

# Hypermedia SIM Server HG9000



## Product Manual



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**HM SIM Server Product Manual**

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# Smart SIM Rack Introduction

## Overview

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### Introduction

The Smart SIM Rack has 2 CPU Boards and a capacity of up to 160 SIM card.

### Technical Specifications

Description	Specification
Dimensions	Smart SIM Server Rackable 19", 1RU Smart SIM Server rack Rackable 19", 2RU
Weight	Smart SIM Server – 8Kg Smart SIM Server rack - 8Kg
Input voltage range for AC power supply	- 240V
Current	3-6 A
Frequency	- 63Hz
Power dissipation	300W (maximum)
Operating temperature	-10°C to 50°C
Operating humidity	5% to 80% (non-condensing)
Noise level	dBA (minimum)
Regulatory compliance	For more compliance information, refer to the document accompanying your device
Safety compliance	UL 60950; VDE 60950

## Preparing Your Hardware for Installation

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### General

For your protection, observe the following safety precautions when installing or working on **Safety** your product or equipment:

- Read and understand thoroughly all instructions provided in the documentation that comes along with your equipment before you handle it.
-

- Pay extra attention to all warnings and cautions highlighted in the documentation or indicated on the equipment.
- Get well informed about hazards that can be caused by electrical circuitry and

1

appliances.

- Be familiar with standard practices to prevent accidents that could occur during electrical or mechanical work.
- Never install or use the equipment near wet area or with wet hands or tools.
- Never install or use the equipment in an unprotected location that could trip others up.
- Always keep your equipment in a clear, dry, and dust-free location.
- Avoid wearing loose clothing such as ties or scarves while working with the equipment.
- Wear safety glasses when working under hazardous conditions that could be hazardous to your eyes.



#### WARNING

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#### Electrical Safety

Follow the guidelines below while handling your product or equipment with electricity:

- Locate the emergency power-off switch closest to your workplace such that you can turn off the power supply quickly if an accident occurs.
- Disconnect all power supplies before installing or removing your equipment.
- Always double check but never assume that the power supply is disconnected.
- Examine carefully for any potential electrical hazards in your workplace such as moist floor, ungrounded outlets, worn power cords or broken insulation before start working.
- Do not deal with electricity if any hazardous conditions exist.
- Proceed as follows should an electrical accident occur:
  - i. Be careful! Do not turn yourself into the next victim.
  - ii. Turn off the power supply of the equipment immediately.
  - iii. Send someone else to obtain medical assistance if possible. You should otherwise call immediately for emergency help.
  - iv. Provide proper first aid such as rendering artificial breath or external cardiac compression to the victim if necessary.

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**Prevention of Electrostatic Discharge** Electrostatic discharge (ESD) can damage your equipment and impair its electrical circuitry. An ESD event can occur if the electronic printed circuit boards are improperly handled. This can consequently cause complete or intermittent failures to your equipment.

Always observe the following procedures to prevent ESD when replacing or removing modules in your equipment:

- Make sure the chassis of your equipment is electrically connected to earth ground.

- Wear an anti-static wrist strap with a good skin contact. Connect the strip clip to an unpainted surface of the chassis in order to channel unwanted ESD voltages safely to ground.
- 



For your equipment safety, verify periodically that the resistance value of the anti-static wrist strap always falls between 1 and 10 megohm (M $\Omega$ ). **CAUTION**

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## General Requirements

### Power Supply

Make sure the power supply at your selected site is noise-free without spikes. A power conditioner is recommended to maintain a smooth power supply if necessary. The Smart SIM Rack must absolutely be connected to grounded power outlets.

### Site Environment

The Smart SIM Rack can be placed on a stable surface in your selected site such as a desktop, shelf or rack. The layout of your site makes a major contribution to proper system operation. Efficient room wiring, adequate ventilation, ample space between appliances and easy equipment access are among the key factors determining satisfactory system performance and maintenance.

The installation site should meet the minimum requirements listed hereafter to provide an acceptable operating environment for the Smart SIM Rack:

- **Air Ventilation** – The Smart SIM Rack dissipates heat just as any other electrical equipment does. The ambient temperature may not be enough to cool the server down to an acceptable operating temperature. Make sure your installation site sustain sufficient air ventilation for this purpose. In addition, your server chassis must always be well fastened to allow efficient air-cooling within the equipment. An open chassis permits air leaking that may interrupt the internal air-cooling.
- **Prevention of Electrostatic Discharge** – Always respect the procedure given in the Prevention of Electrostatic Discharge Section to avoid immediate or intermittent equipment failures due to electrostatic discharge.
- **Site Capacity** – The installation site should provide enough space to accommodate all necessary equipment and accessories. All equipment must be maintained at reasonable distance from each other for air ventilation and easy access.

### Equipment Rack

The Smart SIM Rack is manufactured with a chassis height of 6 RU. It can therefore be installed in 19-inch equipment racks.

This section provides you useful information to plan the configuration of your equipment rack.

- **Air Ventilation** – All equipment racks must have sufficient ventilation because the server dissipates heat just as any other electrical equipment does. Enclosed equipment racks should have louvered sides and fans to provide enough aircooling. Make sure that your racks are never overcrowded. If your rack has only a ventilation fan on its top, provide additional air-cooling at the lower part of the rack to avoid the heat from rising up.
- **Chassis Mounting** – When mounting the server in an open rack, double check that the rack frame does not block any air ventilation openings. If the chassis is mounted on a slope, verify that the chassis is steadily positioned.
- **Air Baffle** – An air baffle can improve the airflow in your equipment rack by isolating the air exhaust from the air intake. Consider the airflow direction while positioning your air baffle so that the air-cooling of the chassis is optimized.

### Waste Recycling

#### Delivery Package

Hypermedia products are delivered in a carton package with protective padding. Keep the delivery package temporarily in case you need to return the product for customer service. Once our product gives you the expected satisfaction, please recycle the delivery package properly.

#### Used Battery or Obsolete Device

For customers in the European Union, please respect the EU recycling regulation. Please dispose of any removed batteries or obsolete devices at the appropriate recycling center.

It is illegal to dispose of such articles in domestic refuse. For customers outside of EU, please observe your local statutory provisions for this subject matter

## Unpacking the Smart SIM Rack

**Introduction** The Smart SIM Rack is delivered in a large box packed with foam padding to protect it against shock during shipping. Do not remove the Smart SIM Rack from this protective padding until you are ready to install it.

**Power Supply** When you are ready to install the Smart SIM Rack, remove all items from the box carefully (i.e. Smart SIM Rack and accessories). Visually inspect all items for any damage or omission before installation.

The hardware configuration of the Smart SIM Rack should feature:

- A fan
- A power connector
- A power switch
- A serial communication port RS-232 (standard DB-9 format)
- An Ethernet 10/100 base-T port
- A USB port
- A power cable corresponding to your geographic location



Please contact your retailer or shipping company should you find any damaged or missing items in your delivery package.

# Installing a System

Install the SIM Server and SIM server Rack/s.



HG-9000 SIM Server – 256 SIMs Front



HG-9000 SIM Server – 256 SIMs Back



HG-9000-16 SIMs Blade Card

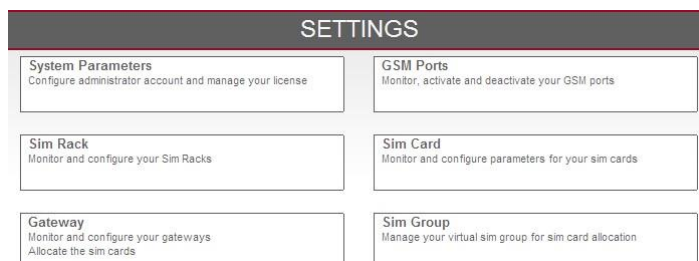
1. Mount the SIM Server and SIM server Rack/s in a 19" rack or set it in another well ventilated and protected location.
2. Attach the LAN cables to the SIM Server and SIM server Rack/s and the second side of the cable to the WAN socket.
3. Attach the power cable to the SIM Server and SIM server Rack/s and to the power outlet.
4. Turn on the SIM Server and SIM server Rack/s.

Install the Gateway.

1. Mount the Gateway in a 19" rack.
2. Attach the WAN cable to the Gateway and the second side of the cable to the WAN socket.
3. Attach the power cable to the Gateway and to the power outlet.
4. Turn on the Gateway.

Configure the SIM Server.

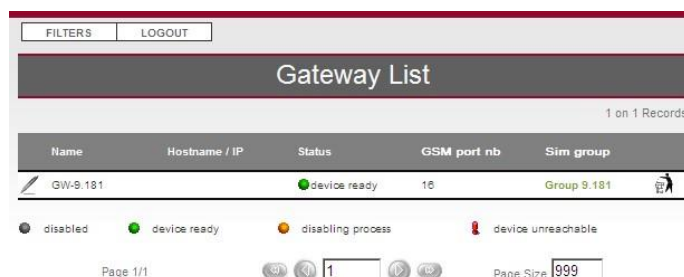
1. Open a browser and enter the IP address of the SIM Server.
2. Enter the password and click **Enter**. The Settings screen is displayed.



The Settings screen displays a grid of configuration options:

- System Parameters**: Configure administrator account and manage your license
- GSM Ports**: Monitor, activate and deactivate your GSM ports
- Sim Rack**: Monitor and configure your Sim Racks
- Sim Card**: Monitor and configure parameters for your sim cards
- Gateway**: Monitor and configure your gateways. Allocate the sim cards
- Sim Group**: Manage your virtual sim group for sim card allocation

3. Click **Gateway**. The Gateway List is displayed and the Gateway appears in the list.

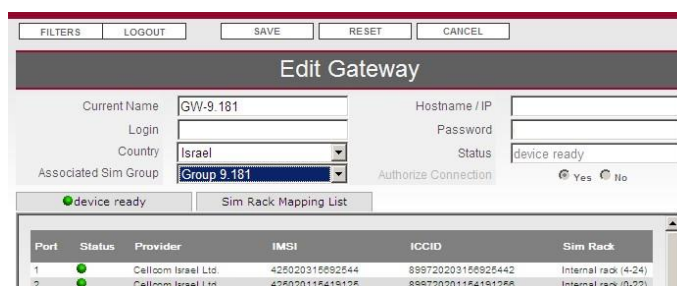


The Gateway List screen shows a table with the following data:

Name	Hostname / IP	Status	GSM port nb	Sim group
GW-9.181		device ready	16	Group 9.181

Page 1/1, Page Size 999

4. Click  (Edit). The Edit Gateway screen is displayed.



The Edit Gateway screen contains the following fields and sections:

- Current Name**: GW-9.181
- Hostname / IP**:
- Login**:
- Password**:
- Country**: Israel
- Status**: device ready
- Associated Sim Group**: Group 9.181
- Authorize Connection**: Yes No
- device ready** (status indicator)
- Sim Rack Mapping List** (table):

Port	Status	Provider	IMSI	ICCID	Sim Rack
1	device ready	Cellcom Israel Ltd.	426020315692544	899720203156925442	Internal rack (4-24)
2	device ready	Cellcom Israel Ltd.	426020115419125	899720201154191256	Internal rack (0-22)

5. Edit the Gateway's name and password.
6. Select the **Authorize Connection > Yes** button.
7. Mouse-over the left tab and click **Enable**.

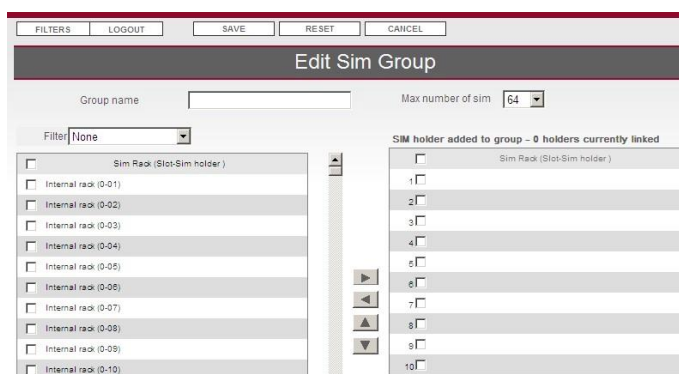



The Sim Rack Mapping List screen shows a table with the following data:

Port	Status	Provider	IMSI	ICCID	Sim Rack
1	device ready	Cellcom Israel Ltd.	426020315692544	899720203156925442	Internal rack (4-24)
2	device ready	Cellcom Israel Ltd.	426020115419125	899720201154191256	Internal rack (0-22)

Buttons: Refresh, Enable, Disable

8. From the navigation panel, click **SIM Group**.
9. Click **Add Group**. The Edit SIM Group screen is displayed.



10. Create the SIM group. For instructions, see “SIM Group” on page 32.
11. From the navigation panel, click **Gateway**. The Gateway List screen is displayed.
12. Click  (Edit). The Edit Gateway screen is displayed.
13. From the Associated SIM Group dropdown menu, select the new SIM Group.

Configure the Gateway.

1. Open the Gateway’s Hypermedia Management Console (HMC).
2. From the Configure branch of the HMC Navigation pane, expand the **SIM Server** sub-branch.
3. Click **Deck Settings** and enter the IP address of the SIM Server.
4. Click **Card Settings** and configure the SIM cards to Virtual Mode.
5. Optionally, customize the SIM associated with the channel.
6. Optionally, set the SIM Switching plan. This is done from the Scheduler. Documentation on the Scheduler is located in the Gateway Product Manual.

## Installing the Smart SIM Rack Hardware



### WARNING

#### Electrical Warning!

Internal components of Smart SIM Rack are pre-installed and pre-configured. Do not remove, replace or modify these components without consulting Hypermedia customer service or your retailer/distributor.

You must always respect the electrical safety to protect yourself against electrical accidents once your Smart SIM Rack is connected to power supplies.

Never remove the top chassis cover of your Smart SIM Rack once it is connected to power supplies.



## Connecting

Follow the instructions below to connect your Smart SIM Rack to a power supply:

- Make sure that all power outlets are earth grounded with over-current protection.
- Double check that the power switch of your Smart SIM Rack is set to the OFF position before any power connection.
- Connect the AC adaptor to the power connector located at the back of your Hypermedia Rack

## Connecting to LAN/WAN

Follow the instructions below to connect your Smart SIM Rack to a LAN/WAN network:

- Connect the RJ45 Ethernet cable to the Ethernet 10/100 Base-T port located at the rear panel of your Smart SIM Rack.
- Connect the other end of the RJ45 Ethernet cable to your LAN/WAN network hub.

# Powering up Smart SIM Rack

## Introduction

This chapter provides information about powering up your Smart SIM Rack including LED interpretation and booting preparation.

## LEDs

Each SIM board from the Smart SIM Rack is equipped with two LEDs on its front.

The different indications of these LEDs signify different operating states of the Smart SIM Rack once the power is turned on. It is important to understand the different LED indications in order to spot quickly any faulty conditions that the array may encounter.

LED Indications for SIM board		Interpretation
Green LED	Yellow LED	
Off	Off	SIM board inserted properly
Off	On	Physical problem encountered, e.g. SIM board is not properly inserted

## Power-up

Once the hardware is properly installed and the LED indications are well understood, you are ready to power up your Smart SIM Rack.

## procedure



### WARNING

#### Electrical Warning!

The plug-socket combination of the power supply for your Smart SIM Rack must absolutely be accessible at all times because it serves as the main disconnecting device.



### CAUTION

Never operate your Smart SIM Rack without tightly fasten its chassis cover for the reason of having adequate internal air-cooling.

## Procedure

Follow the procedures described hereafter to power up your Smart SIM Rack for its system initialization and self-tests:

### Step 1

Turn on the power supply of the PC to which you have established the console connection for your Smart SIM Rack. The console connection allows you to view the booting sequence of your server on the PC terminal.

### Step 2

Set the power switch of your Smart SIM Rack to its ON position. Observe the followings:

The “On” and “Activity” LEDs of the front panel will be turned on.

The internal fan of the server will start operating.

Your Smart SIM Rack is now powered up and ready for the software configuration. Refer to the next section to proceed to the software configuration.

# Administration Interface

## Connect to the Smart SIM Rack interface

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**Procedure** Smart SIM Rack provides a web based administration management interface to configure and manage SIM card usage with additional SIM Rack and GSM device.

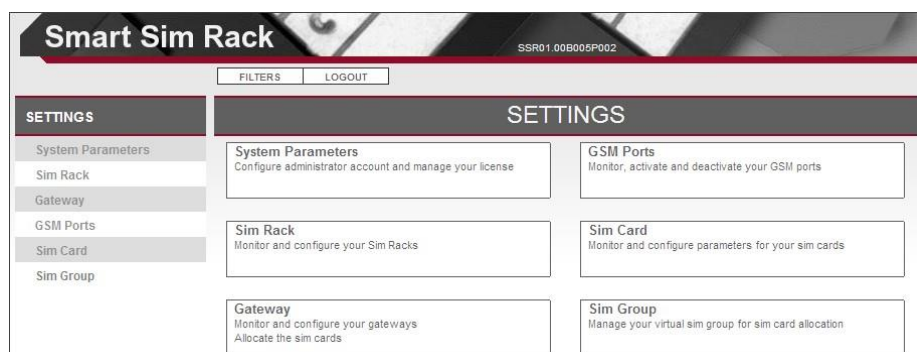
Follow the instructions described in the table below to access Smart SIM Rack web interface.

Steps	Action
1	Launch your web browser.
2	Enter the URL of the Management Interface as follows: <b>http://Configuration_web_server:8000</b> <i>Configuration_web_server</i> stands for the hostname or the IP address of the Smart SIM Rack. http://192.168.200.135:8000 NB: The port can be modified. The Management Interface login page will be displayed (see Figure 2-1)
3	Enter your user login and password then click Enter. Default user: administrator / Hypermedia.

## Administration Interface Overview

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**Introduction** Once connected to the Smart SIM Rack interface, the six categories tables are displayed. These categories are described hereafter:



**System Parameters** Defines the administrator account, logs and license parameters

**SIM Racks** Defines SIM Rack devices that can be used from the Smart SIM Rack.

**GSM** Defines GSM devices that can be used from the Smart SIM Rack.



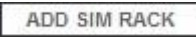



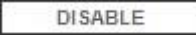
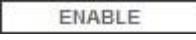
**SIM Card** Manage all the SIM card control from the Smart SIM Rack








**SIM Group** Defines the SIM Group linked to each GSM device

**GSM Ports** Monitor and manage every GSM ports from any GSM device

## Browsing Smart SIM Rack interface

**Definition** When browsing through the Smart SIM Rack menu, a set of buttons are displayed in the various configuration pages to help users setup the different tables

Button name	Function
	Add a new GSM device to the system
	Add a new SIM Group to the system
	Add a new SIM Rack to the system
	Go back to previous section
	Clear current filter to define a new filter.
	Delete the selected item
	Disable the selected item
	Enable the selected item

	Export the current data from list
	Modify, Clear or list the defined filter from a given list displayed in main frame
	Exit from Smart SIM Rack Administration Interface
	Confirm/Accept the request on screen
	Cancel the modifications made in the current screen.
	Save current record/modifications
	Save a new customized filter
	Update selected item
	Update the Smart SIM Rack license
	Edit the record
	Remove the record

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## System Parameters

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### Presentation

System Parameters allows to customize the Smart SIM rack.

It gives you access to the system settings, administrator account parameters and to the license being used from the Smart SIM Rack.

FILTERS
LOGOUT
SAVE
CANCEL

System Parameters

**System Settings**

Sim Rack and Gateway Monitoring TTL  
GSM and Sim port associated timer  
Sim History Allocation Log

Low

High

☐

01

day(s)

**Administrator Settings**

Administrator Email Address  
Enter Current Password to Modify  
New Password  
Confirm Password

**Smart Sim Rack License**

Current License Code  
Smart Sim Rack Serial Number  
Maximum Sim Board Number  
Maximum GSM Port Number  
  
Expiration Date

0


20

10000

2011/12/31

Click to update license (Click save to validate new license)
Update License

Action Name	Description
	Click this button to modify your Smart SIM Rack license
Field Name	Description
SIM Rack and GSM Monitoring TTL	<p>This value defines the interval used from the Smart SIM Rack to scan for new SIM Racks.</p> <p>The higher it is the faster you get information.</p>
SIM History Allocation Lop	<p>By enabling this parameters you are allow to keep the history of any SIM card allocation.</p> <p>The history log is saved for the number of days you have set then it loops.</p>

## System Settings

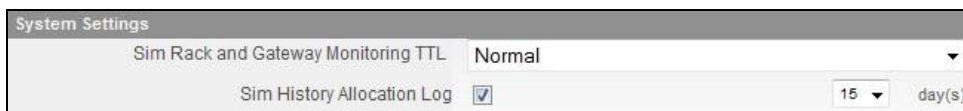
### Usage

This section displays the Time To Live parameter being used from the Smart SIM Rack in order to scan for new SIM Rack unit or GSM ports status GSM. I

14

## Action & Field description Snapshot

### Administrator Settings



System Settings

Sim Rack and Gateway Monitoring TTL: Normal

Sim History Allocation Log: ☒ 15 day(s)

**Usage** This section allows managing Administrator account email address as well as password.

### Field description

Field Name	Description
Administrator Email Address	Set the email address for receiving system events
Enter Current Password to Modify	
New Password	
Confirm Password	

### Smart SIM Rack License

### Snapshot



Administrator Settings

Administrator Email Address:

Enter Current Password to Modify:

New Password:

Confirm Password:

**Usage** If you select a partition from this table with no license or with license expired you will be able to associate a new license.

### Field description

Field Name	Field Description
License Code	Enter the new license here then click OK
License File	You can import the license from a file by clicking browse



Update your license and click confirm

License Code:

CONFIRM CANCEL

## SIM Rack

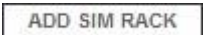


**Presentation**

The SIM Rack menu defines and monitors Hypermedia SIM Racks linked to the Smart SIM Rack

**SIM Rack List****Usage**


The Hypermedia SIM Rack List gives you an overview of current status of your SIM Rack in use. You are able to add a new SIM Rack, edit or to delete any of the SIM Rack in used.



Action Name	Description
	Click this icon to add a new SIM Rack
Field Name	Description
	Click this icon to edit the SIM Rack
Name	Shows the given name of the SIM Rack
Hostname or IP	Shows either the IP or the hostname used by the SIM Rack to be reachable from other devices
Status	Shows the current connection status of the SIM Rack <b>Working</b> means the SIM Rack is linked to a Smart SIM Rack <b>Unavailable</b> means there is no connection yet
SIM Board	Indicates the current number of SIM Boards inserted in SIM Rack
SIM	Indicates the current number of SIM card inserted in the SIM Rack
	Click this icon to delete the SIM Rack record

## Field description

## Snapshot

Sim Rack List					
ADD SIM RACK				2 on 2 Records	
Name	Hostname / IP	Status	Sim Board	Sim	
 Internal rack	192.168.0.53	working	5	160	
 External Rack 1	192.168.0.54	working	13	416	

## Add SIM Rack

## Usage

To create a new SIM Rack you must first click on ADD SIM RACK button.

The Smart SIM Rack can be deployed in a complex network architecture wherein certain elements of the architecture are in private LAN behind a NAT and/or firewall. Therefore, it is possible to configure two virtual IP addresses for a given Hypermedia SIM Rack.

### Example

An Hypermedia SIM Rack can be located in the same private LAN as a Smart SIM Rack. To access the Hypermedia SIM Rack, the Smart SIM Rack

will use the private IP address of the Hypermedia SIM Rack. For those GSM devices deployed in different locations, they will have to use the NAT public IP address of the Hypermedia SIM Rack to access to the Hypermedia SIM Rack. In such deployment scenario, the primary IP address of the Hypermedia SIM Rack will be set to its real private IP address while the secondary IP address of the Hypermedia SIM Rack will be set to the public IP address of the NAT router.

**Field description**

Action Name	Description
<input type="button" value="SAVE"/>	Save the SIM Rack entry
<input type="button" value="RESET"/>	Cancel the pending modification of SIM Rack parameters
<input type="button" value="CANCEL"/>	Go back to previous section
Field Name	Description
Current Name	The given name for the SIM Rack associated to the partition
Primary Hostname / IP	<p>Enter the primary IP address of the given Hypermedia SIM Rack.</p> <p>This IP address is used by the Smart SIM Rack to connect to the Hypermedia SIM Rack.</p>
TCP Port Connection (primary)	<p>The port is 51503 by default. This port value can be modified.</p> <p><u>Example:</u> If two Hypermedia SIM Racks have the same public IP address, they will then need to be addressed using different ports.</p> <p>A configuration change will also be required at the Hypermedia SIM Racks setup.</p>
Secondary Hostname / IP	<p>Enter the secondary IP address of the given Hypermedia SIM Rack (optional).</p> <p>This IP address is required by a GSM device that needs to access the Hypermedia SIM Rack with an IP address different from the one used by the Smart SIM Rack.</p>

	<p><u>Example:</u> When a SIM Rack and an Smart SIM Rack are deployed behind a NAT firewall, GSM device will access the Hypermedia SIM Rack using a public IP address (secondary) while the Smart SIM Rack will use local IP address of the Hypermedia SIM Rack (primary).</p>
<p>TCP Port Connection (secondary)</p>	<p>The port is 51503 by default. This port value can be modified.</p> <p><u>Example:</u> If two Hypermedia SIM Racks have the same public IP address, they will then need to be addressed using different ports.</p> <p>A configuration change will also be required at the Hypermedia SIM Racks setup.</p>

### Snapshot




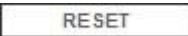

### Edit SIM Rack

#### Usage





If you wish to edit the SIM Rack properties, just click the









If you edit the SIM Rack while it is in status unavailable, you will have access to the same web form as when you click ADD SIM RACK.

Action Name	Description
	Save the SIM Rack entry
	Cancel the pending modification of SIM Rack parameters
	Go back to previous section
Field Name	Description
Current Name	Modify the name of the Hypermedia SIM Rack.
Status	Indicates the current status of the SIM Rack (read only)

**Field description**

Primary Hostname / IP	Modify the Primary Hostname or IP
TCP Port Connection (primary)	Modify the Primary TCP Port Connection
Secondary Hostname / IP	Modify the Secondary Hostname or IP
TCP Port Connection (secondary)	Modify the Secondary TCP Port Connection
Slot Status Icon	<p>Indicate the real-time availability status for each SIM board slot in the Hypermedia SIM Rack:</p> <ul style="list-style-type: none"> <li> Disabled or in maintenance</li> <li> Slot ready</li> <li> Disabling process</li> <li> Hypermedia SIM Rack unreachable</li> </ul>
Slot Field Name	Description
SIM Holder	Shows the ID of the SIM Board number as it is inserted in the SIM Rack

Status SIM Card	<p>Indicate the real-time availability status for a given SIM card in the Hypermedia SIM Rack:</p> <ul style="list-style-type: none"> <li> SIM deactivated</li> <li> SIM not assigned to a port</li> <li> SIM is assigned to a port</li> <li> SIM is assigned to a GSM device but cannot be reached by the Smart SIM Rack</li> <li> SIM is in a SIM Rack but cannot be reached by the Smart SIM Rack</li> <li> SIM is not currently inserted into an Hypermedia SIM Rack</li> </ul>
Provider	Indicates the mobile provider name from reading SIM information
IMSI	Indicates the IMSI read from the SIM card
ICCID	Indicates the unique ICCID read from the SIM card
GSM	Indicates the GSM device name and the GSM port number If the SIM card is allocated to a GSM port

## Snapshot

FILTERS LOGOUT SAVE RESET CANCEL

### Edit Sim Rack

Current Name:

Status:












Primary Hostname/IP:

TCP Port Connection:

Secondary Hostname/IP:

TCP Port Connection:

Slot 4 Slot 3 Slot 2 Slot 1 Slot 0

Sim holder	Status	Provider	IMSI	ICCID	Gateway
1		Partner Communications Co. Ltd.	425010390736050	89972011008036090417	
2		Partner Communications Co. Ltd.	425010380055283	89972010609030552640	
3		Partner Communications Co. Ltd.	425010380055301	89972010609030552822	
4		Partner Communications Co. Ltd.	425010380055279	89972010609030552608	
5		Partner Communications Co. Ltd.	425010390526370	89972011008030993616	
6		Partner Communications Co. Ltd.	425010390526372	89972011008030993632	
7		Partner Communications Co. Ltd.	425010390622696	89972011008032956676	
8		Partner Communications Co. Ltd.	425010380055224	89972010609030552053	
9		Partner Communications Co. Ltd.	425010380055309	89972010609030552905	
10		Partner Communications Co. Ltd.	425010390526374	89972011008030993657	
11		Partner Communications Co. Ltd.	425010390526361	89972011008030993525	








## GSM

**Presentation** The GSM menu defines and monitors the GSM devices linked to the Smart SIM Rack

## GSM List

**Usage** The GSM list section defines and lists the GSM devices that are used in the IRON Cluster architecture.

### Field description

Action Name	Description
	Click this icon to edit current GSM record
Column Name	Description
	Click this icon to edit current GSM record
Name	Name of the GSM device
Hostname or IP address	Hostname or IP address of the GSM device
Status	<p>Link status between the Smart SIM Rack and the GSM device. Possible statuses are:</p> <ul style="list-style-type: none"> <li> Waiting for validation: New GSM</li> <li> GSM unreachable</li> <li> GSM ready for use</li> <li> GSM disabled or not authorized for connection</li> </ul>
GSM port nb	Number of physical GSM ports of the GSM device.
SIM Group	Indicates the Virtual SIM Group linked to the GSM
	Click this icon to delete current GSM device







## Snapshot

FILTERS





LOGOUT

Gateway List

1 on 1 Records

Name	Hostname / IP	Status	GSM port nb	Sim group
 GW-9.181		 device ready	18	Group 9.181 
<div><div> disabled</div><div> device ready</div><div> disabling process</div><div> device unreachable</div></div>				

Page 1/1



Page Size

## Add GSM: Declare a passive GSM device

### Usage

Click ADD GSM to create a new passive GSM device entry  
This section is being use only for GSM not registering itself to the Smart SIM Rack

### Field description

Field Name	Description
Current Name	Enter the name of the GSM device.
Hostname or IP address	Enter the hostname or the IP address of the GSM device.
Login	Enter the login name for the connection.
Password	Enter the password for the connection.
Country	<p>Select the country for the GSM device from the pull-down list.</p> <p>This information is extremely important as the system will apply the country information for the SIM allocation.</p>
Status	Current read only GSM status
Associated SIM Group	Select the Virtual SIM Group that will be used from the GSM device




Authorize connection	<p>GSM device must be authorized from system in order to get access to the Virtual SIM Group.</p> <p>Yes: The GSM device is automatically authorized at first connection</p> <p>No: The GSM device must be authorized after first connection</p>
----------------------	--

### Snapshot



### Edit GSM: Modify or Authorize GSM device

#### Usage

Click the edit icon  to get GSM

device information or to authorize a new GSM device

SIM Rack Mapping List allows selecting the IP address of each SIM Rack through which the given GSM device can be connected.

This setting is useful for an SIM Rack deployed behind a NAT or a firewall that can be accessed either via its private or public IP address.

#### Field description











Field Name	Description
Current Name	Enter the name of the GSM device.
Hostname / IP	Enter the hostname or the IP address of the GSM device.
Login	Enter the login name for the connection.
Password	Enter the password for the connection.
Country	Select the country for the GSM device from the pull-down list.
	This information is extremely important as the system will apply the country information for the SIM allocation.









Authorize connection	<p>GSM device must be authorized from system in order to get access to the Virtual SIM Group. This is defined at first connection.</p> <p>Read only information</p>
GSM port NB	Read-only information about the number of GSM ports of the given GSM device.
Device Tab Field Name	Description
Device status	<p>Indicate the real-time availability status for a given device:</p> <ul style="list-style-type: none"> <li> Device disabled</li> <li> Device ready and connected to Smart SIM Rack</li> <li> Disabling process</li> <li> Device unreachable, IP connection lost from Smart SIM Rack</li> </ul>
Port	
Status	<p>Indicate the real-time availability status for a given SIM card in the Hypermedia SIM Rack:</p> <ul style="list-style-type: none"> <li> SIM deactivated</li> <li> SIM not assigned to a port</li> <li> SIM is assigned to a port</li> <li> SIM is assigned to a GSM not reachable</li> <li> SIM is in a SIM Rack which is not declared anymore</li> <li> SIM is not currently inserted into any SIM Rack</li> </ul>
Provider	Indicates the mobile provider name from SIM card
IMSI	Indicates the IMSI read from the SIM card
ICCID	Indicates the unique ICCID read from the SIM card
SIM Rack	Indicates the SIM Rack, the SIM Board and the SIM Holder number
SIM Rack Mapping List Tab Field Name	Description
Available SIM Rack	Name of SIM Rack available from Smart SIM Rack
Primary Access	Select the primary access only
Secondary Access	Select the secondary access only

## Snapshot

FILTERS
LOGOUT
SAVE
RESET
CANCEL

Edit Gateway

Current Name
GW-9.181

Login

Country
Israel

Associated Sim Group
Group 9.181

Hostname / IP

Password

Status
device ready

device ready

Sim Rack Mapping List

Port	Status	Provider	IMSI	ICCID	Sim Rack
1	●	Cellcom Israel Ltd.	425020315692544	898720203156925442	Internal rack (4-24)
2	●	Cellcom Israel Ltd.	425020115419125	899720201154191256	Internal rack (0-22)

device ready

Sim Rack Mapping List

Available Sim Rack	Primary Access	Secondary Access
SIM RACK 235		

## GSM Ports

**Presentation** This table allows you to control and monitor single GSM ports.

### GSM Port Filter

**Usage** Once you click on GSM port menu selection, you will have to filter the GSM port you need to display. To display all GSM ports you can click directly on button

### Field description

Field Name	Field Description
<b>GSM ports Filter</b>	
View all records	Select this radio button to list the entire GSM ports list
Apply a recorded filter	Select this radio button and choose the customized filter you have previously saved
Apply a customized filter	Select this radio to set your own filter

Filter	
IMSI	Select the IMSI or range of IMSI being in use from GSM port
ICCID	Select the IMSI or range of ICCID being in use from GSM port
Status	Select the status type you want to filter <ul style="list-style-type: none"> <li><input type="radio"/> Port is disabled</li> <li><input type="radio"/> Empty GSM port</li> <li><input checked="" type="radio"/> GSM port with registered SIM card</li> <li><input type="radio"/> GSM port registering</li> <li><input type="radio"/> GSM port in error</li> <li><input type="radio"/> GSM port is in local mode not managed from Smart SIM Rack</li> </ul>
GSM device	You can select a specific GSM device
SIM Group	You can select GSM ports associated to a given Virtual SIM Group

#### Snapshot



#### List of GSM Port

#### Usage


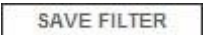









The GSM Port Table provides the running status summary of all GSM ports from GSM devices declared in the Smart SIM Rack architecture.

Indication of number of ports listed is present on top right of the window

Possible actions on GSM ports are: Enable, Disable and Export Port information.



## Field description

Action Name	Action Description
	Modify or clear current filter criteria
	Save the current customized filter
	Enable all GSM ports selected with the checkbox
	Disable all GSM ports selected with the checkbox
	Export the list of GSM port present on screen
Field Name	Field Description
Status	Set the current status of GSM port <ul style="list-style-type: none"> <li> Port is disabled</li> <li> Port is empty</li> <li> Port has a registered SIM card</li> <li> Port is under initialization</li> <li> Port is error, requires administrator action</li> <li> Port is not managed from Smart SIM Rack</li> </ul>
Gateway GSM Port	Identify a given GSM port with its associated GSM device name and port information with the following syntax: <b>GSM_device_Name Port_number</b> <u>Example:</u> LabGW 01 means GSM port 1 of the GSM device named LabGW.
Associated SIM Group	Display the SIM Group name being used from the GSM port
IMSI	The International Mobile Subscriber Identifier (IMSI) of the given GSM port. This field is empty if no SIM card is allocated to the given GSM port.
ICCID	The Integrated Circuit Card ID (ICCID) of the SIM card currently allocated to the given GSM port. This field is empty if no SIM card is allocated to the given GSM port.

## SIM Card

---

### **Presentation**

This section gives you access to the control of your SIM, you can define price plan and SIM card behavior, groups, allocation settings and SIM group sharing credit.

### **SIM Card Filter**

### **Usage**

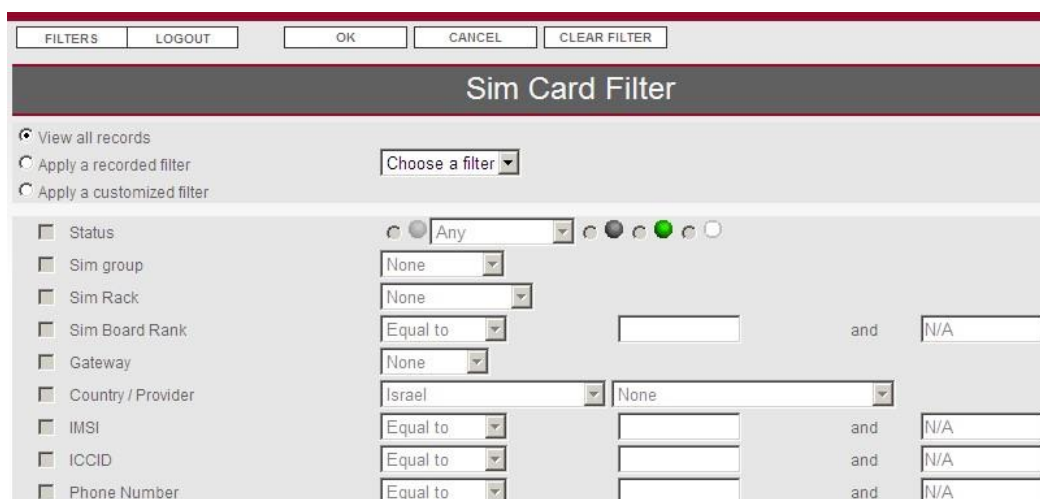
Select the criteria you need in order to get the list to restricted number of SIM cards.

Field Name	Field Description
View all records	<p>Select this option to list all the SIM defined in the system</p> <p>WARNING: By selecting this action, listing can take a while for huge system with hundreds of thousands of SIMs</p>
Apply a recorded filter	Select this option to select a customized filter previously recorded
Apply a customized filter	Select this option to use the next filtering form
Customized Filter Criteria	
Status	<p>Select the SIM status you are searching</p> <ul style="list-style-type: none"> <li><input type="radio"/> SIM card is disabled</li> <li><input checked="" type="radio"/> SIM card is available</li> <li><input type="radio"/> SIM card is registered to network</li> <li><input type="radio"/> SIM card is not present in any SIM Rack</li> <li><input type="radio"/> SIM card Smart SIM Rack</li> </ul>
SIM Group	Select SIM Group for SIM card
SIM Rack	Select SIM Rack for SIM card
SIM Board Rank	Select SIM Board number for SIM card
Gateway	Search for the SIM card actually allocated to the device selected
Country & Provider	Select the country then provider for SIM card selection
IMSI	Set a range of IMSI to search
ICCID	Set a range of ICCID to search

**Field description**

Phone number	Select phone number range from SIM card
--------------	---

## Snapshot











The screenshot shows a 'Sim Card Filter' dialog box with a title bar containing 'FILTERS', 'LOGOUT', 'OK', 'CANCEL', and 'CLEAR FILTER' buttons. The dialog has three radio buttons for filter selection: 'View all records' (selected), 'Apply a recorded filter', and 'Apply a customized filter'. A 'Choose a filter' dropdown is next to the second option. Below these are several filter criteria, each with a checkbox and a corresponding input field or dropdown menu. The criteria are: Status (Any), Sim group (None), Sim Rack (None), Sim Board Rank (Equal to), Gateway (None), Country / Provider (Israel), IMSI (Equal to), ICCID (Equal to), and Phone Number (Equal to). The 'and' operator is used to combine the filters, and the 'N/A' value is shown in the final filter field.





## SIM Card List

### Usage

The SIM Card List provides information about filtered SIM card.

Field Name	Field Description
Action Button	
	Delete all SIM selected from check box
	Open update form for all SIM card selected from check box
	Modify, clear or select another filter
	Save current filter for future use
	Export the full SIM List filtered
SIM Card List	
CheckBox	Select the check box to perform action described above
	Edition of the SIM card parameters
Status	 Show the current status of the SIM  SIM card is disabled

**Field description**

	 SIM card is available  SIM card is registered to network  SIM card is not present in any SIM Rack  SIM card Smart SIM Rack
SIM Rack Position	Shows the current place of the SIM card in the SIM Rack
Gateway Position	Shows current device and GSM port used for the SIM card
SIM Group	Shows the current SIM Group as well as the position in list
Provider	Shows current provider
IMSI	Shows SIM IMSI number
ICCID	Shows SIM ICCID number

## Snapshot

Sim Card List

DELETE

UPDATE

FILTER

SAVE FILTER

EXPORT

2 on 35 Records

Sim group = HyperM

<input type="checkbox"/>	Status	Sim Rack Position	Gateway Position	Sim group	Provider	IMSI	ICCID
<input type="checkbox"/>	registered	Rack132 (2-6)	GSMux80008 (1)	HyperM(12)	Partner Communications Co. Ltd.	425010380055274	8997201060903055258
<input type="checkbox"/>	registered	Rack132 (2-7)	GSMux80008 (5)	HyperM(13)	Partner Communications Co. Ltd.	425010380055302	89972010609030552830

## DELETE a SIM card

The SIM Pool table offers the possibility to delete a SIM record.

## Usage

For example, the administrator can delete a SIM card which is not anymore in the Hypermedia SIM Rack

To delete SIM records, you must select SIM List list

## Process description

Step	Action
1	Select concerning SIM cards by clicking on the checkbox located on the left side of the SIM Pool table
2	Click DELETE and confirm WARNING as undo is not possible after confirmation

## Update a SIM card

This button allows setting up various criteria of a particular SIM card or a set of SIM cards.

## Usage

SET SIM has same behavior for any list

To set SIM information, follow the procedure :

1/ Select the SIM card to update

2/ Click on  button

3/ Modify the values

4/ Click  to confirm new values

Action Name	Action Description
<input type="button" value="SAVE"/>	Check this box to reset all statistic counters of selected SIM cards.
<input type="button" value="CANCEL"/>	Check this box to reset all statistic counters of selected SIM cards.
Field Name	Field Description
Set value for disabling SIM card	Check this box to reset all statistic counters of selected SIM cards.
Set value for PIN code	Check this box and enter the PIN code for selected SIM cards.
Set value for SMS Centre	Check this box and enter the service number of the SMS Center for selected SIM cards.
Set value for SIM Group	To add the SIM card selection into the group, check this box and select a SIM group.

#### Field description

#### Snapshot

Update Sim Card

Set value for disabling Sim Card

☐

Disable Sim Card
☒ Yes
☐ No

Set value for PIN code

☐

PIN code

Set value for SMS Centre

☐

SMS Centre

Set value for Sim group

☐

Sim group
HyperM3

## Export SIM Card List

### Usage

You can export from your Smart SIM Rack system any SIM data.

Export the list of SIM cards (or list of filtered SIM card) with their associated information into a .CSV file with the format below: exported[x].csv

## SIM Group


### Overview

The SIM Group Table provides a list of SIM groups sorted according to specific criteria and provides the capability to group SIM cards.


Sim Group List					
ADD GROUP				3 on 3 Records	
Group name	Gateway	Status	GSM ports	SIM	
 HyperM	GSMux80008	Active	40	2	
 HyperM2	GSMux80009	Active	32	3	
 HyperM3	GSMux80003	Active	12	4	

### Create a new SIM

The procedure to create a new SIM group is described below:

Steps	Action
0	Click  menu button above the SIM Group Table. A new interface for group criteria specification is displayed (Figure 2-28).
1	Enter the name for the new group of SIM cards to be defined.
2	Select the maximum number of SIM card for the SIM Group (16 to 128)



<p><b>3</b></p>	<p>Select SIM to add in the new group:</p> <p><b>a.</b> The left panel list the SIM cards available, that is, those not yet selected. To list only a subset of all SIM card,  select a filter (provider or GSM devices or Hypermedia SIM Rack or Group)</p> <p><b>b.</b> Select the SIM locations that you want to group under the new SIM group by checking the little boxes on the right of the SIM card list.</p> <p><b>c.</b> Click on the right arrow button to enter the selected SIM cards into the SIM group.</p>
<p><b>4</b></p>	<p>Click SAVE.</p>

**Group**