

# BYOD and reliable connectivity made simple

## CommScope helps Woodstock School overcome rugged terrain to elevate digital learning

### CUSTOMER

Woodstock School

### LOCATION

India

### CHALLENGES

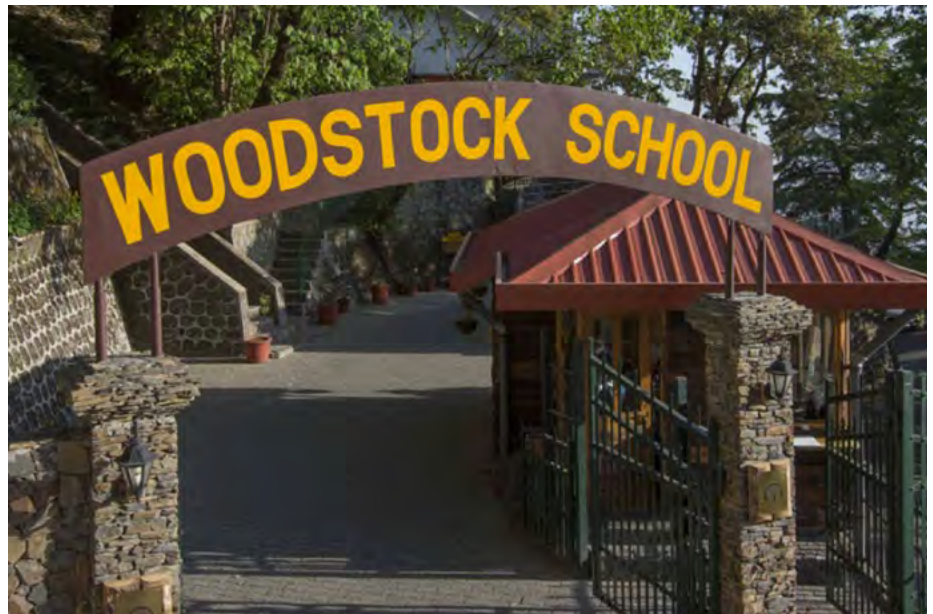
- Spotty connectivity on school grounds due to challenging and rugged hilly areas
- Poor visibility and control of BYOD devices and trouble tickets from poor connectivity
- Very poor mobile network quality

### SOLUTION

- 225 indoor and outdoor RUCKUS® Wi-Fi access points (APs)
- ICX switches
- ZoneDirector 3050 controller
- RUCKUS Cloudpath management software

### Ubiquitous connectivity and secure RUCKUS Cloudpath onboarding help Woodstock School build a connected campus

Founded in 1854 and located amid the lush green hills of Mussoorie (Uttarakhand) in India, Woodstock School is Asia's oldest international boarding school, offering International Baccalaureate Middle Years and Diploma programs. Spread over a sprawling 250-acre campus, Woodstock houses 530



students from 30 countries and 200 on-campus staff members.

Increasingly, the school is embracing the use of multimedia, and the number of resident students and staff members adopting “bring your own device” (BYOD) policies is quickly growing. If the school administrators were to realize their goal of becoming a smart campus, the network would have to provide ubiquitous connectivity and secure device management.

The school's location on a south-facing slope on the foothills of the Himalayas

made it challenging to provide a consistent, high-performing, 24x7 Wi-Fi experience for students and staff. What's more, the campus has several heritage buildings with stone walls up to three feet thick—making it difficult for wireless signals to penetrate. Adding to the connectivity challenges was the fact that the general location of the school campus has very poor mobile network coverage.

Finally, with the adoption of a cross-campus BYOD policy, IT administrators needed better control over the many mobile devices connecting to the network.

"We have very poor mobile networks, so we facilitated our staff members with IP phones. Our students come from around the world and many are used to having high-speed internet connectivity. It was imperative for us to have a network that provided a reliable speed of about 25-30 Mbps for each connected endpoint device."

**Mr. Anil Jain**  
Director of Technology, Woodstock School

## Wired + wireless connectivity = unbeatable accessibility

To solve the school's network issues, Jain and his team turned to CommScope and its RUCKUS portfolio of wired/wireless solutions. The new network consists of more than 200 indoor and outdoor RUCKUS access points (APs) that deliver campus-wide Wi-Fi connectivity, plus a dozen high-performance ICX layer two switches. Tying it all together is the RUCKUS ZoneDirector smart controller that ensures efficient network management and maintenance. The onboarding and management of all BYOD devices is simplified using the RUCKUS Cloudpath software.

The new design yields a range of key benefits for the Woodstock School IT staff. With the number of on-campus devices multiplying, the ICX switches have enabled the school to move from a single flat network to 25 individual VLANs segregated to handle:

- Class/standard and location-based data traffic
- Separate VLAN for guests, staff members and other school facilities
- An exclusive VLAN for IP phones and smart devices

The ICX switches empower the school with flexible scalability—simplifying multiple network setups and management. Enhancing security, the ICX switches also facilitated easy upgrades. The RUCKUS components integrate seamlessly into the CommScope network architecture to ensure:

- Excellent throughput for streaming videos and other multimedia content

- Campus-wide unified communication through IP phones
- Efficient management and maintenance of multiple VLANs

The entire connected environment is also highly resilient. Each VLAN operates independently so, even if one experiences downtime, it does not hinder the efficiency and throughput of other.

The addition of the ZoneDirector controller has also made a big difference. Before the deployment of the new wired/wireless network environment, centralized management was a gargantuan task for the school's lean IT support team. They had to traverse the 250-acre campus to fix even minor breakdowns. Another major advantage of using a central controller was seamless roaming between different APs—ensuring students and staff members have ubiquitous network access.

The APs were mounted in strategic points across campus to maximize performance and throughput, while minimizing the number of APs that needed to be installed, versus the competition. A key RUCKUS technology used to combat the challenging environment was the patented adaptive antenna technology known as BeamFlex+™. This innovative feature provides thousands of antenna patterns and supports horizontal and vertical polarization that can result in up to three times better performance. BeamFlex+ enhances the user experience by ensuring consistent wireless signals—especially for mobile devices.

RUCKUS Cloudpath has dramatically improved the school's ability to manage the onboarding of student and staff devices as part of the school's BYOD program. Under the previous





network setup, IT administrators had to deal with frequent Wi-Fi password issues. These issues are now in the past, as the new network lets students and staff members self-manage a variety of devices, including wearables and even Kindle e-readers, without having to enter the Wi-Fi password each time network access is needed. If anything, the Wi-Fi network literally “follows” them around, whether on campus, in staff residences or student dormitories—making connectivity simple and reliable for everyone.

### Realizing benefits campus-wide

Now, the network is easily able to accommodate more than 1,000 concurrent connections seamlessly. In classrooms, the improved network connections mean students can use laptops in class with confidence while, in the dormitories, smart devices such as connected speakers have become common. At the same time, students from more than 30 nationalities can now easily get on video calls to keep in touch with family and friends from afar.

The passthrough features for the indoor APs also help IT staff easily install the digital IP phones used by staff, while dodging the extra wiring complexities to enable intra- and inter-staff residence communication. The IP phones were used primarily to overcome the weak mobile networks on campus, and thus are the relied-on communications conduit for school staff.

Today, connectivity at the Woodstock School is off the charts and students are enjoying an enriched learning and living environment. For this school, high in the Himalayas, the sky truly is the limit.

“We are a classic BYOD campus, where students and staff bring their own devices, so it was very difficult for our IT team to know which device is connected to our network, as well as to properly enforce network access policies. The self-service model of the Cloudpath enrollment system has relieved our IT department from having to manage each individual device. Now students can manage devices on their own, and switch out those no longer needed.”

**Mr. Anil Jain**  
Director of Technology, Woodstock School



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