

ADTRAN Wireless Site Survey

FAQs



A site survey can often be a necessary step for a successful Wi-Fi® deployment. The following FAQs provide information and guidance concerning a variety of site survey options providing assistance for any organization planning to deploy a Wi-Fi network.

What are the wireless site survey options available from ADTRAN?

ADTRAN® provides the following site survey options:

Predictive Site Survey: The Predictive Site Survey is performed pre-installation and off-site by an ADTRAN sales engineer using Wi-Fi site survey software that simulates access points as well as antenna and building characteristics. This site survey is provided at no cost and is designed to establish an initial Bill of Materials (BOM). It will also determine the number of access points needed for the desired coverage area, their respective installation locations and provide heat maps depicting coverage. The Predictive Site Survey is recommended for small to medium deployments with no real-time applications such as voice or video, no high-capacity or high-density user requirements, and no challenging RF environments such as warehouses or historic buildings.

Comprehensive Remote Pre-Installation Site Survey: The Comprehensive Remote Pre-Installation Site Survey is performed pre-installation and off-site by an ADTRAN Custom Extended Services (ACES) engineer using Wi-Fi site survey software simulating access points as well as antenna and building characteristics. The Comprehensive Remote Pre-Installation Site Survey requires a call for quote. It is designed to establish a comprehensive wireless design considering not only coverage, but also user capacity. Along with a BOM it will determine the number of access points needed for the desired coverage areas, capacity, respective installation locations, heat maps depicting coverage, and a transmit (TX) power/channel plan. The Comprehensive Remote Pre-Installation Site Survey is recommended for small to large deployments that have high-capacity or high-density user requirements. For those deployments that have real-time applications such as voice or video and challenging RF environments, such as warehouses or historic buildings, it is recommended that a Comprehensive Remote Pre-Installation Site Survey be followed by a Post Installation Site Survey.

Post Installation Site Survey: The Post Installation Site Survey is a comprehensive passive and or active survey that is performed post-installation on-site by an ACES engineer using Wi-Fi site survey software to collect real-world data. The Post Installation Site Survey requires a call for quote. It is designed to validate the results of the Comprehensive Remote Pre-Installation Survey post-installation or to troubleshoot an existing ADTRAN wireless network. This includes identifying unforeseen coverage gaps, co/adjacent channel interference, and non- 802.11 interference such as that from microwaves and heavy machinery. Coupled with a Comprehensive Remote Pre-Installation Site Survey, it is recommended for small to large deployments that have real-time applications such as voice or video and challenging RF environments such as warehouses or historic buildings.

What is a predictive site survey?

A Predictive Site Survey creates a model of the wireless environment using simulation software.

What is a heat map?

A heat map allows you to visualize signal strength on a floor plan by overlaying the floor plan with color shaded areas based on coverage strength. A legend is used to define different signal strengths.

What is a TX power/channel plan?

A TX power/channel plan indicates what channels and power settings should be configured for optimum performance. Alternatively, DynamicRF™ radio resource management technology may be leveraged.

What is a passive or active site survey?

During a passive site survey, the site survey software passively listens to the wireless environment on-site to detect access points and measure signal strength, noise, interference, etc. During an active site survey, the site survey software actively connects to the wireless network on-site to measure actual throughput, packet loss, retransmissions, etc.

What are high-capacity or high-density user requirements?

High-capacity or high-density user requirements are Wi-Fi coverage areas that could be covered with one access point in terms of coverage, but may require more access points to provide the required bandwidth to a large user population. These types of areas typically include classrooms, conference rooms, auditoriums, stadiums, lecture halls, gymnasiums, cafeterias and libraries, just to name a few.

Does ADTRAN perform on-site “Access Point (AP) on a Stick” Site Surveys?

No. “AP on a Stick” Site Surveys were designed to plan for coverage only. They also do not account for what the wireless network will look like as a whole. Today, Wi-Fi has become the primary means to access the network. This requires planning, not only for coverage but also for other parameters such as capacity. ADTRAN recommends performing a predictive wireless design considering both coverage and capacity before installation. This should be followed by an on-site survey after installation for deployments that have real-time applications such as voice or video and challenging RF environments such as warehouses or historic buildings. This combines the efficiencies of state-of-the-art predictive modeling with real-world data collection for a best-of-breed solution.



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How do I get started?

If you would like to find out if you qualify for the complimentary Predictive Site Survey please click on the link:

<http://www.adtran.com/bspa>

To request a quote for the Comprehensive Remote Pre-installation Site Survey or the Post Installation Site Survey please send an email to:

aces.installation@adtran.com
or contact ACES Installation & Maintenance Service at 888 874-2237

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What information must I provide to ADTRAN to perform a site survey?

The following information should be provided to ADTRAN to perform a site survey:

- Floor plans with scale
- Defined coverage areas
- Defined non-coverage areas
- Each floor plan should be classified into the following categories:
 - Restricted Closed Office (hotel, walled office)
 - Open Space Office (cubicles, etc.)
 - Commercial (warehouse, airport, convention center, mall)
 - Outdoor Free Space (free space no RF obstruction)
 - Outdoor Residential (residential light RF obstruction)
 - Outdoor Downtown (severe RF obstruction)
- Identify interior/exterior wall materials (brick, cinder block, concrete, dry wall, plasterboard, glass with metal frame, window office)
- Identify interior/exterior door materials (heavy, light, metal)
- Identify interior/exterior window materials (thin, thick)
- Identify ceiling heights
- Identify ceiling mounting options (drop, flush)
- Identify cubicle areas on the floor plans
- Identify warehouse areas on the floor plans and classify into high, medium or low, in terms of stock
- Identify elevator shafts and any other severe RF obstructions on the floor plans including stairways, fire-walls, walk-in safes or vaults, faraday cages, walk-in refrigerators, mechanical rooms, etc.
- Identify high-density user areas such as classrooms, conference rooms, auditoriums, stadiums, lecture halls, gymnasiums, cafeterias, libraries, etc.
- Identify the user capacity of each high-density area
- Identify the bandwidth/throughput requirements per user
- Identify high-profile user locations on the floor plans such as executive office suites, VIP areas, etc.
- Identify any specialized, mission-critical, or real-time applications to be used on the wireless network and their requirements (voice, video, real-time location systems (RTLS), wireless infusion pumps, etc).
- Identify any pre-existing infrastructure that must be accommodated in the design

What floor plan formats does ADTRAN accept?

ADTRAN accepts floor plans in the following formats:

- pdf (Adobe Acrobat)
- .bmp (Bitmap Image)
- .dib (Device Independent Bitmap Image)
- .dwg/.dxf (CAD)
- .emf (Enhanced Metafile)
- .gif (Graphics Interchange Format)
- .vsd (Microsoft Visio)
- .jpg (JPEG Joint Photographic Experts Group)
- .wmf (Windows Metafile)

What site survey software does ADTRAN use and recommend?

ADTRAN uses and recommends AirMagnet Survey Pro, AirMagnet Planner, AirMagnet Wi-Fi Analyzer and AirMagnet Spectrum.

Can ADTRAN's Comprehensive Remote Pre-Installation Site Survey be used interchangeably with third-party access points?

No. ADTRAN's Comprehensive Remote Pre-Installation Site Surveys use the access point and antenna characteristics of ADTRAN access points.

Can ADTRAN perform a Post Installation Site Survey to troubleshoot performance issues with my existing third-party wireless network?

No. ADTRAN does not currently offer a Post Installation Site Surveys to troubleshoot third-party wireless networks.