ERA® DAS

THE ALL-DIGITAL WIRELESS SOLUTION CONNECTING MODERN CAMPUSES

ANDREW®
an Amphenol company

CONNECTIVITY IS THE FOUNDATION OF THE MODERN CAMPUS

Universities operate like small cities—fast-moving, decentralized, and built around digital expectations. Students need instant access to coursework and communication. Faculty rely on mobile teaching tools and collaboration platforms. Campus operations depend on sensors, automation, and safety systems that must function everywhere across academic buildings, residence halls, athletic facilities, research labs, and outdoor spaces.

Reliable, campus-wide 4G/5G coverage has become critical digital infrastructure— as essential as Wi-Fi, power, and security systems.

Why connectivity matters for learning, safety & campus life

Student experience & academic success

High-performance cellular connectivity enables learning apps, LMS systems, digital textbooks, and collaboration platforms to operate without lag—even in dense classrooms, libraries, and dorms..

Campus safety & security

Clinicians experience fewer dropped calls, smoother handoffs, and more efficient coordination—reducing frustration, burnout, and workflow friction.

Faculty mobility & instructional performance

Instructors benefit from seamless mobility between buildings, reliable access to cloud-based teaching tools, and smooth communication during hybrid and in-person classes.

ERA DAS performance in hard-to-reach campus areas

The ERA DAS is engineered to perform in the hardest-to-reach areas of a university. Its digital transport and flexible access-node design deliver reliable 4G/5G coverage where Wi-Fi and legacy DAS struggle—including:

- Concrete and steel academic buildings
- Research labs and shielded environments
- Large lecture halls and auditoriums
- Stadiums, arenas, and recreation centers
- Below-grade areas, tunnels, and parking structures
- Dorm basements and historic or legacy buildings

CONNECTED LEARNING, RESEARCH & CAMPUS MOBILITY

5G-enabled workflows supporting learning, research, and student life

Modern academic environments depend on high bandwidth, low latency, and reliable handoffs:

- Cloud-based LMS and digital exams
- Hybrid and live-streamed classes
- AR/VR learning experiences
- Distributed research instruments and connected lab equipment
- Mobile campus safety apps and location-based services
- Digital credentials and access control
- AI-assisted learning tools and campus applications

The ERA® DAS preserves signal fidelity end-to-end, delivering consistent mobility and real-time performance across the entire campus.

STUDENT LIFE & CAMPUS SERVICES

5G enhances every part of the student journey

Universities rely on mobility and digital tools to support engagement, flow, and communication:

- AR wayfinding and intuitive campus navigation
- Smart residence hall applications
- Real-time transportation and shuttle visibility
- Digital engagement that offloads guest traffic from Wi-Fi
- Queue management for dining, bookstores, and student services
- Mobile ticketing for athletics and events

WHY LEGACY ARCHITECTURES FALL SHORT

Legacy designs cannot meet the scale, mobility, and performance demands of higher education

Legacy analog DAS, RF-fed DAS, Wi-Fi-only networks, and isolated private networks were not built to support:

- High-density 5G performance

- Real-time mobility with seamless, deterministic handoffs

- Research and IoT across academic, residential, and operational areas

- Campus automation requiring predictable, campus-wide coverage

- Multi-operator neutral-host service

- On-campus or centralized operator integration (C-RAN)

- Performance in shielded or complex environments

- Reduced power, cooling, and environmental impact

Modern campuses need a digital, 5G-native DAS engineered for reliability, safety, and growth.

What makes the ERA platform different

- All-digital O-RAN + CPRI architecture
- True neutral-host for all carriers
- Designed for dense, historic, and complex academic environments
- 50%+ lower power and cooling
- Up to 90% less head-end space
- IT-aligned, software-driven operations
- Flexible access-node placement for classrooms, labs, residence halls, and large venues

Wi-Fi, private networks, and the ERA platform: How they work together

Wi-Fi supports student- and faculty-owned devices and high-throughput workflows but cannot replace multi-operator mobility.

Private Networks support research, robotics, AR/VR, and localized wireless applications but do not provide a universal neutral-host layer.

The ERA platform delivers campus-wide, multi-operator 4G/5G coverage for students, faculty, staff, visitors, and public safety.

Together, these technologies form a resilient, multi-layer wireless foundation for modern higher education.

Introducing the ERA digital, 5G-native DAS for higher education

The ERA digital platform provides consistent, campus-wide 4G/5G connectivity through a fully digital architecture that transports signals over fiber or CAT cabling and distributes them through low-profile antennas across all types of campus buildings.

Aligned with modern O-RAN and CPRI interfaces, the ERA system integrates with on-campus or centralized operator deployments—reducing RF room requirements and simplifying multi-operator coordination.

The ERA solution provides reliable coverage in classrooms, dorms, research labs, libraries, athletic venues, tunnels, stairwells, and other challenging campus environments.

Sustainable and adaptable

The ERA DAS reduces head-end footprint and power consumption while supporting flexible access-node placement throughout academic, residential, and operational spaces.

Neutral-host support

The ERA platform supports all mobile network operators, providing universal connectivity for students, faculty, staff, visitors, and public safety.

Fewer remote radio heads

Easy expansion for new wings and outbuildings

Up to 90% less head-end space

More than 50% lower power and cooling

SCALABLE FLEXIBILITY

- All-digital, IT-aligned DAS that scales across classrooms, residence halls, stadiums, and multi-building campuses
- One platform for public cellular, private networks, IoT, and public safety
- Neutral-host architecture that supports new operators, new bands, and new technologies

DIGITAL PERFORMANCE

- O-RAN + CPRI interfaces simplify operator onboarding
- End-to-end digital architecture improves reliability, mobility, and signal integrity
- Low-latency 5G performance for academic, research, and operational workflows

OPTIMIZED OPERATIONS

- Software-driven deployment with automated configuration
- Centralized visibility, monitoring, and diagnostics
- Robust cybersecurity — delivers secure, resilient, and compliant network operations
- Faster installation with minimal campus disruption

SUSTAINABLE INNOVATION

- Up to 90% less head-end space
- 50%+ lower energy and cooling use
- Reduced cabling and material footprint
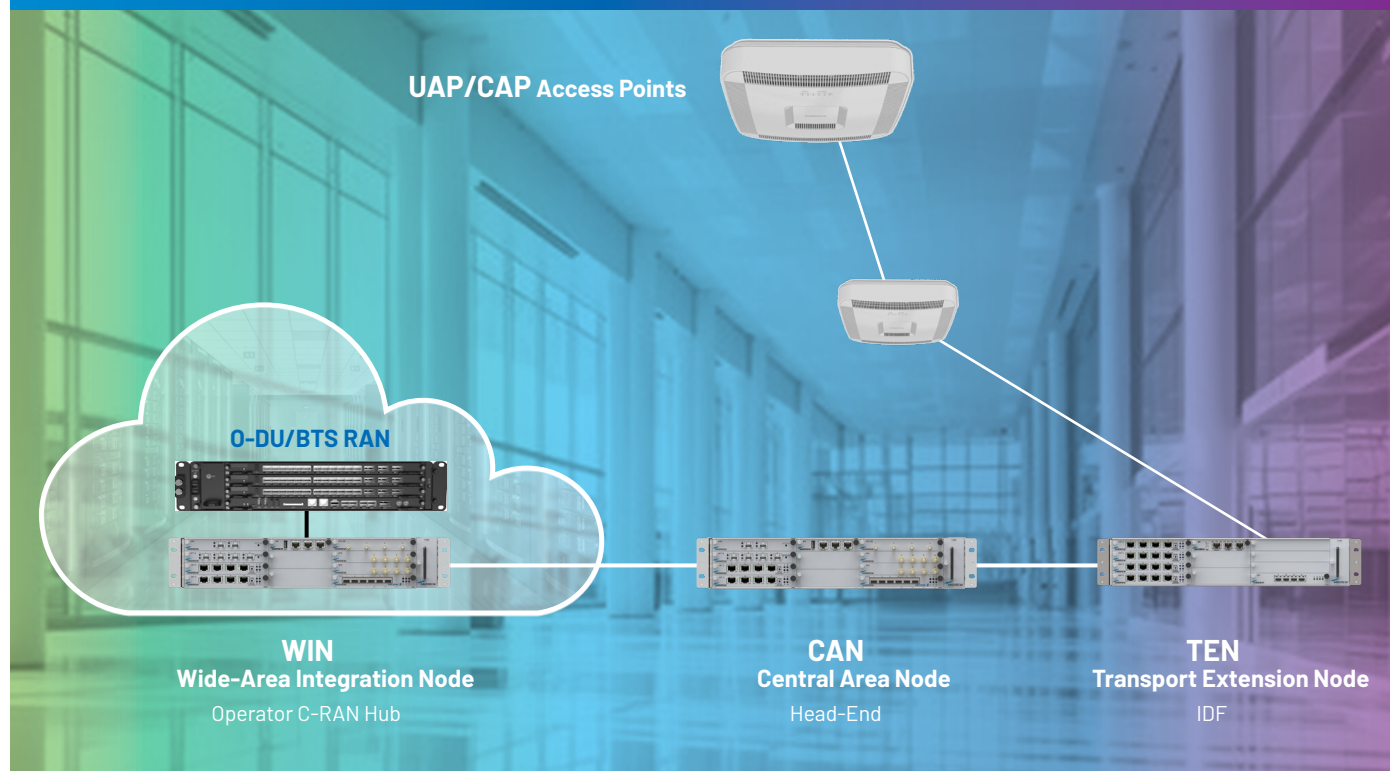- Open, software-defined architecture aligned with O-RAN evolution

Trusted across all types of higher education institutions

ERA DAS is deployed across diverse campus environments, including:

- Large public universities
- Private universities and liberal arts colleges
- Community colleges and technical institutes
- Tier 1 and R1 research universities
- Academic medical and health-science campuses
- Multi-campus university systems
- Urban, commuter, hybrid, and satellite campuses

The ERA platform provides proven reliability across the full spectrum of higher education.

ERA DAS COMPONENTS — COMPACT, EFFICIENT, READY FOR GROWTH

UAP/CAP Access Points

O-DU/BTS RAN

WIN
Wide-Area Integration Node
Operator C-RAN Hub

CAN
Central Area Node
Head-End

TEN
Transport Extension Node
IDF

Wide-Area Integration Node (WIN)

Provides MNO integration for distributed or remote buildings.

Centralized Access Node (CAN)

Connects to mobile operators via digital O-RAN or CPRI interfaces; digitizes and distributes baseband signals over fiber or CAT cabling.

Transport Extension Nodes (TEN)

Extend digital transport across large or complex campuses without signal degradation or added infrastructure.

Access Points (APs)

Low-, mid-, and high-power UAP and CAP models convert digital signals to RF for over-the-air delivery, supporting diverse academic layouts and multi-band operation.

AIMOS Management Software

Provides centralized visibility, automated configuration, fault management, and integration with IT and facilities systems.

Empowering higher education with a future-ready digital infrastructure

The ERA digital platform enables universities to modernize with confidence. Its 5G-native, all-digital architecture strengthens campus-wide connectivity while preparing institutions for the next decade of learning, research, and campus automation.

With the ERA platform, universities gain:

- Better student and faculty mobility

- Safer environments through universal, reliable coverage

- Higher throughput and predictable digital experiences

- Universal 4G/5G coverage for all carriers

- Lower power, cooling, space, and lifecycle cost

- A scalable platform that grows with new buildings and future needs

The ERA all-digital platform is more than a DAS.
It is the foundation for a connected, safe, efficient, and future-ready university—engineered by ANDREW®.

Since 1937, ANDREW, an Amphenol company, has driven the evolution of wireless technology. Trusted by mobile network operators and enterprises globally, we work closely with our customers to deliver innovative solutions that enhance connectivity experiences both outdoors and indoors. Our dedicated global team is committed to advancing the industry, fueled by the vision that a better-connected future is possible.

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