Education

AI-Driven Networks: Transforming Education

RUCKUS®
COMMSCOPE

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 stake-holders 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)
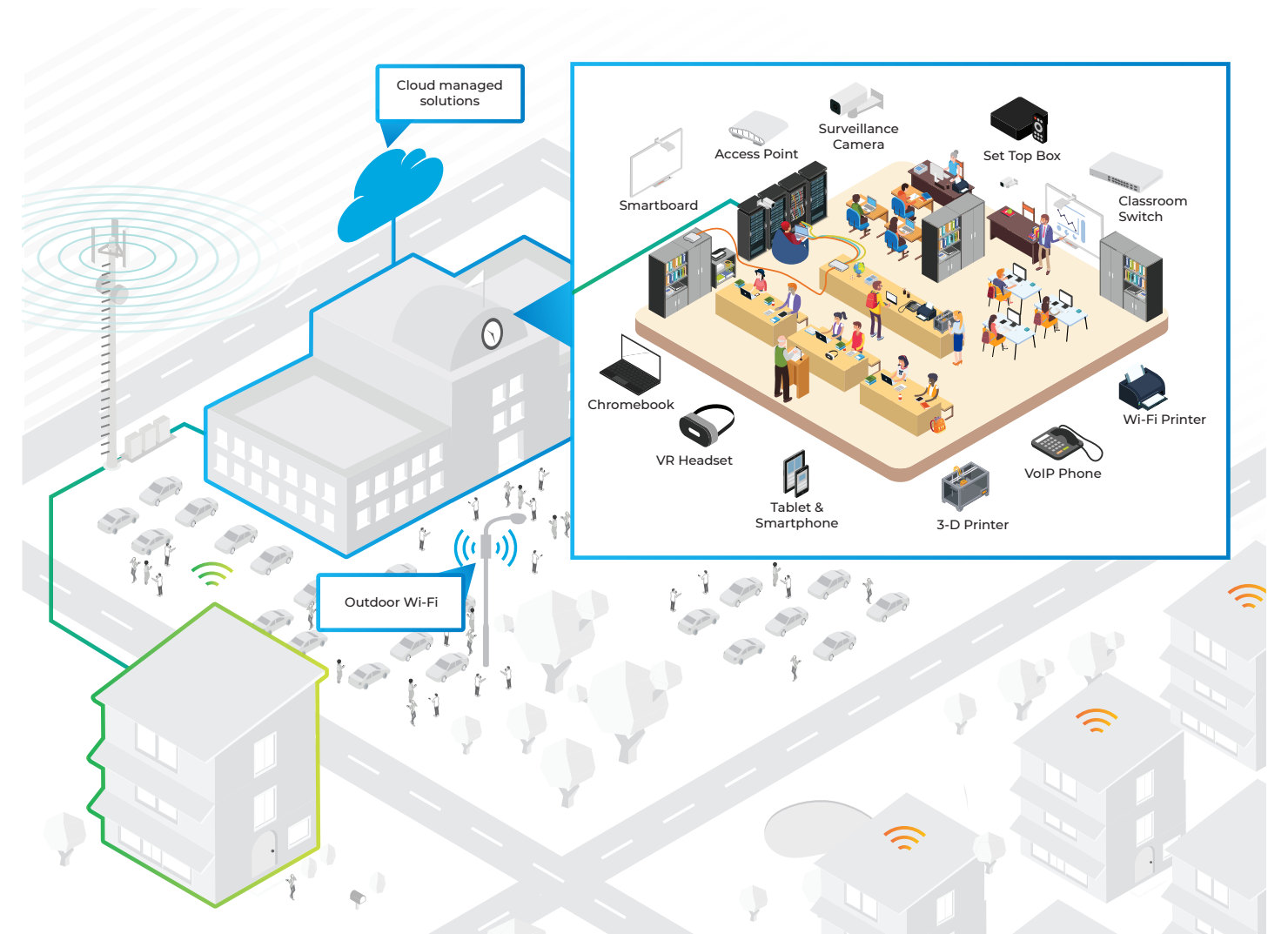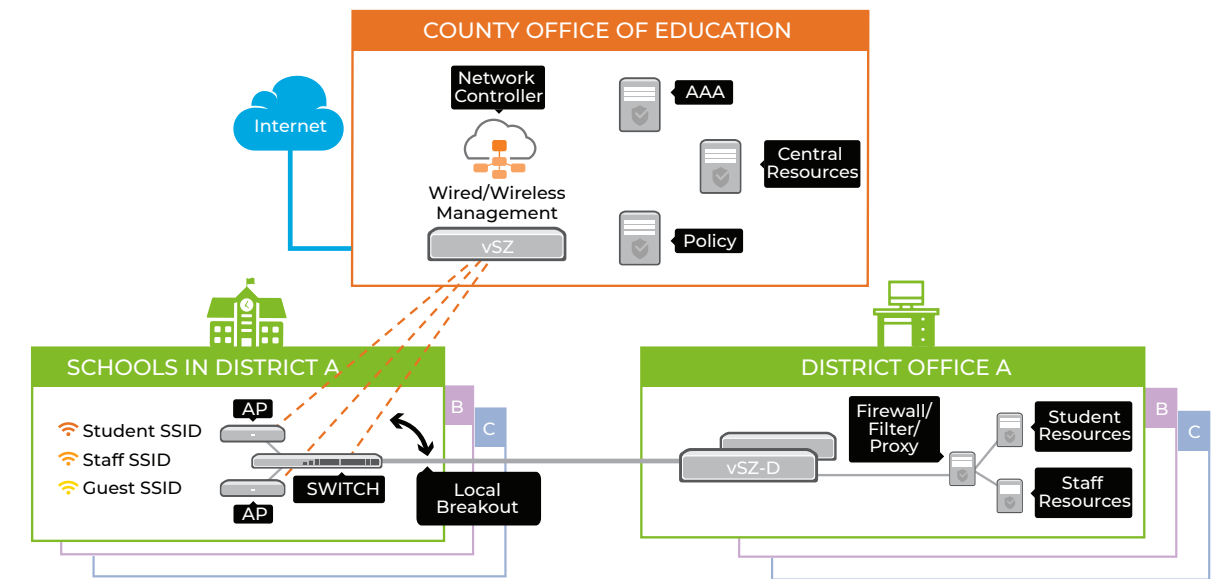
TRANSITION TO DIGITAL LEARNING

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.
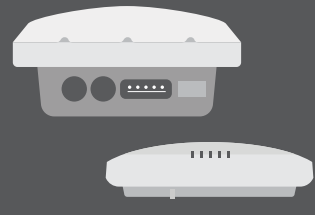
HOW DOES THIS FIT IN MY SCHOOL

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.
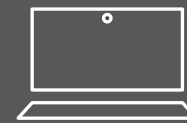
Simple Security

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

STUDENT SAFETY AND WELLNESS

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

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.

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.

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.
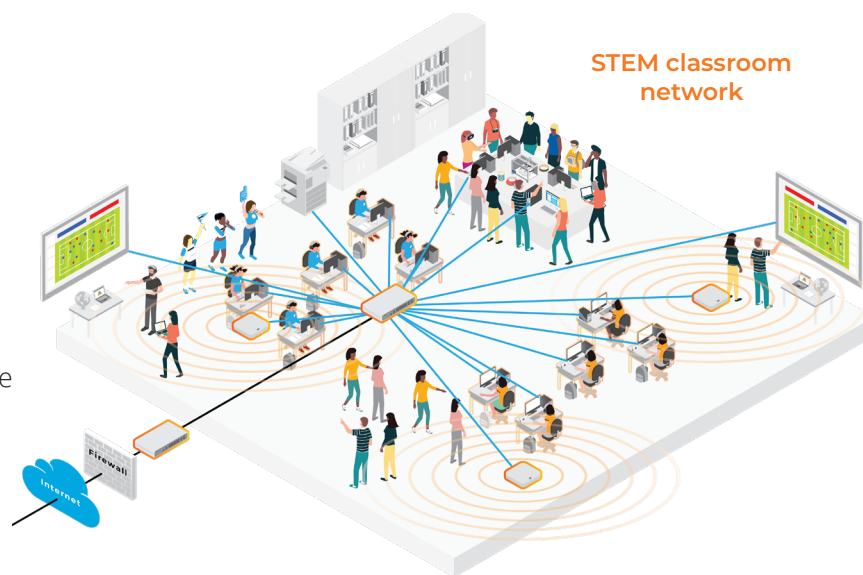
48%
Nearly half of UK parents say esports should be added to the school/college curriculum.

69%
Over two-thirds of UK parents believe esports allows their children to develop skills that they might not get through traditional education methods.
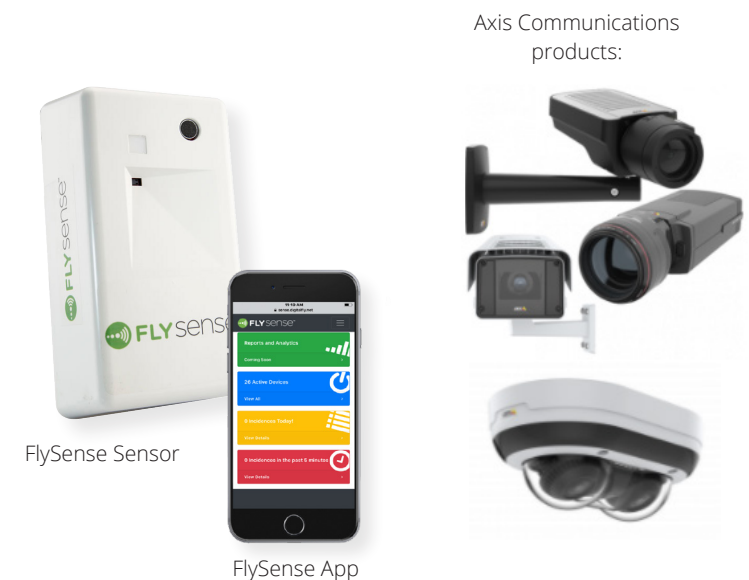

Axis Communications networked cameras

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.

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.

STEM classroom network

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.

Axis Communications products:

FlySense Sensor

FlySense App

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.
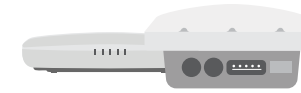
SMARTZONE NETWORK CONTROLLER

- 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
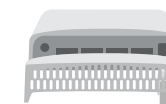- Outdoor AP stats

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
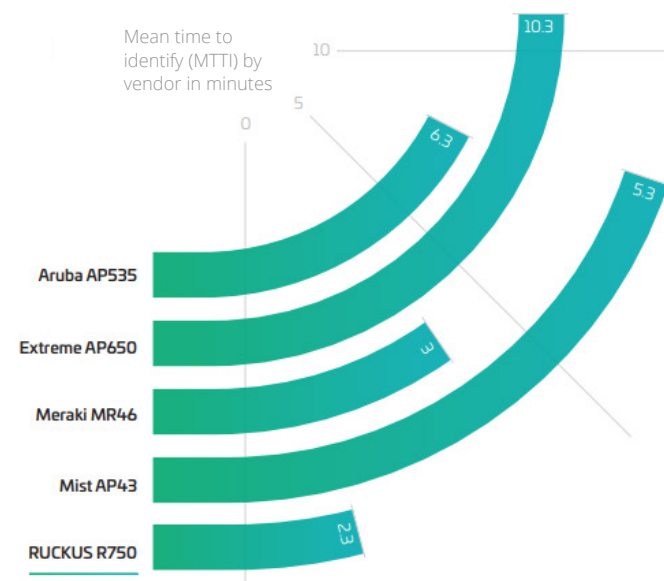- Great for STEM learning
- Go green, save green

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.

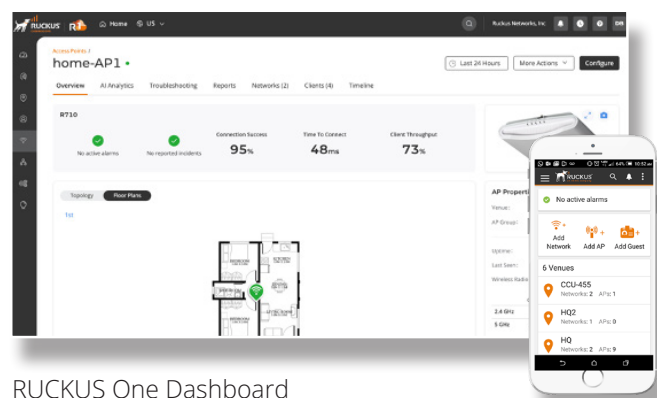Want to learn more? Get a Live Online Demo from a Product Expert here https://www.ruckusnetworks.com/ruckus-ai-demo

Mean time to identify (MTTI) by vendor in minutes

Vendor	Minutes
Aruba AP535	10.3
Extreme AP650	6.3
Meraki MR46	5.3
Mist AP43	—
RUCKUS R750	2.3

TRY RUCKUS ONE
FOR FREE

LET'S GET YOUR TRIAL STARTED

1. Go to 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

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.
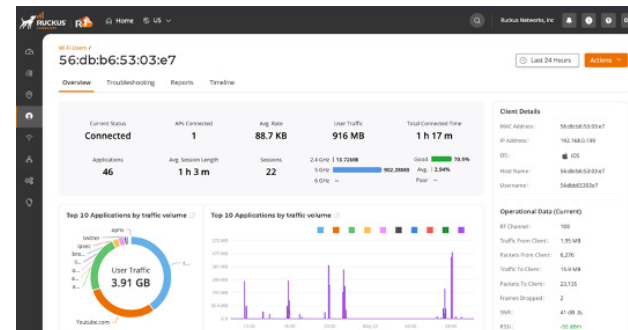
Year	Recognition
2022	2022 CRN Awards CommScope receives 5-Star rating and Women of the Channel
2022	2022 CommScope named operator's "Supplier of the Year" and "Outstanding Technology Performance" awards at Vodafone Partner Awards Arch 2022
2020	2020 Technology and Engineering Emmy® Awards recognize CommScope's IP Video Ad Insertion portfolio leadership
2020	(2020) CommScope is the IoT Sensor Company of the Year
2020	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
2019	RUCKUS Wi-Fi 6 R730 AP scores WBA Award 2019
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

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.

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

Selection Methodology
https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1051431/Education_Investment_Areas_selection_methodology.pdf

Next steps:

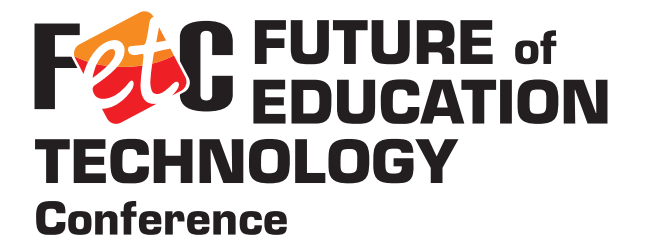DfE will have contacted your school by now to explain your qualification.

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

DELL EMC

COSN

bett

MISA/ASIM CANADA

CITE CALIFORNIA IT IN EDUCATION

FETC FUTURE of EDUCATION TECHNOLOGY Conference

ISTE Inclusive Learning Network

EDUCAUSE

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.