

SOLUTION BRIEF



MAKING COLLEGE SAFER WITH A SMART CAMPUS

Colleges and universities are getting connected. Using Internet of Things (IoT) technologies, they're linking anything and everything to create new applications that elevate the campus experience. And they're unlocking huge savings along the way. It's called a Smart Campus. And it's transforming campus life for students, faculty and visitors.

At the highest level, a Smart Campus links devices, applications and people over a common, shared technology infrastructure. When everything is connected, devices and applications can interact with users and with each other in ways that weren't possible before: digital classrooms, connected campus ID cards, connected lighting and building environmental systems and much more. (For details, see the eBook Smart Campus: [The Journey Starts Here: ruck.it/smartcampus-ebook](http://ruck.it/smartcampus-ebook)) But there's a big part of the Smart Campus story that's just as valuable to colleges and universities, even if it doesn't always capture the headlines: campus safety and security.

As innovative institutions embrace IoT technologies, they're finding that the same platform that supports digital learning and connected experiences can enable applications that make campus safer and more secure for everyone living, learning or working there.

BUILDING A SAFER CAMPUS

Student safety may not be the first thing you think of when considering cutting-edge technology. But to parents, their sons and daughters are their most precious asset. Many are sending their children away from home for the first time, and they want to know their student will be safe. On a Smart Campus, you can build a compelling story around using technology to protect the safety and security of students everywhere on campus, 24/7.



Video surveillance: Traditional closed-circuit security cameras require physical connections to a switch—making deployments expensive and, in some outdoor areas, almost impossible. On a Smart Campus, anywhere you have a power source, you can deploy a smart IP video camera and use wireless meshing to connect it. Using smart lighting? Use the same poles and power for cameras. Using body cameras for security personnel? Connect the over the same wireless mesh network. Extend video surveillance to places you could never reach before, including outdoor areas hundreds of meters from the core network.



Smart locks and access control: Connected locks make it easy to control who has access to hundreds of buildings on campus. Combine them with other Smart Campus systems—smart ID card readers, video surveillance, perimeter controls—and you can now closely monitor every individual coming and going at all times. Use behavior-based alarms to alert campus security if someone tries to enter a building during off hours or even if a door has been left open. In residence halls, verify that everyone entering the building at night is actually a resident.



Tracking assets: Combine ubiquitous wireless coverage with location-based services to track anything moving across campus. Attach Bluetooth beacons to projectors, TV screens, lab equipment and vehicles, and pinpoint their precise location on campus. Use geofencing to receive alerts if an asset moves outside a given area.



Tracking people: You can even apply asset tracking concepts to human beings. Use smart campus ID cards to track the location of students in a building during an emergency evacuation. Or, use connected medical alert wristbands that alert responders to the precise location of a student having a seizure or other medical emergency.

SMART CAMPUS SAFETY AND SECURITY IN ACTION

Smart Campus security technologies aren't necessarily groundbreaking when viewed in isolation. After all, most campuses use solutions like access control systems, intrusion alarms, panic buttons and video surveillance right now. On a traditional campus, however, these systems operate in technology silos, isolated from each other as well as other campus systems such as building automation and lighting control.

A Smart Campus integrates these disparate security technologies into a unified system, allowing you to create safety and security services that are much more than the sum of their parts. Multiple components—lighting, surveillance cameras, alarms, smart ID cards—can now work together to make automated real-time decisions that keep everyone on campus safer.



How could a Smart Campus respond to someone trying to break into a residence hall at night?

1. Motion detectors identify movement at a place and time where no one should be.
2. Wi-Fi locks recognize that someone is attempting entry without proper authorization.
3. Connected lights snap on illuminating the entryway.
4. Smart surveillance cameras automatically turn to capture video.
5. If the intruder is a student or employee with a smart campus ID card, the system immediately recognizes who it is.
6. An alert is sent to campus security with all the relevant information and a real-time video feed so they can respond appropriately.

PUTTING THE PIECES TOGETHER WITH OPEN APIS

Many of the technologies involved in Smart Campus security applications are not necessarily new; they're just used in new ways. But one thing that is relatively new—and that's essential for a versatile Smart Campus platform—is open APIs.


Open APIs are the “glue” that connects different devices and systems, even when using different access methods, to communicate and interact with each other in real time. When everything is connected over a common network platform using open APIs, all manner of security and safety systems—whether connecting over Wi-Fi, Zigbee, Bluetooth, Ethernet—can now communicate with each other in real time. Each distinct security device and application can become a component in a larger, smarter system.

For colleges and universities, open APIs mean freedom to innovate. You can take advantage of a broad range of new smart security applications as they emerge, using the IoT endpoints (sensors, cameras, lights) you already have in place. With an open Smart Campus platform, you can even build your own applications. You're no longer juggling dozens of disparate systems and thousands of proprietary endpoints that don't talk to each other. Every sensor and device you connect becomes just one more versatile tool in your safety and security arsenal.

TRUST RUCKUS ON YOUR SMART CAMPUS JOURNEY


Ruckus has been a leader in connecting higher education institutions for many years. Around the globe, college and university IT departments trust Ruckus to help them deliver lightning-fast, reliable wireless and wired connectivity everywhere on campus. Now, we're helping higher education leaders build new smart safety and security applications to keep their campuses—and everyone living and learning on them—safer.

We combine industry-leading Wi-Fi innovations with state-of-the-art wired infrastructure and cloud management solutions, network intelligence and location analytics and location-based services that use the campus network to bring intelligence and decision-making closer to users and devices.



Cloudpath

- Hassle-free, self service on-boarding & pre-boarding
- Personal networks
- Manage policy for all devices




SmartZone

- Easily set up, manage, and troubleshoot the network
- Campus-level view of the entire infrastructure



SCI

- Glean actionable insights from thousands of devices
- Machine learning network intelligence




Access Points

- Wall-mount AP/switch for residence halls & IPTV
- Industry's best outdoor APs
- The best connection to every device



ICX Switches

- Industry's best performance/value
- Easy-to-manage campus fabric



SPoT

- Track assets
- Target services & information

All of these Ruckus solutions use open APIs, allowing you to easily integrate with devices, applications and management solutions from multiple vendors—or even new solutions created on your own campus.

RUCKUS SMART CAMPUS ECOSYSTEM

When you're ready to get started with new Smart Campus safety and security, where do you begin? Ruckus and our partners are here to help every step of the way. We work with industry-leading partners in video surveillance, asset tracking, connected access control and many other Smart Campus use cases that can deliver ready-to-deploy solutions.

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GET STARTED

Technology has always been on campus. But as universities compete for students who've been using smartphones since they were kids, it's becoming a key differentiator for students—as well as their parents.

When you build a Smart Campus, you can keep everyone and everything on campus safer and more secure. You can respond more quickly to emergencies. You can use the same common technology platform to deliver new applications that make your campus much more efficient. And, you can create a state-of-the-art environment that students, faculty and researchers will clamor to be part of.

Ready to start your Smart Campus journey? Contact your local Ruckus account representative or visit ruckuswireless.com/contact

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