

Multi Management System User Manual

MMS Manual

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1. Introduction

The SCAME Multi Management System (hereinafter, “MMS”) is a Central Station installed on a compact industrial computer, enabling all charging stations to be managed from a single user interface accessible via a browser.

Having a single entry point, this system allows grouping up to 50 charging devices in the 208.MMS01 version (maximum 10 master stations), and up to 100 charging devices in the 208.MMS02 version (maximum 25 master stations) and facilitates the user in their management thanks to an intuitive interface.

There are three types of accounts that can access the MMS, each with different permissions:

- Local Manager - Operator with the role of system administrator.
They can:
 - See the real time status of each socket
 - See the description of the user charging at a station.
 - Start charging by remote.
 - Stop charging by remote.
 - Register Charge Users.
 - Register Charge Cards.
 - Limit charging from a station to a certain Card Group.
 - Customise the Home Page view.
 - See current and past transactions.
 - See the measurements acquired by the MMS.
 - Perform system maintenance operations.
- Maintenance Technician – Operator with the role of system control and diagnostics.
They can:
 - See the events recorded by the MMS and all acquired measurements.
 - Update the firmware of the stations connected to the MMS.
 - Perform system maintenance operations.
- Administrator – Operator with the highest role in the system. Account held only by the SCAME installer.
They can:
 - Register and configure new stations that MMS will manage.
 - Station and MMS software update operations.
 - They can do everything the Manager and Maintenance Technician Operators can do.

Requirements for correct installation to be met by the client

- **Location of SCAME MMS.** This device must be installed in a place that meets the following requirements:

- There must be a socket to power the device (german standard or P40 type).
- There must be access to a cabled local area network (LAN).
- The SCAME MMS can be mounted on a DIN rail.
- **EVSE Network.** The SCAME MMS must be connected via Ethernet cable to the network of charging stations to be managed. SCAME needs to know the IPs that will be assigned to the MMS and charging stations (master). All the IPs must be **static**.
- **Socket Association.** The SCAME MMS displays the sockets according to their name. It asks the client to create a table to ensure unambiguous association between the desired name for the socket (e.g. car spot code A1, A2, ..., B1) and the specific socket of the charging station.
- **VPN for updates and maintenance.** SCAME requires a VPN in order to have direct access to the MMS and stations from an external network, allowing the support service to update or maintain the system. If you do not have a VPN, permission must be requested to enable the one natively installed in the MMS.
- **External memory drive for backup functions.** Every week, the MMS automatically creates a system backup, which is saved in its internal memory and on an external memory drive if the latter is plugged into a USB port on the device. A USB stick or Hard Disk with sufficient memory is therefore required (from 32 Gb and up), which must stay plugged into the MMS for as long as it is used, in order to always have an up-to-date copy of the backup, to be used in the event the device breaks down.

2. Navigation

To access the SCAME MMS, your PC's browser must be opened (e.g. Chrome, Firefox, Microsoft Edge), and the IP address assigned by Scame once the system is installed must be keyed into the URL field (e.g. 192.168.0.2.). Once the page has finished loading, a login screen will appear as shown in figure 1.1.

To log in to the platform, insert the Username and Password assigned by the administrator, select one of the available languages and click the "Login" button.

If the login details are correct, the SCAME MMS will show the main "Home Page" described in the section below.

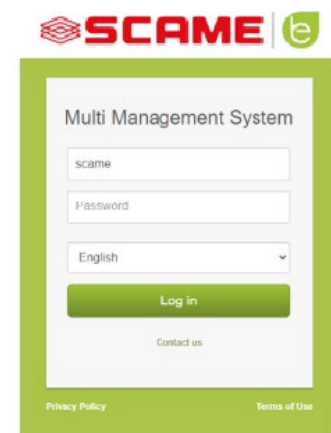


Figure 2.1


Navigation bar





Figure 2.2


To assist the user in navigating the SCAME MMS interface, there is an action bar (Figure 2.2) allowing access to all the main pages of the platform:


- **Home** – Access to Home Page. This page contains the main and most relevant system information such as: diagnostics, total energy consumption and the status of each socket of the charging stations managed by the SCAME MMS.


 **Transactions** – Access to the Transactions page. On this page it is possible to search, using a special filter, any charging transaction made on a socket and to display the measurements acquired (see section “[View a transaction](#)”).


 **Master Data** – Grouping of pages to administer all elements that will be managed by the platform:


 **Stations** – Page to view the details of the charging stations registered on the platform (see section “[Viewing the details of a station](#)”).


 **Socket Views** – Page to manage the Views that customise how the sockets are displayed on the Home Page (see section “[Registering a card](#)”).


 **Cards** – Page to manage the Charge Cards; once created and assigned to a Charge User, they will be authorised by SCAME MMS when they are tapped on the RFID reader of a charging station connected to the platform (see section “[Registering a card](#)”).


 **Card List Management** – Page to create, edit, and delete Card Lists; a Card List is a group of Charge Cards that can be sent to a station to authorise charging only for the cards included in said list (see section “[Enabling charging only for a specific Card Group](#)”).


 **Charge Users** – Page to manage Charge Users; Charge Users are natural persons who can have one or more Charge Cards (see section “[Registering a Charge User](#)”), not the Operators who have the credentials to access the SCAME MMS.


 **Administration** – Grouping of all pages for the correct administration of the platform:

Operators – Page to manage accounts with credentials to access the SCAME MMS platform:
 it is possible to register a new Operator, whose Username and Password will be selected by the administrator (see section “[Registering a new Operator](#)”).

 **SBC Card List** – Page to manage Card Lists; allows the sending, deletion and request for a Card List to one or more charging stations (see section “[Enabling charging only for a specific Card Group](#)”).

 **Maintenance** – Page to manage the backups of the platform files on another drive in order to restore them in case of loss, damage, or deletion of the originals (see section “[Backup and maintenance](#)”).

 **Account** – Groups together the operations to manage the account that is currently connected:

 **Change Password** – Changes the password of the account (see section “[Changing the password](#)”).

 **Logout** – Logs out of the platform.

3. Home Page

The Home Page is the main page of the SCAME MMS containing all the main functions to manage and control the status of the charging points and transactions made on them.

Following is a list of the main sections of the page, starting from the top.

Socket diagnostics

The platform has a “Diagnostics” section, showing a summary of the status of all the sockets. In particular, as shown by the figure, we have:

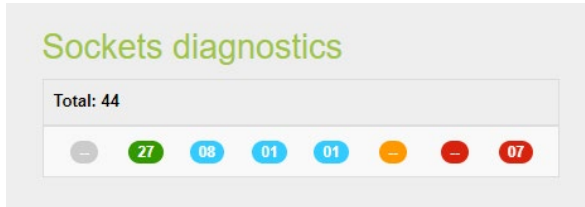


Figure 3.1

- Total: N.** Total number of sockets managed by the system.
- 1 Total number of sockets with “To be configured” status.
 - 2 Total number of sockets with “Available” status.
 - 3 Total number of sockets with “Charging” status.
 - 4 Total number of sockets with “Charging suspended” status.
 - 5 Total number of sockets with “Occupied” status.
 - 6 Total number of sockets with “Not available/Maintenance” status.
 - 7 Total number of sockets with “Fault/Error” status.
 - 8 Total number of sockets with “Out of service” status.

The Socket Statuses are described in the sections below.

Consumed energy

To the right of the “Socket Diagnostics” section, we have the “Consumed Energy” section, which shows:



Figure 3.2

1. Total daily consumption: total sum of energy, measured in kWh, consumed during the day by the charging points managed by the system. The value is reset at midnight the following day.
2. Total weekly consumption: total sum of energy, measured in kWh, consumed during the week by the charging points managed by the system. The value is reset at midnight every Monday.
3. Total monthly consumption: total sum of energy, measured in kWh, consumed during the current month by the charging points managed by the system. The value is reset at midnight on the first Monday of the month.

Search



Figure 3.3

Under the “Socket Diagnostics” and “Total Consumption” sections, the system has a filter to display only the sockets that satisfy the search parameters, from among all those managed by the system.

The search parameters that can be applied by the user are:

- Socket Name
- Socket Status
- Any combination of the above

See the Glossary and following chapter for more information.

The required inputs (shown in figure 3.3) for the Socket Status search filter are:

INPUT NAME	DESCRIPTION	ACCEPTED VALUES
1. Search	Socket Name you wish to view. Even only part of the name can be entered to display all Sockets starting with that sequence of characters.	Text with any alphanumeric characters
2. Socket Status	Drop-down menu to view only sockets with a certain status from among all those defined by the system.	<ul style="list-style-type: none"> • Charging suspended • To be configured • Available • Out of service • Fault/Error • Charging • Not available/ Maintenance • Occupied • Booked
3. Search	Button to start the search using the above input parameters: it is possible to search by Socket Name only, Socket Status only, or a combination of the two.	
4. Socket View	Drop-down menu to select the Socket View and therefore decide how the results should be displayed on the Home Page (see section “ Registering a card ”).	Only the names of the Socket Views created in the “Socket Views” page can be selected (see section “ Registering a card ”).

Socket Status

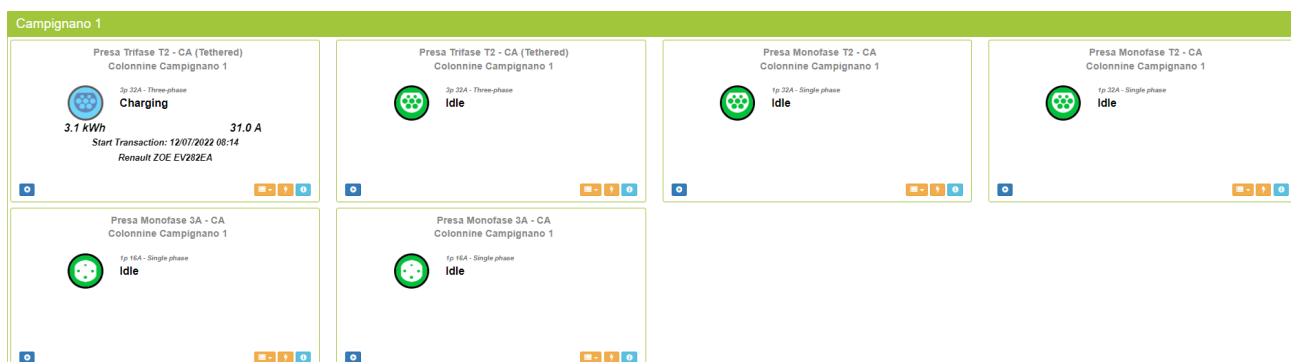


Figure 3.4

Under the search filter, all Socket Groups are listed based on the selected Socket View.

A Socket Group allows a certain number of sockets to be grouped on the basis of a logic defined by a Manager (for more details, see the section “[Customising the Home Page](#)”).

Figure 3.4 shows an example Socket Group with the name “Plan 1” containing 6 sockets.

Each socket is displayed by the SCAME MMS as shown in figure 3.5 with the following information:

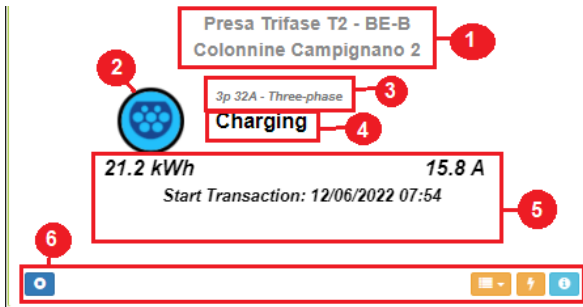



Figure 3.5

1. Socket Name and Socket Group Name: these are defined when creating a new Station and are used to identify the socket and assign a group to it.
2. Image graphically representing both the type and status of the socket.
3. Type of socket cabling: this is defined when creating a new Station and indicates the type of socket.
4. Socket Status: textually represents the operating mode of the socket in real time.
5. Description that can accompany the status of the Socket and used to provide more accurate information about the charging transaction taking place on the socket; From the left, we have:
 - Energy absorbed during the transaction
 - Current supplied by the socket
 - Date and time when charging started
 - User charging the vehicle
6. Control panel to send commands from the SCAME MMS to the charging station.









Socket Status graph and description

The image representing the Socket can vary depending on the type and status during its operation. These are the possible images:

IMAGE	SOCKET TYPE	ELECTRICAL DETAILS
	Socket Type 1	16 Amps, Single-phase
	Socket Type 2	16 Amps, Single-phase
		32 Amps, Single-phase
		16 Amps, Three-phase
		32 Amps, Three-phase
	Socket Type 3A	16 Amps, Single-phase
	Socket Type 3C	16 Amps, Single-phase
		32 Amps, Single-phase
		16 Amps, Three-phase
		32 Amps, Three-phase
	Shuko Socket Type	16 Amps, Single-phase
	CHAdeMO Socket Type	DC 60 kW
		DC 125 kW

	CCS Combo 2 Socket Type	DC 60 kW
		DC 125 kW

Listed below are the Socket Statuses that can be displayed by the SCAME MMS (using a Type 2 Socket as an example):

IMAGE	SOCKET STATUS	STATUS DEFINITION
	To be configured	The socket must be configured by a SCAME installer.
	Available	The socket is available and ready to charge a vehicle.
	Not available/ Maintenance	The socket is not available to charge a vehicle.
	Fault/Error	The MMS has detected a malfunction on the part of the SBC.
	Out of service	The charging station that manages the socket is disconnected from the network and cannot send information to the MMS.
	Charging	The socket is charging an electric vehicle. The description of the transaction under way will also be shown.
	Charging suspended	The socket is not charging the vehicle because the latter may be charged or have experienced an error. The transaction was not concluded and charging may resume when normal conditions are restored.
	Occupied	The socket is occupied by a plug but there are no charging transactions under way.


Socket control panel

This panel groups together a series of commands that can be executed by the SCAME MMS on a socket of a station.

Start Charging




Figure 3.6

If the socket has the “Available” status , pressing this button starts charging by remote for the respective socket of the station (see section “Starting and stopping charging”).

Stop Charging



Figure 3.7

If the socket has the “Charging” status , pressing this button stops charging by remote for the respective socket of the station (see section “Starting and stopping charging”).

Send List

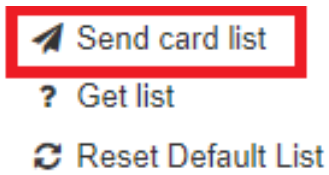



Figure 3.8

Pressing the “List Management” button  opens a drop-down menu like the one shown in the figure to the side. The “Send List” button is used to send a previously created list of User Cards (see section “**Enabling charging only for a specific Card Group**”).

Request List Version

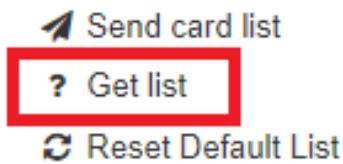



Figure 3.9

Pressing the “List Management” button  opens a drop-down menu like the one shown in the figure to the side. The “Request List Version” button is used to request the charging station for the Card List it manages (see section “**Enabling charging only for a specific Card Group**”).

Reset Default List

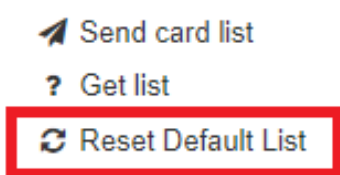



Figure 3.10

Pressing the “List Management” button  opens a drop-down menu like the one shown in the figure to the side. The “Reset Default List” button is used to remove the Card List of the charging station with the socket, and reload all those registered in the MMS (see section “**Enabling charging only for a specific Card Group**”).

Socket Transactions



Figure 3.11

The “Transactions” button opens the page listing all the transactions made on the respective socket (see section “**Viewing a transaction**”).

View Details

Details	
Cards list:	-
Transaction #:	114578

Figure 3.12

The “View Details” button shows the name of the Card List managed by the charging station and the transaction number, if charging is under way on the socket.

4. Registering a Charge User




A Charge User is a natural person who wants to charge their vehicle at a charging station connected to the SCAME MMS, and to do so they must authenticate themselves by tapping their Charge Card on the card reader installed on each SCAME station.

To enable this, the Manager must register both the user and their card (or cards) in the MMS.

This section explains how to create a new Charge User, while the next section explains how to create a new Charge Card and assign it to a user.




It is important to note that the Charge User and Manager Operator are two different entities: the first needs to charge from a station and must not have access to the MMS, the second has an account to access the MMS and manage the system to control the stations and insert new cards and users.

To create a new Charge User, proceed as follows:

1. Log in to the SCAME MMS with the Manager credentials.
2. From the navigation bar, click the  Master Data and  Charge Users buttons.
3. The system will display a table with all registered users and their main details.
4. Above the table header, click the  button.
5. A window will open in which to enter the details of the user you wish to upload. Their name, surname and tax code are required to proceed.
6. Once at least the mandatory fields have been filled, click the “Create” button.
7. You will be redirected to the table in step 3 where the newly created user can be viewed.




The newly entered user will not be able to charge their vehicle until at least one card has been assigned to them (see the section “[Registering a card](#)”).

For the sake of completeness, we also explain the other possible actions from the Charge Users page:



- Click the  button found above the table header to export the complete table of Charge Users in a Microsoft Excel® format.
- Click the  button in the last column of each row of the table to edit the corresponding user information.
- Click the  button in the last column of each row of the table to delete the corresponding user.

5. Registering a card

To add a card and assign it to a user, proceed as follows:

1. Log in to the SCAME MMS with the Manager credentials.
2. From the navigation bar, click the  Master Data and  Cards buttons.
3. The system will display a table with all the registered cards and their main information, such as the user to whom the card is associated.
4. Above the table header, click the  button.
5. A window will open in which to enter the details of the user card you wish to upload.

Below is a detailed description of all parameters to be entered:




- **Charge User** - Click the  button to display the list of all users registered in the MMS. Select the user to whom you wish to associate the card being created by pressing the  button. If a Charge User has not yet been created, see section “[Registering a Charge User](#)”.

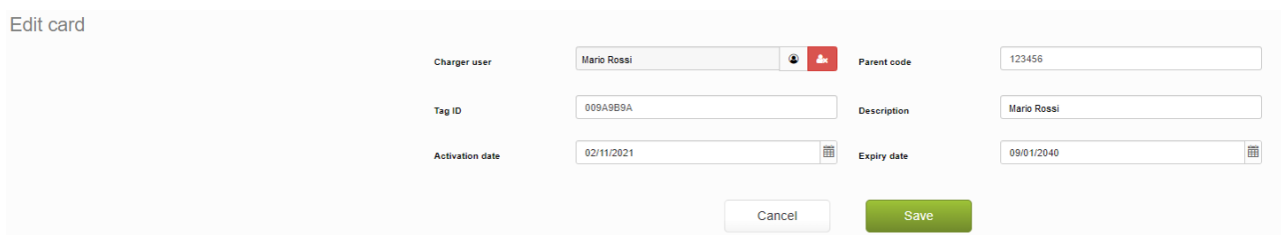
- **Parent Code** – A card with a parent code can stop charging transactions initiated with other cards having the same parent code. If you do not wish to assign a parent code, leave this field empty.
 - **ID Tag** – Sequence of 14 alphanumeric characters (e.g. 8C45BE53000000). This can be read from a card using any NFC reader application.
ATTENTION: for the system to work properly, if the card’s ID tag has less than 14 characters, add as many zeros on the end as needed to reach a total of 14 characters.
 - **Description** – Short sentence describing the user's card.
 - **Activation** – Date from which the card will be active and can be used by the user.
 - **Expiry** – Date from which the card will be disabled and can no longer be used for charging. This field can be left empty, in which case the SCAME MMS will consider this card to have unlimited use with no expiry date.
6. When all the fields have been filled, click the “Create” button. The system will display the screen from step 3 and the table will include the newly created card.

Once registered by the system, the card will be enabled for charging from the activation date until the expiry date entered in the previous procedure.

Editing a card

If any of the card parameters need to be edited at a later stage (for example the expiry date to prolong the use of the card), proceed as follows:

1. Log in to the SCAME MMS with the Manager credentials.
2. From the navigation bar, click the  Master Data and  Cards buttons.
3. The system will display a table with all the registered cards and their main information, such as the user to whom the card is associated.
4. Search the table for the card whose parameters you wish to edit and click the  button.
5. A window like the one shown in Figure 5.1 will open. Edit the parameters you wish to update and when you are satisfied, click the “Save” button.
6. The system will display the screen from step 3 and the table will include the updated card.






The screenshot shows a web form titled "Edit card". It has six input fields arranged in two columns. The left column contains: "Charger user" with the value "Mario Rossi", "Tag ID" with "009A9B9A", and "Activation date" with "02/11/2021". The right column contains: "Parent code" with "123456", "Description" with "Mario Rossi", and "Expiry date" with "09/01/2040". At the bottom of the form are two buttons: "Cancel" and "Save".

Figure 5.1

Deleting a card

To delete a card, proceed as follows:

1. Log in to the SCAME MMS with the Manager credentials.
2. From the navigation bar, click the  Master Data and  Cards buttons.
3. The system will display a table with all the registered cards and their main information, such as the user to whom the card is associated.
4. Search the table for the card you wish to delete and click the  button.

- The system will open a window to confirm the deletion procedure. Click the “Confirm” button to proceed.
- The system will display the screen from step 3 and the table will no longer include the card. This card can no longer be used unless the procedure is repeated described at the start of the section “**Registering a card**”.



6. Starting and stopping charging

All users with a card registered on the SCAME MMS platform can start and stop charging by tapping this card on the RFID reader on the charging station, which must be registered (operation carried out by SCAME support during installation) and managed by the system. This must be the standard procedure unless you wish to allow charging on a station only for certain cards (see section “**Enabling charging only for a specific Card Group**”).

SCAME MMS also allows charging to be started and stopped by remote without needing to tap the card on the RFID reader of the charging station. This operation can be carried out only by Operators with an account to access the platform. The steps are explained in detail below.

Start charging by remote

The steps to start charging by remote are:

- Log in to the SCAME MMS with Manager or Maintenance Technician credentials.
- Go to the platform’s Home Page.
- Search for the socket of the charging station where you wish to start the charging transaction.
- Check that the socket has the “Available” status .
- Click the  “Start Charging” button on the socket control panel.
- Wait for the MMS to display a table containing all the Charge Cards registered on the platform (as can be partially seen in Figure 6.1).

Selezione carta

Tag ID	Descrizione	Codice Padre	Utente di ricarica	Attivazione	Scadenza	
EX556EV	C5 Airross	[123456]	MARIO ROSSI	16/09/2021	01/09/2040	
EX556EV	C5 Airross	[123456]	MARIO VERDI	03/09/2021	01/09/2040	
*132075828	Card Eddy		UTENTE GENERICO Test	01/12/2022		

Figure 6.1

- Select the card assigned to the Charge User to whom the charging transaction is to be attributed (the respective charge measurements and consumption will be associated to them).
- A window will open in which to confirm the operation (see 2).

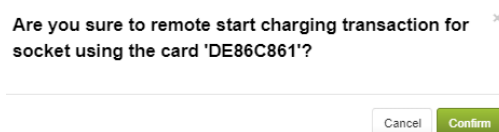


Figure 6.2

- Wait for the SCAME MMS to respond with a message that the procedure has successfully started (visible in Figure 6.3).







Figure 6.3

10. The charging station will enable plugging in of the vehicle charging cable and the transaction will begin. To update the Socket Status, wait for the automatic update, or else refresh the page.

NOTE) Remote charging is possible for every card registered by the system, regardless of whether or not it is included in a customised Card List saved in the station (see section “**Enabling charging only for a specific Card Group**”).

Stop charging by remote

The steps to stop charging by remote are:

1. Log in to the SCAME MMS with Manager or Maintenance Technician credentials.
2. Go to the platform’s Home Page.
3. Search for the socket of the charging station where you wish to start the charging transaction.
4. Check that the socket has one of the following statuses:
 - “Charging” 
 - “Occupied” 
 - “Charging suspended” 
5. Click the  “Stop Charging” button on the socket control panel.
6. Wait for the SCAME MMS to respond with a message that the procedure has successfully ended (visible in Figure 6.4).

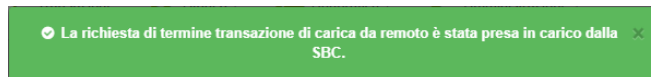


Figure 6.4

7. A window will open in which to confirm the operation (see 6.5).




Figure 6.5

8. The charging station will stop the transaction under way; extract the charging cable from the station. To update the Socket Status, wait for the automatic update, or else refresh the page.

7. View a transaction

The SCAME MMS records all charging transactions made on the sockets of the charging stations connected to it. Each transaction is accompanied by energy, voltage and current measurements.

This information can be accessed in two ways:

- From the Home Page, searching for the socket and clicking the  “Transactions” button. The system will open the “Transactions” page and display a table with all the charging transactions made or under way on the selected socket.
- From the navigation bar, click “Transactions” to open the page. The system will display a table with all the charging transactions recorded by the SCAME MMS.

Search

The “Transactions” page has a search filter (in Figure 7.1) that is useful to filter the transactions and quickly find the desired one from among all those recorded by the system.

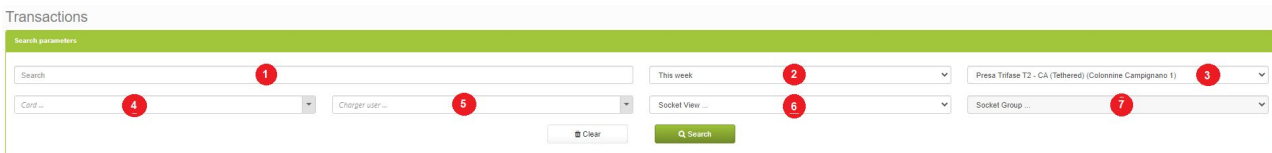


Figure 7.1

INPUT NAME	DESCRIPTION	ACCEPTED VALUES
1. Search Field	Enter the Socket Name to search all transactions corresponding to that socket	Any text.
2. Time range field	Mandatory input. The transactions can be searched based on a time period	<ul style="list-style-type: none"> • Today - search all transactions made on the current day • This week - search all transactions made in the current week • This month - search all transactions made in the current month • Free range - search all transactions made within a period of time selected by the user; the system will display two additional fields in which to enter the start date and time, and the end date and time.
3. Socket field	Search all transactions corresponding to a certain Socket.	The system will display a list of all the managed Sockets from which to choose.
4. Card field	Search all transactions corresponding to a Charge User's Card (a Charge User can have multiple cards).	The system will display a list of all the registered Cards from which to choose.
5. Charge User field	Search the transactions of all Cards associated to a Charge User.	The system will display a list of all registered Charge Users from which to choose.



<p>6. Socket View field</p>	<p>Search all transactions of the Sockets in the Socket Groups of the Socket View.</p>	<p>The system will display a list of all Socket Views created (see section “Customising the home page”).</p>
<p>7. Socket Group field</p>	<p><i>This field is only available after selecting a Socket View in the Socket View field.</i> Search all transactions made on the Sockets belonging to the selected Socket Group.</p>	<p>The system will display a list of all the Socket Groups from which to choose, included in the Socket View selected in the previous field (see section “Customising the home page”).</p>

Transactions table

The transactions table collects all the results found by the MMS after a filter search (Figure 7.2) and shows the sum of the energy consumed.


Transaction #	Socket	Charger user	Terminated by	Start at	End	Duration	Delivered energy
114586	P2 Pisa Trifase T2 - CA (Telerec)	Renault ZOE EV038EA (Portachiavi Renault ZOE C2)	Operatore Web	12/09/2022 09:42	12/07/2022 08:24	22:41 (Total Duration) 22:41 (Charge Duration)	2.8 kWh
114576	P2 Pisa Trifase T2 - CA (Telerec)	Renault ZOE EV038EA (Portachiavi Renault ZOE C2)	Operatore Web	12/09/2022 17:28	12/09/2022 08:23	14:57 (Total Duration) 14:57 (Charge Duration)	2.8 kWh
114572	P2 Pisa Trifase T2 - CA (Telerec)	Renault ZOE EV038EA (Portachiavi Renault ZOE C2)	Operatore Web	12/09/2022 14:51	12/09/2022 11:07	02:16 (Total Duration) 02:16 (Charge Duration)	4.7 kWh

Figure 7.2

All entries in the table can be exported to a Microsoft Excel® file, which the system will download, by clicking the  button above the table header. To do the same thing but for only one entry in the table, click the  button.

The “Total Consumption” field shows the sum of the energy of all transactions displayed by the table. With the search filter, it is possible to obtain the immediate sum of the transactions of interest.

Viewing the measurements of a transaction

To view the measurements acquired by the MMS during a transaction, click the  button. The system will open a window (Figure 7.3) showing a graph of the measurements taken.

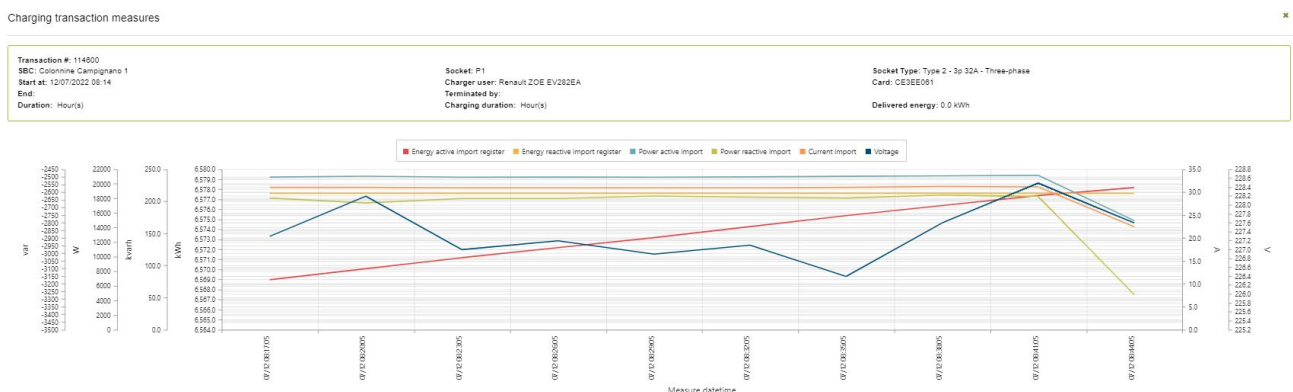


Figure 7.3

The viewing of a particular measurement can be deactivated by clicking on its name in the key above the graph.

8. Viewing the details of a station

SCAME MMS keeps a record of all charging stations administered by the Manager. To view all the stations, click the Master Data and Stations button in the navigation bar. A table will be displayed with each row showing the main details of a station (Figure 8.1).

Clicking the button above the table header, the table can be exported to a Microsoft Excel® file.

Clicking the button of one of the table rows opens the page containing the details of the station in that row.

Name	OCPP Protocol	Code	Device type	N° sockets	
Colonna Ponte Noesa (magazzino) 100163404	OCPP 1.6 J1939	Scame_02	SBC	4	
Colonna Ponte Noesa (laboratorio) 100163402	OCPP 1.6 J1939	Scame_01	SBC	4	
Wallbox Pire 1	OCPP 1.6 J1939	Scame_01	ODD	2	
Wallbox Pire 2	OCPP 1.6 J1939	Scame_02	SBC	2	
Colonna Campigliano 1	OCPP 1.6 J1939	Scame_001	SBC	6	
Colonna Elv.Parsco	OCPP 1.6 J1939	Scame_08	SBC	6	
Colonna Campigliano?	OCPP 1.6 J1939	Scame_003	SBC	10	
Colonna OCB CMH T2	OCPP 1.6 J1939	MVG	SBC	3	
Colonna OCB OCB T2	OCPP 1.6 J1939	MVG2	SBC	3	

Figure 8.1

Details of station

After clicking the button of a station, the system will open the page containing the details of the station. The different sections it contains are described below:

General section

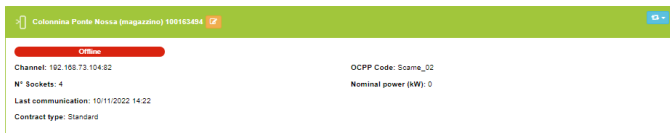


Figure 8.2

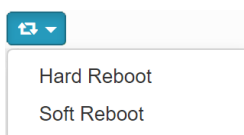


Figure 8.3

This section contains general information about the charging station and its status. From here, the station can be rebooted using the Reboot button:

- **Hard Reboot:** Total station reboot. The station switches off and then on again automatically.
- **Soft Reboot:** only the application that manages communication between the station and the MMS is rebooted. In this case, the station does not switch off.

Firmware section

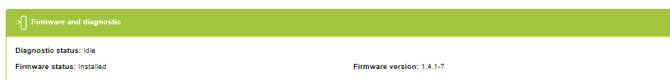


Figure 8.4

This section contains general information about the firmware installed on the charging station that manages the sockets displayed in the side panels.

Socket section

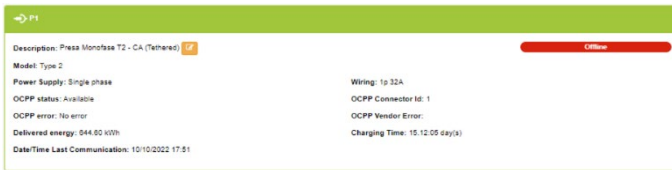



Figure 8.5

This section contains general information about a socket such as its status, type, cabling, etc.

From here, charging can be started by remote for the socket by pressing the  button and following the steps in the section “Starting and stopping charging”.

Events section



Figure 8.6

This section contains a table listing all the events of the OCPP protocol recorded by the SCAME MMS from the selected charging station.

Messages section






Figure 8.7

This section contains a table listing all the messages of the OCPP protocol sent and received by the SCAME MMS from the selected charging station.

Editing the Station Name and Socket Description

On the station details page, the Manager can edit the Station Name and also the Socket Description. This information will be displayed in the Home Page and other pages of the platform so that they can be immediately identified by the user.

To edit the Station Name, follow the steps below:

1. Open the Details page of the station that needs to be edited.
2. Click the  button in the header of the general section (Figure 8.2).
3. A field will be displayed where the new value can be entered, deleting or editing the previous one (Figure 8.8).
4. To confirm the operation, click the  button, otherwise click  to cancel.

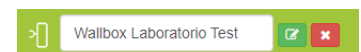



Figure 8.8

To edit the Socket Description, the steps are the same as those shown above, with the only difference being the  button to click, which is found in the Socket section (Figure 8.5).

9. Enabling charging only for a specific Card Group




SCAME MMS offers the possibility to authorise charging at a station only for a specific Card Group (or Card List), and not all cards registered in the system. To do so, a list of authorised cards must be created and uploaded to the station through the platform.

We will look at the two steps separately.

Note that a charging station implies the master station inclusive of all slaves. Therefore, charging can be authorised to a limited Card Group, on all sockets managed by the master station and its slaves, and not on a single socket.

Creating a new Card List

Below is the procedure to create a Card List:

1. Log in to the SCAME MMS with the Manager credentials.
2. From the navigation bar, click the  Master Data and  Card List Management buttons.
3. The system will display a table with all existing Card Lists and their main information such as the list version number, how many cards it contains, and when it was created.
4. Above the table header, click the  button.
5. A page will appear like the one shown in Figure 9.1.
Enter the name of the list in the relative field and drag the cards you wish to include in the group from the “List of available cards” (on the left) to the “Cards to include in list” (on the right) - see example in Figure 9.2 .
To drag: move the mouse cursor over the name of a card in the “List of available cards”; click the left mouse button and hold it pressed, move the cursor over the “Cards to include in list”; release the mouse button, and the card will be inserted into the right-hand list.
6. When the desired cards have been inserted, click the “Create” button.
7. The system will display the screen from step 3 and the table will include the new Card List.

Create new version of cards list

Name

Available cards list

Carta rossa [E4A68438000000] - 30/04/2021 - Marco Rossi
 Carta verde [8C458E53000000] - 02/05/2021 - Giovanni Verdi
 Tag Bianco [477C90F9000000] - Carlo Bianchi

Cards in list

Figure 9.1

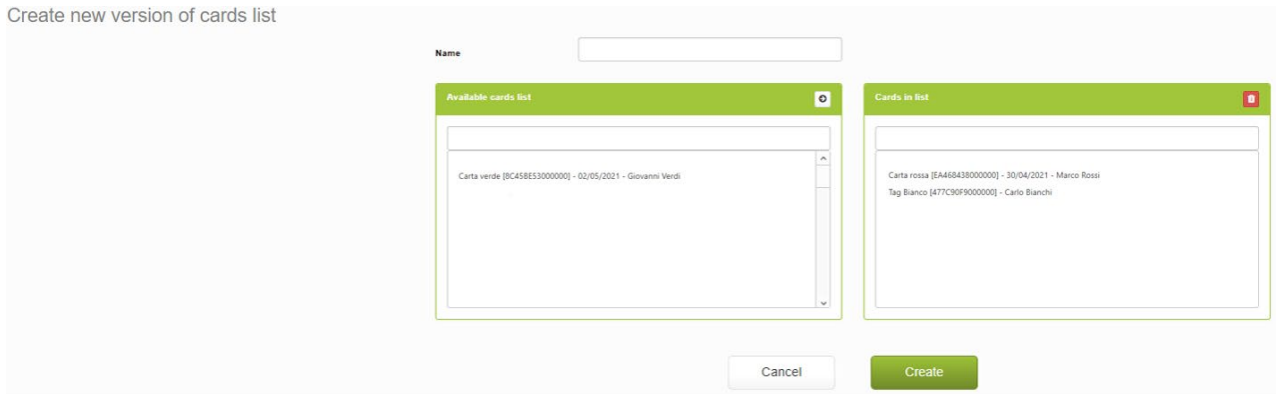


Figure 9.2

Uploading a new Card List to a charging station

There are two procedures to upload a customised Card List to a station:

- From the Home Page – useful when a Card List needs to be uploaded to only a few stations.
- From Administration – useful when a Card List needs to be uploaded to many or all stations.

Below are the steps to carry out the procedure from the Home Page:

1. Log in to the SCAME MMS with the Manager credentials.
2. Go to the platform’s Home Page.
3. Search for a socket of the charging station where you wish to assign the customised Card List.
4. In the socket panel, click the “Card List Management” button and then the “Send List” button (see Figure 9.3).

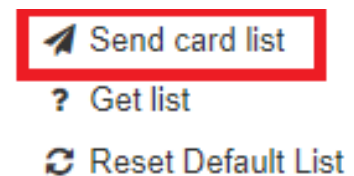


Figure 9.3

5. The system will open a window with the table containing all the previously created Card Lists. Click the button on the row of the desired list to select it.
6. The system will send the list to the charging station and reply with the message shown in Figure 9.4 if the procedure is successfully completed.

From this moment on, the station will authorise only the cards in the uploaded list.

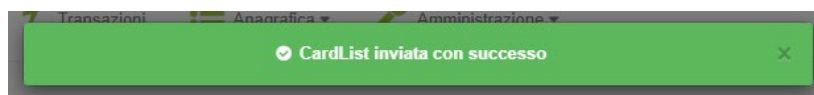


Figure 9.4


Below are the steps to carry out the procedure from Administration:

1. Log in to the SCAME MMS with the Manager credentials.
2. From the navigation bar, click the Administration and SBC Card List buttons.
3. The system will display a page with a table containing all the stations it manages.
4. Using the check boxes in the first column of the table, select the stations where you wish to upload the customised Card List.
5. Click the “Send List” button under the table.
6. The system will open a window with the table containing all the previously created Card Lists. Click the button on the row of the desired list to select it.
7. The system will send the list to the charging station and reply with the message shown in Figure 9.4 if the procedure is successfully completed.

From this moment on, the station will authorise only the cards in the uploaded list.

Removing a Card List from a charging station

To remove a customised Card List from a station, proceed as follows:

1. Log in to the SCAME MMS with the Manager credentials.
2. Go to the platform's Home Page.
3. Search for a socket of the charging station from where you wish to remove the customised Card List.
4. In the socket panel, click the  "Card List Management" button and then the "Remove List" button (see Figure 9.5).
5. The customised list will be removed from the station and a default list will be automatically uploaded containing all cards registered in the system, restoring its original state.

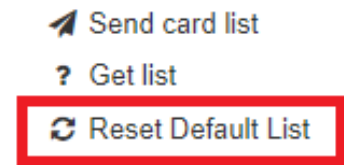





Figure 9.5

There is also another useful procedure to remove customised lists from multiple charging stations at the same time. Below are the steps:


1. Log in to the SCAME MMS with the Manager credentials.
2. From the navigation bar, click the  Administration and  SBC Card List buttons.
3. The system will display a page with a table containing all the stations it manages.
4. Using the check boxes in the first column of the table, select the stations from where you wish to remove the customised Card List.
5. Click the "Remove List" button under the table.
6. The customised list will be removed from the stations and a default list will be automatically uploaded containing all cards registered in the system, restoring its original state.

Viewing the Card List of a charging station

To see which Card List is loaded on a charging station, proceed as follows:

1. Log in to the SCAME MMS.
2. Go to the platform's Home Page.
3. Search for the socket of the charging station where you wish to see the Card List.
4. From the socket panel, click the  button to display the details of the socket. From here, it is possible to read the name of the Card List uploaded to the station of the respective socket (If the name is "-" this means the uploaded Card List is the default one, containing all cards registered by the MMS).

To see which cards are included in the list, continue the procedure.

5. In the socket panel, click the  "Card List Management" button and then the "Request List Version" button (see figure 9.6).
6. The system will open a window with a table containing the cards that will be authorised by the charging station, and for which charging will therefore be allowed.

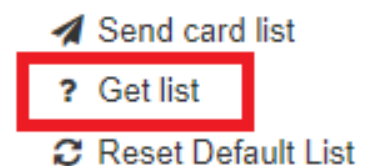


Figure 9.6

10. Customising the Home Page

The SCAME MMS offers the possibility to change how the sockets are displayed in the Home Page according to the Operator's preferences. In the search filter (visible in Figure 3.3), using the first button on the right, it is possible to select the desired Socket View from among those created by the Operator.

A Socket View is a structure consisting of zero to several groups of sockets, the name of which is defined by the Operator. Each group is then assigned one or more sockets managed by MMS.

This model allows the Home Page to be customised so that each socket is collected in a group displayed like a section in itself, allowing a clearer view of the sockets managed by the system.




Moreover, each View can have a different logical meaning. Let's take an example:

Supposing we have several stations split over 3 floors of an underground car park, it is possible to create a view that shows the sockets based on the level where they are installed (each Socket Group corresponds to one floor of the car park), a view that shows the sockets based on the type of cabling (one group will have type 2 sockets, one will have type 3A sockets, etc.) and lastly a view that shows the sockets based on the stations they belong to (each group will have the sockets of the master stations and connected slave stations).

Below are the steps to create a View and display it on the Home Page.




Creating a Socket View

To create a new Socket View, proceed as follows:

1. Log in to the SCAME MMS with the Manager credentials.
2. From the navigation bar, click the  Master Data and  Socket Views buttons.
3. The system will display a table with the existing Views and the names of the Socket Groups of which they are composed.
The View with the name followed by the symbol (*) is the default view, that is, the one displayed when the Home Page is opened.
4. Above the table header, click the  button.
5. A window will open in which to enter the desired name for the new Socket View.
Click the "Create New View" button to confirm.
6. You will be redirected to the table in step 3 where the new view was inserted without any Socket Groups (continue the procedure from point 4 of the next paragraph).




Adding a Socket Group to a View

To add a new Socket Group to a newly created View, or to a View you simply wish to update, proceed as follows:

1. Log in to the SCAME MMS with the Manager credentials.
2. From the navigation bar, click the  Master Data and  Socket Views buttons.
3. The system will display a table with the existing Views and the names of the Socket Groups of which they are composed.
4. Click the  button of the View where you wish to add a new Socket Group.
5. A window will open in which to enter the desired name for the new Socket Group.
Click the "Create New Group" button to confirm.
6. You will be redirected to the table in step 3 where the selected View will include the newly created Group without any sockets entered (continue the procedure from step 4 of the next paragraph).

Adding a socket to a Socket Group

To add one or more sockets to a newly created or existing Socket Group, proceed as follows:





1. Log in to the SCAME MMS with the Manager credentials.
2. From the navigation bar, click the  Master Data and  Socket Views buttons.
3. The system will display a table with the existing Views and the names of the Socket Groups of which they are composed.
4. Click the  button of the View containing the Group where you wish to add the sockets.
5. The system will display a new page to edit the View selected in the previous step.
 - It is possible to change the name of the View and the names of the Socket Groups created in the previous section.
 - It is possible to indicate whether the View is the default one. If the button is enabled, the list will be the default one.
6. In the “Socket Group Association” section, all sockets managed by the MMS will be displayed. Use the select button next to each socket to indicate which group it is to be associated with.
7. Once the changes have been made, click the “Save” button at the bottom of the page.
8. You will be redirected to the table in step 3 where the changes made to the list can be viewed.

Removing a socket from a Socket Group

To remove one or more sockets from a Socket Group, follow the steps in the section “**Adding a Socket to a Socket Group**” until step 6 and use the select button of the socket you wish to remove to select the empty field (the first option). This will remove the socket and place it in the “Unassigned Sockets” group of the View (this group is always present and cannot be deleted).

Removing a Socket Group or Socket View

To remove a Socket Group or View that is no longer needed, proceed as follows:

1. Log in to the SCAME MMS with the Manager credentials.
2. From the navigation bar, click the  Master Data and  Socket Views buttons.
3. The system will display a table with the existing Views and the names of the Socket Groups of which they are composed.
4. Click the  “Cancel Group” button next to the group to be removed, or the  “Delete View” button next to the view to remove it entirely.

In the first case, the group will no longer be visible and the sockets will automatically be assigned to the “Unassigned Sockets” group; in the second case, it will no longer be possible to select the View from the search filter button on the Home Page.

11. Registering a new Operator

An Operator is an account that can access the SCAME MMS platform and therefore administer the system.




As explained in the introduction, each account has certain permissions in order to use only the functions it needs.

Even when creating a new Operator, the following limitations apply:

- Administrator - Can create new Administrator, Manager, and Maintenance Technician type Operators.
- Local Manager - Can create only Manager Operators.

- Maintenance Technician - Cannot create new Operators.

To create an Operator, proceed as follows:

1. Log in to the SCAME MMS using the credentials giving you permission to create a certain type of Operator.
2. From the navigation bar, click the  Administration and  Operators buttons.
3. The system will display a table with all registered users and their main details.
4. Above the table header, click the  button.
5. A window will open to create a new Operator account. All fields, except for the mobile phone number, must be filled in to proceed.
6. Once the mandatory fields have been filled, click the “Create” button.
7. The system will send a confirmation email to the address of the account entered in step 5. If the email is not sent due to connection problems, the account will still be registered.
8. You will be redirected to the table in step 3 where the newly created Operator can be viewed.

12. Backup and maintenance

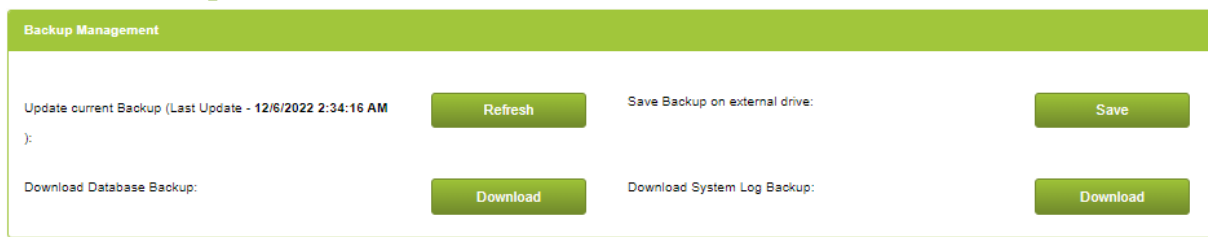


Figure 12.1

To prevent irreversible damage to the system, SCAME MMS automatically saves a backup copy in its memory every day.

A special page has been dedicated to further management of backup files: to access this area, go to the navigation bar and click the  Administration and  Maintenance buttons.

A first backup section will be displayed (visible in Figure 12.1), where it is possible to:

- Click the “Update” button to manually update the SCAME MMS backup
- Click the “Save” button to save the backup on an external drive.
Before starting this operation, check that an external drive is connected to the MMS (such as a USB stick or hard disk that can stay connected).
- The backup can be downloaded directly on the PC used to log in to the system by clicking the “Download” button on the left. To download only the log files for system diagnostics, click the “Download” button on the right.

The next two sections “Upload Update” and “Upload System Configuration” are used by the SCAME administrator to update the software and configuration of the MMS.

13. Changing the password

The procedure to change the password is as follows:

1. Log in to the MSS.
2. Using the navigation bar, click the entry with the name of the user who is using the system and then click the “Change Password” button (Figure 13.1).
3. In the window that opens (Figure 13.2), enter:
 - The password you wish to change (that was used for login in point 1) in the “Current Password” field.
 - The new password in the “New Password” field.
 - Repeat the new password in the “Confirm New Password” field to check.
4. Confirm the new password by clicking the “Change Password” key.

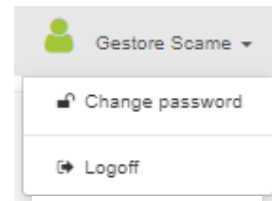
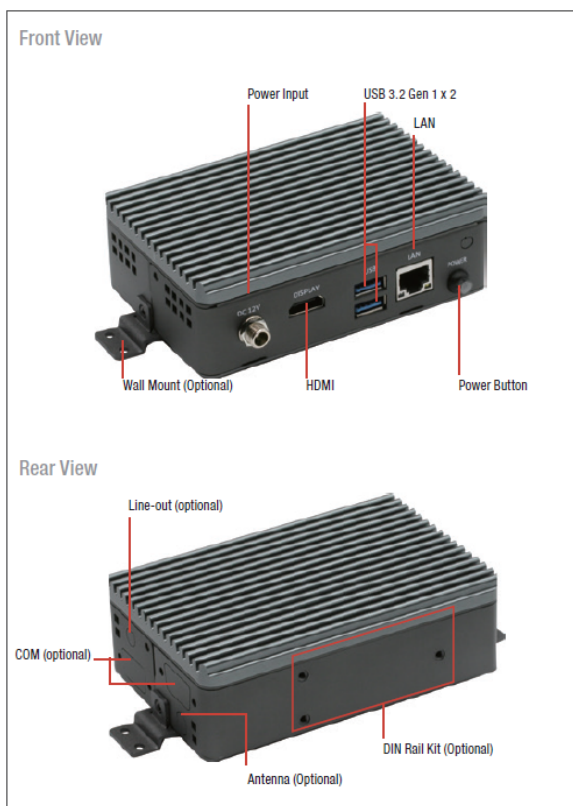


Figure 13.1

Figure 13.2

14. Data sheet



Features

- 270g Extreme Light System, Easy To Adapter Everywhere
- Gigabit Ethernet for Networking Connection
- USB 3.2 Gen 1 Connectivity
- HDMI
- mSATA and miniCard Slot for WiFi/3G/4G Bluetooth Module
- Fix Holes for Antenna, Wallmount, DIN-Rail Kit Optional
- Lockable 12V DC Input



Display	
Chipset	Intel® SoC
Video Output	HDMI 1.4
Touch	—
I/O	
Storage/SSD	mSATA(Full size) x 1
USB Port	USB 3.2 Gen 1 x 2 (Rear I/O) USB2.0 x 1 (Internal option)
Serial Port	Optional
Audio	—
Expansion Slot	RS-232 x 1, RS-232/422/485 x 1 (Optional)
Certification	
Certification	CE, FCC

Specifications

System	
Form Factor	Pico-ITX
Processor	Intel® Pentium® N4200 (4C, 1.1 GHz, up to 2.5 GHz, TDP 6W) (optional) Intel® Celeron® N3350 (2C, 1.1 GHz, up to 2.4 GHz, TDP 6W) Intel® Atom™ x7-E3950 (4C, 1.6GHz, up to 2GHz, TDP 12W) Intel® Atom™ x5-E3940 (4C, 1.6GHz, up to 1.8GHz, TDP 9.5W) Intel® Atom™ x5-E3930 (2C, 1.3GHz, up to 1.8GHz, TDP 6.5W)
System Memory	DDR3L SODIMM Slot x 1, Up to 8GB
Chipset	Intel® SoC
Ethernet	Intel® Gigabit Ethernet I211AT, 10/100/1000Base, RJ-45 x 1
BIOS	AMI BIOS
Wake on LAN	Yes
Watchdog Timer	255 Levels
Expansion Interface	miniCard (Half-Size) x 1
Power Requirement	Normal: +12V
Power Supply Type	Lockable
Power Consumption	N4200 @ 4GB DRAM/eMMC 32GB, 12V @1.1A (Full Loading)
System Size	4.8" x 3.15" x 1.73" (122 x 80 x 44 mm)
Gross Weight	0.59 lb (0.27 kg)
Operation Temp.	32°F ~ 122°F (0°C ~ 50°C), 0.5 m/s airflow
Storage Temperature	-40°F ~ 176°F (-40°C ~ 80°C)
Humidity	0% ~ 90% relative humidity, non-condensing
MTBF	170,000

Packing List

- PICO-APL1 SBC x 1
 - SEMI Top Chassis x 1
 - SEMI Bottom Chassis x 1
 - SEMI Heatsink x 1
 - SEMI power button cable x 1
- * Customer needs assemble by self.

Optional Accessories

Part Number	Description	Qty.
125530040C	(TF)Power Adapter:12V.40W.FSP.FSP040-DHAN3	1
1702031802	Power Cord (US Type)	1
1702031803	Power Cord (European Type)	1
170203180E	Power Cord (Japan Type)	1
1703200052	COM x 2 + LINE_OUT	1
968C016G0V	SATA DOM 16GB (0°C ~ 70°C)	1
9761SEMI00	Wallmount Kit	1
9761SEMI01	DIN-Rail Mount Kit	1



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