

# DISTRIBUTED ANTENNA SYSTEMS

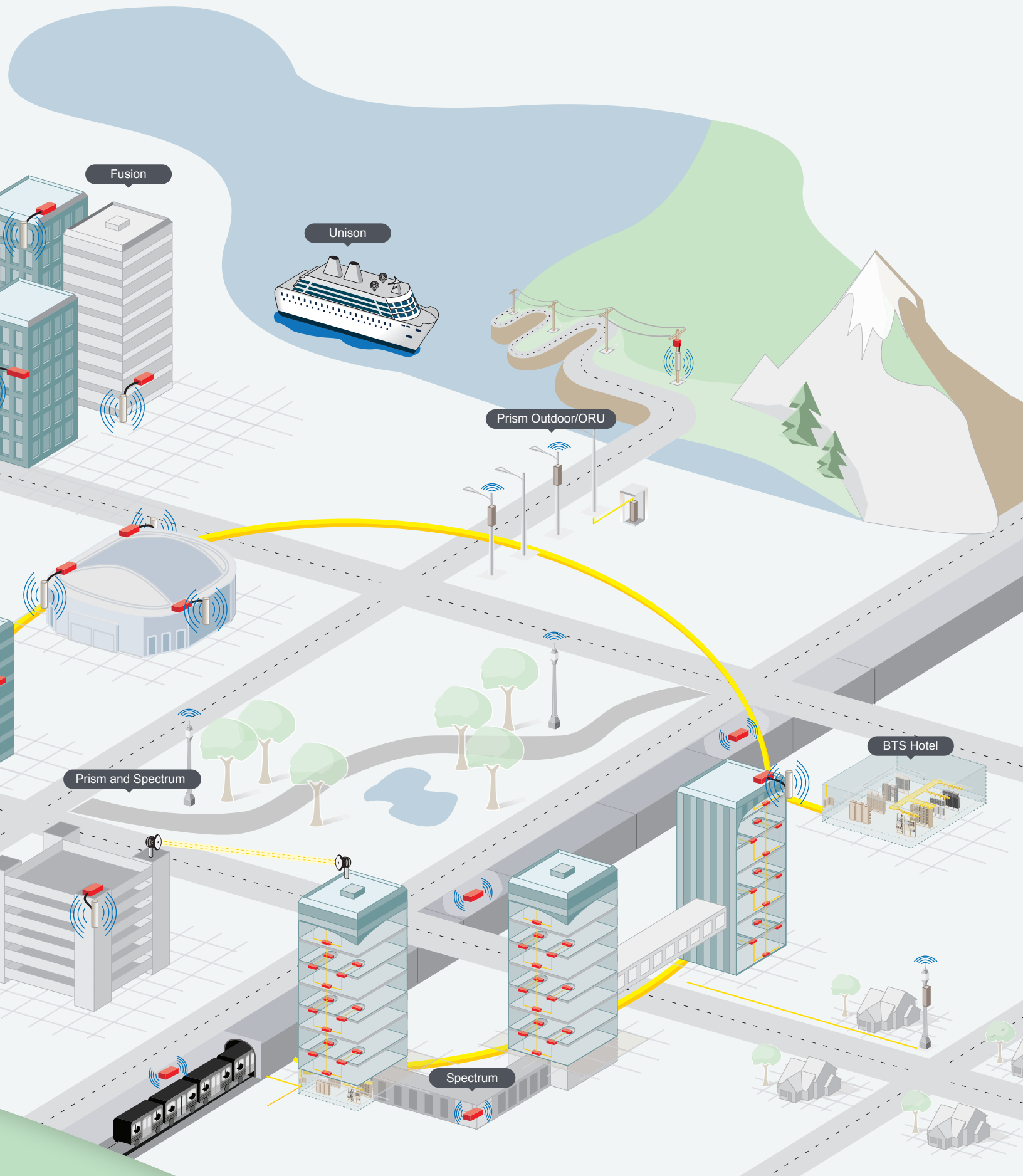
FOR WIRELESS COVERAGE AND CAPACITY



## TE DAS SOLUTIONS

TE is the market leader for distributed wireless coverage and capacity. Our solutions operate as seamless extensions of the wireless network, expanding the reach of signals throughout any size public or private facility, urban or suburban area. Our goal is to offer the industry's most flexible and scalable solutions to suit a variety of network topologies for your evolving and growing network.







# DIGITAL DAS SOLUTIONS

## DIGITAL DAS SOLUTIONS OFFER UNMATCHED BENEFITS:

- Common hub and management system for indoor and outdoor DAS
- Mix-and-match high and low power remotes
- Use of existing fiber
- Cascading expansion and remotes for greatest system reach and expandability
- Modular for ease of installation and management
- Unified 2G, 3G, and 4G support
- Low-loss fiber transport
- Digital simulcast for simplified capacity management
- TE digital DAS also offers an integrated IP connection for adjunct services such as WiFi or security

## FlexWave™ Prism

### Advanced Multi-Band High-Power DAS

TE's FlexWave™ Prism provides all the benefits of a high power DAS and is a compact radio head for macro gap coverage. FlexWave Prism supports up to four frequencies per node, delivering high-performance coverage with end-to-end management. The FlexWave Prism enhances wireless networks in outdoor locations and large venues easier and more cost-effectively than ever before. Based on patented digital RF technology and TE's 15-year leadership in DAS technology, FlexWave Prism is a flexible solution for extending macro network coverage for 2G, 3G, and 4G services providing a unique, full-featured and flexible remote radio head offering. FlexWave Prism provides the option to remote the head-end (BTS hotel). Its robust remote management with an IP-65 rated remote ensure limited truck-rolls and maintenance at the antenna sites.

### The FlexWave Prism system is ideal for extending outdoor coverage and capacity for:

- Urban and suburban macro in-fill and shadow areas
- Along roadways, coastal or canyon areas
- Subterranean areas, subways and tunnels
- Corporate or university campuses, parking garages, arenas or stadiums in large open spaces or "low clutter" environments (stadiums, arenas, malls, airports/hangers, convention centers)





## FlexWave Spectrum™

### Advanced Multi-Band In-Building DAS with Distributed Amplifiers

FlexWave Spectrum is used to extend wireless services throughout a building, multiple buildings, or campus. It is the market's most flexible, scalable and complete solution for addressing coverage and capacity needs for current and emerging wireless networks. FlexWave Spectrum provides edge-to-edge bandwidth and multi-band flexibility. FlexWave Spectrum also offers industry-leading element management that includes on-site or remotely accessible system alarming and management of the network elements and cable infrastructure. FlexWave Spectrum is a scalable platform that allows for easy system growth in size and scope of solution, whether the system needs to scale to reach new service areas inside of buildings or add additional frequency support as necessary.



#### FlexWave Spectrum is designed for:

- Campus
- Large venues
- Multi-tenant high-rise

# ETHERNET ENTERPRISE SOLUTIONS

WITH MORE THAN 20,000 SYSTEMS DEPLOYED WORLD-WIDE, TE IS A MARKET LEADER FOR INDOOR DAS SOLUTIONS. TE'S IN-BUILDING DAS OFFER UNIQUE BENEFITS:

- Star and double-star topologies
- Distributed amplifiers ensuring optimal uplink performance for data
- Standard, cost-effective and easy-to-install thin cabling
- SISO and MIMO solutions that are “mix and match” and upgradable
- Technically superior solutions with patented RF-to-IF transport
- Solutions for any size and scale enterprise, large venue or campus
- Solutions for 700MHz through 2600 MHz
- Turn-key solutions or a la carte materials and services

## InterReach Fusion®

### Multi-Band In-Building Distributed Antenna System (DAS)

Highly economical and remarkably easy to maintain, the InterReach Fusion solution offers advanced configuration options ideal for mobile operators deploying up to three bands. The InterReach Fusion features easy-to-deploy double star architecture. One main DAS hub supports up to four expansion hubs connected via fiber. Each expansion hub connects via CATV 70 Ohm cabling to up to eight remote access units (RAUs). Its distributed amplifier and thin cabling also make it ideal to upgrade SISO to MIMO when and where needed for 4G.



### InterReach Fusion is designed for:

- Mid-to-large size enterprise
- Campus
- Public venues such as hotels, hospitals and retail shops



## InterReach Unison®

### Single-Band Ethernet-Based In-Building DAS

The InterReach Unison is a highly flexible wireless DAS networking system that adapts to changing needs easily and keeps system life-cycle costs low. Its modular architecture provides wireless operators and building owners with power and intelligence in a single, versatile solution. The InterReach Unison features an easy-to-deploy, double-star architecture with three components: a main hub, an expansion hub, and a remote access unit (RAU). The main hub and expansion hub connect using singlemode or multimode fiber. The expansion hubs connect to the RAUs with Cat 5/6 twisted-pair cable.



#### Unison is a leading choice for such diverse applications as:

- Small and medium enterprises
- Where a network overlay is needed
- Ships

## InterReach Express

### Single-Band All-Ethernet In-Building DAS for 850, 900, 1800 and 2100 MHz Applications

TE's InterReach Express DAS is used to extend wireless coverage to specific areas indoors. InterReach Express transports RF from a radio source over Ethernet cable to distributed Active Antenna Units (AAU) to amplify the mobile signal close to the user. Compared to repeaters and passive systems, InterReach Express allows you to customize capacity inside your building when the system is paired with a small base station and provides pin-point coverage. Additionally, distributed amplifiers provide the same level of service output at each location. The signal is stronger, reliable, and better for data. Other system highlights include:

- Quick time to service
- Simple to install
- Economical

#### InterReach Express is suited for:

- Small-to-medium size enterprise applications (single buildings <30,000 square meters)
- Large facility hole-fill applications where there is inadequate mobile reliability
- Maritime applications
- Cascading in large facilities where passive systems are inadequate as capacity and data demands increase.





# PUBLIC SAFETY SOLUTIONS

## TE PUBLIC SAFETY DAS OFFER BENEFITS:

- Supports VHF, UHF, 700 MHz, 800 MHz, 900 MHz and TETRA frequency bands
- Meets all IFC and NFPA codes
- Offers custom filtering for unique frequency requirements
- Can be implemented indoors, or outdoors
- Comes pre-configured for easy installation

## TE Public Safety DAS

### Deliver a Reliable Communication Anytime, Anywhere

Public Safety agencies require reliable wireless coverage for their mission-critical communications. TE Public Safety DAS assures clear clean and distortion-free transmission and distribution of critical communication information: wireless voice and data. TE's products have been used worldwide improving critical communications in systems for first responders, government, transit, commercial enterprises, education, security personnel as well as the military. TE's innovative Public Safety DAS supports primary public safety and critical first responder frequencies in the VHF/UHF/700/800/900/ TETRA bands on a single system and provides high reliability coverage for public safety communications services, both in-building and outdoors. TE's innovative Public Safety DAS is a proven solution to make buildings safer. We provide code-compliant, NEMA rated system to ensure delivery of truly mission-critical wireless services.



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## BROCHURE

### Contact us

P.O. Box 1101  
Minneapolis, Minnesota  
USA 55440-1101

Tel: 1-800-366-3891 x73000  
1-952-917-3000

Fax: 1-952-917-3237

[www.te.com/bns](http://www.te.com/bns)