

ADTRAN

2135

Dual Radio Outdoor 802.11ac Access Point



Benefits

- Offers 100% Cloud-Managed Wi-Fi without required subscriptions
- Provides integrated wireless intrusion detection system to proactively identify rogue access points and wireless attacks
- Supports Zero touch AP provisioning and Zero IT setup in 5 minutes or less
- Leverages machine learning-powered self-optimizing and healing technology
- Supports context-Aware Security and Firewall for the highest level of security at the edge
- Offers seamless feature and service upgrades to match your unique needs and budget
- Scale from a handful of APs to thousands across multiple locations and customers

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.

ADTRAN 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 ADTRAN APs are designed to meet your needs.

High-Performance, Reliable Connectivity

The ADTRAN 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 ADTRAN 2135 APs provide the highest performance, extended range wireless coverage in the harshest outdoor environments.

The ADTRAN 2135 APs provide high performance, reliable coverage in ultra-high density wireless environments with laptops, mobile phones and tablets. The ADTRAN 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 ADTRAN 2135 APs include six N-type connectors for external antennas, and are fully functional with power delivered by a single port 802.3 at (PoE+) solution.



ADTRAN 2135

Flexible, Cloud-Managed Options

ADTRAN Enterprise-Class APs offer simple, robust, adaptable enterprise Wi-Fi connectivity and security without compromise. With ADTRAN Express, every AP is a starting point – enabling you to think big and start small. Leverage the power and simplicity of 100% cloud-managed Wi-Fi, “right sized”, without required subscriptions. Combine that with high performance enterprise-class APs available at market disruptive pricing and machine-learning- powered self-organizing and healing technology – allowing you to get the network up and running quickly, keep it running smoothly and ensuring the best possible quality of experience.

Scale from a handful of APs to thousands across multiple locations and customers. Seamlessly upgrade to elevate the experience with Enhanced Support or upgrade to ADTRAN Elite including advanced features and unparalleled flexibility in deployments options. With ADTRAN Enterprise-Class Wi-Fi Solutions, you can create an experience to best fit the unique needs and budget of your organization.

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ADTRAN Express

100% Cloud-Managed IT

- No required subscriptions or licenses
- No installation or management of on-premises controller or software

Powerful Enterprise-Class APs

- Available at market disruptive pricing 75% lower than typical enterprise-class APs and licenses

Deployments Made Simple

- Zero Touch AP Provisioning
 - APs automatically discover the cloud, download firmware, and configuration.
- Zero-IT Setup
 - Enjoy a fully functional employee and guest network in 5 minutes or less with just a few wizard driven key strokes and mouse clicks
- Machine learning-powered Wi-Fi that just works
 - Self-optimizing and healing technology
 - DynamicRF - Maximizes performance and adapts to interference by learning about the RF spectrum and automatically adjusting optimal radio settings
 - DynamicSteering - Automatically steers clients to the best AP or radio within an AP to provide the best possible quality of experience, provides load balancing and prevents “sticky Wi-Fi clients”
 - DynamicMulticast - Prevents multicast traffic typically sent at low data rates from impacting overall performance by learning about traffic patterns and automatically adjusting optimal multicast settings

Unmatched Visibility and Insight

- Web-based HTML 5 admin interface enables centralized management of the WLAN from any device, anywhere in the world
- Multi-tenanted tiered admin access allows support of multiple customers or sites, on a single instance and provides administrators with permissions to just those sites and the resources within them
- Customizable Dashboard Branding (Logo/Colors)
- Real-time and historical reporting and analytics dashboards
- Complete RESTful web services API for automation, orchestration and analytics

A “Right Sized” Feature Set

- Focused on robust enterprise connectivity and security
- Seamless upgrades to ADTRAN Elite features and flexible deployment options

Context-Aware Security and Firewall

- Role-Based Access Control with L7 Device Fingerprinting allows you to define group policies based on multiple contexts including user credentials, device type, ownership of device (company owned or bring your own device (BYOD), location and schedule

Seamless Layer 2 Mobility

Every AP is a Starting Point

- Scale from a handful of APs to thousands across multiple locations and customers

Remote Site Survivability

- APs continue to function if the connection to the ADTRAN cloud goes down

Interactive Support Community

- Optional upgrades to enhanced support and extended warranty with advanced hardware replacement

ADTRAN Elite

Everything in Express +

- Includes everything in ADTRAN Express plus more

Advanced Features

- Advanced Guest Manager
- Advanced authentication methods
- Wireless Intrusion Detection (W-IDS)
- Heatmaps for RF planning and rogue AP location tracking
- Seamless Layer 3 mobility

Flexible Deployment Options

- ADTRAN cloud or yours

Enhanced Support and Extended Warranty

- Cloud and Support SLAs
- Advanced hardware replacement

ADTRAN 2135

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
- 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
 - 2.4 GHz: 29 dBm/800 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

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
- AP-TLS
- EAP-SIM
- EAP-AKA

Environment

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

Physical

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

Power

- 802.3af 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

Dual Radio Outdoor 802.11ac Access Point

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.

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Ordering Information

1. Access Point

Equipment	Part No.
ADTRAN BSAP 2135: Outdoor 802.11a/b/g/n/ac, 3x3:3, External N-type Antenna	1700962F1

2. Choose Your Accessories

Equipment	Part No.
Accessories	
802.3af Compliant PoE Injector for ADTRAN BSAP 2135	1700923F1
Antenna Bundle for ADTRAN BSAP 2135	1700930F1

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3. Upgrade to Enhanced Support/Extended Warranty

Warranty Option	Part No.
Phone Support	
ProCare 1-Year Basic Maintenance for one Access Point for use with Elite On-Premises Perpetual License or upgrading Express Cloud from community support.	1100AMWIF1M1T1
ProCare 3-Year Basic Maintenance for one Access Point for use with Elite On-Premises Perpetual License or upgrading Express Cloud from community support.	1100AMWIF1M1T3
Phone Support and Advanced Hardware Replacement	
ProCare 1-Year NBD Remote Maintenance for one Access Point for use with Elite On-Premises Perpetual License or upgrading Express Cloud from community support. Includes support and next business day advanced hardware replacement.	1100AMWIF1M2T1
ProCare 3-Year NBD Remote Maintenance for one Access Point for use with Elite On-Premises Perpetual License or upgrading Express Cloud from community support. Includes support and next business day advanced hardware replacement.	1100AMWIF1M2T3

4. Upgrade to to Elite

Elite Option	Part No.
Elite Cloud	
Elite Cloud 1-Year Subscription for one Access Point. Includes: Elite Cloud, ProCare support, software/firmware updates, next business day advanced hardware replacement.	1100MSPH200112
Elite Cloud 3-Year Subscription for one Access Point. Includes: Elite Cloud, ProCare support, software/firmware updates, next business day advanced hardware replacement.	1100MSPH200136
Elite Cloud 5-Year Subscription for one Access Point. Includes: Elite Cloud, ProCare support, software/firmware updates, next business day advanced hardware replacement.	1100MSPH200160
Elite On-Premises (Requires ProCare Support from Step 2 above)	
Elite On-Premises Perpetual License for one Access Point. Requires ProCare support.	1951901G1

ADTRAN

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