ERA® DIGITAL DISTRIBUTED ANTENNA SYSTEM FOR FEDERAL GOVERNMENT

Government office buildings, operational sites and military bases increasingly require ubiquitous, multi-operator in-building cellular connectivity for staff productivity and resident quality of life. IT departments require flexibility to add coverage, support multiple service providers, allocate wireless capacity across the venue, and migrate to 5G.

CommScope's all-digital ERA® distributed antenna system makes in-building cellular simple, scalable and more economical. Operating on standard IT infrastructure—Category 6A and fiber—ERA provides "five bars" mobile voice and data coverage throughout a building, campus or base. ERA supports different operators, frequency bands and mobile technology generations to provide a complete coverage solution. CommScope is the market leader in distributed antenna systems.[1]

FEATURES AND BENEFITS

Multi-operator/multi-technology
ERA provides a single system with common hardware and software that supports multiple service providers and all mobile generations—2G, 3G, 4G/LTE and 5G.

Highly scalable
ERA provides indoor and outdoor coverage for a single building, campus or large military base. It is used in the largest NFL stadiums and international airports—transmitting terabits of mobile data per day to hundreds of thousands of people. Wide-ranging access points offer different power levels, copper/fiber connectivity, and indoor and outdoor placement. Comprehensively monitor and manage deployments using CommScope's proven AIMOS management system.

Future-ready
The all-digital, frequency-agnostic ERA system architecture ensures the system will be able to support new services in existing and new bands, including CBRS and sub-6 GHz 5G NR. ERA's multiplexed fiber fronthaul can also be shared with other communication services. And, as usage patterns change, capacity can be re-allocated through a drag-and-drop software GUI rather than physical re-wiring.

Efficient footprint
Operator base stations serving multiple buildings can be placed in a single, streamlined headend or even in the operator's facilities—saving valuable on-premises real estate. CommScope's exclusive digital (CPRI) base station interface eliminates the need for remote radio units, further reducing headend size and power requirements.

Public safety wireless support
ERA offers specialized access points and related equipment that support common public safety frequencies, including FirstNet, and survivability requirements. Access points are available in different transmit power levels to address different building sizes.

[1] Mobile Experts LLC, Distributed Antenna Systems, November 2019

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SYSTEM DESCRIPTION

ERA is a modular system which can create a nearly infinite range of system configurations using a small number of components. Headend and intermediate node distribution modules include:

- The **CPRI digital donor (CDD)**. For use with ERA, this card receives CPRI digital signals from compatible operator baseband units (BBU).
- The **RF donor (RFD)** card receives analog RF signals from operator base transceiver stations (BTS).
- Optical **(OPT)** and copper **(CPT)** transport cards connect to transport links between network elements.
- Auxiliary transport **(AUT)** cards allow pass-through Ethernet connections to other IP endpoints such as Wi-Fi access points or security cameras—allowing these systems to share cabling infrastructure with ERA.
- The system user interface **(SUI)** card connects to a local control monitor.
- Common 2U and 4U sub-racks and power supplies contain and power the card modules.

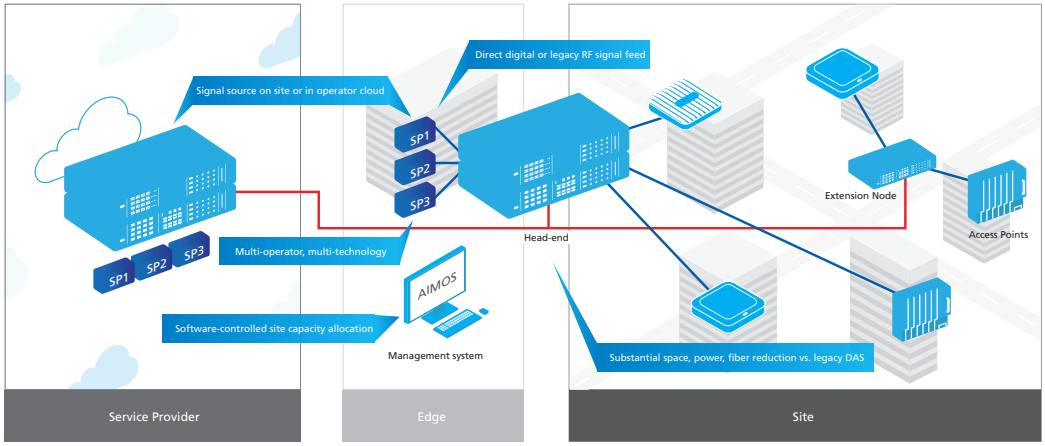
ERA makes in-building wireless solutions simpler to install, easier to manage and less expensive to operate—all while giving federal government agencies a way to grow as new technologies and applications come to market.

Remote access points that convert the digital signal back to radio frequency (RF) for over-the-air transmission include:

- **Carrier access points (CAPs)** come in a range of transmit power and band combinations, with copper and fiber network interfaces. Carrier access points are outdoor and plenum rated.
- The **universal access points (UAPs)** are low-power indoor access points that support software-defined frequencies from 380 to 2700 MHz.

CommScope also provides a full range of compact wideband directional and omni-directional antennas in indoor and outdoor versions, and an extensive selection of passive devices: couplers, power splitters, tappers, hybrids, terminations and attenuators all designed to ensure optimal wireless performance.

SCALABLE MULTI-OPERATOR COMMERCIAL SERVICES: ERA DIGITAL DISTRIBUTED ANTENNA SYSTEM



ERA's architecture scales from single buildings to large campuses and bases, while offering flexibility on the placement of system headend resources.

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