deployments.

- **Consolidated IoT device management**—An IoT management system that eliminates the need for additional gateways and separate management systems. A single IoT pane of glass makes management and troubleshooting simpler and more intuitive for what would otherwise be a dauntingly complex task.
- **Reuse existing infrastructure**—Kontakt io can be deployed across the existing LAN and WLAN infrastructure, saving on deployment time and reducing costs. By providing a common point of management and cabling, multiple physical layer networks are consolidated into a single converged network. This simplifies IoT device onboarding and establishes uniform security protocols and policy.
- **Multi-layered protection**—Data transmitted between IoT suite components is protected via standards-based security such as over-the-air encryption, SSL-secured MQTT and HTTPS REST communication.
- **Simplified device onboarding**—RUCKUS IoT Suite quickly connects Wi-Fi and controlled access devices simply and easily.
- **Expedited deployment**—Connect an IoT module to an IoT-ready RUCKUS AP to quickly upgrade the WLAN to support new wireless technologies such as controlled access locks, BLE ID tags or wristbands, or building automation sensors.
- **Easily deployed and managed IoT**—Locks can be managed online. Security managers can block lost cards centrally and easily de-authorize staff or guests who leave. Everything is managed from one simple, streamlined user interface. Wireless locks are also time-efficient to install, and staff have been able to reduce the time spent on user management and system administration radically.

## Better together: CommScope and our controlled access partners

A great IoT deployment is only as great as the foundation it is built upon. The CommScope portfolio is designed from the ground up to deliver better experiences: to get devices on the network quickly and easily, keep them on reliably, and deliver the capacity and scalability needed to support new applications and devices. Our controlled access partners are the leading connected door lock solution providers with the mission to simplify hotel security. These locks are proven in hospitality worldwide and they are the global leader in door opening solutions. Formed in 1994 and currently employing over 47,000 people, the company is the recipient of numerous industry awards for its innovative products and solutions.

Better user experiences
CommScope' patented technologies such as BeamFlex+, Channelfly, and other RF innovations deliver a high quality of service (QoS), no matter how challenging the environment. RUCKUS Cloudpath provides self-service registration of wired and wireless devices and onboarding without compromising security—and reducing helpdesk calls. All this combined with our partners best-in-class door technology solves many problems faced by hotels today.

Better IT experiences
Self-forming, self-healing wired and Wi-Fi networks simplify deployment. Visual troubleshooting tools and predictive analytics shorten the break-fix cycle. A variety of LAN and WLAN architectures (appliance-based, virtual, cloud-managed, controller-less), offers different cost points—allowing IT to choose the right-sized deployment model and features that best meet their needs. IP-enabled door solutions include advanced, flexible access control software that provides seamless database integration and software interfaces with popular enterprise, transactional and housing systems. It also supports both mag stripe and contactless technology, allowing easy migration to higher security credentials. Customized access by user, by facility, or individual lock.
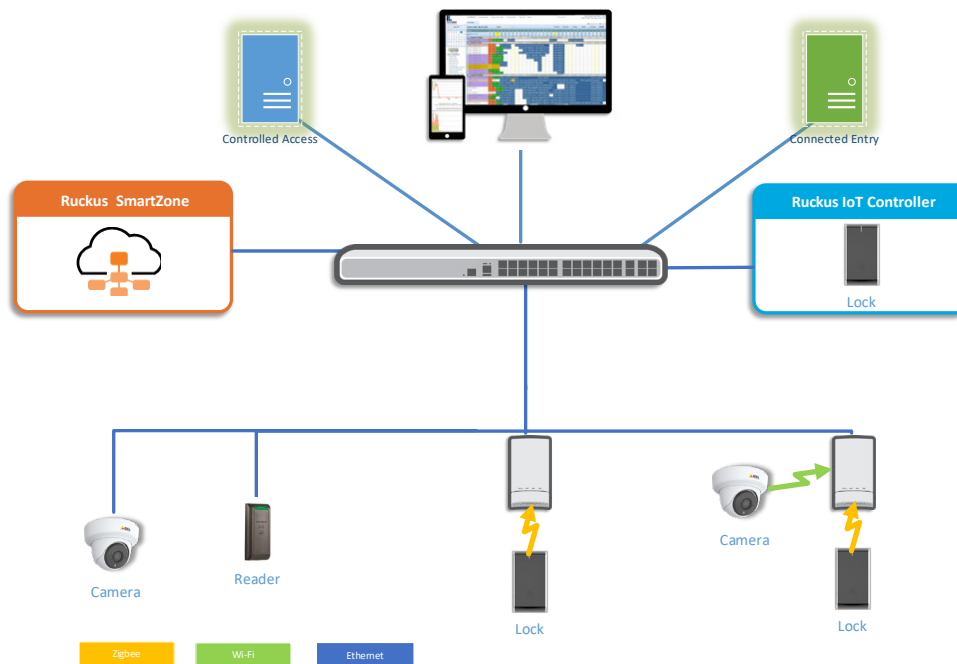
Premium connectivity without the high price tag

CommScope offers the best in access networking for hotels and does it affordably—bringing premium enterprise features and connectivity within reach of any facility. We do it through a relentless obsession with:

- **Performance**—a typical RUCKUS Wi-Fi deployment often requires fewer APs to provide the same, or better, performance than competing vendors[1]
- **Fewer IT helpdesk calls**—self-optimizing networks and self-service onboarding reduce helpdesk calls. accurate, automated, 24/7 monitoring with real-time alerts
- **Ease of use**—intent-driven user interfaces reduce the risk of misconfigurations and the need for extensive training
- **Reliability**—carrier-grade reliability and redundancy options reduce downtime and truck rolls
- **Scalability**—CommScope switches and APs offer flexibility and modularity to minimize rip-and-replace network upgrades. Multi-tenant access network controllers and Cloud easily scale manage thousands of sites and tens of thousands of APs and switches
- **Integration with controlled access systems**—integration reduces redundant spending costs and add new capabilities
- **A vision of the future of connectivity**—the newest CommScope APs go beyond LAN and WLAN, with integrated LTE radios that can be deployed for private LTE today and, soon, neutral host systems that will offer an affordable alternative to in-building DAS

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[1] https://www.RUCKUSwireless.com/ap-performance-testing

CommScope and controlled access systems: transforming hotel safety

Today's hospitality operators face a far more complex set of challenges than they did a decade ago. In addition to providing top-notch hospitality, they must also ensure the safety and security of staff and guests.

A CommScope deployment provides enterprise-class networking with the performance to handle the toughest challenges and an ease of use that gives IT, staff, and residents greater satisfaction with improved reliability and the ability to add new and differentiated services.

Ruckus solutions are part of CommScope's comprehensive portfolio for Enterprise environments (indoor and outdoor)

We encourage you to visit commscope.com to learn more about:

- RUCKUS Wi-Fi access points
- RUCKUS ICX switches
- RUCKUS cloud management software
- SYSTIMAX® and NETCONNECT: structured cabling solutions (copper and fiber)
- imVision®: automated infrastructure management
- Era and OneCell: in-building cellular solutions
- Our extensive experience about supporting PoE and IoT