FEATURE SHEET

Network BeamFlex™

Network BeamFlex is a unique and powerful technology that leverages state-of-the-art advances in smart antenna arrays, quality of service, RF management and wireless meshing. Together these innovations deliver unprecedented Wi-Fi range, performance and signal reliability - essential to supporting the rich mix of multimedia traffic traversing today's wireless LANs.

Based on patented beam steering technology called BeamFlex™, Network BeamFlex extends the benefits of BeamFlex across the entire WLAN - ensuring effortless deployment and ongoing ease of use.

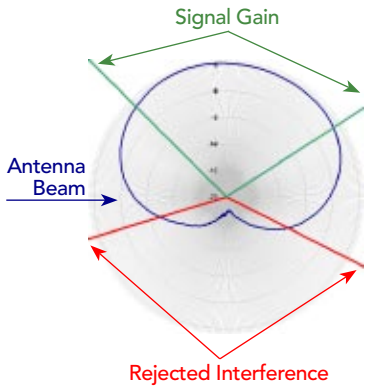
BeamFlex is comprised of a compact, software controlled antenna array that offers 2^N-1 unique patterns. Expert system software in the form of intelligent signal path algorithms continuously learn and select the optimum antenna pattern for each communicating device in real time.

Network BeamFlex derives the maximum potential user throughput per antenna configuration relative to each known destination and maintains a database of best antenna patterns per destination. By steering Wi-Fi transmissions to high-quality signal paths, BeamFlex enables a Wi-Fi device to avoid multipath interference and to maximize and sustain its transmission speeds while minimizing transmission errors.

BeamFlex is inherently self-healing by dynamically configuring its "beam" every 10 milliseconds on a per-station and per-packet basis. BeamFlex effectively allows each ZoneFlex AP to deliver high gain directional Wi-Fi signals in 360° while minimizing noise to nearby networks, devices and other APs.

BeamFlex enables remarkable improvements in signal gain and interference avoidance. A single ZoneFlex AP can realize up to 7 dBi in signal gain and 30 dB in interference mitigation.

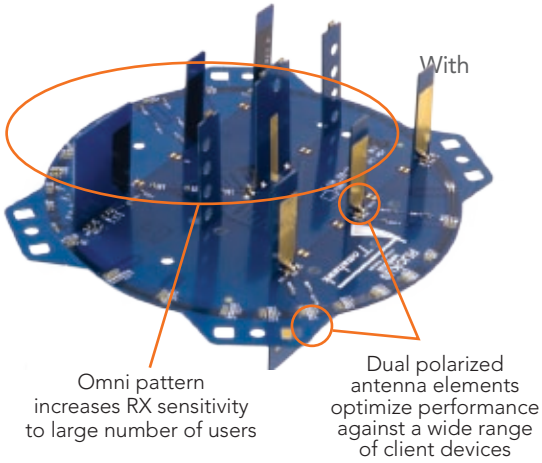
THE BEAMFLEX ADVANTAGE



With Network BeamFlex manual RF tuning and the tedious placement of access points is eliminated. BeamFlex extracts important information from all 802.11 packets received such as the sender's performance, the optimum data rate, RSSI, error rates and approximate location. This allows the system to direct a high-gain signal to each client by selecting the best antenna configuration and data rate per destination in real time.

BEAMFLEX SMART ANTENNA ARRAY

12 discrete directional elements can be used to from over 4000 unique antenna combinations for unprec-edented Wi-Fi signal reliability



- Built on patented BeamFlex directional smart Wi-Fi antenna array technology
- Reduces deployment cost, time and hassle
- Fewer APs reach farther, providing while delivering more reliable client connectivity
- Self-healing, self-optimizing beam steering antenna system proven in more than 1 million installations
- Mitigates interference in a high density client and AP envrionment
- Extends Wi-Fi range and coverage by focusing Wi-Fi signals toward client
- Maximizes AP and client performance
- Up to 7 dBi signal gain and 30 dB interference mitigation
- Network BeamFlex extends smart antenna benefits across WLAN
- Transmit power levels and channel assignment coordinated by the Ruckus ZoneDirector
- Eliminates dead spots
- Delivers whole-site coverage with fewer APs
- Wireless mesh clustering extends BeamFlex across wireless backhauls
- Extends WLAN reach without new cabling
- 802.11n meshing scales capacity while ensuring client compatibility

Network BeamFlex™

Network BeamFlex, each ZoneDirector controls the best RF channel and power setting for each ZoneFlex AP. BeamFlex is then used to steer signals around interference. If an AP fails, ZoneDirector then automatically signals neighbouring APs to increase TX power and change channel assignment (if necessary) in order to cover the coverage hole without any manual intervention.

Wireless Meshing

Ideal for sites with physical or cabling constraints, Network BeamFlex extends the benefits of smart antenna arrays and quality of service across the WLAN. Network Beamflex also dramatically simplifies WLAN deployment and expansion through wireless meshing.

Wireless meshing reduces costly cable backhaul by eliminates the need to run Ethernet wiring to individual ZoneFlex APs. Wireles meshing leverages the same patented signal path selection technology to provide a simple way to scale capacity while ensuring client compatibility.

With wireless meshing, each ZoneFlex AP functions as a wireless node within the mesh. Network BeamFlex uses the same BeamFlex antenna ranking techniques to determine the best upstream path through the wireless mesh to the root or backhaul AP.

Through probe responses and beacons, each upstream AP advertises its throughput to the root AP. Each AP in the mesh determines the best AP with which to associate. In the event of an AP failure or if an upstream path drops below a set performance threshold due to overloading or interference, a new path to the best performing AP is selected.

This efficient tree topology minimizes convergence risks and latency while maximizing performance. Up to 10 ZoneFlex APs can participate in a wireless mesh cluster. To ensure high performance, Network BeamFlex limits the number of connections or "hops" through the mesh.

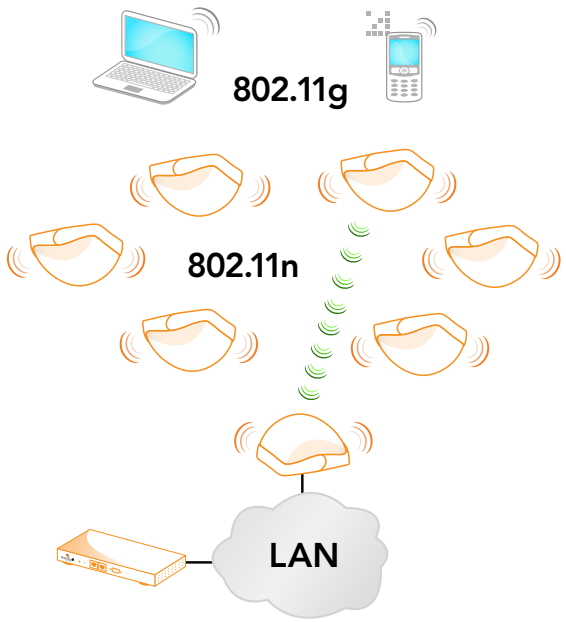
Because Network BeamFlex leverages smart antenna technology to select the best antenna combination between nodes, intranodal interference can be automatically avoided while performance is maximized.

Network BeamFlex provides unprecedented optimization through automatic topology, AP discovery and optimum path selection. This obviates the need for site surveys and complex mesh WLAN designs.

Network BeamFlex provides high-gain directional signals that can be automatically controlled thereby extending signal range, Wi-Fi coverage and reducing the number of AP required to cover larger areas.

WIRELESS MESHING WITH NETWORK BEAMFLEX

Wireless mesh nodes used patented BeamFlex signal path selection algorithms to select the highest performing path through the WLAN - extending Wi-Fi range and reducing network hops.



Ruckus Wireless, Inc.
880 W. Maude Avenue. Suite 101
Sunnyvale, CA 94085 USA
TEL +1 650-265-4200 FAX +1 408-738-2065

www.ruckuswireless.com