

DATA SHEET



BENEFITS

DEPLOY IN UNDER 5 MINUTES

Setup your Wi-Fi network in under 5 minutes from a mobile device or browser with an intuitive and easy to understand User Interface.

POWER IN YOUR POCKET

Manage your network, get detailed insights about your network and understand your network usage patterns from the free mobile app available on Google Play and App Store.

PROTECT YOUR INVESTMENT

Expand across multiple locations with Unleashed Multi-Site Manager. If your network grows even further, migrate to a Controller based or a Cloud based solution with your Unleashed APs.

GREAT OUTDOOR Wi-Fi

Experience high performance outdoor Wave 2 Wi-Fi with IP-67 weather proofing and 2 gigabit Ethernet ports.

STUNNING Wi-Fi PERFORMANCE

Extends coverage with patented BeamFlex+™ adaptive antenna technology while mitigating interference by utilizing over 4,000 directional antenna patterns.

GET OPTIMAL THROUGHPUT

ChannelFly dynamic channel technology uses machine learning to automatically find the least congested channels. You always get the highest throughput the band can support.

SERVE MORE DEVICES

Connect more devices simultaneously with four MU-MIMO spatial streams and concurrent dual-band 2.4/5GHz radios while enhancing non-Wave 2 device performance.

EXPANDED BACKHAUL

Pair two onboard 1GbE ports with link aggregation (LACP) to maximize throughput between the AP and wired switch.

In busy outdoor public venues, customers, employees and the connected devices need fast, reliable connectivity. The Ruckus T610 Unleashed provides an affordable controller-less Wi-Fi solution with premium performance and simplified management. There is no need for separate controllers and access point licenses, significantly reducing upfront costs. With an intuitive and easy to understand user interface, Unleashed network can be setup in under 5 minutes on the mobile phone or a web browser without need of networking expertise.

The Ruckus T610 Unleashed delivers blazing-fast connectivity for medium-density outdoor deployments, with data rates up to 2.5Gbps—the highest available data rates for Wi-Fi clients. Patented Ruckus adaptive antenna technology improves signal quality for every connected device, everywhere. And the AP delivers all of this in an industrial-grade enclosure that can stand up to the rigors of the elements in practically any outdoor space.

The T610 Unleashed is purpose-built for busy public venues such as outdoor campuses and hotspots, arenas, convention centers, and transportation hubs. It's the perfect choice for medium-density deployments with standard Ethernet backhaul that require premium wireless performance.

The T610 Unleashed 802.11ac Wi-Fi AP incorporates patented technologies found only in the Ruckus Wi-Fi portfolio.

- Extended coverage with patented BeamFlex+ utilizing multi-directional antenna patterns.
- Improve throughput with ChannelFly, which dynamically finds less congested Wi-Fi channels to use.

SmartMesh™ wireless meshing technology further accelerates time-to-deployment eliminating the cost associated with running Ethernet cabling between multiple access points in the network. Instead of navigating complex configurations for each AP, just check a box. Once configured, Unleashed AP automatically pushes the configuration to all the other APs in the network and forms the self-healing mesh.

Additionally, the T610 Unleashed provides a full complement of next-generation 802.11ac features. 802.11ac Multi-User MIMO (MU-MIMO) support allows the AP to simultaneously transmit to multiple client devices, drastically improving airtime efficiency and overall throughput for all clients—even non-Wave 2 devices.



Figure 1: Binding Fast Wave 2 4x4:4 802.11ac with MU-MIMO.

BEST IN CLASS PERFORMANCE

BeamFlex+—Patented Adaptive Antenna Technology

The Ruckus T610 Unleashed integrates patented software-controlled adaptive antennas. BeamFlex+ antenna adapts automatically to client locations and environmental conditions; the smart antenna technology optimizes the RF energy toward client on a per packet basis. This allows for substantially higher performance than traditional solutions.

ChannelFly—Machine Learning Auto Channel

ChannelFly is a new approach to optimizing RF channel selection based on capacity averages across all channels. Specialized algorithms select the best channel based on historical values. In combination with the adaptive antenna technology, ChannelFly delivers substantially higher throughput than our competitors.

SmartMesh™—Self-Forming and Self-Healing Mesh

SmartMesh simplifies the deployment of your unleashed network by reducing cumbersome radio planning and costly cabling needed to reliably connect every Wi-Fi access point. SmartMesh automatically establishes wireless connections between individual access points using patented smart antenna technology and self-heals the network in the event of a failed link.

BETTER FOR YOUR BUSINESS

Easy to Deploy and Manage

The Ruckus T610 Unleashed can be deployed in under 5 minutes from your laptop browser (eg. Chrome, Safari) or from your mobile device (eg. iPhone). Unleashed app is free and available on App Store and Google Play. With the intuitive user interface, you can setup an access point in less than 60 seconds. Configure the Master AP and it automatically configures all the other APs.

Low CAPEX and Low OPEX

Controller functions are integrated into the T610 Unleashed. Separate controllers and access point licenses are no longer needed, significantly reducing upfront costs. T610 Unleashed is so easy to deploy and manage that you don't need IT.

Network Investment Protection

We ensured that your network investment with Ruckus is fully protected. If your business grows or your needs change, you can migrate to a Controller based or a Cloud based solution using your Unleashed APs without any additional cost.

ENTERPRISE-GRADE FEATURES

The Ruckus T610 Unleashed is loaded with enterprise-grade features to provide great Wi-Fi experience for your customers and employees. Some of the key features include:

Feature	Benefit
Zero IT	Easily onboard customers or employees onto your Wi-Fi through an interactive portal.
Guest Features	Customize the Wi-Fi service with your logo, brand and messages. Create Guest Passes, Guest Wi-Fi access or Wi-Fi access through social media to gain better customer insights.
Resiliency	Continue to access your network even if internet connectivity fails. In case of any disruption, network will continue to work as long as at least one AP is up.
App Recognition	Gain insights into your network usage patterns of over 2200 applications with Deep Packet Inspection.
Security	Secure your network and protect your client with encryption, WPA-PSK, Dynamic PSK, client isolation and 802.1x for RADIUS and AD.
Multiple language support	Create and manage your Wi-Fi network in your own language. Supports 13 languages currently.
Remote Management	Manage your Unleashed network across multiple locations with a single pane view through the mobile app or the Ruckus Unleashed Multi-Site Manager for more advanced options. Manage up to 10 Unleashed networks using the mobile app.

FEATURES AND SUPPORTED PLATFORMS

PHYSICAL CHARACTERISTICS	
Power	<ul style="list-style-type: none"> PoE: 802.3at, af *
Physical Size	<ul style="list-style-type: none"> 31.7 cm (L), 24.1 cm (W), 9.5 cm (H)
Weight	<ul style="list-style-type: none"> 6 lbs (without mounting hardware)
Interfaces	<ul style="list-style-type: none"> 1 Ethernet port, auto MDX, auto-sensing, 10/100/1000 Mbps, RJ-45, 802.3at PoE input, 802.3af PoE input (reduced operation) 1 Ethernet port, auto MDX, auto-sensing, 10/100/1000 Mbps, RJ-45, support for link aggregation of the two Ethernet ports 1 field accessible IP67 USB port
Powering Options	<ul style="list-style-type: none"> Power over Ethernet+ (802.3at) with Category 5/5e/6 cable With standard PoE (802.3af), the USB and 2nd Ethernet ports are disabled and the transmit power on 2.4G/5G bands is reduced
Environmental Conditions	<ul style="list-style-type: none"> Operating Temperature: <ul style="list-style-type: none"> -40°F (-40°C) to 149°F (65°C) Operating Humidity: up to 95% non-condensing
Power Consumption	<ul style="list-style-type: none"> 5.5W (minimum) 10.4W (typical) 25W peak

* Reduced operation: 2x2, 1 Ethernet port powers off, USB powers off

RF	
Adaptive antenna	<ul style="list-style-type: none"> 4,000+ unique antenna patterns, polarization diversity
Maximum Transmit Power	<ul style="list-style-type: none"> 28 dBm on 2.4 GHz; 28 dBm on 5 GHz
Physical antenna gain	<ul style="list-style-type: none"> 3 dBi
BeamFlex SINR Tx gain	<ul style="list-style-type: none"> Up to 6 dB
BeamFlex SINR Rx gain	<ul style="list-style-type: none"> Up to 3-5 dB
Interference mitigation	<ul style="list-style-type: none"> Up to 15 dB
Minimum Rx sensitivity	<ul style="list-style-type: none"> -104 dBm

PERFORMANCE AND CAPACITY	
Phy Data Rates	<ul style="list-style-type: none"> Up to 800 Mbps (2.4GHz) Up to 1733 Mbps (5GHz)
Concurrent Stations	<ul style="list-style-type: none"> Up to 512
Voice Calls	<ul style="list-style-type: none"> Up to 30

NETWORK ARCHITECTURE	
IP	<ul style="list-style-type: none"> IPv4, IPv6, dual-stack
VLANs	<ul style="list-style-type: none"> 802.1Q (1 per BSSID or dynamic, per user based on RADIUS) Port-based
802.1X for wired ports	<ul style="list-style-type: none"> Authenticator Supplicant
Tunneling	<ul style="list-style-type: none"> L2TP

MANAGEMENT	
Deployment Options	<ul style="list-style-type: none"> Locally managed using Unleashed Web UI, Mobile App, and Multi-Site Manager

Warranty: THIS PRODUCT HAS A ONE YEAR WARRANTY.

For details see: <http://support.ruckuswireless.com/warranty>

WI-FI	
Standards	<ul style="list-style-type: none"> IEEE 802.11a/b/g/n/ac
Supported Data Rates	<ul style="list-style-type: none"> 802.11ac: 29.3 Mbps - 1733 Mbps (80MHz) 802.11n: 6.5 Mbps - 216.7 Mbps (20MHz) 13.5 Mbps - 800 Mbps (40MHz) 802.11a: 54, 48, 36, 24, 18, 12, 9 and 6 Mbps 802.11b: 11, 5.5, 2 and 1 Mbps 802.11g: 54, 48, 36, 24, 18, 12, 9 and 6 Mbps
Radio Chains / Streams	<ul style="list-style-type: none"> 4x4:4
MIMO	<ul style="list-style-type: none"> SU-MIMO - Up to 4 streams MU-MIMO - Up to 3 streams
Channelization	<ul style="list-style-type: none"> 20 MHz, 40 MHz, and/or 80 MHz
Frequency Band	<ul style="list-style-type: none"> IEEE 802.11ac: 5.15 - 5.85 GHz IEEE 802.11a/n: 5.15 - 5.85 GHz IEEE 802.11b: 2.4 - 2.484 GHz
BSSIDs	<ul style="list-style-type: none"> Up to 16 (2.4 GHz) Up to 16 (5 GHz)
Power Save	<ul style="list-style-type: none"> Supported
Compliance	<ul style="list-style-type: none"> WEEE/RoHS compliance EN 60601-1-2 Medical Wi-Fi Alliance
Subway and Railroad Certifications	<ul style="list-style-type: none"> EN50121-1 EMC EN50121-4 Immunity IEC 61373 Shock & Vibration

PRODUCT ORDERING INFORMATION

Model	Description
T610 Dual band 802.11ac Wave 2 Access Point	
9U1-T610-XX01	T610 Unleashed 802.11ac Outdoor Wireless Access Point, 4x4:4 Stream, Omnidirectional Beamflex+ coverage, 2.4GHz and 5GHz concurrent dual band, Dual 10/100/1000 Ethernet ports, POE in, IP-67 Outdoor enclosure, -40 to 65C Operating Temperature. Includes standard 1-year warranty. Mounting kit sold as separate accessory (902-0125-0000). For box contents, see Shipping Container Contents.
9U1-T610-XX51	T610s Unleashed 802.11ac Outdoor Wireless Access Point, 4x4:4 Stream, 120 degree sector Beamflex+ coverage, 2.4GHz and 5GHz concurrent dual band, Dual 10/100/1000 Ethernet ports, POE in, IP-67 Outdoor enclosure, -40 to 65C Operating Temperature. Includes standard 1-year warranty. Mounting kit sold as separate accessory (902-0125-0000). For box contents, see Shipping Container.
Optional Accessories	
902-0125-0000	<ul style="list-style-type: none"> Secure articulating mounting bracket
902-0127-0000	<ul style="list-style-type: none"> Extended cap to accommodate up to 6 cm long USB dongle
902-0180-XX00	<ul style="list-style-type: none"> Spares of Power over Ethernet (PoE) Injector (10/100/1000 Mbps) quantity of 1 unit (7762-series, 7782-series, 8800-S, T610 and T610 access points)
902-0183-0000	<ul style="list-style-type: none"> Spare Data Connector for T300-series, 7782-series, 8800, T610 and T610; contains 1 weatherizing data cable gland

PLEASE NOTE: When ordering Outdoor APs, you must specify the destination region by indicating -US, -WW, or -Z2 instead of XX. When ordering PoE injectors or power supplies, you must specify the destination region by indicating -US, -EU, -IN, -JP, -SA, -UK, or -UN instead of XX.

For access points, -Z2 applies to the following countries: Algeria, Egypt, Israel, Morocco, Tunisia, and Vietnam

