



HSNM Printer

Manual

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Introduction



Styles

This manual uses styles, fonts and symbols specific to the context in order to facilitate the reading and then create a symbolic association with the capabilities of the product. The icons used are those present on the pages and in the context menu of the configuration.

 Means *pay attention and take note of the helpful suggestions*. In some places, in order to study or to highlight some important aspects, notes have this side note icon and this background.

Glossary

The table below shows on the left the abbreviations used in this manual and their meaning on the right.

Term	Meaning
 Card	It is a card, generated by a special procedure of HSNM, containing a username and a password to use to log in. To the user it is linked also a product defined in phase of generation.
HSNM	The HSNM.
HSNM Printer	Printer for HSNM. It is a printer integrated with HSNM, able to create and print Cards and Vouchers.
 Voucher	It's a prepaid token associated with a HSNM product that contains a GUID. During registration or recharging, the user, at the payment by selecting voucher, will be asked for the GUID, therefore avoiding the payment by credit card.

Printer Specifications

Hardware/software/Mechanical

	Technology Standard
Display	128*64 pixels
Keyboard	24 keys
OS	Linux
Connectivity	LAN, WIFI (optional), 3G/GPRS (optional)
USB Interface	2 Host USB port
Battery	1100mAh Li-Polymer battery, supports printing by battery supplied.
Dimensions	200mm*80mm*65mm
Weight	0.8kg

Power Supply

	Technology Standard
AC Input Voltage	90V~250V AC
Power Adapter Output	DC 12V/2A

Application Environment

	Technology Standard
Operating Temperature	-10°C~50°C
Relative Humidity	10%~95%
Atmospheric Pressure	86~106kPa

Micro Printer

	Technology Standard
Printing Method	Thermal-line dot method
Paper	Thermal roll paper (standard) 57*50m
Effective Printing Area	48mm
Speed Maximum	70mm/sec(384 dot line/2.5ms)
Printing Resolutions	8 dots/mm
Character	12*24dots
Number of Columns	32 columns/line
Printing Head Life	Pulse resistance:100 million pulses/dot (under our standard conditions); Abrasion resistance: paper traveling distance 50km (print ratio:25% or less)

Package Contents

The following items are included in the HSNM Printer package:

- 1 x HSNM Printer
- 1 x Power Adapter
- 1 x Battery
- 1 x Thermal paper (57 * 50)

Installing the Paper

- Take out the paper feed roll.
- Put the paper into the paper walking roll
- Reinstall the paper walking roll to the original position
- Roll the paper to the exact place, and make the top of paper to be with the same level of cut notch. Then, close the paper cover

Product Overview


HSNM Printer

The gateways branch contains the printers that allow creating Cards and Vouchers and printing them on paper. It is a particular printer that contains a firmware and a software specially designed integration with HSNM and able to auto parameterize itself according to the options defined in the system, in the domain, in the gateway and in the printer data.

The operations to be performed by the operator in order to print a Card or a Voucher are simple and intuitive. Simply press the F1 button and choose what to print thanks to a mono or multi-level menu. The number of steps that the operator must perform will always depend on the configuration. The possible choices are: Type (Card or Voucher); Print Language; Product Group (defined in the domain products to help to determine if there are many products enabled for printing); Product. If for example, only Cards are enabled, only one language and only a group, operator has to choose only the product he wants to print. So, if there is no need of a choice for level, than the level will be excluded and chosen automatically by the system, in this way operations will be easier and faster. In just one click the operator can print a card or a voucher.


At the purchase of the product, it is necessary to create the printer inside the gateway and run its configuration as described in the "[Configuring the HSNM Printer](#)" section.

The Context Menu




By clicking with the right mouse button the status bar or the properties button , you expand the context menu that contains a range of options grouped by: edit; admin.

The "Admin" section



It contains the following options:







Option	Description
 Download Printer Configuration File	Downloads the configured file generated based on the settings you have made. Please refer to the " Configuring the HSNM Printer " section for explanations about how to configure the printer using the file downloaded through this option.

Adding or Editing a HSNM Printer

To add a HSNM Printer, select the data tab, press the button of the gateway's contextual properties  on which to add or choose " Add printer". Instead, to edit a printer, always in the data tab click on the contextual button on the printer and choose " Edit". In both cases a page will open with the following fields:

General data

Field	Description
ID	Record ID. Self-assigned identifier of the record. It may be useful to use APIs or external integrations.  It is displayed during the editing phase of an existing data and not during the editing of a new record.
Description or Place	Description or place where the printer had been installed.  It is an optional field but useful to remember where the printer has been installed.

Idle Text	Text displayed on the printer when it is offline/idle. Useful to display a brand, a phone number or to indicate how to proceed with the printing.  Example: Press F1.
Show Price	Enables or disables the display of the product price on the printer.
Print Price	Enable or disable the price printing.
Print Multilingual	Enable or disable the print of multi-language cards.  If enabled, the printer will ask the print language. If disabled, it will use the default language set in the domain without requesting it to the operator.
Print Card	Enable or disable the card printing.  If disabled, the printer will automatically choose “Voucher” without asking the “type” to the operator.  If Card or Voucher printing are disabled, the printer will display the error message “Card and Voucher printing is disabled”.
Header for the Cards	Enter the text to print in the header of the card. For example it allows printing: <i>To access to the internet please use these credentials:</i> In the text, you can use these variables: <ul style="list-style-type: none"> • %ManagerCompanyName% (company name of the manager that manages the printer); • %ManagerPhone% (phone number of the manager that manages the printer); • %SystemCompanyName% (company name defined at the system level of the General Options); • %SystemPhone% (phone number defined at the system level in the General Options); • %SSID% (gateway’s SSID that contains the printer).  For example you can print: “To access to the internet use these credentials”.
Footer for the Cards	Enter the text to print in the footer of the card. For example it allows printing: <i>-Instructions to connect</i> <i>1) Enable WiFi on your device</i> <i>2) Connect to the network 'CentralBar'</i> <i>3) Open the browser</i> <i>4) Enter UserName and Password</i> <i>5) Click on 'Access to the internet'</i> <i>To disconnect or to verify the state, press on the 'connection icon'.</i> <i>If the card has been activated, no refund will be provided</i>  The same variables can be used in the text as described in the Header for the Cards.
Print Voucher	Enable or disable the voucher printing.

	<ul style="list-style-type: none"> ✎ If disabled, the printer will automatically choose “Card” without asking the “type” to the operator. ✎ If Card or Voucher printing are disabled, the printer will display the error message “Card and Voucher printing is disabled”.
Header for the Vouchers	<p>Enter the text to print in the voucher header. For example it allows printing:</p> <p style="text-align: center;"><i>Use this code when required at the registration process.</i></p> <ul style="list-style-type: none"> ✎ The same variables can be used as described in the Header for the Cards.
Footer for the Vouchers	<p>Enter the text to print in the footer of the voucher. For example it allows printing:</p> <p style="text-align: center;"><i>-Instructions to connect</i></p> <ol style="list-style-type: none"> 1) <i>Enable WiFi on your device</i> 2) <i>Connect to the network 'CentralBar'</i> 3) <i>Open the browser</i> 5) <i>Click on 'Register' and then click on 'Purchase using voucher'</i> 6) <i>Enter the voucher code and then click on 'Enable'</i> 7) <i>Click on 'Access to the internet'</i> <p style="text-align: center;"><i>To disconnect or verify the state, press on the 'Connection' icon.</i></p> <p style="text-align: center;"><i>If the voucher has been activated, no refund will be provided</i></p> <ul style="list-style-type: none"> ✎ The same variables can be used as described in the Header for the Cards.

Security

Field	Description
Username	<p>Username used by the printer for calls to the backend for creating of cards and vouchers.</p> <ul style="list-style-type: none"> ✎ Used to implement a security system as to prevent malicious persons to use these functions.
Password	<p>Password used by the printer for calls to the backend for creating of cards and vouchers.</p> <ul style="list-style-type: none"> ✎ Used with a username to implement a security system as to prevent malicious persons to use these functions.

Options



Field	Description
Notes for the Printer	<p>Enter possible notes.</p> <ul style="list-style-type: none"> ✎ Available only if the user has the permissions to manage the printer data.
Printer Locked	<p>If enabled, it blocks the use of the printer.</p> <ul style="list-style-type: none"> ✎ Available only if user has the permissions to manage the printer data.

Configuring the HSNM Printer

As previously described, "HSNM Printer" is a particular printer containing a firmware and software specially designed for integration with HSNM and it requires a simple first setup.

Below you will find the various steps to be performed to enable the printer and connect it to HSNM.

Configuring the Domain



First you have to edit the domain and enable the products for printing Cards and/or Vouchers. To perform it, click on the properties button  of the involved domain and select " Edit".

Move to "Domain Product", expand the interested products and enable "Enable Card Printing" and/or "Enable Voucher Printing".



In the products you can also enter a description of the group in order to facilitate the choice to the operator if there are many. An example would be "Free" and "Premium". Combining the same description to multiple products, in the printer only the group code will be proposed and then the operator can extract the only products of that group.

Entering the Printer in the Gateway



The next step is to enter the printer in the gateway including in the domain previously configured.

Click on the properties button  of the gateway and choose " Add Printer".

Enter the data and click on " Save".

 For further explanations of the various fields, please refer to the " HSNM Printer" section.

Downloading Printer Configuration File

After you have followed the previous steps, now you can generate and download the printer auto-configuration file to import into the printer. Click on the properties button  of printer and choose " Download the Printer Configuration File".

Save the file to the path that you prefer to use in the next steps.

Connecting the Printer on a Network

It is possible to configure the printer in two ways: through network connection cable; using wireless connection.

Connection via Cable


Connect the printer via cable to a network with active DHCP in order an IP address is assigned automatically.

Connection via Wireless

The printer is designed to connect to WiFi networks with encryption type WPA. To connect the printer to the network, perform the following steps:

- Switch on the printer and press the "CONFIRM" on the top right of the printer
- Click the down arrow until you get to "Wireless LAN" and press the green button "OK" on the bottom right of the printer.
- Select "Scan networks" and press the green "OK" button to confirm.
- Wait for the detection of WiFi networks, select the desired network and press the green "OK" button.

- Enter the password. To switch between the numeric keypad to the uppercase or lowercase alphanumeric, press #.
- Press the green "OK" button and wait the connection.
- If everything is ok, you'll receive a message "Connection successful".

 If after about a minute, you are displayed the "Unable to get IP. Please check the router" message, it may mean that you are trying to connect to a non WPA network (e.g.: WEP) or the DHCP is not active.

Importing the Printer Configuration File

To complete the configuration of your printer, you have to import the file previously generated in the "[Downloading Printer Configuration File](#)" paragraph.

Follow these steps:

- Press "CONFIRM" on the printer keypad;
- Press twice the down arrow until you see "Settings";
- Press the green "Ok" button to open "Settings";
- Press the green "Ok" button to select "Web settings";
- Make a note of the IP address;
- Open the web browser(Internet Explorer, Chrome or others) on a PC on the same network where the printer is connected;
- Enter the IP address that appeared in the printer;
- Click on "Manage" to change the default username and password;
- On "OldUserName" and on "OldPassword" enter respectively admin and admin;
- On "NewUserName" enter the desired name. Usually admin;
- In the two "NewPassword" field, enter the new desired password;
- Press "Modify" to confirm;
- Enter the username and password just entered and click "Login";
- Towards the middle of the page and at the top left of the purple frame, in correspondence to "INI file:", click on "Select file";
- Select the file you downloaded earlier and press "Open";
- Click on the "Import" button to upload the file;
- Click on the "Upload" button to upload the configuration file into the printer;
- The printer will display the message "Parameter downloaded successfully!" that confirms the configuration;
- Close the browser

At this point the printer is ready to use and you can print the first Card or Voucher. To try printing, press the "F1" key and follow the requests on the display of the printer.


What Appears on the Printer Display

When you press the "F1" button, on the display of the printer, the information is displayed to interact with the operator who can choose what to print. The possible choices are divided up to a maximum of four levels or steps that can be enabled or excluded based on the parameters defined at the level of HSNM, in the domain and printer.

Possible levels are:

- Selection of the type of ticket to print: Card or Voucher;
- Selection of the printing language;

- Group of products to list;
- List of products.

 The selection/confirmation of menu options is performed using the green "OK" button. To cancel a procedure, press the "CANCEL" button at the top right of the printer keyboard.

Selecting the Type of Ticket to Print

This menu appears if in the configuration of the printer data, entered in the HSNM, printing both Card and Voucher has been enabled.

If you enable only one of these two options, the menu is not displayed and automatically chosen the active option. This saves the first step to the operator.

Selecting the Printing Language

This menu appears if in the configuration of the printer data, entered in the HSNM, the "Multilingual Printing" check has been enabled.

If enabled, the operator is shown the choice of language. The list of available languages depends on the active languages for the domain.

If it has not been enabled, it automatically uses the default language active in the domain and the menu is not displayed, saving an additional step to the operator.

Group of Products to List

This menu appears if in the products of the domain, "Groups for Printing" have been entered. They can be useful if in the domain, you have entered many products and you want to help the operator's choice.

For example, if in the domain you have entered products with "Free", "Premium" and "Top", the operator is suggested the three choices. Once it has chosen the group, it will be suggested only the products belonging to that group, thus simplifying the selection.

List of Products

This menu always appears and lists the available products depending on the choices of the previous levels. When pressing the green "OK" button, card or voucher will be created in the domain of the HSNM and printed on paper.

Error Coded Displayed on the Printer Display

The following errors may appear in the printer for their respective causes:

Code	Description
1	Undefined printer ID. The call made by the printer to the HSNM does not pass the printer ID. It is necessary to reconfigure the printer.
2	Printer not found. The call made by the printer to the HSNM passes invalid parameter. It is necessary to reconfigure the printer.
3	Printer is disabled. The printer has been disabled in its configuration into the HSNM.
4	Card and Voucher printing is disabled. In the configuration of the printer into the HSNM, it has been disabled the printing of the Cards and also that of the Voucher. It is necessary to enable at least one of the two options.
5	No Products. Based on the choices made, there are printable products. There may be an error in the definition of the products of the domain.
6	Invalid Product. The chosen product could not be found due to an internal error or to communication. Retry printing. If it persists, try reconfiguring the printer.
7	Invalid Username or Password. The username and password defined in printer setup in the HSNM do not match those that are loaded in the printer. You need to edit your username and/or password in printer setup by restoring the original ones or reconfigure the printer.