SiteScanner™ 13.1
Quick Start Guide
72E- 167673- 01
Rev A – August 2012

Thank you for choosing SiteScanner from Motorola. Please read the Quick Start Guide installation/upgrade instructions prior to installing the software. Should you have any questions during this installation/upgrade process, please feel free to contact us.

1.800.653.5350 (United States and Canada)

+55.11.4133.3180 (South America)

+420.533.336.123 (Europe, the Middle East and Africa)

1.800.457.439 (Australia)

+65.6796.9600 select "2" for Technical Support (Asia Pacific)

001.631.738.6213 (For international callers outside the US)

For additional support contact options visit: http://www.motorola.com/Business/US-EN/Support/Support+Contacts.

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Recommended System Requirements

To effectively use this application, the following computer platform is recommended:

- Intel® Pentium® 4 1.5 GHz or better (or equivalent)
- Microsoft® Windows® XP SP2, Windows Vista (32 and 64 bit), or Windows 7 (32 and 64 bit)
- Microsoft Word® XP (Word 2002) or later (required for generating Reports)
- 1 GB RAM (minimum)
- 500 MB free disk space for installation
- 1024x768 VGA with true color
- Mouse, trackball or compatible pointing device with scroll wheel
- Microsoft Internet Explorer 6.0 or later
- CD-ROM drive

Support for Wireless Measurement via RF Monitoring Mode: In order to enable data collection via RF Monitoring mode, you will need one of the WLAN client cards that support Motorola's custom driver. The latest list of supported WLAN cards is available online at http://support.symbol.com/support/product/RFDesignandPlanning.html.

Installation on Win XP, Win Vista, or Win 7

Installing SiteScanner is much like installing any other Microsoft Windows software. However, SiteScanner uses electronic license control, so an extra activation step will be required. In order to install SiteScanner, you will need your installation CD (or installation executable downloaded from http://support.symbol.com/support/product/RFDesignandPlanning.html) and some way to transfer files to your PC or receive email directly on your PC.

> **IMPORTANT NOTE:** You will need to uninstall any previous versions of SiteScanner prior to installing the new SiteScanner unless you are applying an upgrade patch file. As for your user data, they will be backed up to a directory called **UserBackup** in the directory of the new installation of SiteScanner (the default location is **C:\Program Files\SiteScanner\UserBackup**).

Preparation

It is very important to perform the following preparatory steps to ensure your installation goes smoothly:

- **Administrative Privileges Are Required for Install:** a user with local administrative privileges must install SiteScanner. Non-administrative users may use the software once it has been installed.
- **Internet Explorer 6.0** or better is required to properly run SiteScanner.
- **Windows Service Packs:** Your software will work best running with the most recent updates of Windows. These upgrades are available through the Microsoft Windows Update web site.

Installation procedure

To install SiteScanner, please follow these steps in the order presented:

1. Close any programs running within Windows before starting the installation process.
2. Log on as 'Administrator' or as a user with administrative or power user privileges.
3. Insert the SiteScanner product CD into the CD drive (or double click the Installation executable if downloaded from http://support.symbol.com/support/product/RFDesignandPlanning.html)
4. If installing from a CD and Autorun is activated on your computer, the setup program will start automatically. Otherwise, run SETUP.EXE from the root folder on the product CD.
5. If installing from an installation executable, choose a location for storing the temporary installation files. These files can be removed at a later date or kept for product repairs or reinstallations.
6. Read the warnings and the license agreement. You must accept the license agreement to continue.
7. To choose the destination folder where the program files will be stored on the hard drive, click the Configure button next to the product selection. We recommend you accept the default folder name. If you choose a hard drive other than the default C: drive, be sure to also type in a directory name; e.g. click on your D: drive and then type in \Program Files\SiteScanner\.
8. Click Next to begin the installation process.
9. When setup is complete, you are ready to run the software by going to the Windows Start Menu and selecting Programs > SiteScanner> SiteScanner.

WLAN Card Hardware Removal Procedure

IMPORTANT NOTE: You should only remove your WLAN card adapter from your computer using the following hardware removal process. Failure to follow this process could cause your computer to crash and loss of data.

Step 1: First, close down or ensure that SiteScanner is not running

Step 2: Double click the Safe Hardware Removal icon in your system tray: 

Step 3: Select your Wireless LAN Adapter from the Safely Remove Hardware dialog and choose Stop

Step 4: Again select your adapter and select Ok to confirm you wish to remove the hardware (Note, this will not uninstall the driver. This process simply allows you to safely unplug the adapter from your computer)

Step 5: You may now remove the WLAN Adapter from your computer.

Custom Driver Installation for the WLAN Client Card

In order to enable data collection via RF Monitoring mode, you will need one of the WLAN client cards listed in the recommended system requirements with SiteScanner's custom driver installed.

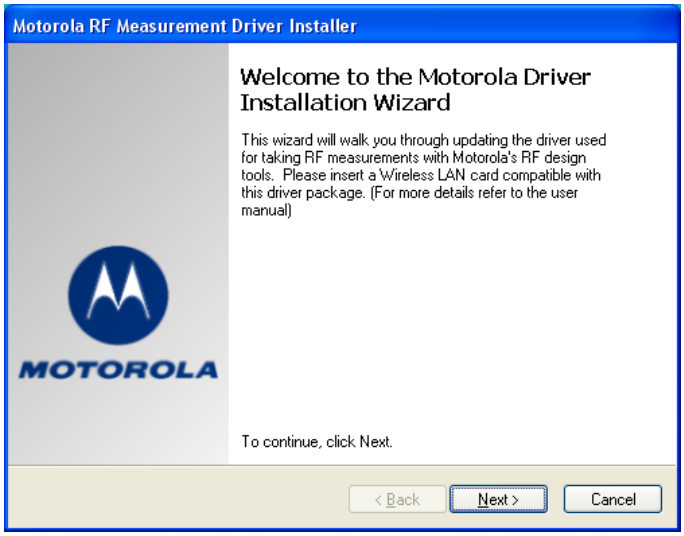
> **IMPORANT NOTE:** Do not install the card manufacturer's driver. The installation of Motorola's custom WLAN driver may not work correctly if the manufacturer's driver has been previously installed on your computer. If the manufacturer's driver or other suitable driver has been previously installed on your computer, please uninstall the client card before proceeding.

Step 1: Insert the network adapter into your computer's PCMCIA slot or USB port.

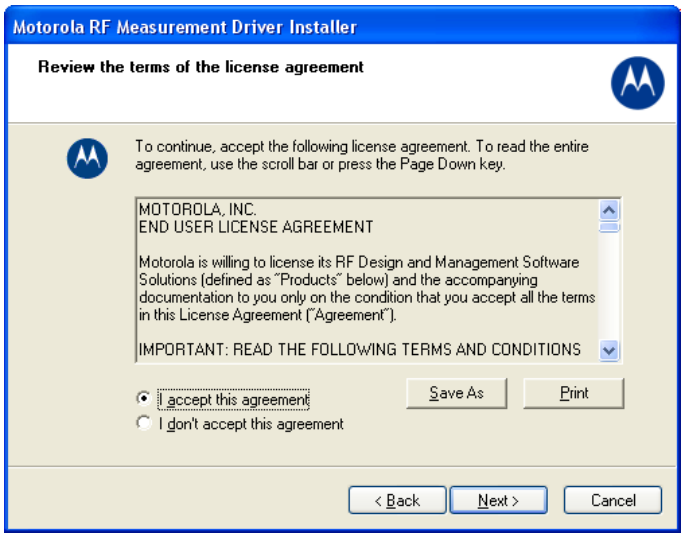
Step 2: If the Hardware Update Wizard dialog window appears, choose Cancel.

Step 3: Run the DriverSetup.exe installer located in Help\WLAN Drivers located within your installation directory.

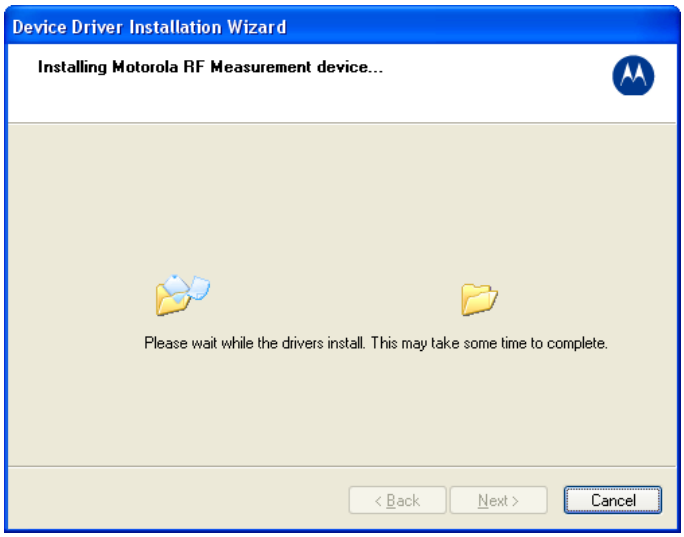
Step 4. Click Next to begin the driver installation process.



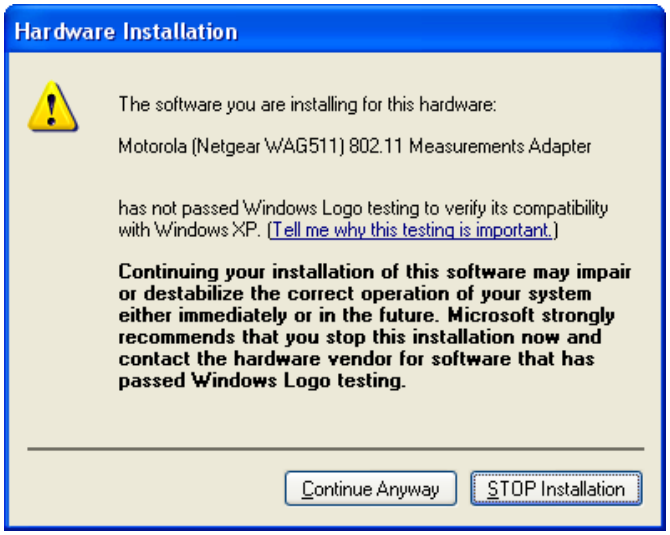
Step 5. You must accept the license agreement before installing the driver. If you accept the agreement, check the radio button I accept this agreement and click Next.



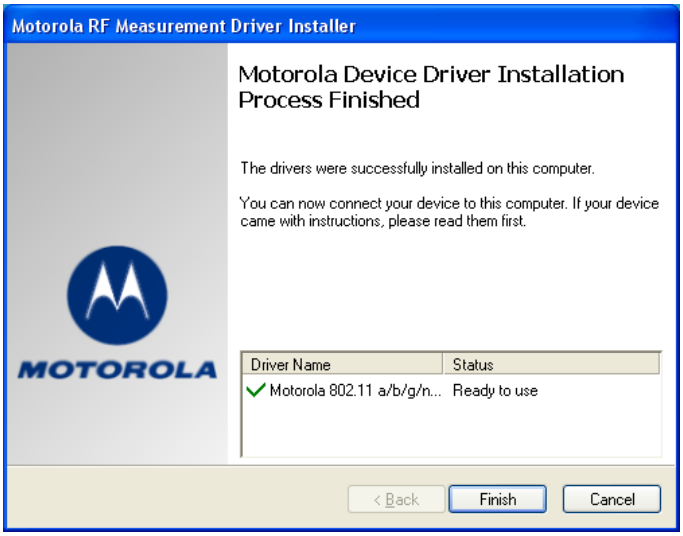
Step 6. The wizard will begin searching for your new hardware.



If you receive a warning message saying that the software you are installing has not passed Windows Logo testing, click Continue Anyway



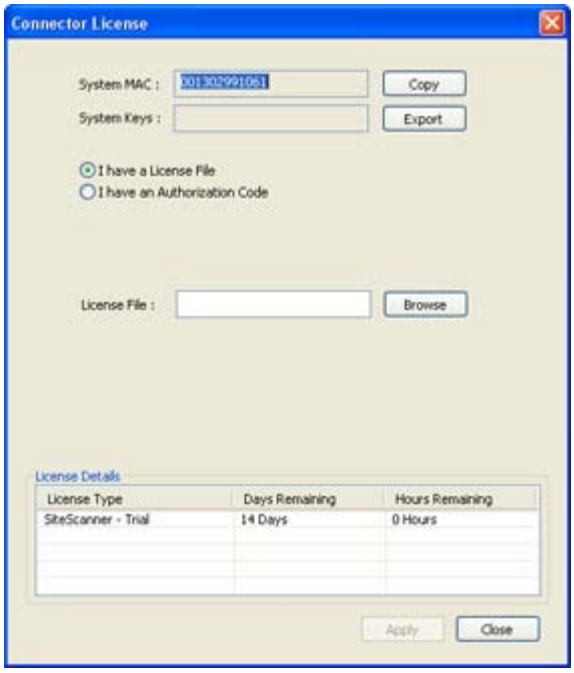
Step 7. If the dialog indicates your hardware is ready to use, the installation was successful and the card is now ready for use with RF Monitoring mode measurements.



If you encounter an error please contact Motorola's wireless software support team at Ems.support@motorolasolutions.com.

License activation

After installing the software, you have 14 days to install the license. Each time you access SiteScanner, the **Connector License** dialog is displayed until the license is installed. The **Connector License** dialog can also be accessed by selecting **Help** > **Manage Licenses**.



There are two methods used to install a license:

- Using a license file
- Using an authorization code (the most common method)

To use either of these methods to install a license, you must have a license file or an authorization code from Motorola.

Using a License File

A license file contains information about your license. If you have a license file, select the **I have a License File** option. Use the **Browse** button (next to the License File field) to locate the file and select it. Once you have selected the licensing file, click **Apply**. The license information is updated.

Using an Authorization Code

If you have an authorization code, select the **I have an Authorization Code** option. Enter your authorization code, company name, contact phone number, and email address. Then, click **Download**. The license is downloaded from the Connector and the license details are displayed at the bottom of the **Connector License** dialog. Now, click **Apply**. The license is installed using the authorization code.

> **IMPORTANT NOTE:** If you need to use a proxy to access the internet, select the Use proxy for Internet Access option. The proxy settings must already be configured using Configure > Configure Proxy Settings.

Multiple PC installation

According to the license agreement, your software can only be installed on one PC. License unlock codes will not be provided for multiple PCs.

Introduction to Using SiteScanner

Now that you have installed the software, you can begin measuring and visualizing your WiFi network's performance. This Quick Start Guide provides a brief tutorial on using the software to perform a site survey of your facility and then analyze your WiFi network through various visualization modes. The following instructions provide a recommended workflow for doing site surveys and analysis using SiteScanner. For additional information about how to use SiteScanner, please refer to the online User Manual (**Help menu** > **User Manual**).

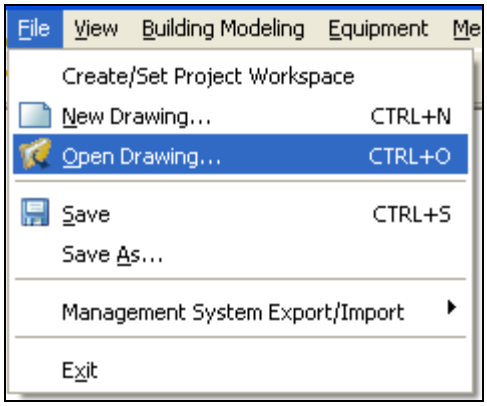
Requirements

Before proceeding with the site survey, you must first acquire a floor plan of the facility. In order to import the floor plan into SiteScanner, the floor plan needs to be in the following formats:

- Raster images (*.BMP, *.JPG, *.TIFF formats)
- Raw facility CAD files (*.DWG and *.DXF formats)
- Formatted facility drawing files (files that were created in Motorola EnterprisePlanner™, LANPlanner®, or SiteScanner™)

Loading Raster Images, Raw CAD files, or Formatted Drawing Files

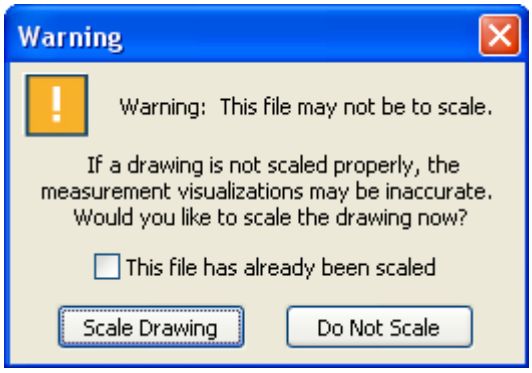
Step 1: Select the **File** menu > **Open Project / Floor Plan…** command to access the **Open Drawing** dialog.



Step 2: When the **Open Drawing** dialog opens, browse to your floor plan's file and click **Open**. You will be asked whether you wish to save changes for the current drawing file. Click **No**.

Step 3: A **Warning** dialog will pop up asking you whether the file you have opened is scaled or not. If you opened a raster image or a raw CAD drawing file, you will need to scale the drawing file. When performing a site survey, it is extremely important to use a scaled drawing file. Click **Scale Drawing** and follow the onscreen instructions. You will be asked to select two points on the floor plan for which you know the distance and then enter the distance. If you opened a formatted drawing file created in EnterprisePlanner or LANPlanner, most likely it has already been scaled. Check the box next to the **This file has already been scaled** option and then click **Do Not Scale**.

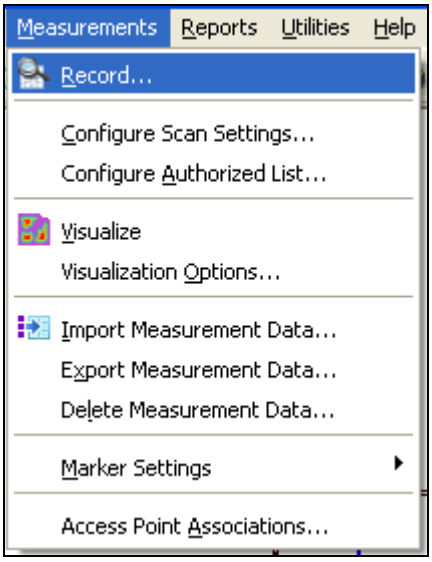
IMPORTANT NOTE: You can still choose to scale the formatted drawing file in order to ensure that it is scaled properly.



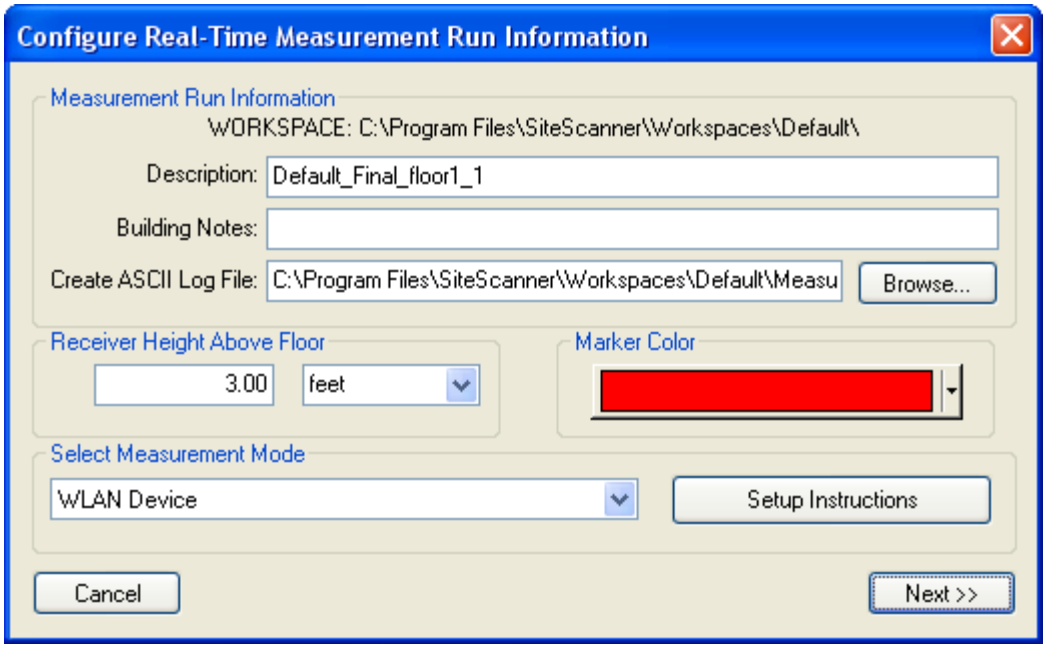
Step 4: You should now see your facility in the main drawing window. You are now ready to perform a site survey.

Performing a Site Survey

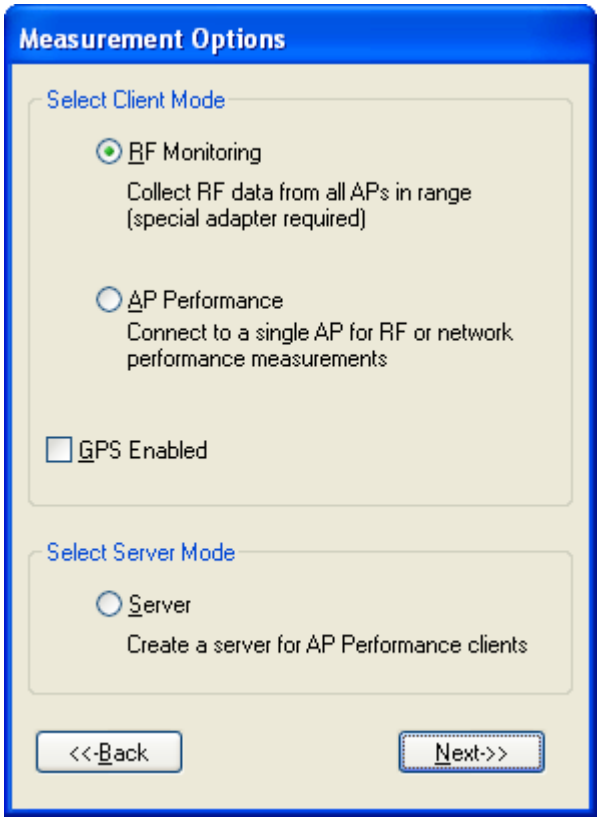
Step 1: Select the **Measurement Survey** menu > **Record New Data** command to begin taking measurements.



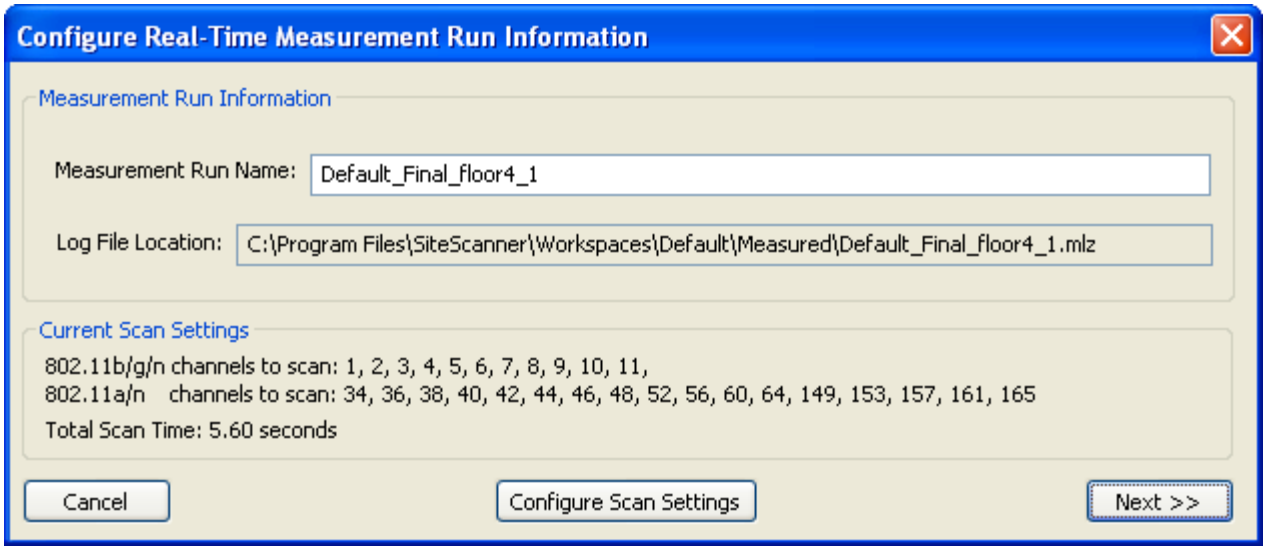
Step 2: In the **Configure Real Time Measurement Run Information** window, there are several options available. You can change the Measurement Run name, the location where the measurement run log file is saved, mobile receiver height, and marker color. Ensure that the **WLAN Device** option is selected from the **Select Measurement Mode** drop down menu before clicking **Next**.



Step 3: Select **RF Monitoring** in the **Measurement Options** window and click **Next**.

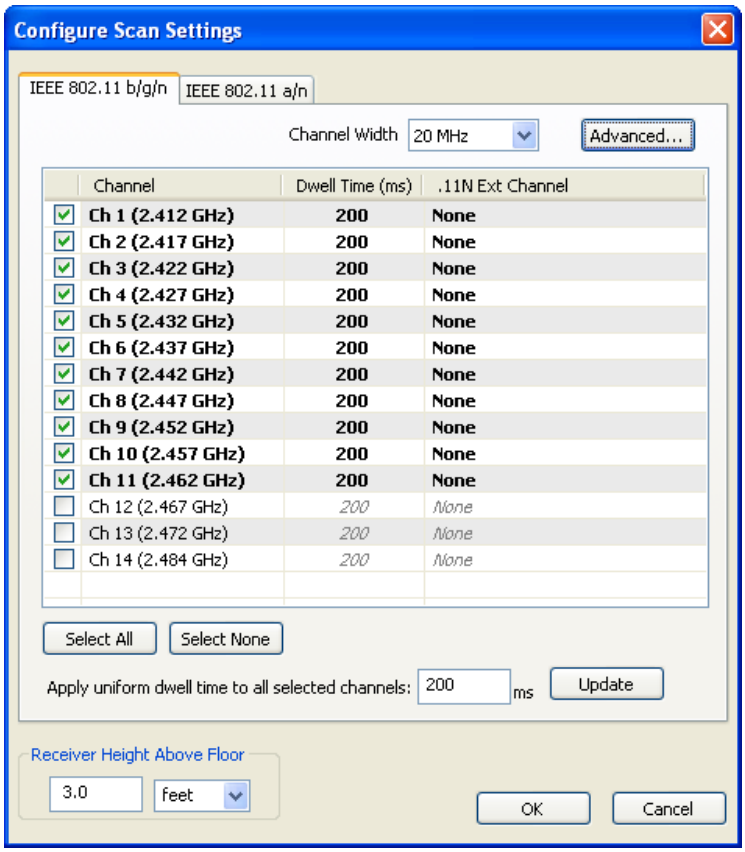


Step 4: In the **Configure Real Time Measurement Run Information** window, there are several options available. You can change the Measurement Run name, the location where the measurement run log file is saved, and what standards and channels to scan for.

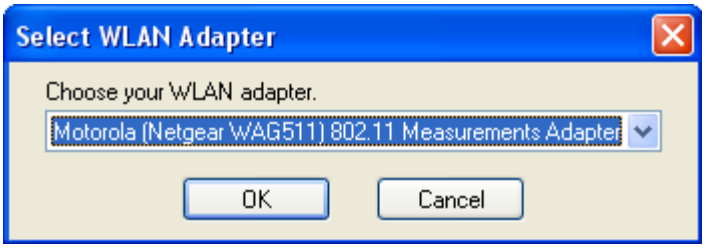


Step 5: If you need to change the default scan settings, click the **Configure Scan Settings** button. In the **Configure Scan Settings** window, select the channels you wish to scan and make any desired changes to dwell times. Click OK and then click **Next** on the **Configure Real Time Measurement Run Information**.

IMPORTANT NOTE: We suggest that users select a dwell time of at least 150 ms for all channels scanned.

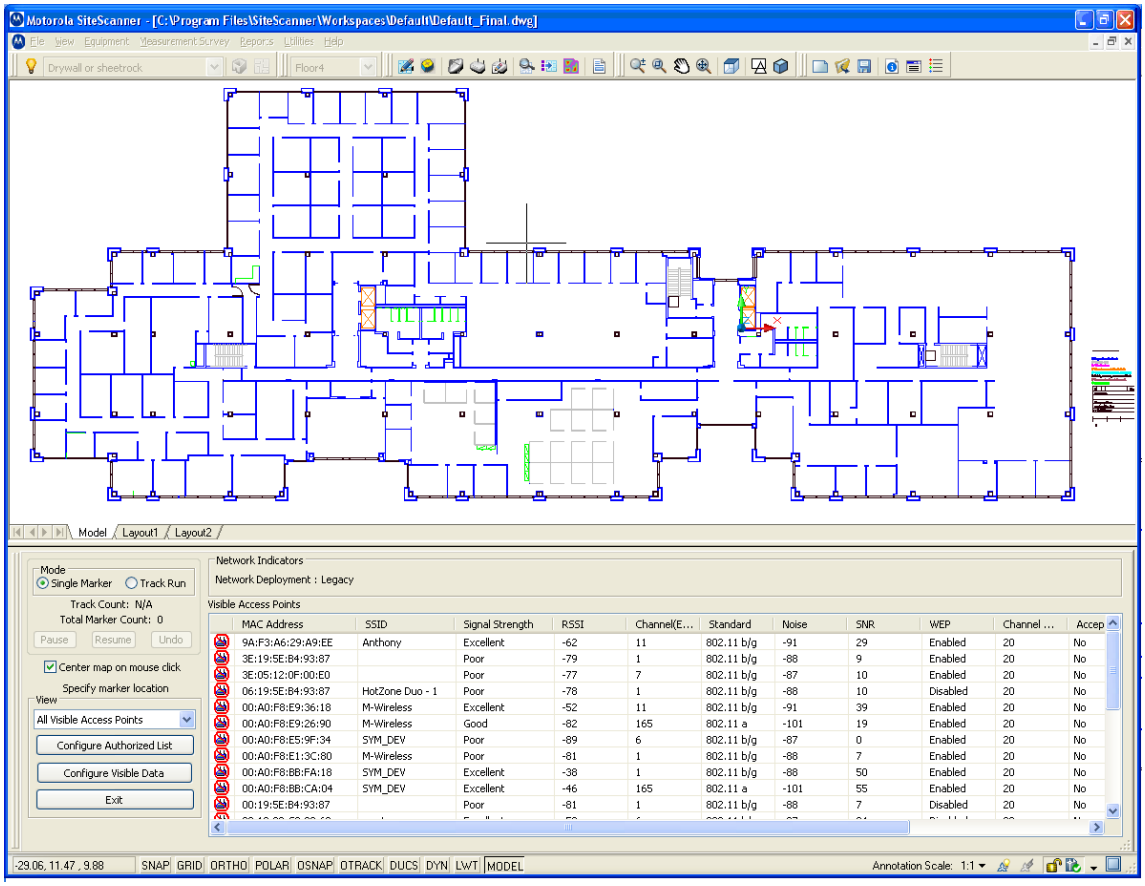


Step 6: Select the desired WLAN adapter to perform the site survey. If no adapter is listed ensure you have installed the custom driver or contact Motorola's wireless software support team at Ems.support@motorolasolutions.com.



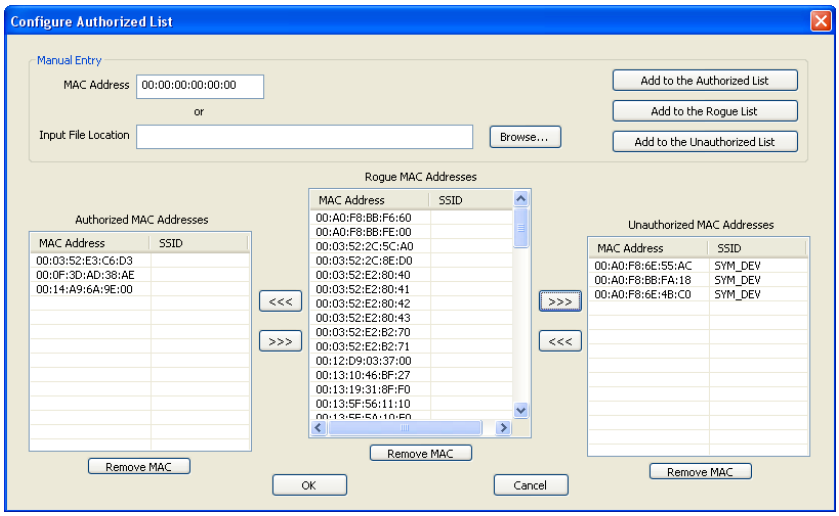
Step 7: A panel should now appear towards the bottom of the drawing window. If there are any APs in the vicinity, the list under the **Visible Access Points** section will start populating. It is recommended that you let the **Visible Access Points** list refresh at least 5 times before proceeding (this can be seen by periodic updates to the **Visible Access Points** list).

> **IMPORTANT NOTE:** If the **Visible Access Points** list does not populate and you are certain that there are active APs nearby, click the **Exit** button. You need to ensure that you are not associated to an AP under the Windows Wireless Network Connections. Also, if the laptop used to perform the site survey has an active internal wireless card, try disabling the internal card and then proceed with using SiteScanner.

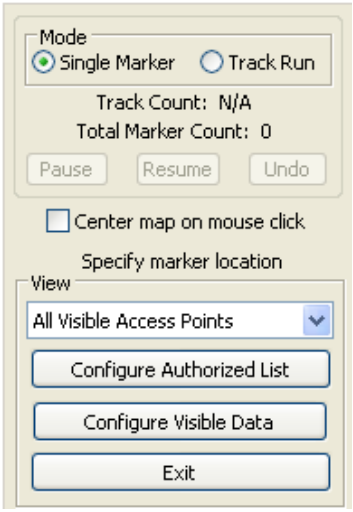


Step 8: After the list has been populated, you now have the option to specify which APs are authorized, unauthorized, or rogues. Authorized APs are APs that are part of your network. Unauthorized APs are APs that you are aware of but are <u>not</u> part of your network (i.e. APs that are part of a neighboring office network). APs classified as rogues are those APs that do not belong in the environment and should not be present. Now click on the **Configure Authorized List button**. In the **Configure Authorized List** dialog window, you will see that all the MAC addresses for visible APs will initially be under the **Rogue MAC Address** section. Select the authorized MAC addresses that are part of your network and click the '<<<'

button to populate them under the **Authorized MAC Addresses**. Repeat this for the unauthorized MAC addresses and then click **OK**. Users can also load a text file list of authorized MAC addresses into SiteScanner. The text file needs to have one MAC address per line with the following format for the address: "XX:XX:XX:XX:XX:XX".



Step 9: You can begin taking measurements by clicking on points on the map that corresponds to your current location. There are two options for recording data under the **Mode** section. **Single Marker** mode records a single measurement point on the drawing file when you left click a point on the map. **Track Run** mode records multiple points along a straight line which are collected and plotted between your start and end point clicks. Track runs are continuously drawn unless you switch back to **Single Marker** mode. If you wish to delete a measurement, click on the Undo button. For further explanations of these two modes, please refer to **Taking Measurements in Chapter 3 – Measurement Surveys** in the **SiteScanner User Manual**.



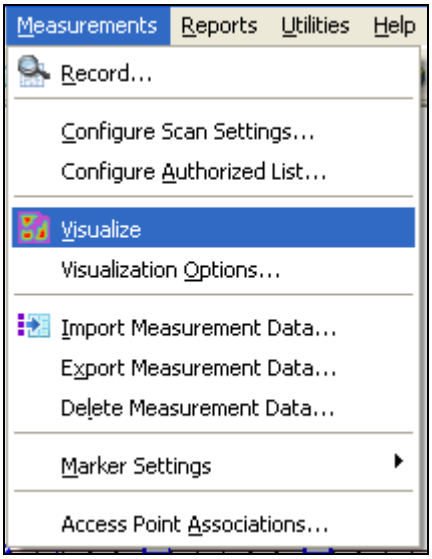
Step 10: If you find that you are zoomed too far in or out, click on the  icon. Left click and hold the mouse button while the cursor is in the drawing window and move the mouse up or down in order to zoom in or out. When you are done, right click in the drawing window and go to **Exit**. To pan the drawing file so that you can take a measurement in a certain location of the map, click on the  icon. Left click and hold

the mouse button with the cursor in the drawing window. Move the mouse in the direction you wish to pan to. To exit **Pan** mode, right click in the drawing window and choose **Exit**.

Step 11: When you are done taking measurements, click the **Exit** button.

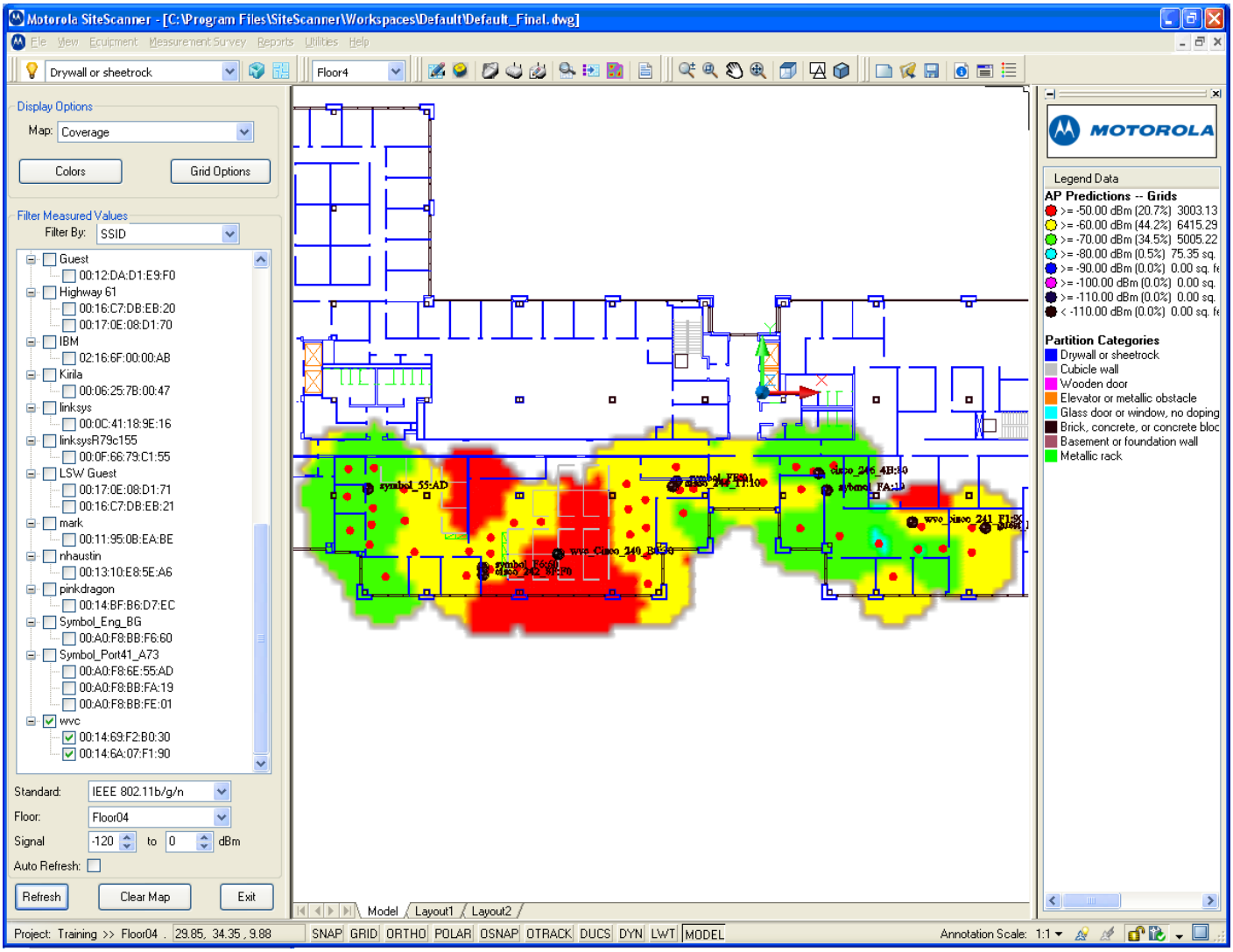
Visualizing Your Measurement Data

Step 1: Select the **Measurement Survey** menu > **Visualize Survey Data** to bring up the heat map visualizations. If a **Warning** dialog box pops up, click **OK** and proceed. The **Display Options** window pane will appear to the left of the drawing window.

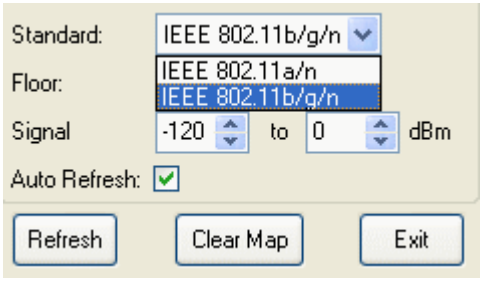


Step 2: You should now see a heat map being displayed in the drawing window. To change the type of heat map being displayed, click on the pull down menu next to **Map** and choose from the list. For an explanation of what the different heat map visualizations mean, please refer to **Visualizing Survey Data** in **Chapter 3 – Measurement Surveys** in the **SiteScanner User Manual**.

> **IMPORTANT NOTE:** If the Heat maps do not appear, the two possible reasons are 1) you are trying to visualize for the wrong **Standard** (a/n or b/g/n) or 2) no APs were found on the **Standard** you were scanning for.



Step 3: If you took measurements on the 802.11a/n standard in addition to 802.11b/g/n, click on the pull down tab next to **Standard** and select **802.11a/n**. The Heat map visualizations for the 802.11a/n standard should now appear.



Step 4: Click **Exit** to close the **Display Options** window pane.

What's New in SiteScanner 13.x

Version 13.1

- This release supports the RF modeling for the following Access points:
  - AP8132
  - AP7161
  - AP6521
  - AP6522
  - AP621
  - AP622
- The support for RF Design & Planning Software Suite is moved from www.onepointwireless.com/rfdesign to http://support.symbol.com/support/product/RFDesignandPlanning.html.
- Many external antennas are also supported along with the bug-fixes. Please refer to Release Notes for more details.

Version 13.0

Enhancements

General Improvements

- Added a product Start Page to provide up-to-date information on product announcements, enable quick access to common operations, and simplify the product licensing process.
- Added a modeless, general use building modeling panel for quick access to building modeling tools and options
- Added a quick-access visibility toolbar
- Added a toolbar for changing the current floor
- Updated menu layout to improve usability
- Added support for blended-color grid visualizations (this is now the default view)
- Added support for bitmap-based grid visualizations
- All drawing data can now be saved into a single-file format, ".spz", for easy transfer between systems and / or upload to an ADSP server

Building Modeling

- Added support for undo / redo of building modeling operations
- Added the ability to cut / copy / paste building entities across floors
- Added RF-Intelligent detection of wall overlap to increase future prediction accuracy during building modeling process
- Improved right-click context menu options for quick access to building formatting options
- Added support for entity selection using a polygonal boundary
- Added support for rotating entities clockwise / counter-clockwise in 90 degree increments
- Added support for rotating entities counter-clockwise by an arbitrary angle
- Improved the workflow for changing the height of partitions
- Added the ability to lift partitions above the floor
- Improved the workflow for changing the material type of a partition
- Improved the workflow for aligning one floor with respect to the rest of the building
- Improved the workflow for drawing walls
- Improved the workflow for drawing rooms
- Added the ability to draw an arc-based wall
- Improved the workflow for drawing ceiling regions
- Added the ability to free-form erase partitions
- Added the ability to erase regions of partitions or ceiling within a polygonal boundary
- Added the ability to insert a doorway into existing partitions
- Added the ability to insert new partitions into existing partitions (e.g., inserting a length of glass for a window into existing brick)
- Improved the workflow for inserting a background image
- Added a modeless list of unformatted layers in the drawing for quick access to standard processing / conversion features
- Improved workflow for changing the visibility of entire floors
- Improved workflow for adding / deleting floors

- Added the ability to create a copy of all building data on a floor
- Improved workflow for changing the order of the building floor stack
- Improved workflow for adjusting the free space path loss with respect to a suggested WLAN planning guide
- Added the ability to easily scale the attenuation of partition types based on the number of lines representing a wall in the drawing
- Added the ability to edit the color of ceiling regions
- Improved the workflow for changing the visibility of individual partition types
- Improved the workflow for changing the visibility of equipment, predictions, measurements, and other drawing data
- Improved the workflow for changing the background image fade
- Added the ability to change the visible thickness of partition types based on attenuation or type

Equipment

- APs can now be configured as dual-mode, AP / Sensor, devices (e.g., the Tri-Radio AP7131N)
- Full support for all device templates supported for management by ADSP
- Sensors can now be moved across floors
- The edit sensor dialog now displays the device model
- The edit sensor dialog now displays the list of air standards supported by the device

Measurements

- The WLAN survey log file format has been updated. Survey files now have the extension, ".mlz"
- Improved the in-survey scalability of WLAN surveys for large numbers of measurement locations
- GPS enabled WLAN surveys are now supported

Licensing

- Improved workflow for product licensing
- License server monitor is now a standalone application.

Critical Fixes

- Fixed crash that occurred when the building wizard is opened while the measurement visualization panel is active
- Fixed a crash that occurred if the replace button is clicked when a sensor is selected within the BOM summary dialog
- Fixed a bug where the application would hang when starting a SiteSpy server on Windows Vista
- Fixed a bug where specific channel configurations involving 802.11a/n channels 34, 38, 42, and 46 could not be scanned with the USB WLAN driver

General Fixes

Building Modeling

- A default Floor1 is now added to all drawings
- The drawing legend is now automatically available in all drawings
- Corrected meters / feet conversions in the Prune Overlapping Partitions dialog
- Fixed a bug where changing the set of drawing partition types to use the same types from the global partition library was not updating correctly

Equipment

- Equipment markers are no longer removed during pre-processing of the drawing for building formatting

Measurements

- Measurement data is now correctly scaled along with the result of the drawing within the existing scale drawing workflow
- Cancel button no longer functions the same as the OK button in the Anritsu communication configuration dialog
- Fixed a bug where the displayed legend for a throughput graphical marker view was incorrect in a certain workflow

Miscellaneous

- Measurement data no longer disappears from view when opening a drawing in SiteScanner

- Fixed a bug where any device imported from ADSP was listed as a new device in the import log regardless of whether or not it was already in the drawing

Known Issues Related to SiteScanner 13.x

- **Compatibility with previous Motorola PC-based software versions:** Note that earlier versions of SiteScanner cannot open drawings created with version 12.2 or higher.
- When visualizing 802.11n performance for 40MHz channels it may be necessary to configure the color scheme for your visualization to include higher data rates than the default 130Mbps. A suggested scheme has already been provided for this. To assign the **Peak Data Rate (up to 300Mbps)** scheme:

    1. Open your drawing
    2. Select **Utilities->Edit Color Schemes...** from the menu
    3. Select the data rate display type you would like to change from the **Color Scheme Assignment** list (Contour Data Rate, Grid Data Rate, etc.)
    4. Click the Edit button in **the Color Scheme Assignment** section of the dialog
    5. Select the Peak Data Rate (up to 300Mbps) color scheme

- **Virtual Environments Not Supported:** SiteScanner currently is not supported on third-party virtual environments such as Citrix or VMWare. SiteScanner will only operate in a native operating system environment.
- **Some Unicode Characters will not display correctly** when viewed in a 3D shaded mode.
- **Conflict with TrendMicro firewall:** TrendMicro firewall must be disabled before taking measurements in RF Monitoring mode with the custom driver to avoid possible system crashes. The following steps can be taken to disable the firewall:

    6. Go to Start -> Run -> services.msc
    7. Double click the service named OfficeScanNT Personal firewall
    8. In the dialog that appears change the Startup type to Disabled, press Stop and click Ok
    9. Go to Start -> Control Panel -> Network Connections
    10. Right click the Motorola measurements adapter and select Properties
    11. In the dialog that appears uncheck the Trend Micro Common Firewall Driver in the list of available network components and press OK

- **Installation may fail on some HP PCs**. A warning message regarding the software MSXML is given during the installation failure. If this occurs, please contact Motorola Wireless Software Support and a fix will be promptly supplied.
- **Installing the Motorola WLAN driver on a PC** with the AirPCapN driver installed first may cause the PC to crash.
- **Reports sometimes fail to generate when using custom grid boundary regions**. When running the Utilities > Reports command, if "Select Region" from the Boundary tab is used to define a custom region then in some random cases the report may fail to generate successfully. It is recommended that users select "Entire Region" in this dialog.

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For additional support contact options visit: http://www.motorola.com/Business/US-EN/Support/Support+Contacts