

SOLUTIONS OVERVIEW

Expanding the Flexibility of Global Networks

As demand grows, wireless operators need innovative solutions for network consolidation, efficiency, scaling, and optimal capital utilization. Quintel designs, develops, and delivers a wide range of multi-purpose antenna solutions that deliver up to 40 percent cost savings. Our products and services address the pressing needs of global operators, including:

- Timely network roll-out and consolidation
- Deploying new standards on existing networks
- Facilitating multiple operator sharing
- Enhancing spectrum efficiency

Quintel solutions enable global wireless operators to increase QoS, rapidly deploy new services, and realize the cost savings of up to 40%



*Op = Operator

Quintel antenna products maximize the output of site assets and minimize the number of sites required to meet Quality of Service (QoS) requirements. Our products increase performance and reliability by supporting multiple services and spectrum bands, and—at minimum—doubling the output of standard antennas. Our full range of network design services can help you optimize capital expenditures, operating expenses, and time-to-revenue for more efficient network evolution and expansion.

Quintel's family of flexible antenna products maximize site utilization and output to provide significant improvements in capital build-out, operating cost efficiency, and capacity/coverage. Utilizing our innovative QTilt™ technology, these products are being increasingly deployed by world-class wireless operators in the Americas, EMEA, and Asia.

Leading operators choose the Quintel family of products because they can be easily configured to meet specific business and network requirements for frequency, technology, and size.

(((**Quintel Benefits:**

Breakthrough Performance	Network Flexibility	Transformative Architecture	Proven Capability
<ul style="list-style-type: none"> Reduces site costs, including backhaul, construction, and time-to-market 	<ul style="list-style-type: none"> Powers multiple bands, operator and service configurations 	<ul style="list-style-type: none"> Eliminates redundant sites and infrastructure 	<ul style="list-style-type: none"> Supports 2G to 4G+ technologies
<ul style="list-style-type: none"> Doubles existing or new site output 	<ul style="list-style-type: none"> Addresses capacity, coverage and consolidation applications 	<ul style="list-style-type: none"> Doubles standard antenna output 	<ul style="list-style-type: none"> Supports full range of frequencies (700-2600MHz)
<ul style="list-style-type: none"> Maximizes spectral efficiency by up to 40 percent 	<ul style="list-style-type: none"> Enables customer-defined frequency and service control 	<ul style="list-style-type: none"> Optimizes operator QoS by enabling independent control 	<ul style="list-style-type: none"> Delivers complete AISG functionality
<ul style="list-style-type: none"> Cuts capital and operating costs for both new greenfield deployments or site consolidation 		<ul style="list-style-type: none"> Supports integrated and non-integrated RF and digital solutions 	

To ensure successful implementation, Quintel offers a wide range of network engineering and design services—from detailed analysis of RF designs through to comprehensive site and wireless infrastructure planning. Our professional team of wireless network and site specialists is capable of providing you with an advanced level of design and engineering expertise to optimize your sites and networks.

In addition, we offer a range of professional services:

- Network design for site consolidation and rollout
- Site engineering for deployment
- Network optimization support
- Post-sales remote or on-site analysis and repair
- Warranty repair, RMA, and expedited field-replacement

(((**A New Metric for Network Optimization: The Quintel Efficient Frontier**

The Quintel Efficient Frontier (QEF) methodology is applied to network site consolidation to optimize the most capital-efficient Quality of Service (QoS) performance relative to your network investment. By identifying maximum QoS for a given network cost structure, QEF allows technical and business stakeholders to assess performance tradeoffs, opportunity costs, and accurately project investments required for future growth.

As wireless network sites are increasingly shared, expanded, or consolidated, several factors determine the suitability of shared site assets:

- Masthead space availability
- Wind-load or structural-load limitations
- Site-lease restrictions, such as space or additional antennas
- Re-negotiated rental rentals
- Permits and planning authority approvals

Presently, operators may strive to achieve a 10-15 percent savings in operating expenses by “matched pairing”, wherein two nearby sites are consolidated onto a single site for lower rentals and associated maintenance costs. However, to achieve optimal QoS, operators must still optimize networks across many parameters which are not addressed by this current technique.

Quintel’s methodology supports a unique and significantly more efficient technique than matched pairing. With QEF, your network is optimized using Automatic Cell Planning (ACP), enabling up to 40 percent savings in recurring OPEX, and a 20 percent reduction in CAPEX.

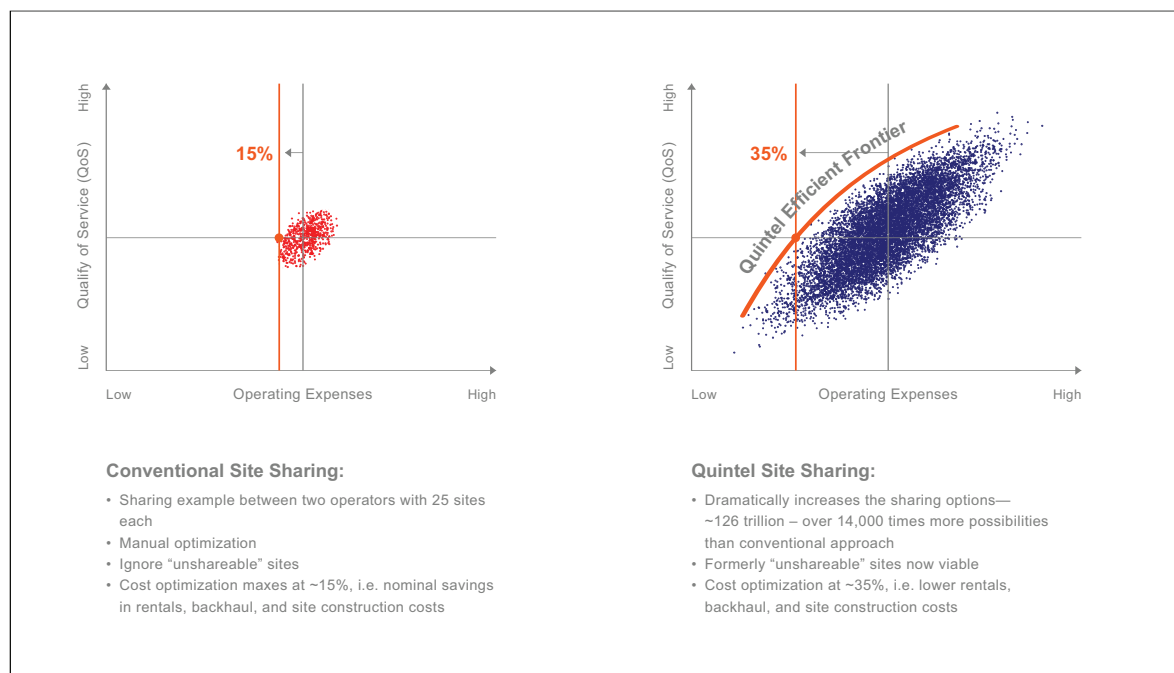
(((**How it Works:**

After identifying all the possible combinations of one operator’s base stations across a portfolio of two operators’ sites, the ACP optimization engine identifies the minimum network rental cost while maintaining QoS targets for both operators across all network technologies.

Quintel dramatically increases the number of potential sites for consolidation, yielding a much greater “Efficient Frontier.” Consolidated network combinations are no longer constrained by the number of potential “shareable” sites. An ACP engine can consider an enormous number of possible combinations of deploying base stations of one operator across a portfolio of a second operator’s sites. For example, if each operator has 18 of 25 sharable sites, Quintel enables formerly “unshareable” sites, effectively raising the number of practical combinations to 126 trillion -- 14,000X more possibilities than with traditional methods.

Also, when consolidating networks using the ACP and Quintel antennas, the results use many otherwise unshareable structures, such as monopole sites. The ACP process selects such sites as they are often in ideal positions for traffic and urban coverage, and also often have low rentals when compared to the larger more traditional lattice type site structures. By enabling operator sharing on these previously unshareable, high-value sites, Quintel’s Efficient Frontier methodology can more than double the typical recurring operational savings of matched pairing solutions.

Quintel Efficient Frontier vastly expands the universe of sharable sites—consequently providing over 2x more efficient solutions at the same level of service.



« About Quintel

In 2007, Quintel was spun-out by QinetiQ, a world-class research and development organization with hundreds of technical innovations. As a privately held company, Quintel and its investors share an unwavering commitment to commercialization of pioneering innovation. Through its support, Cody Gate Ventures has enabled the development of next-generation wireless antenna solutions for an ever-expanding global wireless market. Quintel holds over 100 combined patents in 20 countries, and serves many leading global wireless operators across the Americas, Europe, and Asia. Quintel operates headquarters offices in Menlo Park, California and Bicester, United Kingdom, with additional points of presence in the Americas, Europe, and Asia.



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