Wireless Overview

TE connectivity WIRELESS AND SERVICES

Complete Wireless Coverage and Capacity Solutions

TE is a wireless market leader with more than 20,000 systems shipped to more than 130 countries. Our in-building and outdoor wireless systems enable mobile coverage and capacity in places where service providers and enterprises have difficulty delivering wireless voice and data services to their customers. These locations include urban and rural canyons, subways and stadiums, tall buildings and on campuses such as universities and enterprises, in residences and neighborhoods, on cruise ships and along coastal areas.

Our advanced outdoor wireless solution combined with innovative products and market leadership in the in-building wireless market create a leading platform for serving wireless service providers and enterprises' coverage and capacity needs. Our unified architecture for every application in the micro cellular space delivers coverage and capacity to match our customers' needs. TE's wireless portfolio offers solutions for a broad range of industries worldwide.

Deliver Better Performance to Subscribers Anytime, Anywhere

With the increasing popularity of wireless devices, mobile operators' customers expect to have coverage anytime, anywhere. This capability requires them to increase network capacity, which is typically done by adding new cell sites. However, with urban areas becoming more congested and local government zoning regulations increasingly more stringent, obtaining permits for new wireless cell sites is becoming nearly impossible. Extending service to these hard-to-reach areas can provide challenges. TE's wireless solutions improve both coverage and capacity in high-demand and hard-to-reach locations.

TE is revolutionizing the way people communicate through our high performance and scalable solutions for wireless networking. From extending fiber reach, to increasing indoor and outdoor coverage and capacity, to providing high-speed wireless backhaul, wireless service providers consistently look to TE for reliable solutions that increase revenue, lower churn and improve customer satisfaction.

TE is well positioned to meet the diverse customer and geographic needs of the constantly evolving wireless marketplace. The Companys innovative in-building solutions expand its wireless product offerings globally and create a comprehensive portfolio of market-leading solutions for wireless service providers and enterprises. This portfolio includes in-building, microcellular, and cell-site solutions.

In-Building Network Solutions

TE is the market leader for in-building wireless coverage and capacity. The InterReach® solution operates as a seamless extension of the wireless network, expanding the reach of signals throughout any size public or private facility.

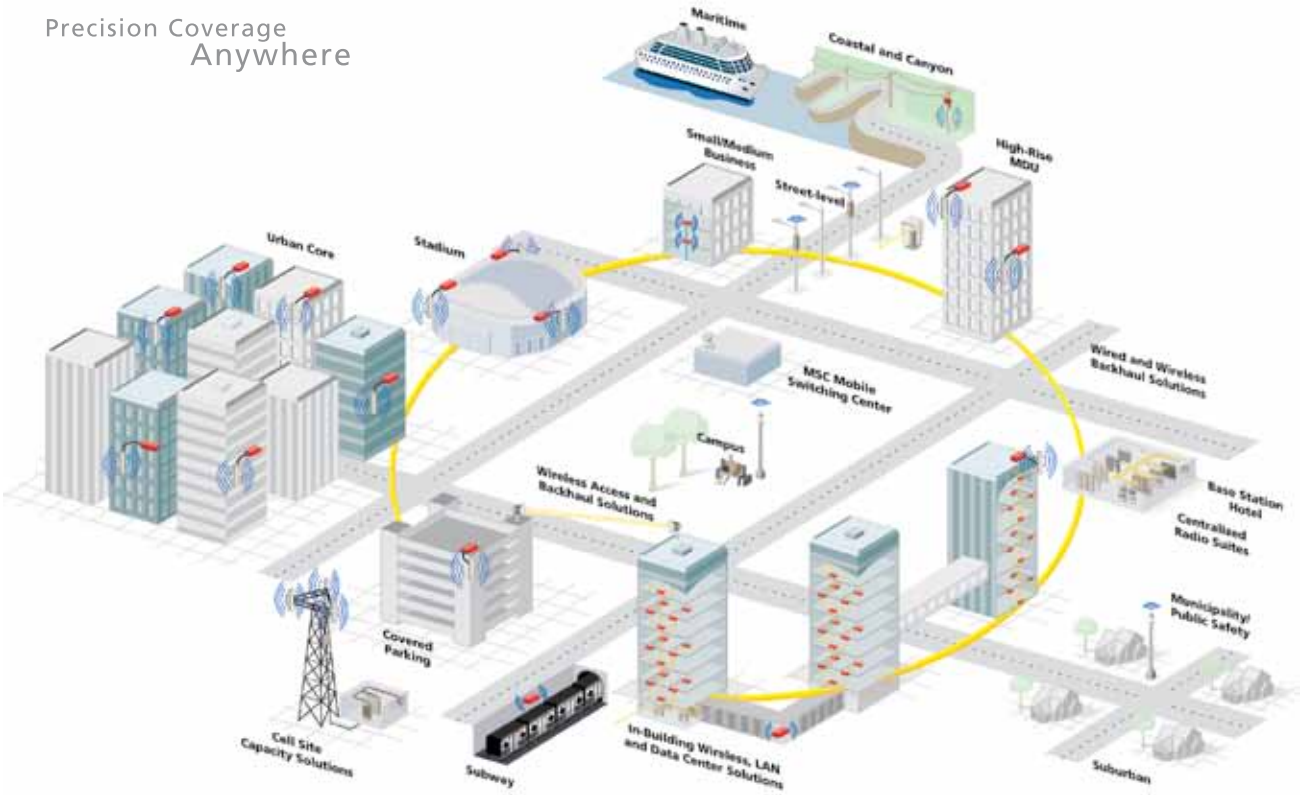
Microcellular Network Solutions

TE is changing the way people communicate through high performance and scalable solutions for wireless local loop, network extension, and hard-to-reach areas. Our solutions support the urban core, campus, stadium, coastal and roadsides, tunnels and subways, and suburban areas. We offer a complete line of cost-effective, efficient wireless solutions for service providers who are looking for next-generation mobile service delivery platforms that enable them to meet their customers increasing demands while supporting legacy service.

Cell-Site Solutions

TE's cell-site solutions improve existing network performance, allowing mobile subscribers to place clear calls and improve data usage, resulting in increased revenue for service providers.

Wireless Solutions for Multiple Applications



Wireless Solutions Product Overview

InterReach Spectrum™

Advanced Multi-band In-Building Distributed Antenna System (DAS)

InterReach 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. It provides edge-to-edge bandwidth and multi-band flexibility. Spectrum also offers industry-leading element management that includes on-site or remote accessible system alarming and management of network elements and the cable infrastructure. 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 bandwidth and capacity as necessary.

FEATURES:

- Supports multiple frequency bands and wireless protocols in one system (2G, 3G, 4G)
- Air interface independent
- Supports up to 8 bands in non-contiguous segments of 1.5 to 75 MHz each
- BTS interface supporting RF and CPRI/OBSAI standards
- Star and Cascaded topologies
- Hybrid (indoor/outdoor; Spectrum/Prism) configuration for campus and large, open space indoor environments such as stadiums
- Common hardware with Prism
- Spectrum and Prism software, alarming, configuration and maintenance through one platform; web-based and SNMP
- Simplifies procurement, reduces spares kit and simplifies installation
- Add bands, protocols by adding DART cards and Remotes
- No need to pull added CATV in ceiling for additional bands
- Digital transport maintains superior signal quality even over long distance fiber runs
- High dynamic range increases capability for data throughput, enabling higher rate broadband services

Wireless Solutions Product Overview

InterReach Fusion®

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

InterReach Fusion is a true multi-band system that provides state-of-the-art in-building wireless coverage and capacity for campus environments and areas greater than 250,000 square feet. Highly economical and remarkably easy to maintain, this solution's advanced configuration options are ideal for mobile operators deploying multi-band spectrum in-building solutions. It also can be used for multi-operator installations at public venues such as hotels, retail shops, subway stations, as well as for enterprises. The InterReach Fusion, featuring easy-to-deploy double star architecture, consists of one main hub and up to four expansion hubs connected via fiber. Each expansion hub connects via CATV cabling to up to eight remote access units (RAUs).

FEATURES:

- Multi-band, multi-operator system
- Delivers wireless voice and high-speed data
- Supports frequencies from 800 MHz to 2.5 GHz
- Dedicated capacity per band, easily supports dense user environments
- High output power that provides greater coverage area per antenna
- Distributed amplifier system ensures best-in-class performance and uniform output power at every antenna point

InterReach Unison®

Single-Band In-Building Distributed Antenna System (DAS)

The InterReach Unison is a highly flexible software-based wireless networking system that adapts to changing needs easily and keeps system life-cycle costs low. It specifically addresses the needs of larger installations and dense, high-traffic environments, such as convention centers, sporting venues and airports. This 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) that connect using single-or multi-mode fiber and CAT-5/6 twisted pair cabling.

FEATURES:

- Superior RF performance and high composite power support more channels and deliver greater coverage in a wireless network
- Provides software configurable components for flexible system configuration
- Offers simple installation using fewer components
- Uses industry-standard cabling
- Provides industry-leading advanced operations, administration and maintenance capabilities

FlexWave™ Prism

DAS/Compact Radio Head

TE's FlexWave™ Prism is a new compact radio head for macro gap coverage that supports up to four frequencies 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 technology and TE's 15-year leadership in outdoor wireless distributed antenna system (DAS) technology, FlexWave Prism offers mobile operators a small, light, and flexible solution for extending macro network coverage for 2G, 3G, and 4G services.

The FlexWave Prism system is ideal for extending outdoor coverage in cities, suburbs, canyons, tunnels, campuses, stadiums, and other public areas. It is over 35 percent lighter and up to 60 percent smaller than the previous TE offerings, and is available in four different cabinet sizes to support one, two, three or four frequency customers or any mix of each. Operators can future-proof their deployments by purchasing a larger cabinet and adding more frequencies when needed. FlexWave Prism uses TE's proven digital RF technology and combined with CPRI or OBSAI support providing an unique, full-featured and flexible remote radio head offering. A robust remote management with an IP-65 rated remote ensure limited truck rolls and maintenance to the antenna sites.

FEATURES:

- Management under the same host end equipment and EMS as the FlexWave URH, allowing operators to scale legacy URH deployments with the FlexWave Prism
- TE's patented RF-over-fiber transport eliminates installation-dependent gain or fiber length adjustments
- Improved manageability for installation and upgrades
- Smaller size to ease placement and zoning approvals
- 4G readiness with Four Band remote, which is ideal for incorporating 2G and 3G services with needs of 4G technologies such as MIMO
- The unique capability to support digital RF as well as baseband compatibility into a single fiber pair and remote radiating point
- Support for millimeter wave backhaul

ClearGain® Cell Site Amplifiers

Tower and Ground-mounted Amplifiers

Our Tower-Mounted Amplifiers (TMAs) and Ground-Mounted Amplifiers (GMAs) improve the signal quality by boosting the uplink signal of a mobile system to increase receiver performance and improve overall coverage. The improvements in quality of service allow mobile subscribers to place more calls, make longer calls, and successfully complete calls in an expanded geographic area, thus resulting in increased revenue for service providers. Our GMAs are located at the base of the tower, and therefore do not require tower climbs.

FEATURES:

- System for wideband applications
- Slim, stackable design to conserve tower space
- Highly advanced LNA amplifies RX signal for improved receiver performance and increased coverage
- Advanced filtering maintains the lowest possible noise figure for improved QoS
- Aluminum sleeve construction protects components from the elements
- Integrated lightning protection

TE is a leading global provider of network infrastructure equipment and professional services needed to deliver voice, video, Internet and data communications around the world. Wireline, wireless, cable, enterprise, and broadcast network operators rely on TE offerings to deliver bandwidth-intensive, high-speed services to residential, business and mobile subscribers.

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