5620 SAM

Drivers for 9500 MPT-*x* Devices

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Contents

1 Introduction

The *5620 SAM Drivers for 9500 MPT-x Devices* document provides general information for 5620 SAM drivers, including features, installation steps, discovery and management instructions, compatibility information, and known issues. Drivers extend 5620 SAM management of MPT-*x* devices to include radio port properties, radio link inventory, alarms and statistics management.

1.1 About this document

This document provides common installation information in chapter 2, followed by separate chapters for each supported driver.

1.2 Obtaining technical support

Technical support engineers are available to assist you 24 hours a day, 7 days a week.
For the list of regional contact telephone and fax numbers, visit the following URL and click on the Alcatel-Lucent Global Support link: http://support.alcatel-lucent.com.

2 Installation

This section describes the steps required to install and deploy a driver. The device may or may not be already managed as a GNE by the 5620 SAM. The following installation procedures cover both managed and newly discovered devices. See the procedure "To prepare a GNE for 5620 SAM management" in the *5620 SAM User Guide* for more information.

NOTE: Users of these instructions are assumed to be familiar with 5620 SAM operation and administration. Users who are uncertain about the implications of executing these procedures should contact Alcatel-Lucent Support for clarification before proceeding.

2.1 Installation instructions using the 5620 SAM GUI

Perform the following steps if you are installing the driver using the 5620 SAM GUI.

Note: If the 5620 SAM server is configured with auxiliary servers to collect statistics, the driver must be manually installed on each auxiliary server. See section 2.2 *Installation instructions using the server* to complete the driver installation for each auxiliary server.

1. Choose Administration→Generic NE Manager from the 5620 SAM main menu. The Generic NE Manager form opens.
2. Choose Generic NE Driver (Generic NE) from the drop-down menu and click Search. A list of already installed NE drivers appears.
3. Perform one of the following:
   a) To view the properties of a driver, select a driver and click Properties. The Properties form opens.
   b) To install a driver, click Install. The Specify file to install form opens. Go to step 4.
4. Locate the appropriate .jar file and click Install Driver. The Install Driver window opens and displays the product name, version number, and a description of the driver.

   If applicable, you can click on the View Readme Content link to open a Release Memo with more information about the driver.

   Note: If the selected driver does not match the minimum 5620 SAM version required, an error message appears. Click Cancel and refer to the originator of the driver.
5. Click Continue. The Install Driver window indicates if the driver was successfully installed.
6. Click Close.

2.2 Installation instructions using the server

Perform the following steps if you are installing the driver using the server.

1. Obtain the driver file from ALED.
2. Save the driver to the primary main server by completing the following steps:
   i. Log on to the main server station as the samadmin user.
   ii. Navigate to the /opt/5620sam/server directory.
   iii. Create the following directory structure below the current directory:
   install_descriptors/descriptors/*drivername*
   where *drivername* is the name of the driver, for example, MPTGS
   iv. Copy the driver to the created directory.
3. Save the driver to all auxiliary servers by completing the following steps:
   i. Log on to the auxiliary server station as the samadmin user.
   ii. Navigate to the /opt/5620sam/auxserver directory.
   iii. Create the following directory structure below the current directory:
   install_descriptors/descriptors/*drivername*
   where *drivername* is the name of the driver, for example, MPTGS
   iv. Copy the driver to the created directory.
4. Open a console window on the main server.
5. Navigate to the /opt/5620sam/server/nms/bin directory.
6. Enter the following:
   ```
   bash$ ./nmsserver.bash read_config ↵
   ```
   Note: The server loads and activates the driver. In a redundant 5620 SAM deployment, the primary main server copies the driver to the standby main server, if the standby server is active. If any server is not active, you must install the driver separately, using steps 2 to 6, when commissioning that server. The standby driver is activated only when the standby main server assumes the primary role after a server activity switch.
7. Close the console window.

3 MSS-1c

3.1 Compatibility

The MSS-1c driver extends 5620 SAM management of this device to include its radio port properties, radio link inventory, and statistics. The driver is installed with the name MSS1c.

Driver version	5620 SAM				MSS-1c Release
	12.0 R5-P1	12.0 R7	13.0 R1	13.0 R2	
MSS1c 1.0.0	No	No	Yes	Yes	5.0, 5.2

Please note that driver compatibility is not tracked in the *5620 SAM Network Element Compatibility Guide.*

3.2 Feature summary

The following table lists functionality added by the MSS-1c driver.

Feature	Description
MSS-1c 1.0.0	
Radio port properties	The driver extends the 5620 SAM management of the MSS-1c device to include its radio port interfaces. With the installation of the driver, a new tab called "Radio" is added to the Generic NE Interface properties form, allowing 5620 SAM operators to view the following generic radio port property of the device: • Current Tx Capacity (supported only when Adaptive Modulation is enabled) This property is also available to the 5620 SAM-O under the following package and class *radioequipment.RadioPortSpecifics.* The *5620 SAM Parameter Search Tool*, found in the on-product help system, allows users to search and view package and class information.
Radio link inventory	The driver allows 5620 SAM operators to create radio links with endpoints on MSS-1c devices. Operators can also view all radio links terminating on this device by drilling down from the network topology map or network Equipment Tree representations of the MSS-1c device. Additionally, radio links associated with the MSS-1c device are now included in the inventory list accessed through the Equipment Manager (Manage→Equipment→Equipment from the 5620 SAM main menu, then choose Radio link (Network) from the object type drop-down). Radio link inventory information is also available to the 5620 SAM-O through the installation of the driver, under the following package and class *netw.RadioPhysicalLink*. The *5620 SAM Parameter Search Tool*, found in the on-product help system, allows users to search and view package and class information.
Performance management	The driver extends 5620 SAM performance management to the MSS-1c device so that statistics related to the GNE can be viewed through the 5620 SAM GUI. See section 3.5. Statistics are also available to the 5620 SAM-O; see the *5620 SAM Statistics Management Guide*.

Alarm resynchronization	The 5620 SAM detects lost traps and triggers the resynchronization of the NE current alarm list.

3.3 Closed issues

As this is version 1.0.0 of the driver, there are no closed issues to report.

3.4 Outstanding issues

This section lists current open problems that customers must be aware of before deploying the MSS-1c driver into a live network or lab environment.

PTS number	Description	Workaround	Version Introduced
SAMPTS-152461	Current TX capacity is not updated when Reference Modulation is changed	Resync all MIBs	MSS1c 1.0.0

3.5 Discovery and management

This section describes how to discover and use the MSS-1c in the 5620 SAM after driver installation.

Post-installation configuration instructions

The following instructions assist users by providing information specific to MSS-1c device configuration and discovery. The *5620 SAM User Guide* chapter "Device commissioning and management" should be consulted for full procedural details.

1. Set the 5620 SAM as the destination for trap forwarding by accessing the MSS-1c device via the MCT software (user=Default_Admin; password=9500MPR_alu) and populating the IP Address field for the SNMP Manager with the 5620 SAM server IP address. Use the default values for other fields. See the *MSS-1c User Manual* for more information.
2. Configure a generic NE profile for the device on the 5620 SAM:
   i. Choose Administration→Generic NE Manager from the 5620 SAM main menu. The Generic NE Manager form opens.
   ii. Click on the Create button and choose Create Generic NE Profile. The Generic NE Profile (Create) form opens.
   iii. Configure the parameters as shown in the table below (parameters with no value specified may be left blank):

Parameter	Value
ID	
Auto-assign ID	
Generic NE Type	MSS-1c
Generic NE Category	Wireless

Sys Object ID	.1.3.6.1.4.1.637.54.1.10.90.8
Description	E Band
Default Element Manager URL	N/A
Default Alternate Element Manager	N/A
Chassis MAC Object	
CLI Supported	

3. Associate the MSS-1c driver with the profile:
   i. Click Select and choose the MSS-1c driver that was copied to the 5620 SAM in procedure 2.1 or 2.2.
   ii. Click on the Translators tab and click Add. A search form opens.
   iii. Click Search to list the translators.
   iv. Select all of the translators and click OK.
4. Click on the Interface Types tab and import all the available listed interfaces.
5. Click Apply.
6. Map the MSS-1c SNMP traps to user-defined 5620 SAM alarms. See the *5620 SAM User Guide* for the procedure to create a GNE alarm catalog and associate it with a GNE profile.
7. Use the 5620 SAM to create a dedicated transform function for the alarm catalog created in step 6. See the *5620 SAM User Guide* for the procedure to create a transform function.
8. Use the 5620 SAM to create an SNMPv2c mediation policy that specifies “private” as the Read/Write Community String value. See the *5620 SAM User Guide* for information about creating mediation policies.
9. Use the 5620 SAM to create an SNMPv2c mediation policy that specifies “SNMP-trap” as the Trap Community String value. See the *5620 SAM User Guide* for information about creating mediation policies.
10. Use the 5620 SAM to configure a discovery rule for the MSS-1c that specifies the following mediation policies; see the *5620 SAM User Guide* for information about creating discovery rules:
    - Read Access Mediation Policy and Write Access Mediation Policy - mediation policy created in step 8.
    - Trap Access Mediation Policy - mediation policy created in step 9.
11. Click on the Statistics tab of the MSS-1c interface properties form to view statistics as required. The following counters are supported on Radio interface 9. The availability of historical data requires the activation of Performance Monitoring. See the *MSS-1c User Manual* for more information about PM activation.

Note: Alcatel-Lucent recommends scheduling only History Data Stats and retrieving Current Data Stats on-demand, if required. History Data Stats - 15 minutes is the same as Current Data Stats collected at that 15 minute interval, therefore, it is redundant to schedule Current Data Stats. Scheduling Current Data Stats may result in an error message. Scheduling Interface Additional Stats (Generic NE) is not supported and may result in stopping the collection of other statistics.

Interface Type	Statistic Type
Radio	Ethernet Aggregate Tx Stats
	Ethernet Aggregate Per Queue Stats
	Adaptive Modulation Current Data Stats - 15 min
	Adaptive Modulation Current Data Stats – 24 Hr
	Hop Current Data Stats – 15 min
	Hop Current Data Stats – 24 Hr
	Radio Analog Statistics
Note: On Ethernet interfaces with index 501101 (Radio) and 70001 – 70004 (USER 1 – USER 4), the genericnestats are also applicable.	

4 MPT-GM

4.1 Compatibility

The MPT-GM driver extends 5620 SAM management of this device to include its radio port properties, radio link inventory, and statistics. The driver is installed with the name MPTGM.

Driver version	5620 SAM				MPT-GM Release
	12.0 R5-P1	12.0 R7	13.0 R1	13.0 R2	
MPT-GM 1.0.0	No	Yes	Yes	Yes	1.0, 1.2

Please note that driver compatibility is not tracked in the *5620 SAM Network Element Compatibility Guide*.

4.2 Feature summary

The following table lists functionality added by the MPT-GM driver.

Feature	Description
MPT-GM 1.0.0	
Radio port properties	The driver extends the 5620 SAM management of the MPT-GM device to include its radio port interfaces. With the installation of the driver, a new tab called "Radio" is added to the Generic NE Interface properties form, allowing 5620 SAM operators to view the following generic radio port properties of the device: • ATPC Enabling • ATPC Max Tx Power • ATPC Low Power Threshold • Manual Local Tx Mute • Tx Frequency • MPT Shifter Value • Channel Spacing • Received Power Level • Transmitted Power Level • ATPC Control – Local Rx Power High These properties are also available to the 5620 SAM-O under the following package and class *radioequipment.RadioPortSpecifics*. The *5620 SAM Parameter Search Tool*, found in the on-product help system, allows users to search and view package and class information.

Radio link inventory	The driver allows 5620 SAM operators to create radio links with endpoints on MPT-GM devices. Operators can also view all radio links terminating on this device by drilling down from the network topology map or network Equipment Tree representations of the MPT-GM device. Additionally, radio links associated with the MPT-GM device are now included in the inventory list accessed through the Equipment Manager (Manage→Equipment→Equipment from the 5620 SAM main menu, then choose Radio link (Network) from the object type drop-down). Radio link inventory information is also available to the 5620 SAM-O through the installation of the driver, under the following package and class *netw.RadioPhysicalLink*. The *5620 SAM Parameter Search Tool*, found in the on-product help system, allows users to search and view package and class information.
Performance management	The driver extends 5620 SAM performance management to the MPT-GM device so that statistics related to the GNE can be viewed through the 5620 SAM GUI. See section 4.5. Statistics are also available to the 5620 SAM-O; see the *5620 SAM Statistics Management Guide*.

4.3 Closed issues

There are no closed issues to report.

4.4 Outstanding issues

This section lists current open problems that customers must be aware of before deploying the MPT-GM driver into a live network or lab environment.

PTS number	Description	Workaround	Version Introduced
SAMPTS-141742	Resync button on Radio tab has no effect	Right-click on the node and Resync All MIBs	MPT-GM 1.0.0
SAMPTS-146142	9500 GNE MPT-GM no RSL statistics being collected by the 5620 SAM from the node	Perform an on-demand collection using the 5620 SAM for the RSL statistics	MPT-GM 1.0.0
SAMPTS-146143	9500 GNE MPT-GM statistics Hop Historic 15Min and 24Hr not being collected by the 5620 SAM	Perform an on-demand collection using the 5620 SAM for the Hop Historic 15Min and 24Hr statistics	MPT-GM 1.0.0

4.5 Discovery and management

This section describes how to discover and use the MPT-GM in the 5620 SAM after driver installation.

Post-installation configuration instructions

The following instructions are provided to assist users by providing information specific to MPT-GM device configuration and discovery. The *5620 SAM User Guide* chapter "Device commissioning and management" should be consulted for full procedural details.

1. Set the 5620 SAM as the destination for trap forwarding by accessing the MPT-GM device via web browser (user=admin; password=admin) and populating the IP Address

field for the SNMP Manager with the 5620 SAM server IP address. Use the default values for other fields. See the *MPT-GM User Manual* for more information.

2. Configure a generic NE profile for the device on the 5620 SAM:
   i. Choose Administration→Generic NE Manager from the 5620 SAM main menu. The Generic NE Manager form opens.
   ii. Click on the Create button and choose Create Generic NE Profile. The Generic NE Profile (Create) form opens.
   iii. Configure the parameters as shown in the table below (parameters with no value specified may be left blank):

Parameter	Value
ID	
Auto-assign ID	
Generic NE Type	MPT-GM
Generic NE Category	Wireless
Sys Object ID	.1.3.6.1.4.1.3373.1103
Description	E Band
Default Element Manager URL	http:%IP%
Default Alternate Element Manager	N/A
Chassis MAC Object	
CLI Supported	

3. Associate the MPT-GM driver with the profile:
   i. Click Select and choose the MPT-GM driver that was copied to the 5620 SAM in procedure 2.1 or 2.2.
   ii. Click on the Translators tab and click Add. A search form opens.
   iii. Click Search to list the translators.
   iv. Select all of the translators and click OK.
4. Click on the Interface Types tab and import all the available listed interfaces.
5. Click Apply.
6. Map the MPT-GM SNMP traps to user-defined 5620 SAM alarms. See the *5620 SAM User Guide* for the procedure to create a GNE alarm catalog and associate it with a GNE profile.
7. Use the 5620 SAM to create a dedicated transform function for the alarm catalog created in step 6. See the *5620 SAM User Guide* for the procedure to create a transform function.
8. Use the 5620 SAM to create an SNMPv1 mediation policy that specifies “admin” as the Read Community String value. See the *5620 SAM User Guide* for information about creating mediation policies.

9. Use the 5620 SAM to create an SNMPv1 mediation policy that specifies “NMS5UX” as the Write/Trap Community String value. See the *5620 SAM User Guide* for information about creating mediation policies.

10. Use the 5620 SAM to configure a discovery rule for the MPT-GM that specifies the following mediation policies; see the *5620 SAM User Guide* for information about creating discovery rules:

    - Read Access Mediation Policy and Write Access Mediation Policy - mediation policy created in step 8.
    - Trap Access Mediation Policy - mediation policy created in step 9.

11. Perform configuration management tasks on an MPT-GM device:

    i. Right-click on the MPT-GM icon on the 5620 SAM topology map and choose Open URL.

    ii. Respond to the prompts (user=admin; password=admin). The device EMS opens to allow configuration.

12. Click on the Statistics tab of the MPT-GM interface properties form to view statistics as required. The following counters are supported on Radio interface 9. The availability of historical data requires the activation of Performance Monitoring. See the *MPT-GM User Manual* for more information about PM activation.

    Note: Alcatel-Lucent recommends scheduling only History Data Stats and retrieving Current Data Stats on-demand, if required. History Data Stats - 15 minutes is the same as Current Data Stats collected at that 15 minute interval, therefore, it is redundant to schedule Current Data Stats. Scheduling Current Data Stats may result in an error message. Scheduling Interface Additional Stats (Generic NE) is not supported and may result in stopping the collection of other statistics.

Interface Type	Statistic Type
Radio	Adaptive Modulation Current Data Stats - 15 min
	Adaptive Modulation Current Data Stats – 24 Hr
	Adaptive Modulation History Data Stats - 15 min
	Adaptive Modulation History Data Stats – 24 Hr
	Hop Current Data Stats – 15 min
	Hop Current Data Stats – 24 Hr
	Hop History Data Stats - 15 min
	Hop History Data Stats - 24 Hr
	RSL Hop Current Data stats – 15 min
	RSL Hop Current Data stats – 24 Hr
	RSL Hop History Data Stats - 15 min
	RSL Hop History Data Stats - 24 Hr

	TSL Hop Current Data Stats – 15 min
	TSL Hop Current Data Stats – 24 Hr
	TSL Hop History Data Stats - 15 min
	TSL Hop History Data Stats - 24 Hr
Note: On Ethernet interfaces with index 9 (Radio), 10 (LAN 1), and 6 (LAN 2), the genericnestats are also applicable.	

5 MPT-GS

5.1 Compatibility

The MPT-GS driver extends 5620 SAM management of this device to include its radio port properties, radio link inventory, and statistics. The driver is installed with the name MPTGS.

Driver Version	5620 SAM				MPT-GS Release
	12.0 R5-P1	12.0 R7	13.0 R1	13.0 R2	
MPT-GS 1.3.0	No	No	Yes	Yes	5.2, 6.0
MPT-GS 1.2.0	No	Yes	No	No	5.2, 6.0
MPT-GS 1.0.0	Yes	No	No	No	5.2, 6.0

Please note that driver compatibility is not tracked in the *5620 SAM Network Element Compatibility Guide*.

5.2 Feature summary

The following table lists functionality added by the MPT-GS driver.

Feature	Description
MPT-GS 1.3.0	
Radio port properties	The driver extends the 5620 SAM management of the MPT-GS device to include its radio port interfaces. With the installation of the driver, a new tab called "Radio" is added to the Generic NE Interface properties form, allowing 5620 SAM operators to view the following generic radio port properties of the device: • Channel Width (MHz) • TX Frequency (MHz) • Role • Mode • Modulation • Sub Channels • Repetitions • FEC Rate • Rx Link ID • Tx Link ID • Rx State • Tx State • RSSI (dBm) • CINR (dB) • Oper. Status • RF Temperature • Tx Mute • Tx Mute Timeout (sec) • Tx Power (dBm) These properties are also available to the 5620 SAM-O under the following package and class *radioequipment.RadioPortSpecifics.* The *5620 SAM Parameter Search Tool*, found in the on-product help system, allows users to search and view package and class information.

Radio link inventory	The driver allows 5620 SAM operators to create radio links with endpoints on MPT-GS devices. Operators can also view all radio links terminating on this device by drilling down from the network topology map or network Equipment Tree representations of the MPT-GS device. Additionally, radio links associated with the MPT-GS device are now included in the inventory list accessed through the Equipment Manager (Manage→Equipment→Equipment from the 5620 SAM main menu, then choose Radio link (Network) from the object type drop-down). Radio link inventory information is also available to the 5620 SAM-O through the installation of the driver, under the following package and class *netw.RadioPhysicalLink*. The *5620 SAM Parameter Search Tool*, found in the on-product help system, allows users to search and view package and class information.
Performance management	The driver extends 5620 SAM performance management to the MPT-GS device so that statistics related to the GNE can be viewed through the 5620 SAM GUI. See section 5.5. Statistics are also available to the 5620 SAM-O; see the *5620 SAM Statistics Management Guide*.
Alarm resynchronization	The 5620 SAM detects lost traps and triggers the resynchronization of the NE current alarm list.
MPT-GS 1.2.0	
Radio port properties	The driver extends the 5620 SAM management of the MPT-GS device to include its radio port interfaces. With the installation of the driver, a new tab called "Radio" is added to the Generic NE Interface properties form, allowing 5620 SAM operators to view the following generic radio port properties of the device: • Channel Width (MHz) • TX Frequency (MHz) • Role • Mode • Modulation • Sub Channels • Repetitions • FEC Rate • Rx Link ID • Tx Link ID • Rx State • Tx State • RSSI (dBm) • CINR (dB) • Oper. Status • RF Temperature • Tx Mute • Tx Mute Timeout (sec) • Tx Power (dBm) These properties are also available to the 5620 SAM-O under the following package and class *radioequipment.RadioPortSpecifics.* The *5620 SAM Parameter Search Tool*, found in the on-product help system, allows users to search and view package and class information.
Radio link inventory	The driver allows 5620 SAM operators to create radio links with endpoints on MPT-GS devices. Operators can also view all radio links terminating on this device by drilling down from the network topology map or network Equipment Tree representations of the MPT-GS device. Additionally, radio links associated with the MPT-GS device are now included in the inventory list accessed through the Equipment Manager (Manage→Equipment→Equipment from the 5620 SAM main menu, then choose Radio link (Network) from the object type drop-down). Radio link inventory information is also available to the 5620 SAM-O through the installation of the driver, under the following package and class *netw.RadioPhysicalLink*. The *5620 SAM Parameter Search Tool*, found in the on-product help system, allows users to search and view package and class information.

Performance management	The driver extends 5620 SAM performance management to the MPT-GS device so that statistics related to the GNE can be viewed through the 5620 SAM GUI. See section 5.5. Statistics are also available to the 5620 SAM-O; see the *5620 SAM Statistics Management Guide*.
MPT-GS 1.0.0	
Radio port properties	The driver extends the 5620 SAM management of the MPT-GS device to include its radio port attributes. With the installation of the driver, a new tab called "Radio" is added to the Generic NE Interface properties form, allowing 5620 SAM operators to view the following generic radio port properties of the device: Adaptive Modulation • Current Tx Modulation (QAM) RTPC • Current Tx Power (dBm) Tx Mute • Manual Local Tx Mute • Manual Local Tx Mute Timeout Frequency • Tx Frequency (KHz) Direction • Mode • Modulation Link Identifier Configuration • Expected Identifier • Sent Identifier Generic Radio Panel • Channel Width (MHz) • Operational Frequency (MHz) • Role • Number of Subchannels • Repetitions • FEC Rate (label @ UI to be updated) • Rx State • Tx State • Average RSSI (dBm) • Average CINR (dB) • Operational State • RF Temperature These properties are also available to the 5620 SAM-O under the following package and class *radioequipment.RadioPortSpecifics.* The *5620 SAM Parameter Search Tool*, found in the on-product help system, allows users to search and view package and class information.
Radio link inventory	The driver allows 5620 SAM operators to create radio links with endpoints on MPT-GS devices. Operators can also view all radio links terminating on this device by drilling down from the network topology map or network Equipment Tree representations of the MPT-GS device. Additionally, radio links associated with the MPT-GS device are now included in the inventory list accessed through the Equipment Manager (Manage→Equipment→Equipment from the 5620 SAM main menu, then choose Radio link (Network) from the object type drop-down). Radio link inventory information is also available to the 5620 SAM-O through the installation of this driver, under the following package and class *netw.RadioPhysicalLink*. The *5620 SAM Parameter Search Tool*, found in the on-product help system, allows users to search and view package and class information.
Performance management	The driver extends 5620 SAM performance management to the MPT-GS device so that statistics related to the GNE can be viewed through the 5620 SAM GUI. See section 5.5. Statistics are also available to the 5620 SAM-O; see the *5620 SAM Statistics Management Guide*.

5.3 Closed issues

There are currently no closed issues to report.

5.4 Outstanding issues

This section lists current open problems that customers must be aware of before deploying the MPT-GS driver into a live network or lab environment.

PTS number	Description	Workaround	Version Introduced
SAMPTS-138171	Radio link color always green	—	MPT-GS 1.0.0
SAMPTS-136823	5620 SAM displays Tx Mute timeout in minutes	Configure the timeout value in multiples of 60 seconds from EMS.	MPT-GS 1.0.0

5.5 Discovery and management

This section describes how to discover and use the MPT-GS in the 5620 SAM after driver installation.

Post-installation configuration instructions

The following instructions are provided to assist users by providing information specific to MPT-GS device configuration and discovery. The *5620 SAM User Guide* chapter "Device commissioning and management" should be consulted for full procedural details.

1. Set the 5620 SAM as the destination for trap forwarding by accessing the MPT-GS device via web browser (user=admin; password=admin) and populating the IP Address field for the SNMP Manager with the 5620 SAM server IP address. Use the default values for other fields. See the *MPT-GS User Manual* for more information.
2. Configure a generic NE profile for the device on the 5620 SAM:
   i. Choose Administration→Generic NE Manager from the 5620 SAM main menu. The Generic NE Manager form opens.
   ii. Click Create and choose Create Generic NE Profile. The Generic NE Profile (Create) form opens.
   iii. Configure the parameters as shown in the table below (parameters with no value specified may be left blank):

Parameter	Value
ID	
Auto-assign ID	
Generic NE Type	MPT-GS
Generic NE Category	Wireless
Sys Object ID	.1.3.6.1.4.1.31926
Description	V & E Bands
Default Element Manager URL	https:%IP%
Default Alternate Element Manager	N/A
Chassis MAC Object	

CLI Supported	

3. Associate the MPT-GS driver with the profile:
   i. Click Select and choose the MPT-GS driver that was loaded to the 5620 SAM in procedure 2.1 or 2.2.
   ii. Click on the Translators tab and click Add. A search form opens.
   iii. Click Search to list the translators.
   iv. Select all of the translators and click OK.
4. Click on the Interface Types tab and import all the available listed interfaces.
5. Click Apply.
6. Map the MPT-GS SNMP traps to user-defined 5620 SAM alarms. See the *5620 SAM User Guide* for the procedure to create a GNE alarm catalog and associate it with a GNE profile.
7. Use the 5620 SAM to create an SNMPv2 mediation policy that specifies “public” as the Community String value. See the *5620 SAM User Guide* for information about creating mediation policies.
8. Use the 5620 SAM to configure a discovery rule for the MPT-GS that specifies the following mediation policies. See the *5620 SAM User Guide* for information about creating discovery rules:
   - Read Access Mediation Policy and Write Access Mediation Policy - default mediation policy
   - Trap Access Mediation Policy - mediation policy created in step 7.
9. Perform configuration management tasks on an MPT-GS device:
   i. Right-click on the MPT-GS icon on the 5620 SAM topology map and choose Open URL.
   ii. Respond to the prompts (user=admin; password=admin). The device EMS opens to allow configuration.
10. Click on the Statistics tab of the MPT-GS interface properties form to view statistics as required. The following counters are supported. The availability of historical data requires the activation of Performance Monitoring. See the *MPT-GS User Manual* for more information about PM activation.

    Note: Alcatel-Lucent recommends scheduling only History Data Stats and retrieving Current Data Stats on-demand, if required. History Data Stats - 15 minutes is the same as Current Data Stats collected at that 15 minute interval, therefore, it is redundant to schedule Current Data Stats. Scheduling Current Data Stats may result in an error message. Scheduling Interface Additional Stats (Generic NE) is not supported and may result in stopping the collection of other statistics.

Interface type	Statistic type	Supported counters
Radio (index 1)	Ethernet Aggregate Rx Stats	Total Received Correct Frames Total Received Correct Octets Total Received Severely Errored Frames
	Ethernet Aggregate Tx Stats	Total Transmitted Frames Total Transmitted Octets
	RSL Hop Current Data Stats - 15 min	Average Level (dBm) Maximum Level (dBm) Minimum Level (dBm)
Ethernet (indices 3 – 6: ETH1 – ETH4)	Ethernet Aggregate Rx Stats	Total Discarded Frames Total Received Correct Frames Broadcast Total Received Correct Frames Multicast Total Received Correct Frames Unicast Total Received Correct Octets Total Received Severely Errored Frames
	Ethernet Aggregate Tx Stats	Total Discarded Frames Total Transmitted Frames Broadcast Total Transmitted Frames Multicast Total Transmitted Frames Unicast Total Transmitted Octets
Note: On Ethernet interfaces with index 1 (Radio) and indices 3-6 (ETH 1-ETH 4), the Interface Stats (Generic NE) are also applicable.		

6 MPT-SUB6

6.1 Compatibility

The MPT-SUB6 driver extends 5620 SAM management of this device to include its radio port properties, radio link inventory, and statistics. The driver is installed with the name MPTSUB6.

Driver Version	5620 SAM				MPT-SUB6 Release
	12.0 R5-P1	12.0 R7	13.0 R1	13.0 R2	
MPT-SUB6 1.0.0	No	Yes	Yes	Yes	3.4

Please note that driver compatibility is not tracked in the *5620 SAM Network Element Compatibility Guide*.

6.2 Feature summary

The following table lists functionality added by the MPT-SUB6 driver.

Feature	Description
MPT-SUB6 1.0.0	
Radio port properties	The driver extends the 5620 SAM management of the MPT-SUB6 device to include its radio port interfaces. With the installation of the driver, a new tab called "Radio" is added to the Generic NE Interface properties form, allowing 5620 SAM operators to view the following generic radio port properties of the device: • Channel Bandwidth (KHz) • Operational Frequency (MHz) • Band • Sector ID • HSU Far-end ID • Current Tx Power (dBm) • Current Rx Power (dBm) • Antenna type • Aggregate Capacity These properties are also available to the 5620 SAM-O under the following package and class *radioequipment.RadioPortSpecifics*. The *5620 SAM Parameter Search Tool*, found in the on-product help system, allows users to search and view package and class information.

Radio link inventory	The driver allows 5620 SAM operators to create radio links with endpoints on MPT-SUB6 devices. Operators can also view all radio links terminating on this device by drilling down from the network topology map or network Equipment Tree representations of the MPT-SUB6 device. Additionally, radio links associated with the MPT-SUB6 device are now included in the inventory list accessed through the Equipment Manager (Manage→Equipment→Equipment from the 5620 SAM main menu, then choose Radio link (Network) from the object type drop-down). Radio link inventory information is also available to the 5620 SAM-O through the installation of the driver, under the following package and class *netw.RadioPhysicalLink*. The *5620 SAM Parameter Search Tool*, found in the on-product help system, allows users to search and view package and class information.
Performance management	The driver extends 5620 SAM performance management to the MPT-SUB6 device so that statistics related to the GNE can be viewed through the 5620 SAM GUI. See section 6.5. Statistics are also available to the 5620 SAM-O; see the *5620 SAM Statistics Management Guide*.

6.3 Closed issues

There are no closed issues to report.

6.4 Outstanding issues

This section lists current open problems that customers must be aware of before deploying the MPT-SUB6 driver into a live network or lab environment.

PTS number	Description	Workaround	Version introduced
SAMPTS-139846	5620 SAM allows the creation of a radio link between HSU's	Create the radio link between HBS and HSU using Create>Equipment>Radio Link on the 5620 SAM	MPT-SUB6 1.0.0
SAMPTS-140293	MPT-SUB6 Band is not in sync with Radwin Manager	-	

6.5 Discovery and management

This section describes how to discover and use the MPT-SUB6 in the 5620 SAM after driver installation.

Post-installation configuration instructions

The following instructions are provided to assist users by providing information specific to MPT-SUB6 device configuration and discovery. The *5620 SAM User Guide* chapter "Device commissioning and management" should be consulted for full procedural details.

1. Set the 5620 SAM as the destination for trap forwarding by accessing the MPT-SUB6 device via web browser (user=admin; password=netman) and populating the IP Address field for the SNMP Manager with the 5620 SAM server IP address. Use the default values for other fields. See the *MPT-SUB6 User Manual* for more information.

2. Configure a generic NE profile for the device on the 5620 SAM:
   i. Choose Administration→Generic NE Manager from the 5620 SAM main menu. The Generic NE Manager form opens.
   ii. Click Create and choose Create Generic NE Profile. The Generic NE Profile (Create) form opens.
   iii. Configure the parameters as shown in the table below (parameters with no value specified may be left blank):

Parameter	Value
ID	
Auto-assign ID	
Generic NE Type	MPT-SUB6
Generic NE Category	Wireless
Sys Object ID	.1.3.6.1.4.1.4458.20*
Description	SUB 6
Default Element Manager URL	http:%IP%
Default Alternate Element Manager	C:\5620sam\client\nms\thirdparty\RADWINManager.exe -t %IP% -r public -w netman
Chassis MAC Object	
CLI Supported	

3. Associate the MPT-SUB6 driver with the profile:
   i. Click Select and choose the MPT-SUB6 driver that was copied to the 5620 SAM in procedure 2.1 or 2.2.
   ii. Click on the Translators tab and click Add. A search form opens.
   iii. Click Search to list the translators.
   iv. Select all of the translators and click OK.
4. Click on the Interface Types tab and import all the available listed interfaces.
5. Click Apply.
6. Map the MPT-SUB6 SNMP traps to user-defined 5620 SAM alarms. See the *5620 SAM User Guide* for the procedure to create a GNE alarm catalog and associate it with a GNE profile.
7. Use the 5620 SAM to create an SNMPv1 mediation policy that specifies “public” as the Read Community String value. See the *5620 SAM User Guide* for information about creating mediation policies.
8. Use the 5620 SAM to create an SNMPv1 mediation policy that specifies “netman” as the Write/Trap Community String value. See the *5620 SAM User Guide* for information about creating mediation policies.

9. Use the 5620 SAM to configure a discovery rule for the MPT-SUB6 that specifies the following mediation policies; see the *5620 SAM User Guide* for information about creating discovery rules:
    - Read Access Mediation Policy and Trap Access Mediation Policy - mediation policy created in step 7.
    - Write Access Mediation Policy - mediation policy created in step 8.
10. To perform configuration management tasks on an MPT-SUB6 device, right-click on the MPT-SUB6 icon on the 5620 SAM topology map and choose Alternate Element Manager. The device EMS opens to allow configuration.
11. Click on the Statistics tab of the MPT-SUB6 interface properties form to view statistics as required. The following counters are supported on Radio interfaces 101 – 104 on HBS.

    Note: Alcatel-Lucent recommends scheduling only History Data Stats and retrieving Current Data Stats on-demand, if required. History Data Stats - 15 minutes is the same as Current Data Stats collected at that 15 minute interval, therefore, it is redundant to schedule Current Data Stats. Scheduling Current Data Stats may result in an error message. Scheduling Interface Additional Stats (Generic NE) is not supported and may result in stopping the collection of other statistics.

Interface type	Statistic type
Radio	Aggregate Rx History Data Stats – 15 min
	Aggregate Rx History Data Stats – 24 hr
	Aggregate Tx History Data Stats - 15 min
	Aggregate Tx History Data Stats - 24 Hr
	Hop Current Data stats
	Hop History Data Stats - 15 min
	Hop History Data Stats - 24 Hr
	RSL Hop Current Data stats
	RSL Hop History Data Stats - 15 min
	RSL Hop History Data Stats - 24 Hr
	TSL Hop Current Data stats
	TSL Hop History Data Stats - 15 min
	TSL Hop History Data Stats - 24 Hr
Ethernet	Aggregate Rx History Data Stats - 15 min
	Aggregate Rx History Data Stats - 24 Hr
	Aggregate Tx History Data Stats - 15 min
	Aggregate Tx History Data Stats - 24 Hr
	Hop Current Data stats
	Hop History Data Stats - 15 min
	Hop History Data Stats - 24 Hr

Note: On Ethernet interfaces with index 1(ETH), the genericnestats are also applicable.

On HSU, the following counters are supported only on interface 101.

Interface type	Statistic type
Radio	Hop Current Data stats
	Hop History Data Stats - 15 min
	Hop History Data Stats - 24 Hr
	RSL Hop Current Data stats
	RSL Hop History Data Stats - 15 min
	RSL Hop History Data Stats - 24 Hr
	TSL Hop Current Data stats
	TSL Hop History Data Stats - 15 min
	TSL Hop History Data Stats - 24 Hr
Ethernet	Aggregate Rx History Data Stats - 15 min
	Aggregate Rx History Data Stats - 24 Hr
	Aggregate Tx History Data Stats - 15 min
	Aggregate Tx History Data Stats - 24 Hr
	Hop Current Data stats
	Hop History Data Stats - 15 min
	Hop History Data Stats - 24 Hr
Note: On Ethernet interfaces with index 1(ETH), the genericnestats are also applicable.	

7 Document history

Edition	Date	Reason for issue
Edition 1	May 6, 2015	5620 SAM Release 13.0 R2 released
Edition 2	June 19, 2015	Updated with NE compatibility information Added SAMPTS-152461 to Section 3.4 Added the following PTSs to Section 4.4 SAMPTS-146142, SAMPTS-146143