



# Education

AI-Driven Networks: Transforming Education



# TRANSITION TO DIGITAL LEARNING

In many ways, the connectivity and access to the internet has transformed education at all levels. The ability for students to access learning materials on-line as well as for instructors to share lessons and collaborate has revolutionized teaching and learning. Where education used to be concentrated in school buildings, it can now be accessed by millions of people (almost) anywhere.



**58%**

Of schools say that they are in Phase 3



## LAB

CURRENT 1%  
DESIRED 0%

### ACCESS

- Lab-centric classrooms

### USAGE

- Small files/PDFs

### INFRASTRUCTURE

- Classroom switch
- 10/100Mbps edge
- 1Gbps backbone

PHASE  
**1**



## TEACHER

CURRENT 26%  
DESIRED 2%

### ACCESS

- Teacher-centric classrooms

### USAGE

- Interactive E-Books
- Google Docs / Office 365

### INFRASTRUCTURE

- Wi-Fi 5 (Cloud-managed)
- 1 Gbps edge with PoE
- 10 Gbps backbone

PHASE  
**2**



## STUDENT

CURRENT 58%  
DESIRED 32%

### ACCESS

- Student-centric classrooms
- Secure campus / remote access

### USAGE

- Courseware and denser files
- VR, video and gaming

### INFRASTRUCTURE

- 2.5 Gbps Wi-Fi 5
- 2.5 Gbps edge with 60W PoE
- 10/40 Gbps backbone

PHASE  
**3**



## COMMUNITY

CURRENT 11%  
DESIRED 40%

### ACCESS

- Community and industry (Smart Cities)
- Collaboration between schools and nations
- Outdoor Connectivity (School bus Wi-Fi)

### USAGE

- Video conferencing and streaming
- Synchronous and Asynchronous learning
- Esports

### INFRASTRUCTURE

- Wi-Fi 6 and CBRS (indoor & outdoor)
- 5 Gbps edge with 90W PoE+
- 40 Gbps backbone

PHASE  
**4**



## GLOBAL

CURRENT 4%  
DESIRED 13%

### ACCESS

- Global / Internet of things

### USAGE

- Virtual classrooms
- Pervasive computing

### INFRASTRUCTURE

- Cloud Analytics
- Wi-Fi 6 + LTE + IoT
- 5/10 Gbps edge
- 100 Gbps backbone

PHASE  
**5**

**1.5 million**

About 1.5 million homes in the UK still do not have internet access.

<https://www.bbc.com/news/technology>

**20%**

20% of children did not always have access to a device for online learning while schools were closed.

<https://www.bbc.com/news/technology>

**1.78 million**

1.78 million children in the UK don't have access to a laptop or device for home schooling.

<https://www.computerweekly.com/news>

**41%**

41% of education stakeholders believe that schools do not have the facilities for esports equipment.

<https://esports-news.co.uk>

# A FAST AND RELIABLE NETWORK IS **NO LONGER** **OPTIONAL.**

Don't let your campus network become a roadblock. Invest in a wired & wireless network that supports future ready technologies and delivers proven performance, reliability, and scale for schools.

## THE DIGITAL CLASSROOM OF TOMORROW PROMISES AN OUTSTANDING EDUCATION. IS YOUR NETWORK READY?

The classroom of tomorrow promises an outstanding education. Blended learning, digital curriculum and other modern learning models can better engage students and help educators be more effective.

With this digital transformation, lesson plans now depend on consistent, reliable connectivity to the school Wi-Fi network. Instead of leaving tools locked in the classroom, students walk in the door with their Chromebooks, tablets or other devices every morning, and take them home with them each night.

As such, there are three major concerns that IT administrators are currently facing:

### NETWORK AND BROADBAND SCALING



**THE TOP PRIORITY FOR IT IS BROADBAND AND NETWORK CAPACITY.**

More devices are coming onto the network, stretching the limits of aging infrastructure. 65% of international schools use live video lessons while over 40% surveyed faced significant challenges delivering distance learning through technology, such as problems with bandwidth.

(reference: ISC Research Specialist Market Report - August 2020)

### SECURITY AND STUDENT DATA PRIVACY



**FACING THE TASK OF PROTECTING STUDENT DATA FROM MISUSE OR BREACH.**

The National Cyber Security Centre along with the London Grid for Learning completed research in 2019, looking into cyber security of more than 400 schools across the UK. Of the schools polled, 83% said they had experienced at least one of the types of cyber security incidents like Phishing.

(reference: NCSC (National Cyber Security Centre) and LGfL (London Grid for Learning) Security Audit 2020)

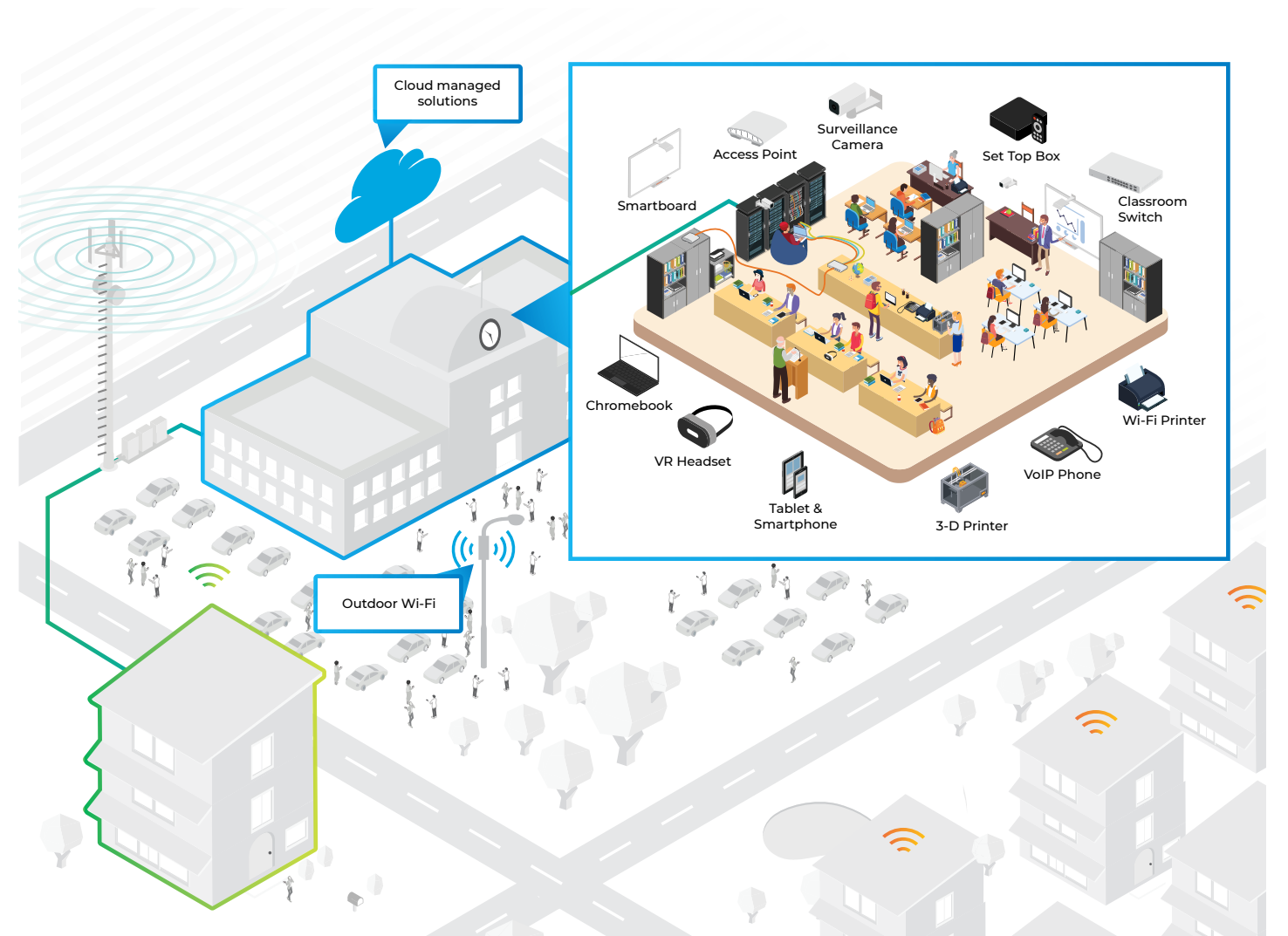
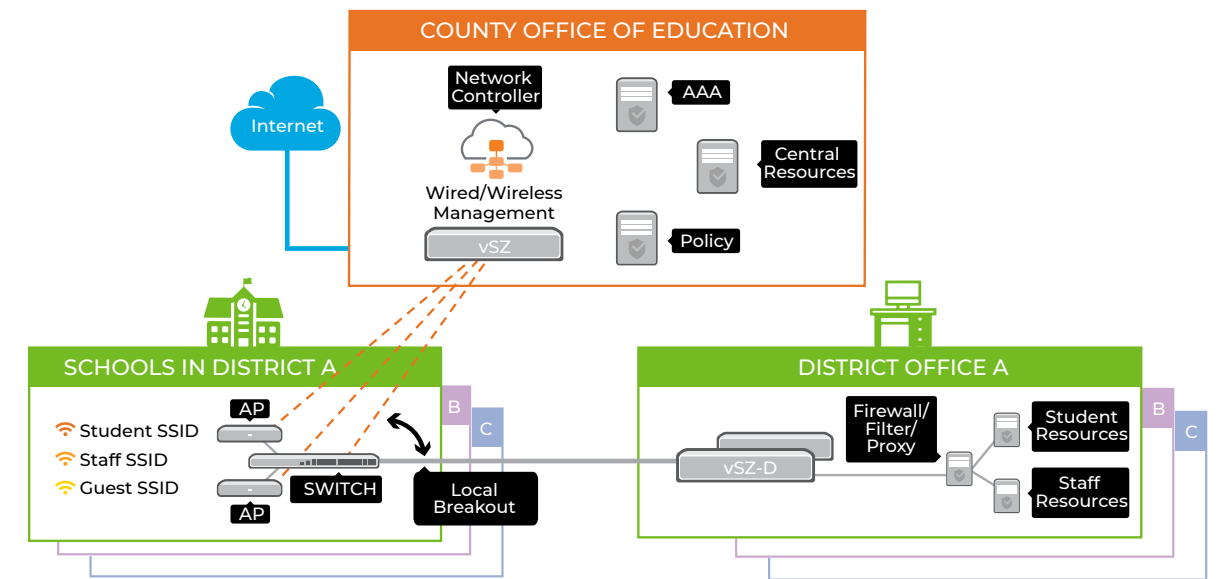
### TRANSITION TO DIGITAL LEARNING



**THE TRANSITION FROM TEXT-BASED CURRICULA TO BLENDED LEARNING.**

Reliable connectivity is critical for classroom and distance learning. Cloud managed networks combined with network analytics can reduce digital downtime.

## HOW DOES THIS FIT IN MY SCHOOL

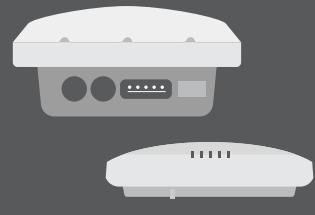


# WHY CHOOSE RUCKUS FOR YOUR SCHOOL PROJECT

As your school continues its digital transformation to 1:1 mobile learning, RUCKUS helps you address the top three challenges of school IT: network scaling, securing student data privacy, and network reliability for digital instruction. **Our goal is to help you provide a safe and reliable learning environment at an affordable price.**



## Reliable Wi-Fi (indoor & outdoor)



Our passion is highlighted by 100+ RF patents that provide the strongest wireless connections and enable our access points (APs) to automatically adapt to non-ideal placement or changing conditions. Moreover, it has been independently proven that only RUCKUS can sustain 60 HD video streams with just one AP. Supporting more students with fewer APs means significant savings for your school.

Combined with the outdoor APs, which provides not just connectivity outdoors, but also security when combined with solutions like Soter and AXIS.

## Scalable Switching



ICX supports long distance stacking on regular fiber links and requires no proprietary cables. MCT support on stacking provides a high availability active-active network scaling up to 300+ clients. In addition, entry level switch uplinks support 25GbE to avoid any bottleneck as the wireless network is upgraded to Wi-Fi 7 APs.

## Simple Security



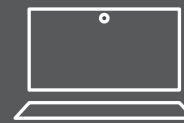
We make securing every connection to your school network easy, with identity-based policies that facilitate rapid guest access on-boarding. This means an end to passwords and trouble tickets for Wi-Fi access.

## Easy Cloud



Utilizing the latest in AI, manage the entire network from a single pane of glass.

## Optimal for Chromebooks



Our RUCKUS Cloudpath Chrome Extension enables simple network provisioning with a single click – and verifies which Chromebooks are school property. Moreover, only RUCKUS can sustain 60 HD video streams with just one AP. We also support CIPA compliance by allowing the restoration of content filtering for HTTPS traffic.

## Future Proof



Our ICX access switch uplinks can be upgraded without replacing the switch. ICX supports MCT with stacking which ensures less than sub second downtime due to adding/removing/upgrading switches in a production environment.

## Affordable Multi-Gigabit



Our purpose-built multi-gigabit APs and switches are designed to work together. Our ICX 8200 Entry Level switch offers 8x25GbE SFP28 or 48x1GbE RJ45 ports, with maximum power budget of 1480W.



# ESPORTS: GOING BEYOND THE GAME

On a wicked fast network

**Esports isn't all about gaming. Scholastic esports goes beyond the game.** The life lessons and skills that can be achieved through competitive gaming and STEM based curriculum can provide the best student outcomes. That is why RUCKUS Networks is collaborating with British Esports to help support Esports programs in schools.



# STUDENT SAFETY AND WELLNESS

Vaping detection and IP video indexing on CommScope's RUCKUS WLAN infrastructure

## Push back against the youth E-cigarette epidemic

Vaping is a difficult behavior to target. Its odor is easily overlooked, it's easy to conceal visually, and it's often done in private areas like bathrooms and locker rooms where human and electronic monitoring is weakest.



## Axis Communications networked cameras

This powerful, flexible, IoT-driven camera provides exceptional image quality, panoramic views, remote zoom, and low-light performance. Combined with FlySense sensors, they can capture actionable, time-stamped footage around vape detection locations.

# 79%

Financial decision-makers in UK schools are optimistic about the value esports brings to education. Nearly four out of five believe esports should be taught in schools.

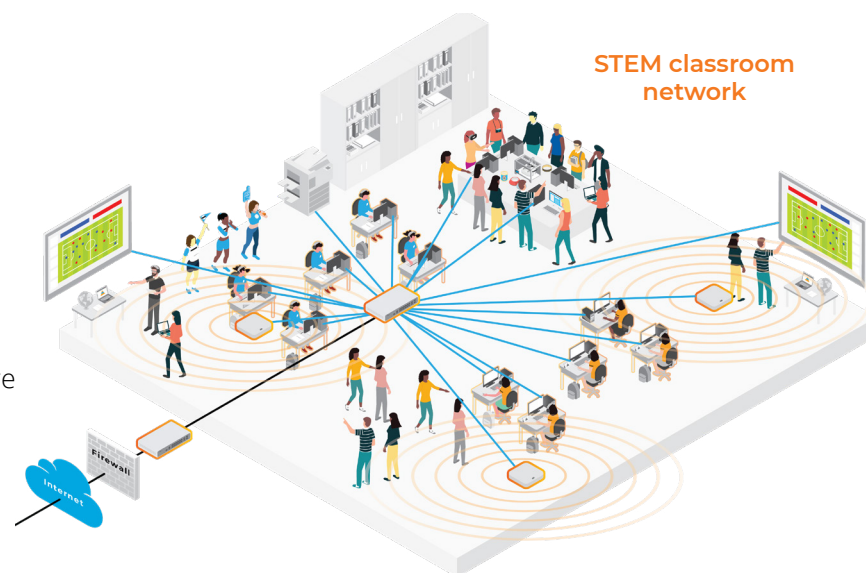
# 48%

Nearly half of UK parents say esports should be added to the school/college curriculum.

# 69%

Over two-thirds of UK parents believe esports allows their children to develop skills that they might not get through traditional education methods.

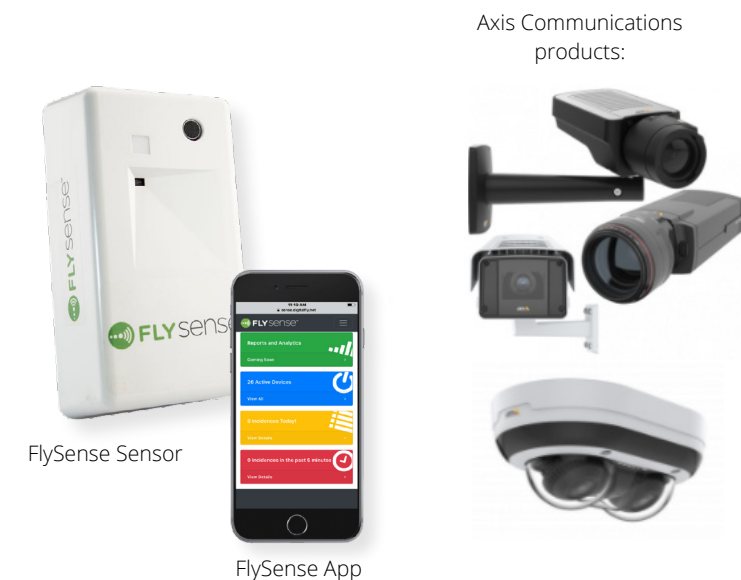
Whether you're looking to level up your classroom or host an esports event, our network solutions can support the esports beginner/enthusiast with a smaller, pop-venue configuration or an amateur level striving to become professional, with an in-classroom design with an esports tournament ready auditorium. Our advanced, patented technologies will allow students to participate even from home. To learn more about our esports network solutions, visit our esports website at [www.commscope.com/esports](http://www.commscope.com/esports).



## The Soter Technologies FlySense detector

This IoT device detects vaping mist in the air and also flags raised voices in a room without actually recording them—all in real time. It can quickly alert administrators and hall monitors with customized alerts sent to their mobile devices if illicit vaping or bully confrontations are detected where video surveillance is not used, such as bathrooms, locker rooms or anywhere else conditions prohibit video.

Riding on CommScope's RUCKUS portfolio of Wi-Fi solutions, it's a school's best defense against vaping by students.



# RELIABLE SCHOOL CONNECTIVITY: RUCKUS NETWORKS

The CommScope RUCKUS product portfolio of Wi-Fi, switching, IoT, LTE, powered fiber, Cat 6A solutions, software and SaaS lets you deliver a great end-user connectivity experience while reducing the amount of time you spend managing the network. And because CommScope RUCKUS packs more capability into every network element, you can build that network at a lower cost per connection.



## SMARTZONE NETWORK CONTROLLER



- Wired/Wireless management
- Visual connection diagnostics
- Powerful new mapping tool
- COE as service provider
- Customization with Open APIs

## CLOUDPATH SOFTWARE



- Easy Chromebook on-boarding
- HTTPS inspection for CIPA
- Prevents password lockouts
- BYOD and 1:1 policies
- Dynamic PSK
- Granular policy guest access

## ACCESS POINTS (INDOOR & OUTDOOR)



- All students connect reliably
- Fewer APs needed per school
- Non-stop VR, gaming and video streaming Network
- Multi-gigabit (2.5GbE) uplink
- Outdoor AP stats

## ICX SWITCHES



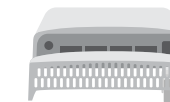
- Silent classroom switches
- Leading power density (up to 90W)
- Upscaling to 1/10/25/40/100GbE
- Hitless failover & ISSU
- Multi-Gigabit options even in compact switches
- Long distance stackable entry-level switches up to 25Gb uplinks

## CLOUD SOLUTIONS



- AI driven network management of all devices
- Service assurance via Incident identification, prioritization, and suggested resolution
- AI-driven radio resource management & channel planning
- Automatic management of performance KPIs
- Security & Policy management through single pane of glass

## RUCKUS IoT SUITE



- Add IoT during or after install
- Keep your AP investment
- Reduce IoT complexity and cost
- Great for STEM learning
- Go green, save green



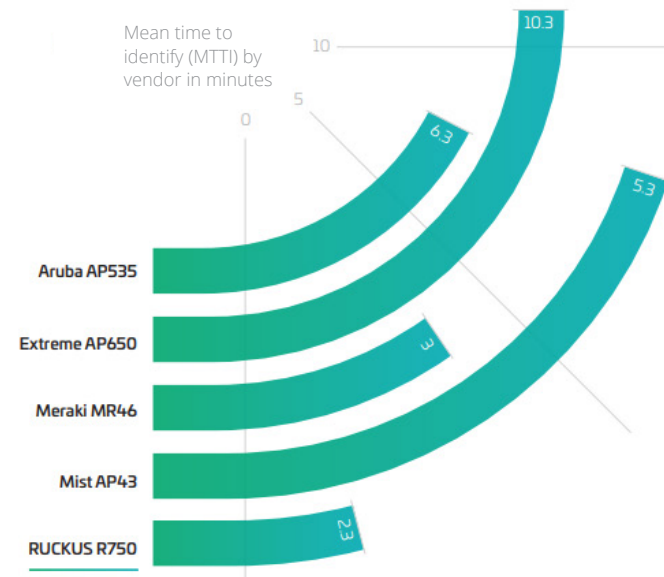
# RUCKUS AI DELIVERS THE LOWEST MTTI

## Troubleshooting with network analytics tools

Mean time to identify (MTTI) is the time a network administrator needs to determine the root cause of a network issue or incident. A shorter average MTTI reduces the trouble-shooting burden on IT while improving user experience by allowing IT to more effectively limit incident duration and impact.

RUCKUS Analytics is a cloud service for network intelligence and service assurance. Powered by machine learning and artificial intelligence, it gives IT comprehensive visibility into network operations.

Want to learn more? Get a Live Online Demo from a Product Expert here <https://www.ruckusnetworks.com/ruckus-ai-demo>



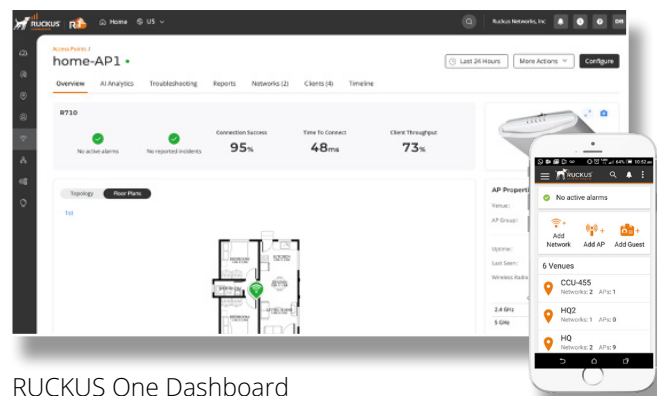
## COMMSCOPE INDUSTRY RECOGNITION

CommScope has long been an active participant of leading standards committees and alliance organizations. Participating in these groups has allowed CommScope to develop solutions that drive benefits to our customers today while ensuring the same solutions are a sound investment for tomorrow. By upholding these values and commitments, CommScope's portfolio of products and services have been recognized among the best in the industry.

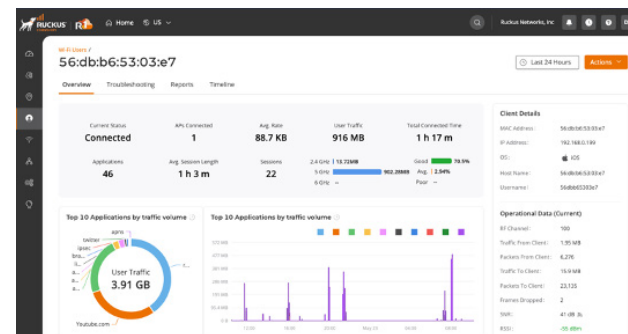
## TRY RUCKUS ONE FOR FREE

### LET'S GET YOUR TRIAL STARTED

1. Go to [www.ruckusnetworks.com/ruckusone](http://www.ruckusnetworks.com/ruckusone) and learn about what sets RUCKUS One apart.
2. Go to <https://www.ruckusnetworks.com/ruckus-one-trial/> and request a free trial



RUCKUS One Dashboard



Application by traffic

- 2022** 2022 CRN Awards CommScope receives 5-Star rating and Women of the Channel  
2022 CommScope named operator's "Supplier of the Year" and "Outstanding Technology Performance" awards at Vodafone Partner Awards Arch 2022
- 2020** 2020 Technology and Engineering Emmy® Awards recognize CommScope's IP Video Ad Insertion portfolio leadership  
(2020) CommScope is the IoT Sensor Company of the Year  
CommScope named a Wi-Fi Alliance 2020 Industry Impact Award Recipient
- 2019** (2019) 3rd consecutive year, CommScope achieved a Gold level Corporate Social Responsibility (CSR) rating from EcoVadis  
RUCKUS Wi-Fi 6 R730 AP scores WBA Award 2019  
CommScope's RUCKUS ICX 7850 switch wins CRN's "2019 Product of the Year" award
- 2018** 2018 Top 100 Global Tech Leader by Thomson Reuters
- 2017** CommScope receives AT&T 2017 Supplier Diversity Crystal Award
- 2016** RUCKUS Wireless recognized as a Best-in-Class Channel Provider on CRN's 2016 Annual Report Card



## DfE – Connect the Classroom Programme

### What is Connect the Classroom?

Connect the Classroom is an investment funding programme run by the Department for Education (DfE). The current programme offers eligible schools an upgraded wireless networking solution to improve their IT infrastructure. This will provide infrastructure equipment and set up to help schools meet the latest Wi-Fi 7 standards.

In 2022, the DfE released updated guidance detailing additional Connect The Classroom funding for approximately 3,500 schools. This guidance focuses on 55 local authority education investment areas where school outcomes are weakest.

### Am I eligible for Connect the Classroom?

This is an invitation-only incentive. Your school will receive an invitation from the DfE if you are eligible. Most likely, this will go to a Head Teacher. If you think you might be eligible, ask your senior leadership team to check their mailbox.



#### Priority Investment Areas

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1063088/Priority\\_EIA\\_selection\\_methodology\\_FINAL.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1063088/Priority_EIA_selection_methodology_FINAL.pdf)



#### Selection Methodology

[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/1051431/Education\\_Investment\\_Areas\\_selection\\_methodology.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1051431/Education_Investment_Areas_selection_methodology.pdf)

#### Next steps:

DfE will have contacted your school by now to explain your qualification.

1. Please contact RUCKUS Networks directly.
2. Our team will happily discuss your options and advise on how to move forward.



Scan the QR code to contact RUCKUS

# RUCKUS KEEPS GOOD COMPANY

RUCKUS is proud to be a contributing member of many associations serving the Education community. We are also working with leading technology and alliance partners that offer complete, proven solutions that complement the RUCKUS wired or wireless portfolio to help our customers meet critical business needs.





## About RUCKUS Networks

RUCKUS Networks builds and delivers purpose-driven networks that perform in the demanding environments of the industries we serve. Together with our network of trusted go-to-market partners, we empower our customers to deliver exceptional experiences to the guests, students, residents, citizens and employees who count on them.

[www.ruckusnetworks.com](http://www.ruckusnetworks.com)

Visit our website or contact your local RUCKUS representative for more information.

© 2023 CommScope, Inc. All rights reserved.

All trademarks identified by ™ or ® are trademarks or registered trademarks in the US and may be registered in other countries. All product names, trademarks and registered trademarks are property of their respective owners. This document is for planning purposes only and is not intended to modify or supplement any specifications or warranties relating to CommScope products or services.

CO-114169.3-EN.GB (12/23)

**RUCKUS**<sup>®</sup>  
**COMMScope**