



Bluesocket

2135

Dual Radio 802.11ac Access Point



Benefits

- 802.11a/b/g/n/ac wireless access points supporting MIMO antenna technology
- Dual radio 2.4 GHz and 5 GHz
- Full 3x3:3 MIMO performance
- Data rates up to 1.3 Gbps on 5 GHz radio and 450 Mbps on 2.4 GHz radio
- Built-in carrier class antenna and Ethernet surge protection
- Powered by 802.3at (PoE+)
- User configurable maximum associated clients per radio
- Increased receive sensitivity to compensate for mobile devices with less transmit power
- Zero-touch AP deployment—APs automatically discover vWLAN, download firmware, and configurations
- Layer 7 Device Fingerprinting provides reporting and analytics of device types and device-specific policies
- Supports WMM/802.11e and QoS for Enterprise-class Voice over Wi-Fi®
- DynamicRF Radio Resource Management Technology—automatically configures optimal radio settings to maximize performance
- Dynamic Steering – Band/client steering, load balancing and sticky client prevention technology allows the Wi-Fi infrastructure to take charge making informed, coordinated, connectivity and roaming decisions
- Integrated wireless intrusion detection system to identify rogue access points and wireless attacks
- Supports stateful firewall for highest security at the edge

Overview

ADTRAN's wireless portfolio includes a family of 802.11n and 802.11ac high-performance Access Points (APs) that are a perfect fit for enterprises of all sizes, including educational institutions, retail, hospitality, and healthcare providers who are looking to move their organizations to a pervasive mobility environment. Bluesocket® APs are completely plug-and-play requiring no manual configuration and deliver optimal performance. Whether you want to add wireless to your office or deploy across an entire campus, the Bluesocket APs are designed to meet your needs.

High-Performance, Reliable Connectivity

The Bluesocket 2135 outdoor 802.11ac AP offers enterprise-grade performance with three transmit and three receive streams providing data rates up to 1.3 Gbps on the 5 GHz radio and 450 Mbps on the 2.4 GHz radio for a total of 1.75 Gbps. With a weather resistant, industrial-grade enclosure and built-in carrier class antenna and Ethernet surge protection, the BSAP 2135 APs provide the highest performance, extended range wireless coverage in the most harsh outdoor environments.

The Bluesocket 2135 APs provide high performance, reliable coverage in ultra-high density wireless environments with laptops, mobile phones and tablets. The BSAP 2135s offer higher receive sensitivity on both the 2.4 GHz and 5 GHz radios to compensate for Bring Your Own Device (BYOD) type mobile devices such as smartphones and tablets that have a fraction of the transmit power of traditional laptops.

The Bluesocket 2135 APs include six N-type connectors for external antennas, and are fully functional with power delivered by a single port 802.3at (PoE+) solution.

Flexible, Cloud-Managed Options

The Bluesocket APs operate in conjunction with ADTRAN's flexible portfolio of cloud-managed deployment options including public cloud, private cloud or partner cloud with the freedom to migrate among them.

ADTRAN's wireless solutions are built on Bluesocket virtual Wireless LAN (vWLAN), the industry's premier cloud-managed wireless LAN. vWLAN® is simple yet powerful: simple in that it is intuitive, easy to learn, setup and use, and powerful with unmatched visibility, security, reliability, scalability and performance. In addition, ADTRAN's ProServicesSM offer the most robust lifecycle professional services—from initial designs, to onsite surveys, to installations, all the way to end-user Help Desk.

Deployments Made Simple—Auto Provision, Auto Configure, Auto Optimize

- **Zero-touch AP Deployment:** APs automatically discover vWLAN in the cloud, download firmware and download configuration.
- **Zero-IT Setup:** Enjoy a fully functional employee and guest network in minutes with just a few clicks and keystrokes.
- **DynamicRF:** Radio Resource Management (RRM) technology maximizes performance, adapts to interference, and provides seamless L2/L3 mobility by automatically setting channel and TX power settings, discovering neighbors and load balancing.
- **DynamicSteering:** Band/client steering, load balancing and sticky client prevention technology opens up a brand new dialogue between the Wi-Fi infrastructure and client devices allowing the Wi-Fi infrastructure to take charge making informed, coordinated, connectivity and roaming decisions from the vantage point of both the Wi-Fi infrastructure and the clients.

BLUESOCKET 2135

Unmatched Visibility and Insight

Cloud management allows you to view, manage and optimize the Wi-Fi network from any device—anytime.

- **Customizable Reporting and Analytics**
Dashboards provide realtime and historical business insight into the network.
- **Multi-tenant Support** enables centralized management of multiple customers or business entities from a single software instance.

Unsurpassed Security, Reliability, Scalability and Performance

- **Context-aware Access Control (with Layer 7 Device Fingerprinting)** allows for defining security policies based on users, device type, ownership, location and schedules. Businesses can now support BYOD or allow guest access while ensuring highest levels of network security.
- **Built-in Wireless Intrusion Detection (W-IDS)** to detect and isolate rogue access points in the network.
- **Built-in High-Availability (HA)** with zero packet loss failover ensures a reliable, always-on network.
- **Elastic Scalability** allows the network to quickly scale without the constraints of legacy hardware controllers.

Product Specifications

Interfaces

- One Auto-sensing, 10/100/1000Base-T, RJ-45 Connector

Antenna

- Six N-type Connectors

Radios

- 802.11a/n/ac and 802.11b/g/n
- Configurable for Sensor-mode RF Scanning
- DynamicRF (Radio Resource Management) for Automatic Channel, TX Power and Neighbor Discovery
- Configurable Maximum Associated Clients per Radio
- DynamicSteering (Band/client steering, load balancing and sticky client prevention technology) with 802.11k/v support
- Multicast/Broadcast to Unicast Conversion
- A-MPDU and A-MSDU Frame Aggregation
- HT20, HT40 (High Throughput) and VHT80 (Very High Throughput)
- Max Aggregate TX Power*
 - 2.4 GHz: 29 dBm/800 mW
 - 5 GHz: 27 dBm/500 mW

Certifications

- Wi-Fi 802.11a/b/g/n/ac Certification

Mobility Services

- Eight SSIDs Per Radio
- Support for Apple Bonjour-based Services (Airprint, Airplay), Apple CNA, and Microsoft NCSI
- Wireless Client Load Balancing
- Secure Fast Roaming with Opportunistic Key Caching (OKC)

- Seamless Layer 2 and Layer 3 Roaming
- High Availability
- 802.1Q VLAN Support
- Soft GRE Tunneling

QoS for Voice, Data, and Video

- Smart Bandwidth Management (Incoming, Outgoing)
- WMM (802.11e)
- 802.1p or Differentiated Service Code Point (DSCP)
- WMM Power Save (U-APSD)

Security

- 802.1X Port-based Authentication
- Open System (WEP-64/128)
- Shared System (WEP-64/128)
- WPA/WPA2-Personal
- WPA/WPA2-Enterprise
- EAP-TTLS
- EAP-PEAP
- EAP-FAST
- EAP-TLS
- EAP-SIM
- EAP-AKA

Environment

- **Operating:** -40° F to 140° F (-40° C to 55° C)
- **Storage:** -58° F to 150° F (-40° C to 70° C)
- **Humidity:** 5% to 90% Typical
- **Waterproof:**
 - IP67
 - Salt-spray resistant
- Built-in Carrier Class Antenna and Ethernet Surge Protection

*Aggregate of chains. Max TX power may be limited by local regulatory domains (country) and band edge requirements.

Dual Radio 802.11ac Access Point

Physical

- Dimensions: 9.6 in. x 7.8 in. x 1.9 in.
(245 mm x 200 mm x 75 mm) (L x W x H)
- Weight: 3.2 lbs (1.45 kg)

Power

- 802.3at Compliant Power over Ethernet

Mounting

- Wall/Pole/Ceiling Mount Kit Included

Agency Approvals

Electrical/Safety Compliance

- UL 1950
- CSA 22.2
- IEC 60950
- EN 60950

Radio Approvals

- FCC Part 15.247
- RSS-210 (Canada)
- EN 300.328 (Europe)
- AS/NZS 4771 (Australia & New Zealand)
- EMI and Susceptibility (Class A)
- FCC Part 15.107 and 15.109
- ICES-003 (Canada)
- EN 301.489-1 and -17 (Europe)
- AS/NZS 3548

Warranty

- One Year Warranty

Power and Sensitivity Tables

2.4 GHz: 29 dBm
5 GHz: 27 dBm

	Max TX Power*		Receive Sensitivity*
802.11b 2.4 GHz			
1 Mbps	29 dBm	1 Mbps	-93 dBm
11 Mbps	29 dBm	11 Mbps	-88 dBm
802.11g 2.4 GHz			
6 Mbps	28 dBm	6 Mbps	-91 dBm
54 Mbps	24 dBm	54 Mbps	-74 dBm
802.11n 2.4 GHz HT20			
MCS0/MCS8	28 dBm	MCS0/MCS8	-89 dBm
MCS1/MCS9	27 dBm		
MCS2/MCS10	27 dBm		
MCS3/MCS11	27 dBm		
MCS4/MCS12	27 dBm		
MCS5/MCS13	26 dBm		
MCS6/MCS14	25 dBm		
MCS7/MCS15	23 dBm	MCS7/MCS15	-67 dBm
802.11n 2.4 GHz HT40			
MCS0/MCS8	22 dBm	MCS0/MCS8	-89 dBm
MCS1/MCS9	22 dBm		
MCS2/MCS10	22 dBm		
MCS3/MCS11	22 dBm		
MCS4/MCS12	20 dBm		
MCS5/MCS13	25 dBm		
MCS6/MCS14	25 dBm		
MCS7/MCS15	24 dBm	MCS7/MCS15	-67 dBm
802.11a 5 GHz			
6 Mbps	27 dBm	6 Mbps	-95dBm
54 Mbps	23 dBm	54 Mbps	-79 dBm
802.11n 5 GHz HT20			
MCS0/MCS8	26 dBm	MCS0/MCS8	-91 dBm
MCS1/MCS9	26 dBm		
MCS2/MCS10	26 dBm		
MCS3/MCS11	26 dBm		
MCS4/MCS12	26 dBm		
MCS5/MCS13	25 dBm		
MCS6/MCS14	24 dBm		
MCS7/MCS15	23 dBm	MCS7/MCS15	-72 dBm

*Aggregate of chains. Max TX power may be limited by local regulatory domains (country) and band edge requirements.

	Max TX Power*		Receive Sensitivity*
802.11ac 5 GHz HT40			
MCS0/MCS8	26 dBm	MCS0/MCS8	-87 dBm
MCS1/MCS9	26 dBm		
MCS2/MCS10	26 dBm		
MCS3/MCS11	26 dBm		
MCS4/MCS12	26 dBm		
MCS5/MCS13	25 dBm		
MCS6/MCS14	24 dBm		
MCS7/MCS15	23 dBm	MCS7/MCS15	-71 dBm
802.11ac 5 GHz HT20			
MCS0	26 dBm	MCS0	-91 dBm
MCS1	26 dBm		
MCS2	26 dBm		
MCS3	26 dBm		
MCS4	26 dBm		
MCS5	25 dBm		
MCS6	24 dBm		
MCS7	23 dBm		
MCS8	21 dBm	MCS8	-67 dBm
MCS9			
802.11ac 5 GHz HT40			
MCS0	26 dBm	MCS0	-87 dBm
MCS1	26 dBm		
MCS2	26 dBm		
MCS3	26 dBm		
MCS4	26 dBm		
MCS5	25 dBm		
MCS6	24 dBm		
MCS7	23 dBm		
MCS8	21 dBm	MCS8	-66 dBm
MCS9	19 dBm	MCS9	-63 dBm
802.11ac 5 GHz VHT80			
MCS0	26 dBm	MCS0	-85 dBm
MCS1	26 dBm		
MCS2	26 dBm		
MCS3	26 dBm		
MCS4	26 dBm		
MCS5	25 dBm		
MCS6	24 dBm		
MCS7	23 dBm		
MCS8	21 dBm	MCS8	-63 dBm
MCS9	19 dBm	MCS9	-60 dBm

*Aggregate of chains. Max TX power may be limited by local regulatory domains (country) and band edge requirements.

Ordering Information

Choose Your Access Point

Choose Your AP	Part No.
Outdoor AP	
Bluesocket 2135: 802.11a/b/g/n/ac, 3x3:3, External N-type Antenna Connectors	1700962F1

Choose Your Cloud

Public Cloud - ProCloud	Part No.	Part No.
ProCloud for Outdoor AP (BSAP 2135)	NBD	7x24x4
One Year	1100MSPH200112	1100MSPH300112
Three Years	1100MSPH200136	1100MSPH300136
Five Years	1100MSPH200160	1100MSPH300160
Public Cloud - ProCloud Plus		
ProCloud Plus for Outdoor AP (BSAP 2135)	NBD	7x24x4
One Year	1100MSPM200112	1100MSPM300112
Three Years	1100MSPM200136	1100MSPM300136
Five Years	1100MSPM200160	1100MSPM300160
Private Cloud		
FREE vWLAN Virtual Appliance (VMware) (\$1995 value)		Download Only (adtran.com/downloadvwan)
vWLAN 1U Rackmount Appliance (Hardware)		1700900F2
vWLAN Desktop Appliance (Hardware)		1700918F1

Licenses

Software License	Part No.
Licenses purchase waived while covered by ProCloud/ProCloud Plus	
FREE Access Point vWLAN Software License (\$235 value)	1951901G1
Access Point Unified User Access (Wired and Third-Party AP Support) Software License (Optional)	1951910G1

Accessories

Power Supply and Antennas	Part No.
802.3at Compliant PoE Injector for BSAP 2135	1700923F1
Omnidirectional Antenna Bundle with 5 dBi gain for BSAP 2035	1700930F1
Dual Band High Density Antenna Bundle with 13/7 dBi gain (2.4/5GHz respectively) for BSAP 2135	1700982F1
Dual Band Wide Angle Patch Antenna Bundle with 6/7 dBi gain (2.4/5GHz respectively) for BSAP 2135	1700980F1



ADTRAN, Inc.
901 Explorer Boulevard
Huntsville, AL 35806
256 963 8000

General Information
800 9ADTRAN
www.adtran.com/contactus

**Canada Headquarters—
Toronto, Ontario**
+1 877 923 8726
+1 905 625 2515
sales.canada@adtran.com

Canada—Montreal, Quebec
+1 877 923 8726
+1 514 940 2888
sales.canada@adtran.com

Mexico and Central America
+1 256 963 3321
+1 52 55 5280 0265 Mexico
sales.cala@adtran.com

South America
+1 256 963 3185
sales.brazil@adtran.com
sales.latam@adtran.com

61700962F1-8E

November Copyright © 2016 ADTRAN, Inc. All rights reserved. ADTRAN believes the information in this publication to be accurate as of publication date, and is not responsible for error. Specifications subject to change without notice. ADTRAN and Total Access are registered trademarks of ADTRAN, Inc. and its affiliates in various countries. All other trademarks mentioned in this document are the property of their respective owners.

ADTRAN warranty duration and entitlements vary by product and geography. For specific warranty information, visit www.adtran.com/warranty

ADTRAN products may be subject to U.S. export controls and other trade restrictions. Any export, re-export, or transfer of the products contrary to law is prohibited. For more information regarding ADTRAN's export license, please visit www.adtran.com/exportlicense

ADTRAN
Certified
Supplier



ISO 9001
ISO 1401
TL 9000