



**GenWatch3®**  
**GW\_ATIA Module**  
**Software Version 2.23.5**  
**Module Book**

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***GenWatch<sub>3</sub>***

**600-2.23.5-D.1**  
**10/31/2023**



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Refer to the *Troubleshooting & Support* section of the GenWatch3 Manual Shell (Book 600-2.23.5-AA.1) for complete support and contact information.

## Document History

Revision	Description	Author
2.0.2	Initial Release	JAW
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2.0.4	Described new <i>Source</i> option and updated screenshots	JAW
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2.0.4	Added two thumbnail screenshots to show options available when GenGET or Zone Controller are selected.	KIH
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2.14	Revisions Before Release	JAW
2.14	Added Ignored Conventional Site Activity section	JAW
2.15	Revisions Before Release	REB
2.16	Revisions Before Release	JPS

## Table of Contents

<i>Trademarks</i> .....	3
<i>The Genesis Group Trademark Information</i> .....	3
<i>Copyright</i> .....	3
<i>Disclaimer</i> .....	3
<i>License</i> .....	3
<i>Support</i> .....	3
DOCUMENT HISTORY .....	4
<b>TABLE OF CONTENTS</b> .....	<b>5</b>
<b>ABOUT THIS MANUAL</b> .....	<b>7</b>
GOALS .....	7
WHO SHOULD READ THIS MANUAL? .....	7
HOW THIS MANUAL IS ORGANIZED .....	7
<b>CHAPTER 1 OVERVIEW</b> .....	<b>9</b>
WHAT IS THE GW_ATIA MODULE? .....	9
<b>CHAPTER 2 MANAGING CONNECTIONS</b> .....	<b>11</b>
GW_ATIA CONNECTIONS .....	11
<i>Adding a Connection</i> .....	12
<i>Updating a Connection</i> .....	12
<i>Deleting a connection</i> .....	12
CONNECTION PROPERTIES .....	13
<i>Connection Settings</i> .....	14
<i>System Information</i> .....	14
<i>Roaming Information</i> .....	15
<i>Ignored Conventional Site Activity</i> .....	15
<b>CHAPTER 3 FILTERING ATIA DATA</b> .....	<b>17</b>
WHAT ARE CONNECTION FILTERS? .....	17
WHY WOULD I CREATE CONNECTION FILTERS? .....	17
LOADING THE ADVANCED OPTIONS SCREEN .....	18
CONNECTION FILTER OPTIONS .....	19
<i>More on Raw Data Files</i> .....	19
Changing the Raw Data File Directory .....	20



### Goals

This manual provides instructions on creating and managing GW\_ATIA connections. If you have already read the ATIA Quickstart Guide, then you are familiar with the high-level functions of the GW\_ATIA module. This document will provide further detail on the setup and maintenance of GW\_ATIA connections.

### Who Should Read This Manual?



This manual is intended for an audience of Motorola system administrators. In-depth knowledge of your Motorola system is required to complete many of the steps in this manual.

### How This Manual Is Organized

This manual is organized as follows:

- **Overview:** Describes the GW\_ATIA module and its role in the GenWatch3 solution.
- **Managing Connections:** Describes how to create and manage GW\_ATIA connections.
- **Filtering ATIA Data:** Describes how to create a packet filter for an ATIA connection.

This manual contains the following images, used to indicate that a segment of text requires special attention:

-  **Additional Information:** Additional information is used to indicate shortcuts or tips.
-  **Warning:** Warnings are used to indicate possible problem areas, such as a risk of data loss, or incorrect/unexpected functionality.





This chapter defines the GW\_ATIA module and its role in the GenWatch3 product.

This chapter contains the following sections:

- **What is the GW\_ATIA Module?:** Defines the GW\_ATIA module and its role in the GenWatch3 solution.

### ***What is the GW\_ATIA Module?***

The GW\_ATIA module receives and decodes packets from one or more packet sources. Packet sources include:

- GenGET Data Readers
- GenGET Data Processors
- Zone Controller ATIA ports

GenGET Data Readers listen to the ATIA port of an Astro P25 or Dimetra Motorola trunked radio system. Each connection provides ATIA data from a Motorola ASTRO Core.

Each GenGET Data Reader or Data Processor is accessed via a GenWatch3 GW\_ATIA connection. The GW\_ATIA graphical user interface GUI allows you to manage each GW\_ATIA connection. The number of connections allowed within the GW\_ATIA screen is restricted by your GenWatch3 license.

GW\_ATIA can also bypass the GenGET layer and connect directly to the ATIA port of the Zone Controller. However, GenWatch3 does not support ATIA archiving for reporting, so in most cases the GenGET layer is suggested.






This chapter gives instructions on how to manage GW\_ATIA connections.

This chapter contains the following sections:

- **GW\_ATIA Connections:** Describes GW\_ATIA connections.
- **Connection Properties:** Detailed description of the GW\_ATIA connection properties.

### GW\_ATIA Connections

Each connection shown in the **Connections** list, on the left side of the GW\_ATIA GUI (graphical user interface), represents a connection to a GenGET Data Reader/Processor or the Zone Controller's ATIA port. Connections receive ATIA packets via TCP/IP. The status of each connection is represented by a radio icon that appears in the Windows system tray (the bottom right of your desktop). The icon has the following statuses:

-  : Connection status unknown (white)
-  : Connection has received packets within the last 5 seconds (green)
-  : Connection has not received packets within the last 5 seconds (blinks between red and white background))



The ATIA stream does not send a continual stream of packets. It only sends packets when events/activities occur on the system. As such, a red light does not necessarily mean that the ATIA connection is offline or that the link is down. It could just mean that there has not been any ATIA activity for at least the last 5 seconds.

## Adding a Connection

To receive packets from an ATIA packet source, you must add a GW\_ATIA connection. To add a GW\_ATIA connection, take the following steps:

1. Click the **Add** button. This will create a new entry in the **Connections** list. The new entry will be named something like 'NewConnection1.' This connection will contain defaults for all its values.
2. Select (click on) the new connection in the **Connections** list. This will show the properties of this connection.
3. Change the connection properties to the desired values.
4. Click the **Update** button.

## Updating a Connection

In most cases, after you configure a GW\_ATIA connection, you will not need to update it. However, you can update the GW\_ATIA connection properties in case you make a data entry error, or if the settings change for some reason. To update an existing connection, take the following steps:

1. In the **Connections** list, select (click on) the connection that you wish to update. This will show the properties of this connection.
2. Update the properties that you wish to change.
3. Click the **Update** button.

## Deleting a connection

In most cases, after you add a GW\_ATIA connection, you will not need to delete it. However, you can delete a GW\_ATIA connection in case you no longer want to monitor the connection's packet source. To delete an existing connection, take the following steps:

1. In the **Connections** list, select (click on) the connection that you wish to delete. This will show the properties of this connection.
2. Click the **Delete** button. This will result in a confirmation prompt.
3. Click **Yes**.



When the maximum number of ATIA connections has been reached the Add button will be disabled and information showing the current number of connections with the number of connections that are licensed.

## Connection Properties

Each GW\_ATIA connection represents a set of properties. These properties are defined in detail below.

The screenshot shows the GW\_ATIA (admin) window with the 'Connections' list on the left containing 'ATIA01'. The 'Connection Settings' panel on the right is configured for a GenGET source. The settings are as follows:

Field	Value
Connection Alias	ATIA01
Source	GenGET
Host Name / IP	127.0.0.1
Pipe Name	Zone1
Dimetra?	<input checked="" type="checkbox"/>
Include Conventional Sites in Statistics?	<input checked="" type="checkbox"/>
Start Connection?	<input checked="" type="checkbox"/>
<b>System Information</b>	
WACN ID	00000
System ID	1404

At the bottom of the window, it says 'Press F1 for Help' and 'Connected to Module: Yes'.

**Figure 2.1** – GW\_ATIA Screen for GenGET Source

The screenshot shows the GW\_ATIA (admin) window with the 'Connections' list on the left containing 'ATIA01'. The 'Connection Settings' panel on the right is configured for a Zone Controller source. The settings are as follows:

Field	Value
Connection Alias	ATIA01
Source	Zone Controller
ATIA Port	8700
Dimetra?	<input checked="" type="checkbox"/>
Include Conventional Sites in Statistics?	<input checked="" type="checkbox"/>
Start Connection?	<input checked="" type="checkbox"/>
<b>System Information</b>	
WACN ID	00000
System ID	1404

At the bottom of the window, it says 'Press F1 for Help' and 'Connected to Module: Yes'.

**Figure 2.2** – GW\_ATIA Screen for Zone Controller Source

## Connection Settings

- **Connection Alias:** A name that describes this connection.
- **Source:** One of the following options:
  - **GenGET:** Select this option to connect to a GenGET Data Reader or Data Processor.
  - **Zone Controller:** Select this option to connect directly to the Zone Controller's ATIA port.
- **Host Name / IP \*:** Host Name or IP Address of the machine running the GenGET Data Reader or Data Processor.
- **Pipe Name \*:** The pipe name assigned to the GenGET Data Reader or Data Processor during the GenGET setup.



The default pipe name will usually be ZoneX, where 'X' indicates a RFSS ID set up in the GenGET setup utility. For example, a GW\_ATIA connection to RFSS 1 would use a pipe name of 'Zone1'. Confirm the **HostName / IP** and **Pipe Name** values with the values configured in your GenGET setup.

- **ATIA Port \*\*:** UDP port number of the Zone Controller's ATIA port.
- **Include Conventional Sites in Statistics?:** If checked, GenWatch3 statistics will include connection events and airtime usage sourced on ATIA conventional sites (2000-2999). If unchecked, GenWatch3 statistics will ignore events and airtime usage on ATIA conventional sites.
- **Dimetra?:** If checked, packets will be decoded as expected on a Dimetra system.
- **Start Connection?:** If checked, then the GW\_ATIA module will start this connection when the GenWatch service is started. If you want to retain the settings for a connection, but do not want to receive packets from the connection, uncheck this option. In most cases, this option should be checked.

\* - Only available for GenGET source connections (see Figure 2.1)

\*\* - Only available for Zone Controller source connections (see Figure 2.2)

## System Information

- **WACN ID:** 5-digit hexadecimal WACN ID assigned to your infrastructure by Motorola. (These values are limited to the WACN IDs in your license.)
- **System ID:** 4-digit, hexadecimal system ID assigned to your infrastructure by Motorola. If you have a 5-digit Motorola system ID, use only the last 4 digits. (These values are limited to the systems in your license under the selected WACN ID.)
- **RFSS ID:** Numeric RFSS ID (1-64). This is the ID of the Zone controller being connected to.

## Roaming Information

As of ATIA 7.13, home system information is included for activity involving radio IDs and talkgroups that have roamed onto the system. In order to prevent ambiguity between these roaming (foreign) IDs on the home system, GenWatch3 fully qualifies these IDs by their home (fixed) WACN and System IDs. Foreign radio IDs and talkgroups show a display ID in the format <WWWW><SSS><00000000> where:

<WWWW> = Hexadecimal Fixed WACN ID

<SSS> = Hexadecimal Fixed system ID

<00000000> = Fixed radio or talkgroup ID padded out to 8 places.

In Alias, these fully qualified radio IDs and talkgroups are dynamically added under the local WACN and system. This allows statistical tracking of the airtime used by these resources.

The display ID described above is used throughout GenWatch3. However, it is important to note how GenWatch3 derives the decimal value of a foreign radio ID or talkgroup (shows as the ID or Talkgroup in the packet details of Activity). The decimal value is derived by the following formula:

$\text{<Fixed WACN ID in decimal> * } 2^{36} + \text{<Fixed System ID in decimal> * } 2^{24} + \text{<Fixed Radio or Talkgroup ID>}$

For Reference:  $2^{36} = 68,719,476,736$  and  $2^{24} = 1,6777,216$

## Ignored Conventional Site Activity

ATIA conventional site activity is activity with a *Conventional RF Site ID* value. *Conventional RF Site ID* values between 2000 and 2999 are considered ignored conventional RF site ID values.

ATIA activity sourced on a site in the ignored conventional RF site ID values range is not processed in the following GenWatch3 statistics modules:

- GW\_Affiliation
- GW\_KPI (Radios Count and Group Count)
- GW\_SystemSummary
- GW\_SysVista

ATIA activity sourced on a site in the ignored conventional RF site ID values range will not result in an update on information in Alias' RES\_IDs table for the sourcing radio.





This chapter gives instructions on how to manage GW\_ATIA connection filters.

This chapter contains the following sections:

- **What are Connection Filters?:** Describes the GW\_ATIA connection filter.
- **Why Would I Create Connection Filters?:** Explains how connection filters can be used to offload monitoring and reporting to agencies.
- **Loading the Advanced Options Screen:** Instructions on how to load the GW\_ATIA Advanced Options screen.
- **Connection Filter Options:** Instructions on managing the GW\_ATIA Connection Filter.

### *What are Connection Filters?*

Each GW\_ATIA connection allows packet filtering based on groups assigned to a GenWatch3 user. Information filtered out at this level is not passed to the other GenWatch3 modules. If a filter is set up, then only packets that reference groups (multigroups and/or talkgroups) selected in the user's groups or radio IDs that reference this group as their Default Group are included.



**NOTE:** Default groups are assigned to radio IDs in the GW\_Alias module GUI.

This means that packets such as system status and diagnostic are not passed on to the rest of the modules, because these packets do not reference groups or radio IDs.



If you wish to filter at this level, it is best to create a new GenWatch3 user that is used only as the Filter User.

### *Why Would I Create Connection Filters?*

Connection filters are designed to allow system owners to offload the GenWatch3 monitoring and reporting capabilities onto agencies. In these installations, system owners would install and set up GenWatch3. During the setup an 'Agency A' GenWatch3 user is defined, containing only the groups available to that agency. This GenWatch3 user is used for the connection filter.

In the end, only the system owners know the logins that would allow changes to the GenWatch3 users. The system owners also create various GenWatch3 users to be used by Agency A. Agency A is now allowed to monitor and report on only the groups and radio IDs used by their agency.

## Loading the Advanced Options Screen

To load the **Advanced Options** screen, take the following steps:

1. Load the GW\_ATIA GUI.
2. In the **Connections** list, click on a connection. This will show the properties of this connection and enable the **Options...** button (bottom left of the screen). You must be logged in as a user whose role contains the **SetupFilters** privilege for the GW\_ATIA module in order to see the **Options...** button.
3. Click the **Options...** button: This will show the **Advanced Options** screen.



**Figure 3.1** – Advanced Options Screen



In addition to this filter, there is also an infrastructure filter. The infrastructure filter limits what you receive based on your license. The difference is that the infrastructure filter will pass individual activity (private and interconnect calls) through, while filters defined here (via an attachment list associated with a user) will not.

## Connection Filter Options

Each GW\_ATIA connection has a single Connection Filter. The list below describes the connection filter options:

- **No Filter:** If selected, then all packets will be passed to the GenWatch3 modules, regardless of radio ID or group (this option is only available if you are not licensed for a fixed number of groups).
- **Filter:** If selected, GenWatch3 will only process packets with a group or radio ID matching ones defined in the Filter User's groups.
- **Filter User:** User whose Group Filter settings will be used to filter ATIA packets. When you select a Filter User, the tree below the Filter User shows the group and radio IDs that are allowed by the selected user.
- **License Threshold:** Two labels at the bottom of the Connection Filters screen indicate how many groups you are licensed for and how many groups the selected user includes. If you are licensed for a fixed number of groups, you cannot select a Filter User whose Group Filter setting includes more groups than are included in your license.
- **Raw Data Archive Option:** This option allows you to choose how long the GenWatch3 raw data files remain on your GenWatch3 computer.
  - **Do Not Archive:** GenWatch3 should not archive raw data files.
  - **Archive for 1 Week:** GenWatch3 should archive one week's worth of raw data files. (default)
  - **Archive for 2 Weeks:** GenWatch3 should archive two weeks' worth of raw data files.
  - **Archive for 5 Weeks:** GenWatch3 should archive five weeks' worth of raw data files.

## More on Raw Data Files

GenWatch3 stores raw data files on your GenWatch3 computer. Genesis and Motorola support personnel use these files to help diagnose control channel decode issues you may have with GenWatch3. By default, GenWatch3 will keep one week (400 MB-4 GB depending on RFSS activity) of raw data files per GW\_ATIA connection.

These raw data files are stored in the following directory:

*ProgramData\Genesis\GenWatch3\RawData\ATIA\<SystemId>\<RFSSId>*

In the default GenWatch3 installation directory, if the System ID is 1404 (5124 in decimal), the RFSS Id is 1, the GenWatch3 raw data directory is:

*C:\ProgramData\Genesis\GenWatch3\RawData\ATIA\5124\1*

The files in this directory are in the following format:

*GW3\_<year><month><day>\_<hour>.RAW*

The raw data file for the 3:00pm hour on 3/24/2023 would be:

*GW3\_20230324\_15.RAW*

### Changing the Raw Data File Directory

Changing the GenWatch3 raw data directory is usually not recommended. However, if the default location might not have enough disk space to store the raw data, you may wish to move this archive operation to another drive. For instructions on how to change the raw data file directory, see the *GenWatch3 Config Files* section of *Chapter 3 - GenWatch3 Service* in the *GenWatch3 Core Manual*.



**Warning:** Make sure you only change the RawDataFilePath setting. Changing other GenWatch3.config settings can cause your computer to become unstable or even unusable. When in doubt, ask for assistance from your IT department or Genesis support.