

# Wireless Broadband Access

## Product Portfolio At a Glance



The Ruckus Wireless Broadband Access solution lets operators deliver reliable, indoor/outdoor, always-on, broadband services using Smart Wi-Fi technology at a fraction of the cost and complexity of conventional alternatives. No spectrum licenses, long lead times or complex configuration. Using dual-band 802.11n technology, adaptive antenna technology and smart hybrid mesh networking, operators can now deploy a complete, end-to-end, managed wireless infrastructure that provides consistent broadband performance.

### TARGET CUSTOMERS







- New and existing broadband operators in emerging countries
- Next-gen managed service providers
- Large-scale systems integrators
- Rural operators in mature markets

### TARGET MARKETS

- Broadband wireless residential access
- Community Wi-Fi applications
- Multi-dwelling/tenant units
- Dense urban hotspots
- Indoor shopping malls

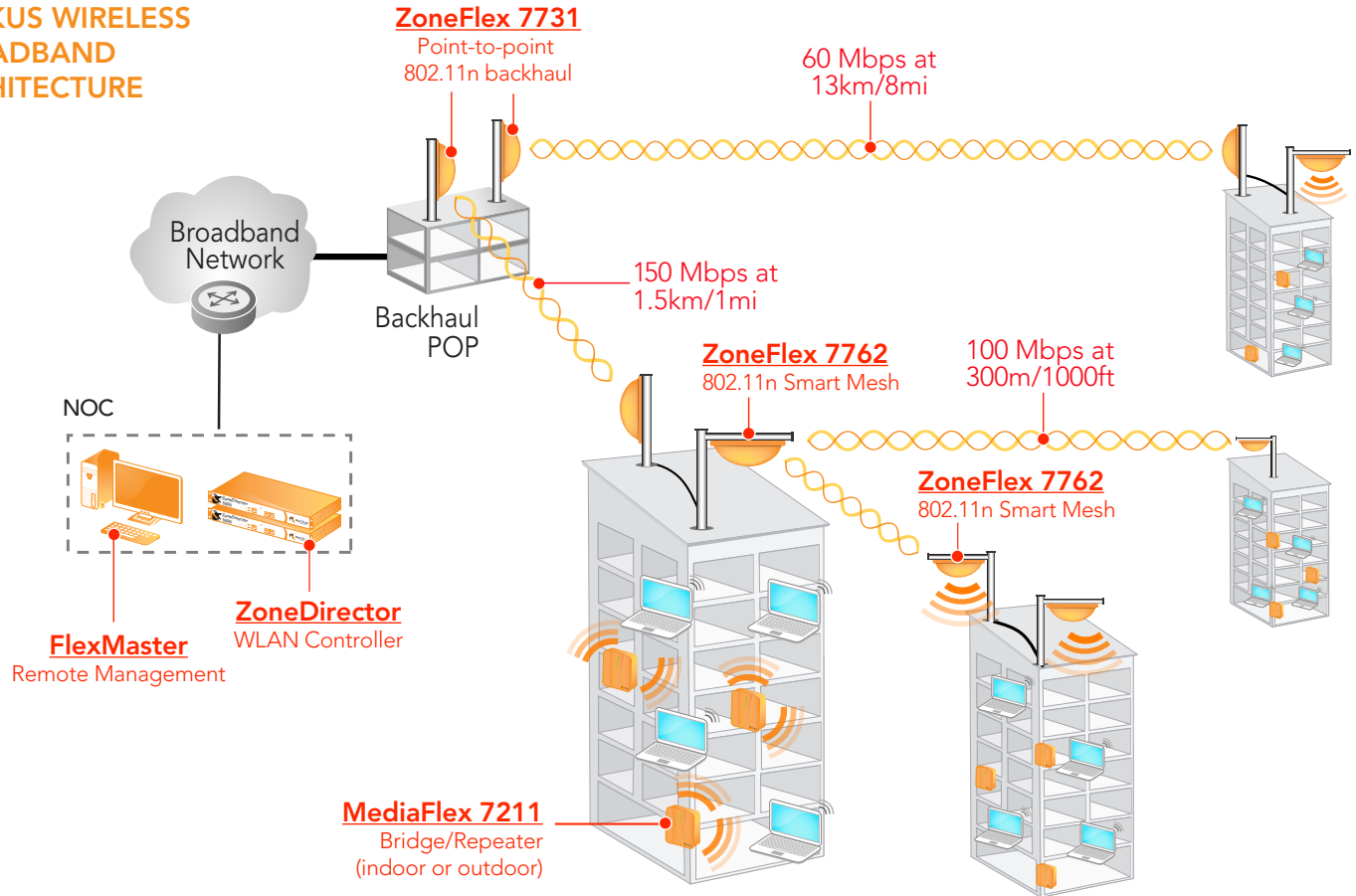
### KEY BENEFITS

- Everything needed to build a reliable and robust wireless broadband access network
- Unified centralized management of all components
- Add broadband Wi-Fi capacity incrementally as and when needed
- Adaptive antenna technology APs, wireless backhaul and CPE systems ensure reliable, far-reaching coverage with superior indoor penetration
- Smart antennas provide more efficient spatial reuse
- Enhanced hybrid Smart Mesh software scales capacity on demand without mesh "bandwidth tax"
- Self-forming, self organizing smart meshing for non-stop operation
- Low-cost site acquisition
- Five-fold CAPEX reduction versus WiMAX
- No spectrum licenses
- Deploy APs anywhere without specialized IT staff
- No complex mesh configuration

WIRELESS USER ACCESS										
<b>ZoneFlex 2741</b>		Wired or meshed access point	Single-band 2.4GHz 802.11b/g (54 Mbps)	Pole, wall, ceiling deployment	Over 4,000 unique antenna patterns to a given client	One 10/100 Mbps Ethernet port	Power over Ethernet (802.3 af) support	Operates with or without ZoneDirector, managed by FlexMaster	External antenna connector	15-25 Mbps over 100 meters (LoS)
<b>ZoneFlex 7762</b>		Wired or meshed access point	Dual-band 2.4/5GHz 802.11a/b/g/n (600 Mbps)	Pole, wall, ceiling deployment	Over 4,000 unique antenna patterns to a given client	One 10/100 Mbps PoE output, One 10/100/1000 Mbps Ethernet port	Power over Ethernet (802.3 af/at) support	Operates with or without ZoneDirector, managed by FlexMaster	Two external antenna connectors	Up to 150 Mbps over 300 meters
WIRELESS BACKHAUL										
<b>ZoneFlex 7731</b>		Point-to-point wireless bridge	Single-band 5GHz 802.11n (300 Mbps)	Pole, wall, ceiling deployment	Dual-polarized, directional antenna	One 10/100/1000 PoE port	Power over Ethernet (802.3 af) support	Managed by FlexMaster	External antenna connector option	Up to 180Mbps at 1km, 60Mbps at 10km
CUSTOMER PREMISE EQUIPMENT										
<b>MediaFlex 7200</b>		In-home, high-gain, wireless repeater	Single-band 2.4GHz 802.11b/g/n (150 Mbps)	In-home deployment	Internal and external antenna	One 10/100 Mbps Ethernet port	AC power	Client visibility via FlexMaster, SNMP	External antenna connector option	Up to 25 Mbps throughout 500 sq. m
LOCAL WIRELESS LAN CONTROLLERS										
<b>ZoneDirector 1100</b>		Network Operations Center	Appliance	6, 12, 25 or 50 APs	Centrally configures/controls ZoneFlex APs	Two Gigabit Ethernet ports	AC power	Operates with ZoneFlex APs, managed by Flexmaster	Guest networking, authentication	Up to 32 SSIDs
<b>ZoneDirector 3000</b>		Network Operations Center	Appliance	25, 50, 100, 150, 200, 250 or 500 APs	Centrally configures/controls ZoneFlex APs	Two Gigabit Ethernet ports	AC power	Operates with ZoneFlex APs, managed by Flexmaster	Guest networking, authentication	Up to 32 SSIDs
REMOTE SYSTEM MANAGEMENT										
<b>FlexMaster</b>		Network Operation Center	Software	up to 10,000 managed devices (APs or ZDs)	Centralized management platform	Standard hardware with Linux® OS	n/a	Manages standalone Ruckus APs and/or Ruckus ZoneDirectors	Bulk AP configuration, tiered administration	n/a

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## RUCKUS WIRELESS BROADBAND ARCHITECTURE



## OPERATIONAL ADVANTAGES

- **Highly adaptive and robust**
  - Adaptive antenna technology
- **Simple to deploy**
  - Self-optimizing adaptive antenna technology APs
  - Smart Mesh self-organizing topology
  - Auto-provisioning with FlexMaster
- **Scalable capacity**
  - Hybrid Smart Meshing
- **High signal penetration indoors**
  - Customized high-gain, low-cost directional repeaters
- **Complete management**
  - FlexMaster scalable to manage 100,000s of Ruckus systems
  - Single point of management for all network components
- **Unparalleled cost/value ratio**
  - Cost competitive end-to-end solution, both CAPEX and OPEX
  - Adaptive antenna technology enables fewer Ruckus APs for a given area with better user density
  - Build-as-you-go architecture

## TECHNICAL ADVANTAGES

- 802.11n processing gains and signal gains from smart antenna arrays dramatically increase range/capacity
- Spatial re-use with smart antenna array means less interference, more capacity
- Purpose-built CPE improves reliability, increases capacity
- Hybrid meshing increases capacity
- Adaptive antenna technology for outdoor resilience

## ABOUT RUCKUS WIRELESS

- Formed in 2004, based in Sunnyvale, California
- Funded by Motorola, T-Online, Sequoia Capital, Focus Ventures
- 225+ employees
- \$51 million raised to date
- Over 1.5 million "Smart Wi-Fi systems" shipped worldwide
- 30+ patents in the areas of RF control and advance networking

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