

# MediaFlex™ 7200 Series

802.11n Smart Wi-Fi Gateway for  
Wireless Broadband Access

Reliable broadband connectivity to Ruckus Wireless Broadband Access Networks and high performance Smart Wi-Fi access point in a single device

The Ruckus MediaFlex 7200 series is the first 802.11n (2.4GHz) customer premise equipment (CPE) specifically designed and optimized for broadband operators building large-scale wireless broadband access networks.

Deployed indoors or outdoors, the Ruckus MediaFlex 7200 series Smart Wi-Fi gateway compliments the overall network build out of wireless broadband access networks by maximizing coverage around the subscribers' home and office and extending Wi-Fi coverage to hard-to-reach indoor locations.

With it, operators can deliver reliable, indoor/outdoor, always-on, broadband services at a fraction of the cost and complexity of conventional alternatives.

The Ruckus MediaFlex 7200 series acts as a wireless access gateway, providing reliable connectivity to wireless broadband access nodes, as well as an extended range indoor 802.11n (2.4 GHz) access point.

Patent-pending hardware and software let subscribers connect faster and more reliably to wireless broadband access networks by automatically optimizing around changing environmental conditions. Intelligent connection algorithms determine the fastest Wi-Fi mesh node with which to associate based on the highest data rates and best signal strength.

The Ruckus MediaFlex 7200 series delivers unprecedented diversity through unique, dual polarized antenna array. This provides the largest coverage area possible, the strongest resilience to interference and the highest receive sensitivity.

The Ruckus MediaFlex 7200 Series is equipped with integrated smart-MIMO antenna technology developed to reliably communicate with the wireless broadband access networks nodes.



## BENEFITS

### Increased performance/range for communicating with Wireless Broadband Network Access Points

Advanced customer premise equipment (CPE) designed to provide indoor (home and office) coverage extension of Ruckus Wireless Broadband Access

### Lower Total Cost of Ownership (TCO) with high performing CPE to provide coverage in difficult to reach locations

Reduces overall network infrastructure investment by deploying Smart Wi-Fi gateways in selected locations without significantly adding more expensive Access Points

### Dual zone support

Simultaneously functions as a long-range wireless access gateway to outdoor Wireless Broadband Network and as a high performance Wi-Fi access point indoors

### Unprecedented reliability

Antenna diversity and automatic antenna selection optimizes signal quality to Wireless Broadband Network

### Secure management access

Remote management access allows service providers to restrict and control remote access to in-home subscriber units

### Robust security

Discrete SSIDs and associated security configurations for both the WAN and LAN. Support multiple LAN SSIDs for differentiated services

### Automatic interference avoidance

Mitigates multipath fading and avoids RF interference by continuously selecting the best signal path to the Wireless Broadband Network

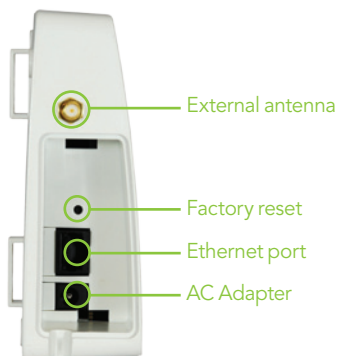
### Client visibility for subscriber management

Available with deployment using Ruckus Access Points, the Smart Wi-Fi gateway forwards the connected clients' information to upstream servers for authentication, authorization, and billing purposes.



### Indoor 802.11n wireless gateway with external antenna port

**Includes:** Power adapter, Ethernet cable and clip-on door



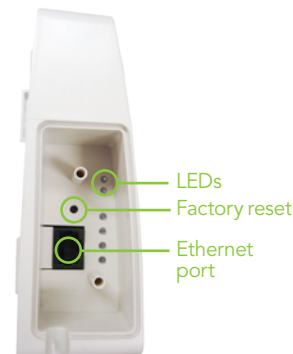
### Indoor 802.11n wireless gateway

**Includes:** Power adapter, Ethernet cable and clip-on door



### Outdoor 802.11n wireless gateway

**Includes:** Power adapter, PoE adapter with LED and outdoor kit



## Introducing the Ruckus MediaFlex 7200 Series

The Ruckus MediaFlex 7200 Series offers three variants to provide flexible deployment options for the service providers.

- MediaFlex 7211-Indoor is an indoor CPE optimized to extend the signal for indoor access
- MediaFlex 7211-Indoor with External Antenna provides the ability to deploy a high gain antenna away from the CPE
- MediaFlex 7211-Outdoor is a ruggedized, IP-65 rated, weather proof outdoor CPE

## Dramatic Increases in Range and Performance

The Ruckus MediaFlex 7200 integrates patent-pending Ruckus BeamFlex technology. BeamFlex is the first-of-its kind smart antenna technology that works with off-the-shelf 802.11 silicon to deliver the most cost effective MIMO benefits to 802.11a/b/g/n devices. Each Ruckus MediaFlex 7200 Series that integrates Ruckus BeamFlex™ technology utilizes a compact, internal antenna array with multiple dual-polarized directional antenna elements capable of combining to form unique antenna patterns for diversity. BeamFlex expert system control software continuously ranks the antenna patterns for each destination device using the feedback mechanism built into the 802.11 MAC layer protocol. Cognizant of the real time RF conditions, the direction and performance of the communicating devices, network capacity and application types, BeamFlex steers each packet

to the optimum signal path, enabling a Wi-Fi device to sustain high transmission speeds and minimize retransmissions.

## Simple Installation and Rich Functionality

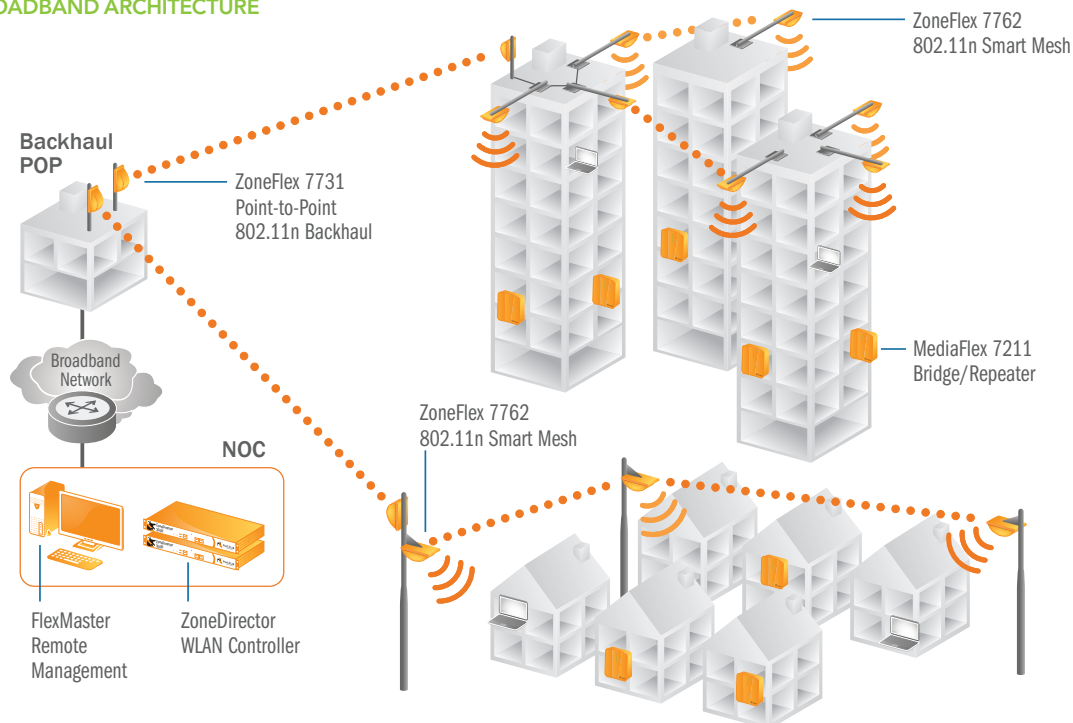
Self-installable, the Ruckus MediaFlex 7200 Series utilizes dynamic host configuration protocol (DHCP) for automatic configuration with the Wireless Broadband Access Networks. The Ruckus MediaFlex 7200 Series has a simple and intuitive user interface and provides a setup wizard to guide the home users to configure the device.

The Ruckus MediaFlex 7200 Series is equipped to be remotely manageable by the service provider's network management center via HTTP or HTTPS. The Ruckus MediaFlex 7200 Series provides extensive statistics to the service provider's network management center for ease of troubleshooting and monitoring.

The MediaFlex 7200 Series supports multiple home PCs by automatically assigning dynamic IP addresses. Network address translation (NAT) is used to give home PCs Internet access.

The MediaFlex 7200 Series can also be configured to have multiple Home SSID's to allow guest access on a separate SSID, while maintaining network security for home users.

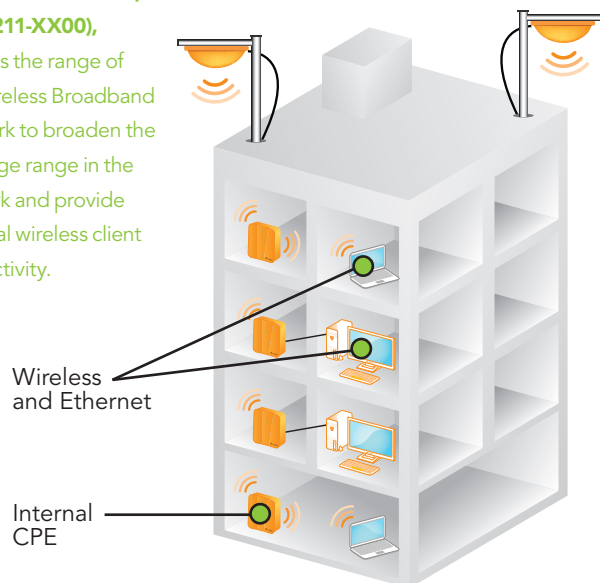
### WIRELESS BROADBAND ARCHITECTURE



### COMMON DEPLOYMENT USE CASES OF THE MEDIAFLEX 7211

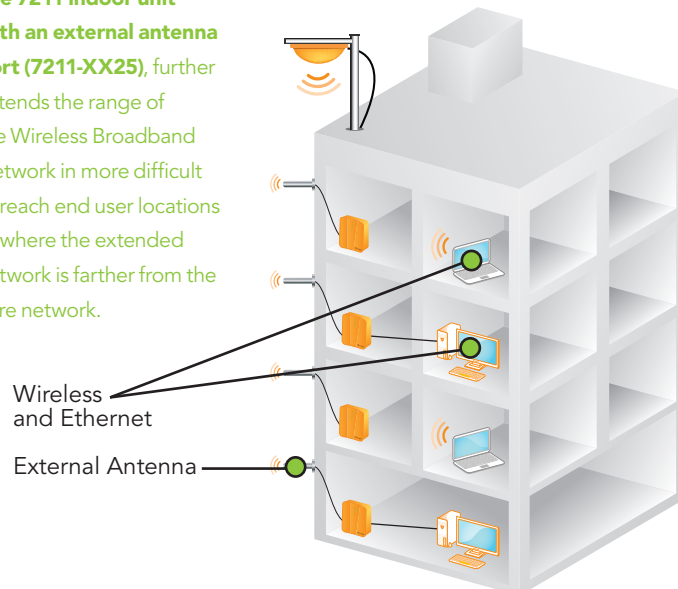
#### The 7211 indoor unit, the (7211-XX00),

extends the range of the Wireless Broadband Network to broaden the coverage range in the network and provide optional wireless client connectivity.

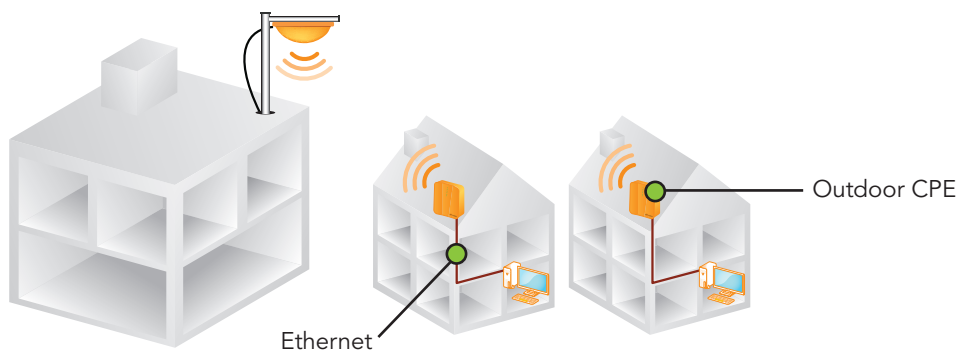


#### The 7211 indoor unit with an external antenna port (7211-XX25), further

extends the range of the Wireless Broadband Network in more difficult to reach end user locations or where the extended network is farther from the core network.



**The 7211 outdoor unit (7211-XX10),** is optimized for bridging the Wireless Broadband Network to the outside of the premise, such as those in residential rollout. The IP 65 rated casing allows for difficult environmental conditions and provides a wired bridge into the premise.



## Specifications

### PHYSICAL CHARACTERISTICS

<b>POWER</b>	<ul style="list-style-type: none"> <li>External power adapter</li> <li>Input: 110-240V AC (country specific) 220-240V AC (country specific)</li> <li>Input: 12V PoE (7211-Outdoor), include PoE injector</li> </ul>
<b>PHYSICAL SIZE</b>	<ul style="list-style-type: none"> <li>5.40" (137mm) L x 4.55" (115mm) H x 1.65" (42mm) W</li> </ul>
<b>WEIGHT</b>	<ul style="list-style-type: none"> <li>0.50 lb (.23 kg)</li> </ul>
<b>ANTENNA</b>	<ul style="list-style-type: none"> <li>Internal software-configurable antenna array with directional high-gain elements (2 vertically polarized and 1 horizontally polarized)</li> <li>External RP-SMA connector option (7211-Indoor with External antenna)</li> </ul>
<b>ETHERNET PORTS</b>	<ul style="list-style-type: none"> <li>1 10/100 Mbps</li> </ul>
<b>LED DISPLAY</b>	<ul style="list-style-type: none"> <li>Power, Ethernet, 4 wireless signal LEDs (for Indoor)</li> <li>2 LEDs (Power, Ethernet) for the outdoor</li> </ul>
<b>ENVIRONMENTAL CONDITIONS</b>	<ul style="list-style-type: none"> <li>Outdoor: Operating Temperature (-10 to +55C, 10 - 90% relative humidity), Storage Temperature (-20 to +70C, 5 - 95% relative humidity)</li> <li>IP65 rated (outdoor)</li> <li>Indoor: Operating Temperature (0 to +40C, 10-90% relative humidity), Storage Temperature (-20 to +70C, 5 - 95% relative humidity)</li> </ul>

### MANAGEMENT

<b>CONFIGURATION</b>	<ul style="list-style-type: none"> <li>Web user interface (HTTP/S)</li> </ul>
<b>STATISTICS</b>	<ul style="list-style-type: none"> <li>LAN, wireless and associated stations</li> <li>Accessible via WebUI</li> </ul>
<b>AUTO AP SOFTWARE UPDATES</b>	<ul style="list-style-type: none"> <li>Manually or automatically via FTP, TFTP, or WebUI (preconfigured with address of Ruckus-hosted firmware server), local firmware upgrade</li> </ul>
<b>OTHER UTILITIES</b>	<ul style="list-style-type: none"> <li>Configuration dump (admin only)</li> <li>Smart configuration wizard</li> </ul>

### WI-FI

<b>STANDARDS</b>	<ul style="list-style-type: none"> <li>802.11n (2.4GHz)</li> <li>802.11n (20 MHz): 6.5 – 72.2 Mbps (40 MHz): 13.5 – 150 Mbps</li> </ul>
<b>RF POWER OUTPUT</b>	<ul style="list-style-type: none"> <li>Country-specific power settings are configurable</li> </ul>
<b>ROUTER MODE</b>	<ul style="list-style-type: none"> <li>Supported</li> </ul>
<b>NAT</b>	<ul style="list-style-type: none"> <li>Supported</li> </ul>
<b>DHCP</b>	<ul style="list-style-type: none"> <li>Supported</li> </ul>
<b>BRIDGE MODE</b>	<ul style="list-style-type: none"> <li>Supported</li> </ul>
<b>TRANSMIT POWER CONTROL</b>	<ul style="list-style-type: none"> <li>Supported</li> </ul>
<b>DUAL ZONE (Repeater)</b>	<ul style="list-style-type: none"> <li>Supported for "XX00" and "XX25" models, <b>NOT</b> on the outdoor "XX10"</li> </ul>
<b>HOME SSIDs</b>	<ul style="list-style-type: none"> <li>2 (not outdoor "XX10")</li> </ul>
<b>CLIENT STATIONS SUPPORTED</b>	<ul style="list-style-type: none"> <li>10</li> </ul>
<b>WIRELESS SECURITY</b>	<ul style="list-style-type: none"> <li>WEP, WPA-TKIP, WPA2-AES</li> </ul>
<b>AUTHENTICATION</b>	<ul style="list-style-type: none"> <li>802.1x (EAP-TTLS) on both the client SSID and the home SSID</li> </ul>
<b>CERTIFICATIONS</b>	<ul style="list-style-type: none"> <li>US, Europe, Australia, Canada, Chile, Hong Kong, India, Indonesia, Mexico, New Zealand, Philippines, Singapore, Taiwan, Thailand and UAE</li> </ul>

## Product Ordering Information

Model	Description
<b>MediaFlex 7200 Series 802.11n Smart Wi-Fi Gateway</b>	
901-7211-XX00	Indoor 802.11n 2.4 GHz Smart Wi-Fi Gateway
901-7211-XX25	Indoor 802.11n 2.4 GHz Smart Wi-Fi Gateway with External Antenna
901-7211-XX10	Outdoor 802.11n 2.4 GHz Smart Wi-Fi Bridge/Repeater

**PLEASE NOTE:** When ordering you must specify the destination region by indicating -US, -EU, -UK, -UN, -UU or -IN instead of XX.