

MediaFlex™ 2835

Smart Wi-Fi 802.11g Router for Hotspots at Home



The First Centrally Managed Carrier Wi-Fi Platform for Building Secure Hotspots at Home

The Ruckus Wireless MediaFlex 2835 is the first Smart Wi-Fi platform developed specifically for carriers to extend their broadband networks and network services by building “hotspots at home” — opening the door to a whole new world of managed Wi-Fi services.

The Ruckus MediaFlex 2835 turns homes into public or private hotspots, while maintaining complete independence, security, and service subscription of the customer.

Now, service providers can expand their network footprint, confidently offload traffic from cellular networks to faster Wi-Fi networks, and exploit unused local loop capacity to provide innovative new services. Expanded Wi-Fi coverage can be used to offer Internet access, voice over Wi-Fi services, and infotainment services to users inside and outside the residence.

For the home user, the MediaFlex 2835 is a high-quality, long-range and full-feature Wi-Fi router that ensures whole home coverage and support for multimedia applications.

Ruckus MediaFlex can be managed remotely over any IP network and offers four discrete wireless LANs (WLAN) with separate policies. Each WLAN can be dedicated to a specific service, or limited to support a specific traffic type.

The Ruckus MediaFlex 2835 offers a range of access control and authentication schemes to allow the operator to not only offer general-purpose Internet access, but also to limit the usage of particular SSIDs to captive carrier services such as UMA, IMS, IPTV, or music and radio streaming. This simplifies service provisioning, allowing the carrier to retain control of SSIDs and security parameter configurations, while providing a seamless experience to the end user.

BENEFITS

Smart Wi-Fi makes multimedia services possible

Smart antenna technology uniquely enables new revenue-generating video and voice services.

Easily and cost effectively expand network footprint

Unique multi-service capabilities let providers leverage Smart Wi-Fi in the home to increase network coverage area.

Offload traffic from expensive cellular networks

Make better use of in-home Smart Wi-Fi to direct UMA/FMC traffic to faster and more affordable Wi-Fi networks.

Flexible options to authenticate users

Tunnel traffic to a central location, allow only specific traffic to traverse a discrete WLAN or redirect traffic to a portal for authentication.

Leverage surplus capacity in the local loop

Multiple SSIDs, tunnelling and reliable Smart Wi-Fi enable new service offerings that can take advantage of unused capacity to the home.

Dedicate SSIDs to specific traffic or carrier services

Reliably offer client-based services through a specific IP address or port and blocking or redirecting all other destinations to a captive portal.

Maintain complete administrative remote control

Lower operational expenses and minimize truck rolls with TR-069-based remote management and administration.

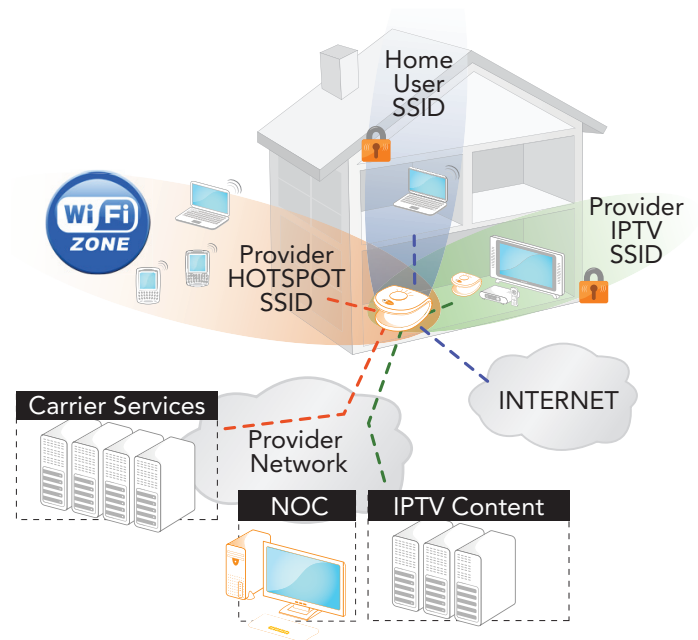
Simplify and automate user configuration

Managed Wi-Fi services can be pre-configured to eliminate frustrating and cumbersome Wi-Fi configuration by the user.

Introducing the Ruckus MediaFlex 2835

The Ruckus MediaFlex 2835 is the first Wi-Fi platform of its kind designed to help operators leverage their subscriber base to securely offer managed Wi-Fi services. It is the only Wi-Fi platform developed to balance overlay services offered by operators with paid-for subscription services used by residential customers. Now each subscriber home can be turned into a secure hotspot for new services using a single platform.

The Ruckus MediaFlex 2835 sits in the home providing multiple Wi-Fi networks, each of which can be dedicated to a carrier service and completely controlled by the operator and assigned unique policies. This lets operators exploit unused broadband capacity in the local loop by offering new services, extend the reach of their network services and offload traffic from cellular networks onto higher speed Wi-Fi networks. The Ruckus MediaFlex 2835 transforms individual homes into public or private hotspots while completely maintaining the independence, security and service subscription of the customer.



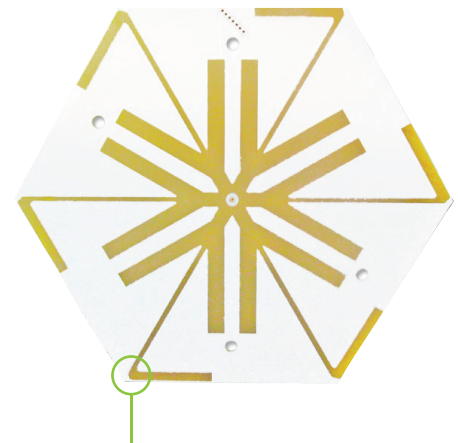
Increasing network footprint by leveraging the home

The Ruckus MediaFlex 2835 gives operators a cost-effective way to quickly and easily expand the footprint of their broadband networks by leveraging the subscriber's home or business to broadcast public Wi-Fi services such as VoIP via Wi-Fi or offer private subscriber services such as IPTV. This multiservice support lets providers use Wi-Fi to blanket areas where pulling facilities is not feasible or is cost prohibitive. It also gives providers the power to offload traffic from their cellular network and on to higher-speed Wi-Fi networks, while giving home users better Wi-Fi range, reliability and performance through Smart Wi-Fi technology.

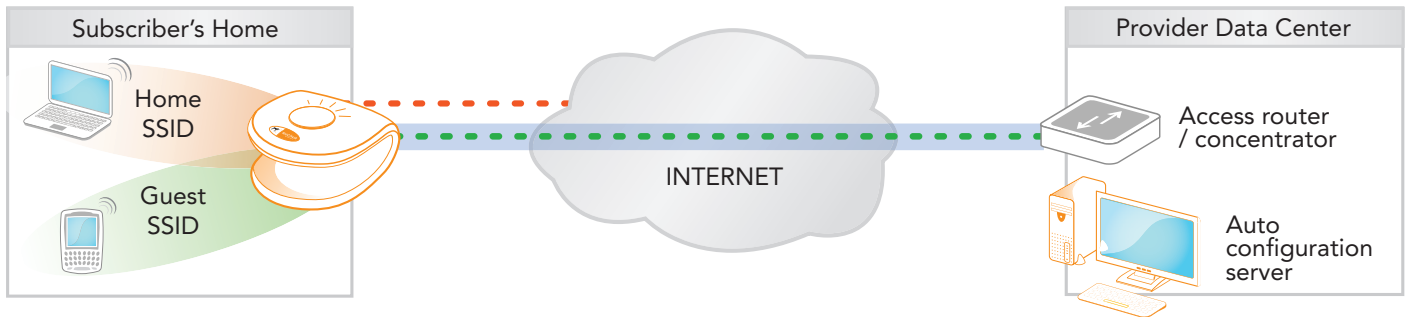
The power of BeamFlex™

Each Ruckus MediaFlex 2835 is equipped with a patented smart antenna system called BeamFlex. BeamFlex enables client devices to communicate over longer distances at higher speeds than consumer-grade 802.11 products — delivering unprecedented reliability and diversity.

With BeamFlex, the Ruckus MediaFlex router is able to reconfigure itself in real-time, detecting and adjusting for both spectral and multi-path interference as well as neighboring network noise. By selecting the optimum antenna pattern for each receiving device, BeamFlex enables extended Wi-Fi range and higher communications speeds. The massive diversity of the BeamFlex antenna system allows the Ruckus MediaFlex router to find and instantly select from many quality signal paths in a changing environment. This provides the stability and sustained baseline performance essential for voice and video applications, allowing the carrier to offer multiple multimedia services not possible before.



Six high-gain, directional antenna elements offer up to 63 unique antenna patterns for massive diversity. Expert system control software continuously ranks the antenna patterns for each receiving device, using the inherent feedback mechanism built into the 802.11 MAC layer protocol.



Flexible deployment options

The Ruckus MediaFlex 2835 gives service providers complete architectural flexibility with a variety of methods to authenticate users. An integrated VPN client allows providers to automatically direct guest traffic over an IPSEC or L2TP tunnel to any VPN concentrator for security and control. Optional bridging of MAC addresses ensure visibility of associated clients.

Multi-tier administration

Each Ruckus MediaFlex 2835 supports up to four discrete virtual Wi-Fi networks (SSIDs) with unique policy settings (e.g., security, QoS, etc.) associated with each. Providers can give subscribers complete control over their own home Wi-Fi network, while managing service-specific SSIDs that support IPTV, voice over Wi-Fi, public access or other Wi-Fi services.

Remote management with FlexMaster

The Ruckus MediaFlex 2835 integrates a standard TR-069 interface and SNMP support. Completely manageable and controlled by the Ruckus FlexMaster management platform or a third-party network management system, the Ruckus MediaFlex 2835 is shipped pre-configured with the host name of the Ruckus FlexMaster.

Once a broadband IP connection is detected, the Ruckus MediaFlex 2835 automatically establishes an SSL tunnel to the FlexMaster system which in turn sends configuration parameters to the device. Thereafter, the Ruckus MediaFlex 2835 and the services offered through it can be completely controlled by the operator from its network operations center.

FEATURES

- Internal 6-element antenna array, with 63 dynamic configurations
- Real time learning of RF, station, network and application conditions
- Extended range/coverage through high-gain directional smart antenna array
- Integrated VPN client
- Secure (L2TP/IPSEC) or unsecure (L2TP)
- Works with off-the-shelf VPN concentrators
- Layer 2 bridging for MAC address visibility
- Four BSSIDs with unique QoS and security policies
- WEP, WPA-PSK, 802.1X
- WMM-PS / UAPSD
- Embedded DHCP client, server
- NAT, PPPoE support
- Traffic-specific filtering
- Rate limiting
- Standard TR-069 interface (*future*)
- Integration with Ruckus FlexMaster or third-party network management systems (*future*)
- Web-based interface

Ruckus FlexMaster gives operators complete remote control over and management of the Ruckus MediaFlex 2835 device.



Specifications

PHYSICAL CHARACTERISTICS

POWER	- External power adapter - Input: 110-240V AC - Input: 20-240V AC - Output: 12V DC, 1A
PHYSICAL SIZE	14.2cm (L), 12.2cm (W), 7.5cm (H)
WEIGHT	200 grams
ANTENNA	Internal software-configurable antenna array with six directional high-gain elements that provide up to 63 unique antenna patterns
ETHERNET PORTS	5 ports, auto MDX, auto-sensing 10/100 Mbps, RJ-45
LED DISPLAY	Power/status, Ethernet status, wireless status, wireless network quality indicator
ENVIRONMENTAL CONDITIONS	- Operating Temperature: 32°F (0°C) - 104°F (40°C) - Operating humidity: 15% - 95% non-condensing

PERFORMANCE AND SUPPORTED CONFIGURATIONS

CONCURRENT STATIONS	- Up to 48 (Open, WEP or WPA-AES) - Up to 22 (for WPA-TKIP)
TARGET UDP THROUGHPUT	15-20 Mbps (54 Mbps bursts) sustainable throughput for a 4,000 sq. foot (372m²) public area
SIMULTANEOUS VIDEO TRANSMISSIONS	2 to 3 simultaneous MPEG-2 or 4 to 6 MPEG-4 standard definition streams or single 10 Mbps+ HD stream with concurrent background traffic

TRAFFIC MANAGEMENT AND QUALITY OF SERVICE

CLASSES OF SERVICE	Voice, video, best effort and background
HARDWARE QUEUES	Four
SOFTWARE QUEUES	Four per station
AUTOMATIC TRAFFIC CLASSIFICATION	Automatic type of service tagging for multicast video packets
AUTHENTICATION/ TUNNELLING	- L2TP (secure and unsecure) - IPSEC - WISPr (future)
MAC ADDRESS ENTRIES	128
ACCESS CONTROL	- Layer 2 MAC addresses - Layer 3 IP addresses - Layer 4 TCP ports
HEURISTIC CLASSIFICATION	Supported

MANAGEMENT

CONFIGURATION	Web user interface, TR-069, Bonjour, CLI (Telnet), SSH HTTP/S, SNMP statistics interface
LOGIN	- User - Administrator
STATISTICS	LAN, wireless and associated stations (accessible via Web UI)
AUTO AP SOFTWARE UPDATES	- FTP or TFTP, remote auto available - Accessible via Web UI

WI-FI

STANDARDS	802.11b/g
SUPPORTED DATA RATES	54,48,36,24,18,12,11,9,6,5.5,2,1 Mbps
CHANNELS	- US/Canada: 1-11 - Europe (ETSI X30): 1-13 - Japan X41: 1-13
AUTO CHANNEL SELECTION	Supported
RF POWER OUTPUT	- Max transmit power 23 dBm - Country-specific power settings are configurable
TRANSMIT POWER CONTROL	Supported
BSSID	Up to four
POWER SAVE	Supported
CERTIFICATIONS	- Australia, Canada, Chile, China, Columbia, Ecuador, Europe, Hong Kong, India, Mexico, New Zealand, Philippines, Saudi Arabia, Singapore, Thailand, UAE, U.S. - WEEE/RoHS compliance - Wi-Fi alliance certification
WIRELESS SECURITY	WEP, WPA-PSK, WPA-TKIP, WPA2 AES
ROUTING	DHCP client support, DHCP server support, NAT and PPPoE

MULTICAST VIDEO

IGMP SNOOPING	- Up to 32 multicast groups - Up to 48 receiving stations
MULTICAST OPERATIONS	- Directs multicast IPTV packets to each receiving station within the designated multicast group using the optimum data rate and antenna selection - Automatic classification into video queues

Product Ordering Information

Model	Description
MediaFlex 2835 802.11g Smart Wi-Fi Router	
901-2835-XX01	5-port homespot Wi-Fi router

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

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