USER MANUAL

SCAN105



CUSTOM S.p.A. Via Berettine 2/B

43010 Fontevivo (PARMA) - Italy

Tel.: +39 0521-680111 Fax: +39 0521-610701 http: www.custom.biz

Customer Service Department: www.custom4u.it

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THE IMAGES USED IN THIS MAN-UAL ARE USED AS AN ILLUSTRA-TIVE EXAMPLES. THEY COULDN'T REPRODUCE THE DESCRIBED MODEL FAITHFULLY.

UNLESS OTHERWISE SPECIFIED, THE INFORMATION GIVEN IN THIS MANUAL

ARE REFERRED TO ALL MODELS IN PRODUCTION AT THE ISSUE DATE OF THIS DOCUMENT.

GENERAL INSTRUCTIONS

CUSTOM S.p.A. declines all responsibility for accidents or damage to persons or property occurring as a result of tampering, structural or functional modifications, unsuitable or incorrect installations, environments not in keeping with the equipment's protection degree or with the required temperature and humidity conditions, failure to carry out maintenance and periodical inspections and poor repair work.

GENERAL SAFETY INFORMATION

Your attention is drawn to the following actions that could compromise the characteristics of the product:

- Read and retain the instructions which follow.
- Follow all indications and instructions given on the device.
- Make sure that the surface on which the device rests is stable. If it is not, the device could fall, seriously damaging it.
- Make sure that the device rests on a hard (non-padded) surface and that there is sufficient ventilation
- Do not fix indissolubly the device or its accessories such as power supplies unless specifically provided in this manual.
- When positioning the device, make sure cables do not get damaged.
- [Only OEM equipment] The equipment must be installed in a kiosk or system that provides mechanical, electrical and fire protection.
- The mains power supply must comply with the rules in force in the Country where you intend to install the equipment.
- Make sure that there is an easily-accessible outlet with a capacity of no less than 10A closely to where the device is to be installed.
- Make sure the power cable provided with the appliance, or that you intend to use is suitable with the wall socket available in the system.
- Make sure the electrical system that supplies power to the device is equipped with a ground wire and is protected by a differential switch.
- Before any type of work is done on the machine, disconnect the power supply.
- Use the type of electrical power supply indicated on the device label.
- These devices are intended to be powered by a separately certified power module having an SELV, non-energy hazardous output. (IEC60950-1 second edition).
- [Only POS equipment] The energy to the equipment must be provided by power supply approved by CUSTOM S.p.A.
- Take care the operating temperature range of equipment and its ancillary components.
- · Do not block the ventilation openings.
- Do not insert objects inside the device as this could cause short-circuiting or damage components that could jeopardize printer functioning.
- Do not carry out repairs on the device yourself, except for the normal maintenance operations given in the user manual.
- The equipment must be accessible on these components only to trained, authorized personnel
- Periodically perform scheduled maintenance on the device to avoid dirt build-up that could compromise the correct, safe operation of the unit.
- Do not touch the head heating line with bare hands or metal objects. Do not perform any operation inside the printer immediately after printing because the head and motor tend to become very hot.
- Use consumables approved by CUSTOM S.p.A.



THE CE MARK AFFIXED TO THE PRODUCT CERTIFY THAT THE PRODUCT SATISFIES THE BASIC SAFETY REQUIREMENTS.

The device is in conformity with the essential Electromagnetic Compatibility and Electric Safety requirements laid down in Directives 2014/30/EU and 2014/35/EU inasmuch as it was designed in conformity with the provisions laid down in the following Standards:

- EN 55032 (Electromagnetic compatibility of multimedia equipment - Emission Requirements)
- EN EN55024/EN55035 (Electromagnetic compatibility of multimedia equipment Immunity requirements)
- EN IEC/EN62368-1 (Audio/video, information and communication technology equipment)

The device is in conformity with the essential requirements laid down in Directives 2014/53/EU about devices equipped with intentional radiators. The Declaration of Conformity and other available certifications can be downloaded from the site www.custom4u.it.



The crossed-out rubbish bin logo means that used electrical and electronic products shall NOT be mixed with unsorted municipal waste. For more detailed information about recycling of this product, refer to the instructions of your country for the disposal of these products.

- Do not dispose of this equipment as miscellaneous solid municipal waste, but arrange to have it collected separately.
- The re-use or correct recycling of the electronic and electrical equipment (EEE) is important in order to protect the environment and the wellbeing of humans.
- In accordance with European Directive WEEE 2012/19/EU, special collection points are available to which to deliver waste electrical and electronic equipment and the equipment can also be handed over to a distributor at the moment of purchasing a new equivalent type.
- The public administration and producers of electrical and electronic equipment are involved in facilitating the processes of the re-use and recovery of waste electrical and electronic equipment through the organisation of collection activities and the use of appropriate planning arrangements.
- Unauthorised disposal of waste electrical and electronic equipment is punishable by law with the appropriate penalties.
- For the waste sorting of the packaging materials, please check the local waste disposal laws.





For further information about the use of "PrinterSet" tool refer to the manual with code **7820000001800**

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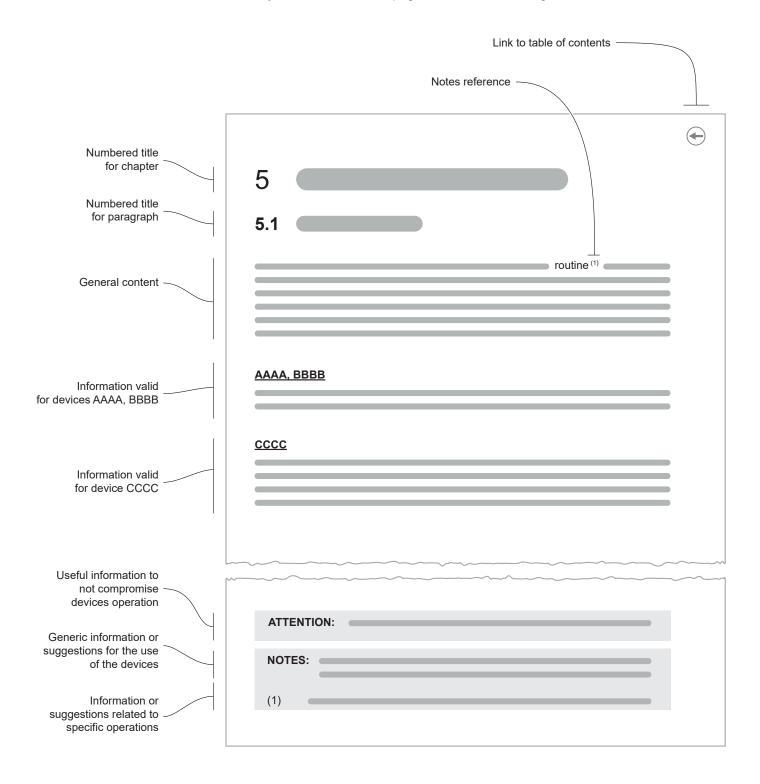
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1 INTRODUCTION

This document is divided into sections and chapters. Each chapter can be reached by the index at the beginning of this document. The index can be reached by the button on each page as shown in the diagram below.









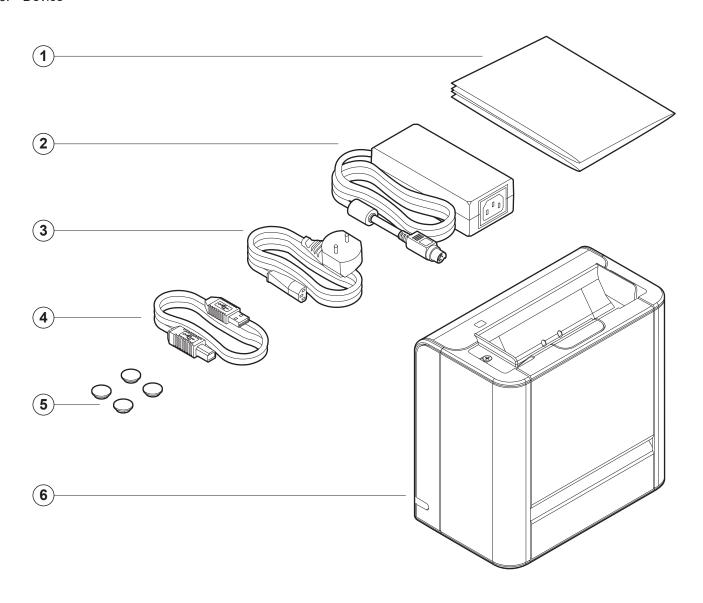
2 DESCRIPTION

2.1 Box contents

Remove all the box contents (see following figures) being careful not to damage the packing material so that it may be re-used if the device is to be transported in the future.

Make sure that all the components illustrated below are present and that there are no signs of damage. If there are, contact customer service.

- 1. Documentation (User Manual)
- 2. AC adapter
- 3. Power supply cable
- 4. USB type A / B cable
- 5. Rubber feet
- 6. Device



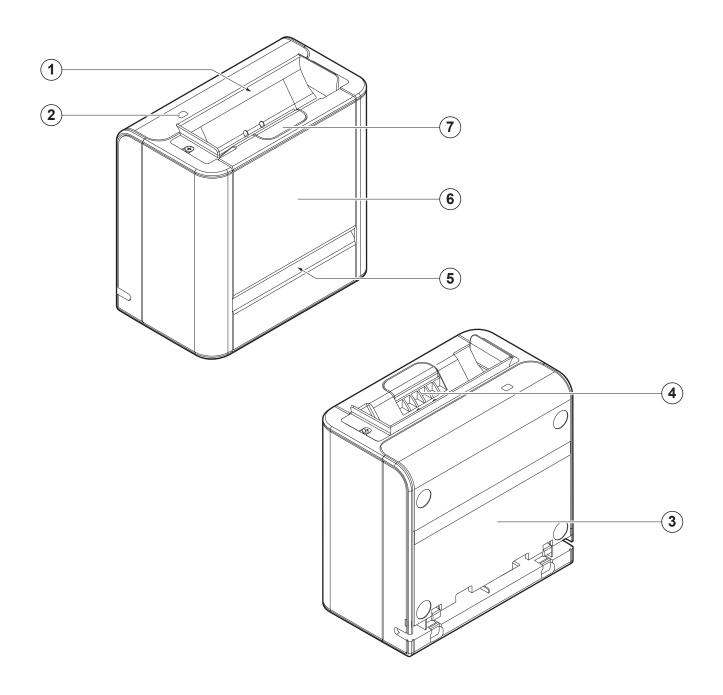




2.2 Device components: external views

- 1. Paper input bezel
- 2. Status LED
- 3. Connector cover
- 4. Paper sensors

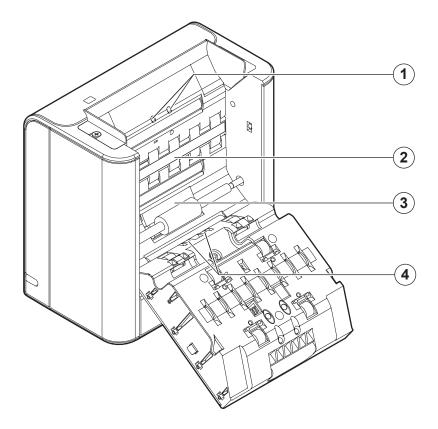
- 5. Paper output
- 6. Device cover
- 7. Opening cover lever





2.3 Device components: internal view

- 1. Paper input presence sensors
- 2. CIS reader
- 3. Void head
- 4. Paper output presence sensor

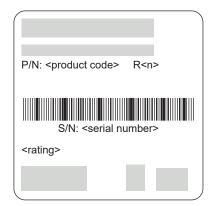






2.4 Product label

The main data used to identify the machine are shown on the label attached to the bottom of the device. In particular, it shows the electrical data for the connection to a power source. It also shows the product code, the serial number and the hardware revision (R).







2.5 Status messages

The Status LED indicates hardware status of device. Given in the table below are the various led signals and the corresponding device status.

STATUS LED		DESCRIPTION
-	OFF	DEVICE OFF
GREEN	ON	DEVICE ON: NO ERROR
	x 1	RECEIVE DATA
GREEN	x 2	RECEPTION ERRORS
COMMUNICATION STATUS	x 3	COMMAND NOT RECOGNIZED
	x 4	COMMAND RECEPTION TIME OUT
	x 2	DEVICE OVERHEATED
YELLOW	x 4	PAPER JAM
RECOVERABLE ERROR	x 5	POWER SUPPLY VOLTAGE INCORRECT
	x 6	COVER OPEN
	x 2	FPGA ERROR
RED UNRECOVERABLE ERROR	x 3	RAM ERROR
-	x 4	EEPROM ERROR







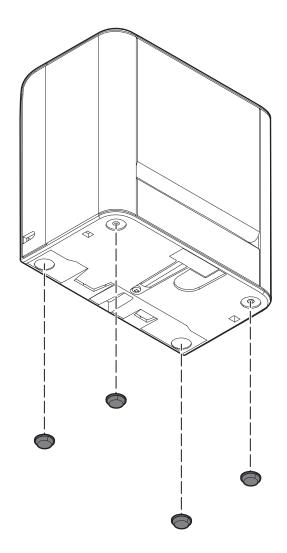


3 INSTALLATION

3.1 Rubber feet assembly

Position the four supplied feet in the recesses at the base of the device, as shown in the figure.

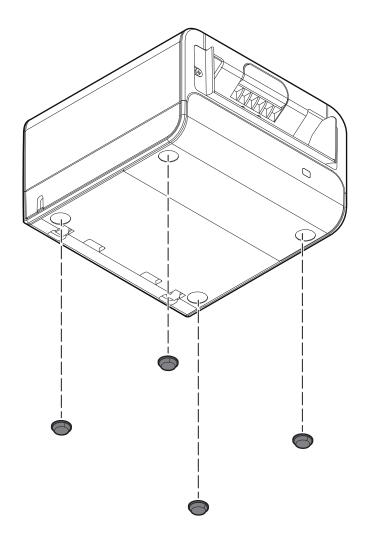
Vertical position







Horizontal position

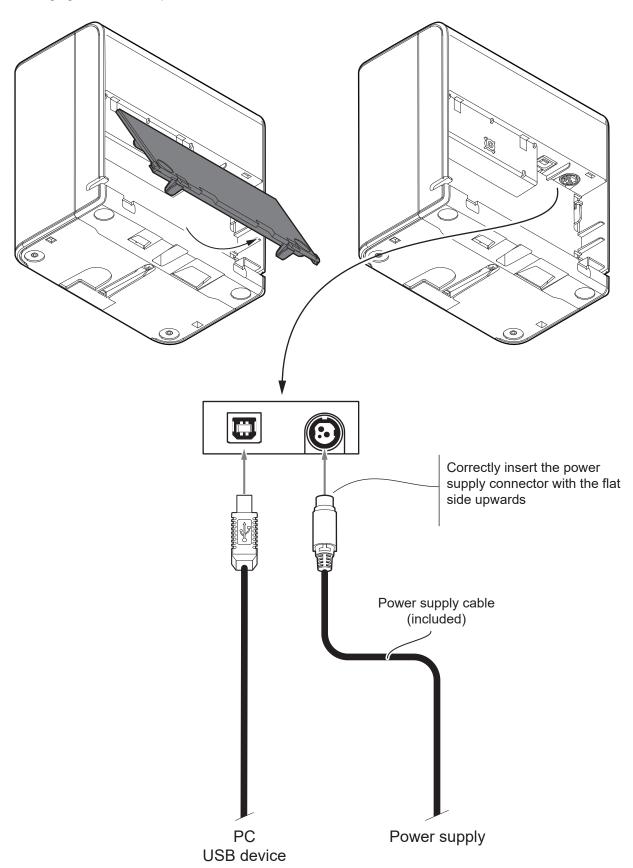






3.2 Connections

The following figure shows the possible connections for the device.



ATTENTION:

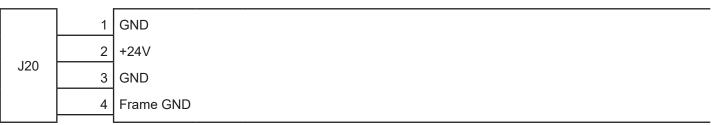
In some using conditions, we recommend the installation of a ferrite core on the power supply cable.



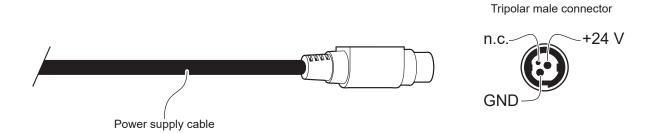
•

3.3 Pinout



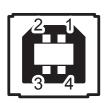


The following figure shows the connector pinout of the power supply cable for the device:



ATTENTION:

Respect power supply polarity.



POWER SUPPLY

Tripolar female connector

	1	USBHS_VBUS	(in)
10	2	USBHS_D-	(in/out)
J3	3	USBHS_D+	(in/out)
	4	GND	



3.4 Driver and SDK

The drivers for the following operating system are available in the website www.custom4u.it:

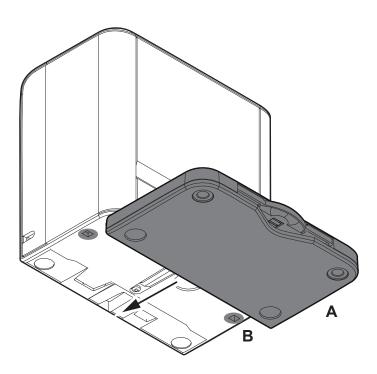
OPERATING SYSTEM	DESCRIPTION	PROCEDURE	
Windows	Windows 7 (32/64 bit)		
	Windows 8 (32/64 bit)		
	Windows 8.1 (32/64 bit)	Download the SDK package containing libraries, documentation, examples, interface drivers, etc	
	Windows 10 (32/64 bit)		
Linux	32/64 bit		



(+)

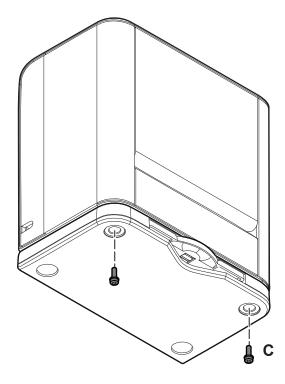
3.5 Ticket tray assembly cod. 996LV010000001 (optional)

1



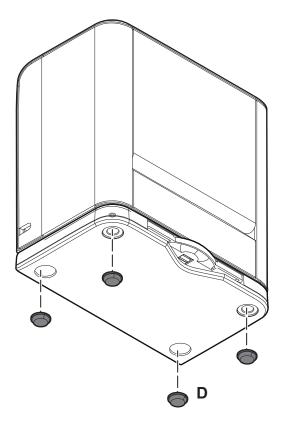
Fit the ticket trayA into the two slots B at the base of the device.

2



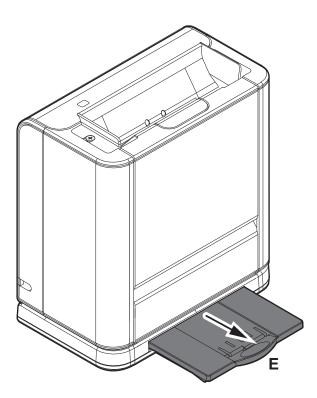
Secure the ticket tray by tightening the two fixing screws C.

3



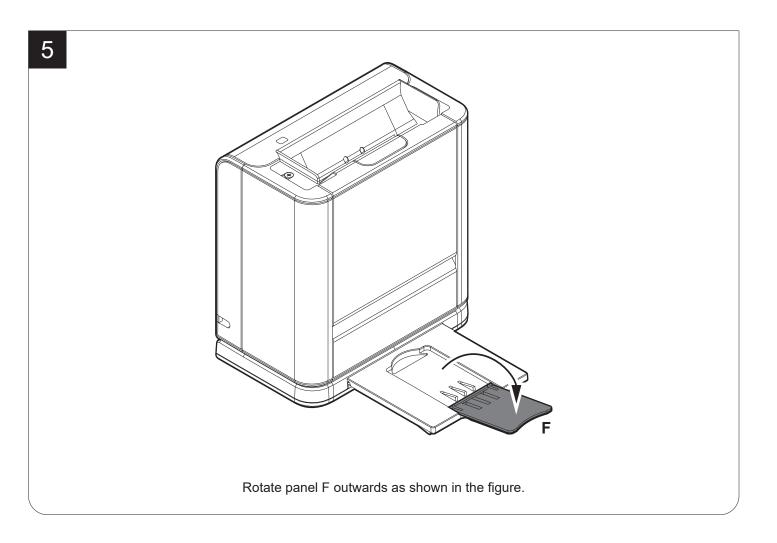
Paste the four feet D supplied in the recesses at the base of the device.

4



Pull the slide E outwards.







4 OPERATION

The device is provided with CIS sensor able to acquire images of both sides of a document. A CIS (Contact Image Sensor) sensor is an image sensor consists of RGB LEDs that turn on and off in rapid sequence illuminating the document and of a linear array of sensors that detect the variation in brightness.

The device can be controlled using special libraries available on request for image acquisition and the recognition of gaming cards, OCR, 1D Barcode and 2D Barcode. Using such libraries it is possible for example:

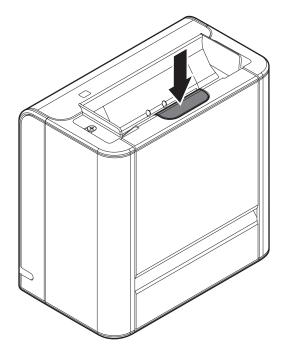
- set scanning parameters
- · scan a ticket
- · perform a firmware upgrade
- · receive information on the device status
- · receive information on hardware and firmware release
- perform an hardware reset of the device
- use a demo software that exploits these libraries





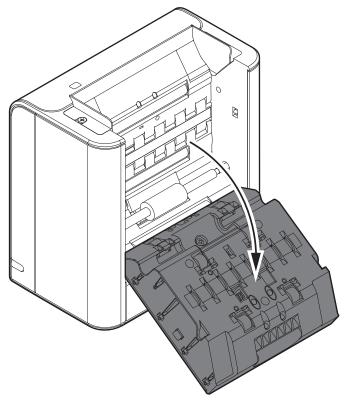
4.1 Opening the cover

1



Push the release lever in the direction shown in the figure.

2



Open the device cover.

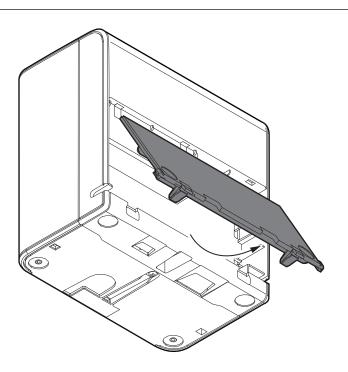


4.2 Cable organization

The device allows to organize cables in several ways. Here are some options.

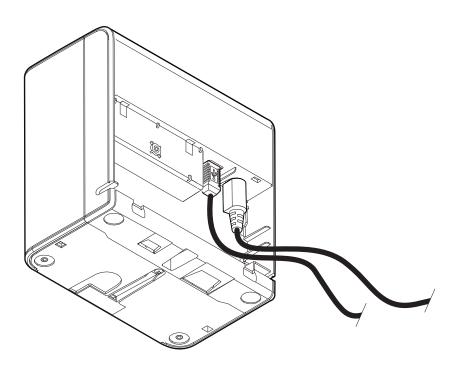
Option 1





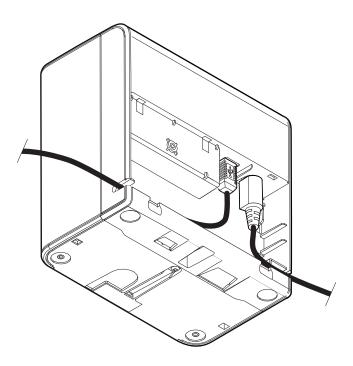
Lift and remove the connector cover in the direction shown in the figure.





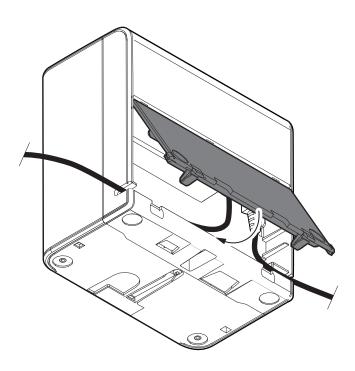
Insert the connectors (see paragraph 3.2)

3



Insert the cables into the slots placed on the sides of the device.

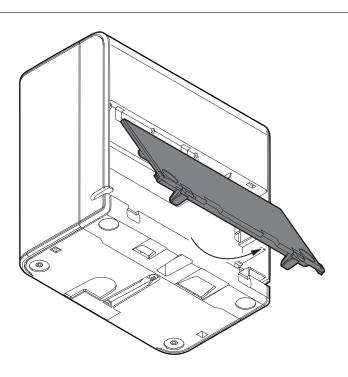
4



Close the connector panel.

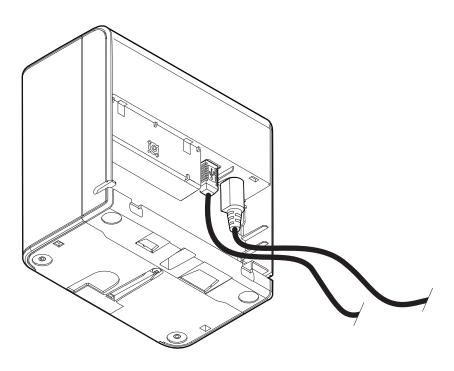


1

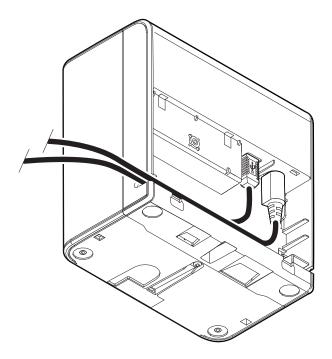


Lift and remove the connector cover in the direction shown in the figure.

2

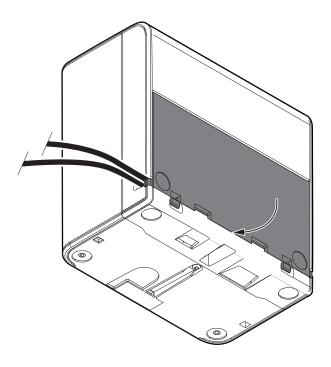


Insert the connectors (see paragraph 3.2)



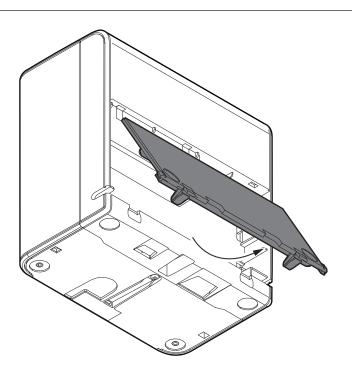
Insert the cables into one of the two slots placed on the sides of the device.

4



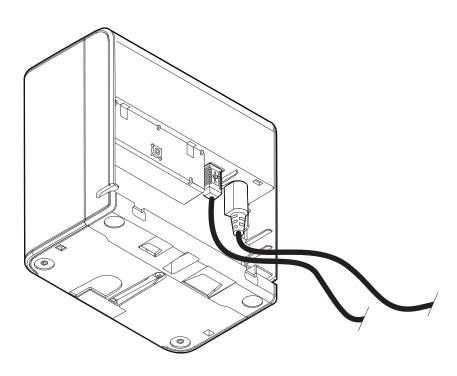
Close the connector panel.

1



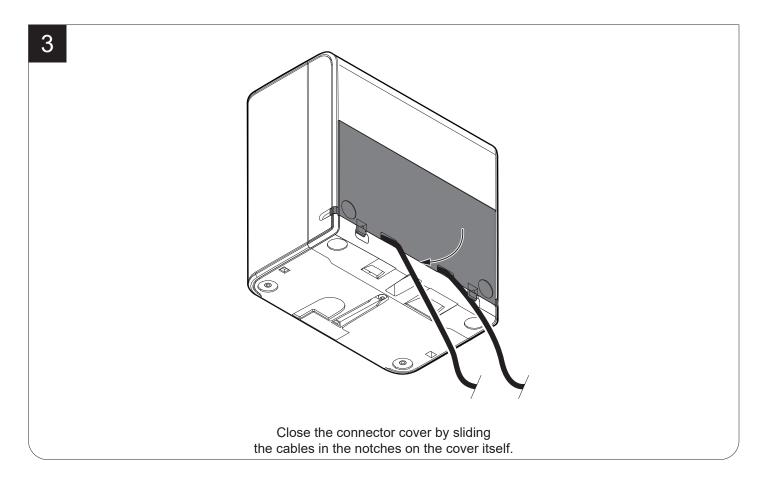
Lift and remove the connector cover in the direction shown in the figure.

2



Insert the connectors (see paragraph 3.2)

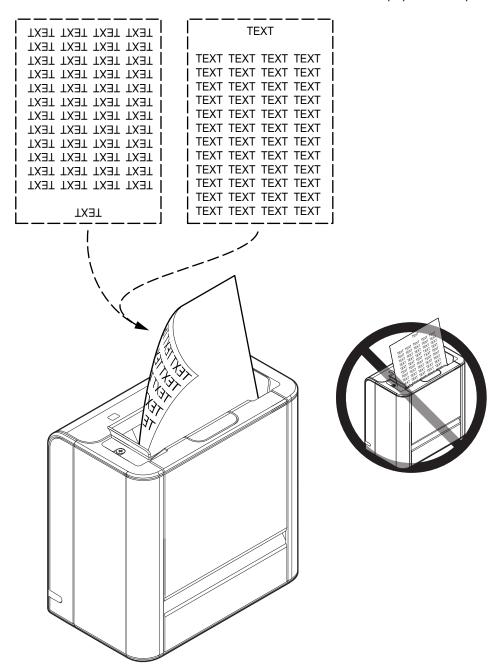






4.3 Loading paper

The following figure illustrates how to insert the ticket in the entrance. Make sure the paper is well positioned.

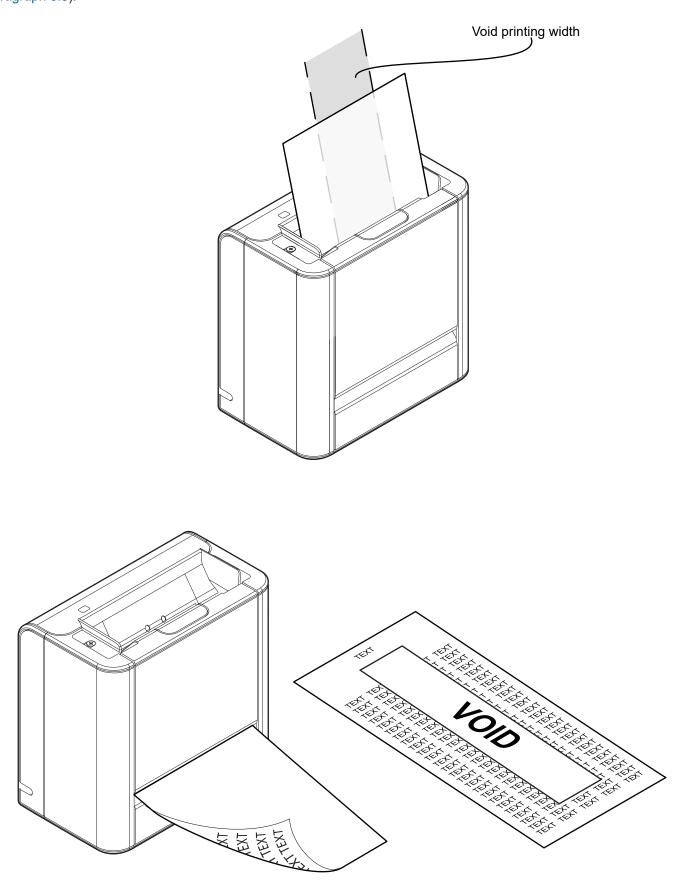






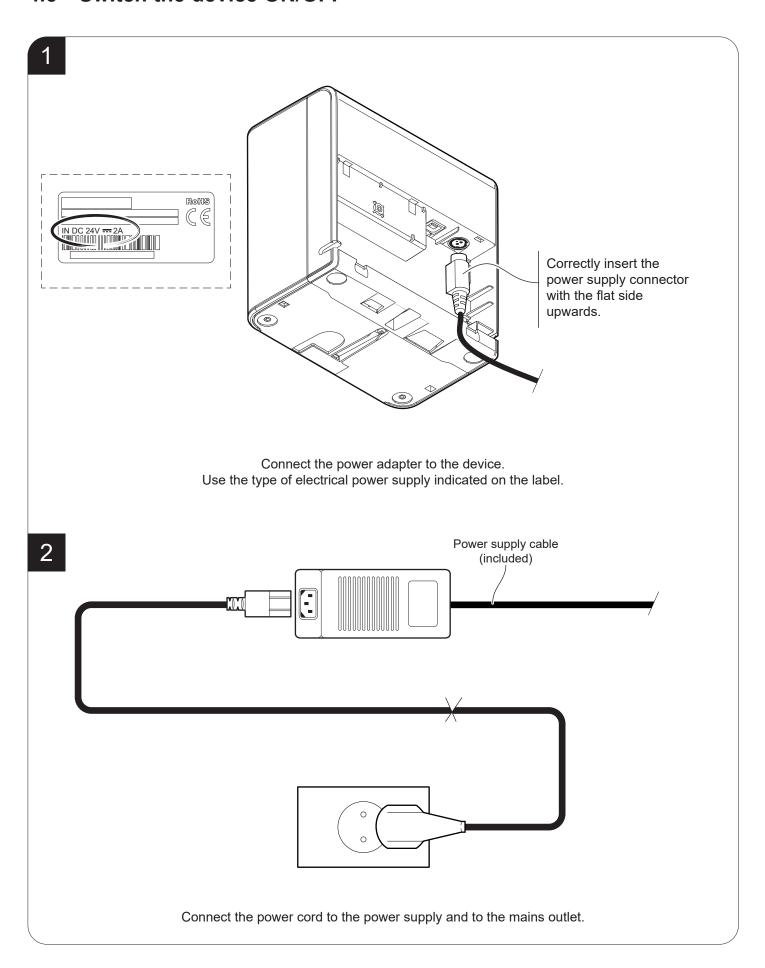
4.4 Ticket void

The following figure illustrates how ticket void is printed on the thermal side of the paper (for technical specifications, see paragraph 6.5).



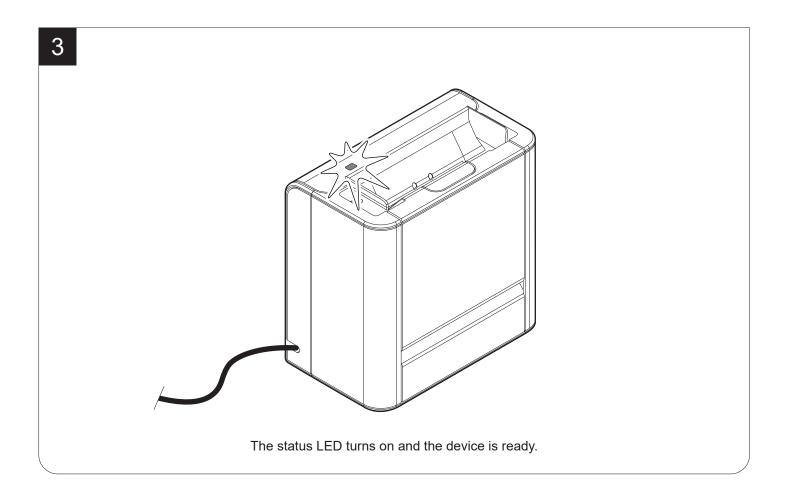


4.5 Switch the device ON/OFF









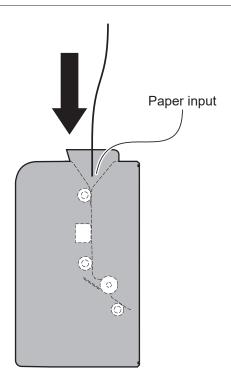


4.6 Ticket management

The device allows you to choose between different operating modes for the management of scanned documents. The operating modes shown in the following images, depend on the configuration parameters set with the libraries.

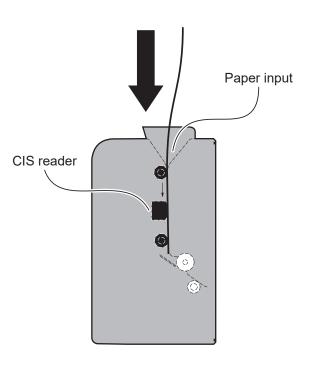
"EJECT" mode

1



Bring the ticket near the paper inlet.

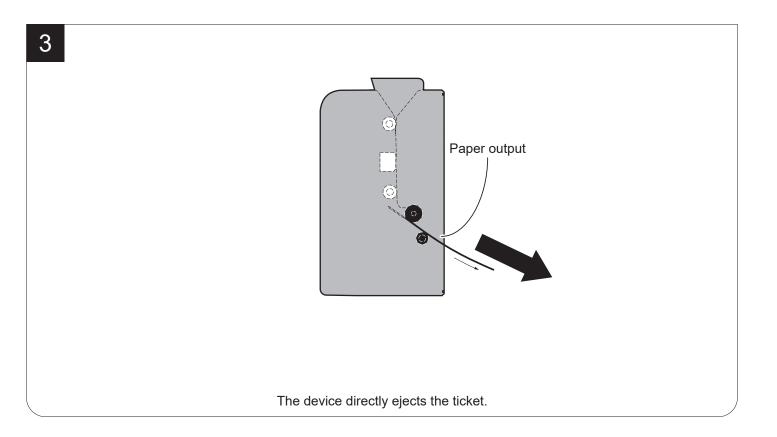
2



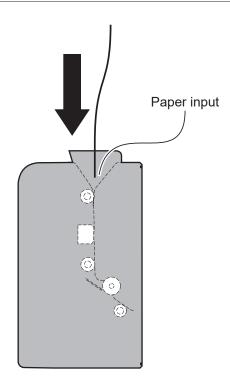
If the scanning mode is enabled, the device automatically loads the paper and starts the ticket scanning.





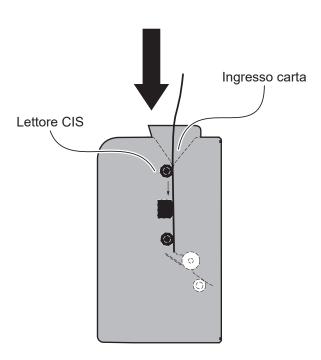


1

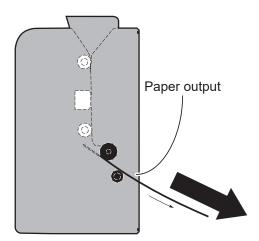


Bring the ticket near the paper inlet.

2

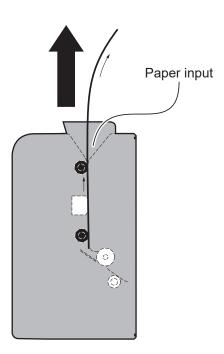


If the scanning mode is enabled, the device automatically loads the paper and starts the ticket scanning.



The ticket advances ahead to the paper output and is caught between the device rollers.

4



The device ejects the ticket from the paper input.



4.7 Configuration by software

The setup parameters can be set by using the "PrinterSet" software tool available on www.custom4u.it.

For a detailed description of the device operating parameters see the following paragraphs.

During saving, it is strongly discouraged to disconnect the communication cable or to remove the power supply of the PC or the device.

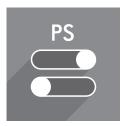
To configure the device by software, proceed as follows:

1



Connect the device to a PC directly (see paragraph 3.2), without using HUB devices.

2



Start "PrinterSet" software tool.

3



Click on LOAD > FROM DEVICE and select the device connected to the PC.



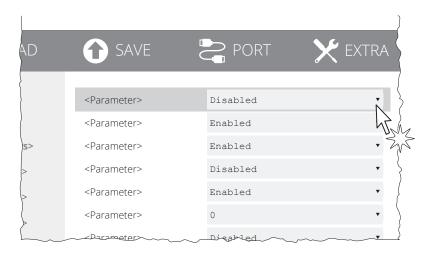


4



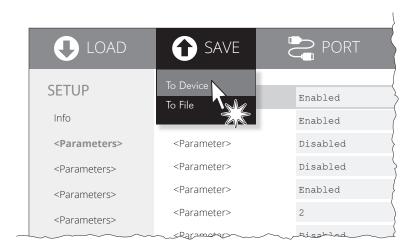
Click on SETUP to access the operating parameteres of the device to be configured.

5



Make the desired changes to the device operating parameters.

6



Click on SAVE > TO DEVICE to make the changes made effective.

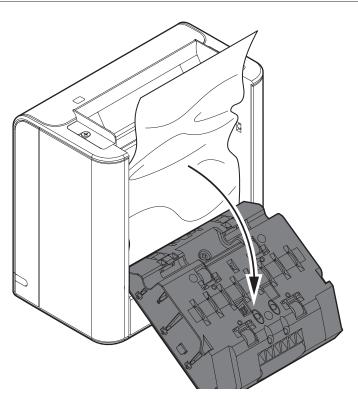


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5 MAINTENANCE

5.1 Paper jam

1



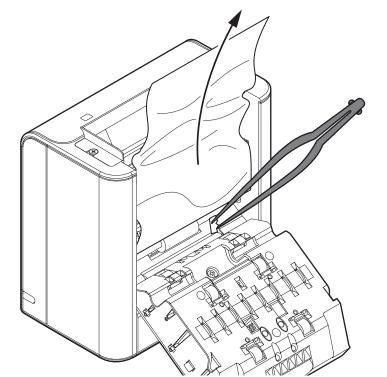
Lift the device cover (see paragraph 4.1).

2







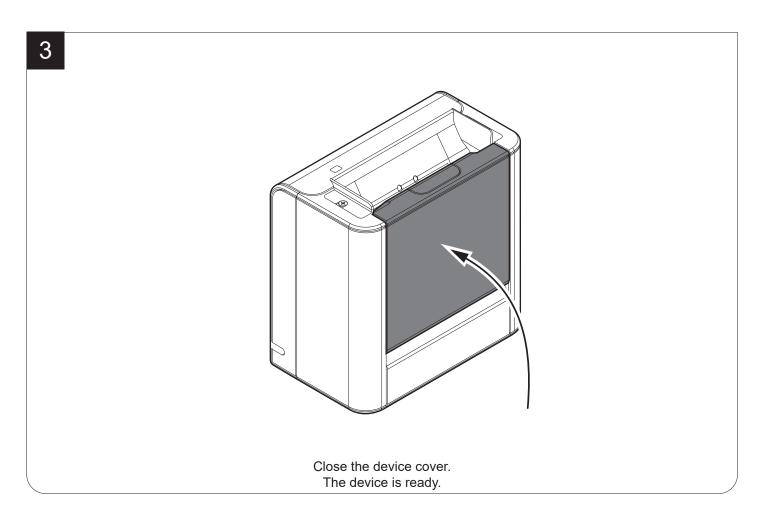


Remove the damaged paper and check the presence for paper scraps inside the device.

Carefully remove all paper scraps. If necessary use tweezers.









5.2 Cleaning

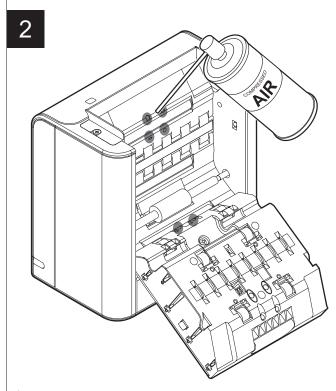
The regular cleaning of the device keeps the scan quality and extends its life. The device does not provide a pre-established cleaning schedule. Proceed with cleaning operations when image acquisition is inaccurate. For cleaning the device, see the instructions below:

Sensors





Disconnect the power supply cable and open the device cover (see paragraph 4.5).



ATTENTION:

Do not use alcohol, solvents, or hard brushes. Do not let water or other liquids get inside the machine. To remove paper scraps, use tweezers or compressed air.









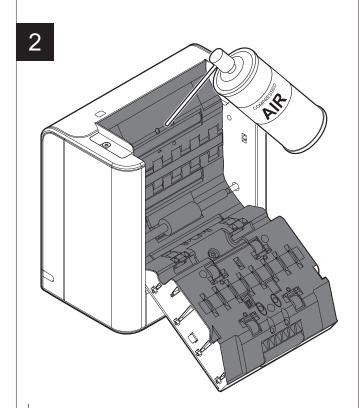
Clean the device sensors by using compressed air.

Paper path

1



Disconnect the power supply cable and open the device cover (see paragraph 4.5).



ATTENTION:

Do not use alcohol, solvents, or hard brushes. Do not let water or other liquids get inside the machine. To remove paper scraps, use tweezers or compressed air.









Clean, from the inside out, the area involved in the passage of paper by using compressed air.





Feed rollers

1



Disconnect the power supply cable and open the device cover (see paragraph 4.5).

1SOPROPYL ALCOHOL

ATTENTION:

Do not use solvents, or hard brushes.

Do not let water or other liquids get ins

Do not let water or other liquids get inside the machine. To remove paper scraps, use tweezers or compressed air.



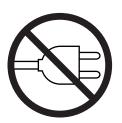




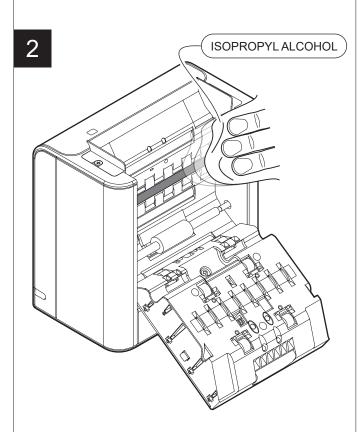
Clean the feed rollers by using a non-abrasive cloth moistened with isopropyl.

CIS readers

1



Disconnect the power supply cable and open the device cover (see paragraph 4.5).



ATTENTION:

Do not use solvents, or hard brushes.

Do not let water or other liquids get inside the machine. To remove paper scraps, use tweezers or compressed air.





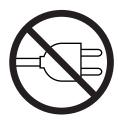


Clean the CIS reader by using a non-abrasive cloth moistened with isopropyl.



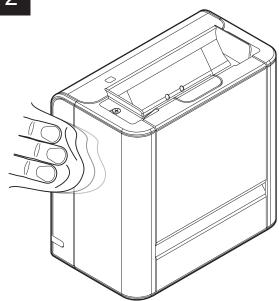
Device case





Disconnect the power supply cable.

2



ATTENTION:

Do not use alcohol, solvents, or hard brushes. Do not let water or other liquids get inside the machine. To remove paper scraps, use tweezers or compressed air.









To clean the device, use compressed air or a soft cloth.



•

5.3 Firmware upgrade

Firmware upgrade can be performed by using the libraries or "PrinterSet" software tool available on www.custom4u.it. To upgrade firmware by using the "PrinterSet" software tool, proceed as follows:

1



Login to the website www.custom4u.it, type in the product code of the device and download the latest firmware release available.

2



Connect the device to a PC directly (see paragraph 3.2), without using HUB devices.

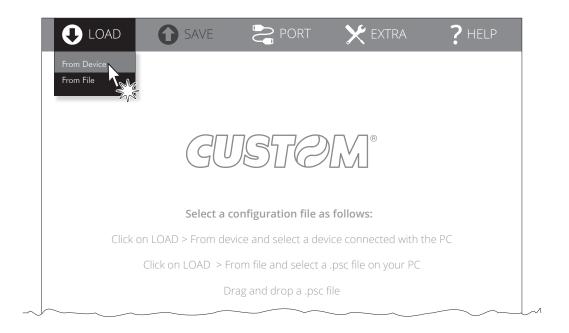
3



Start the "PrinterSet" software tool.

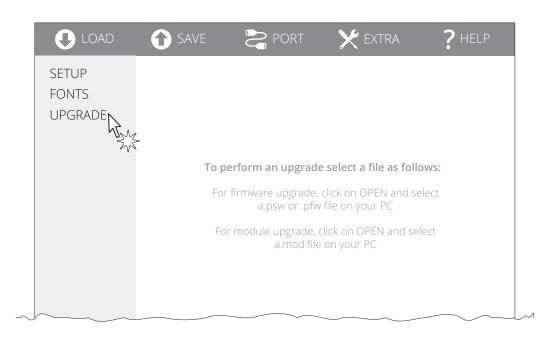


4



Click on LOAD > FROM DEVICE and select the device connected to the PC.

5



Click on UPGRADE and follow the instructions shown on the screen.

ATTENTION:

During saving, it is strongly discouraged to disconnect the communication cable or to remove the power supply of the PC or the device.







6 SPECIFICATIONS

6.1 Hardware specifications

GENERALS	
Sensors	Paper input presence, paper presence, paper output presence and cover open
Driver	Windows 7 (32/64 bit) Windows 8 (32/64 bit) Windows 8.1 (32/64 bit) Windows 10 (32/64 bit)
Communication Libraries	Windows 7 (32/64 bit) Windows 8 (32/64 bit) Windows 8.1 (32/64 bit) Windows 10 (32/64 bit) Linux (32/64 bit) Android (version 6 and later)
Gaming card recognition libraries, OCR, 1D Barcode and 2D Barcode	Windows 7 (32/64 bit) Windows 8 (32/64 bit) Windows 8.1 (32/64 bit) Windows 10 (32/64 bit) Linux (32/64 bit) Android (version 6 and later)
INTERFACES	
USB port	USB 2.0 (high speed)
MEMORIES	
Flash memory	2 MB
RAM memory	32 MB
SCANNER	
Sensor technology	single side
Resolution	100 dpi, 150 dpi, 200 dpi, 250 dpi, 300 dpi
Light source	colors LEDs: red (635 nm) green (525 nm) blue (460 nm)





Scan modality	black and white 8 bits greyscale 24 bits colours
Max. scan speed (1)	400 mm/s (to 300 dpi grayscale)
Min. scan length	75 mm
Max. scan length	300 mm
Max. scan width	108 mm
Image format	.raw (default) .bmp, .jpg, (library)
VOID FUNCTION	
Resolution	203 dpi (8 dot/mm)
Print method	thermal printing
Head reliability (1)	
Abrasion resistance (2)	50 km (with recommended paper)
Number of pulses	100 M (referred to each dot)
Print width	30 mm
SCANNER PAPER	
Type of paper	Thermal or plain paper
Paper width	to 112 mm from 116 mm
Paper weight	to 60 g/m² from 120 g/m²
PRINTER ELECTRICAL SPECIFICATIONS	
Power supply	24 Vdc ± 10% (optional external power supply)
Medium consumption	0.6 A
Standby consumption	0.1 A





ELECTRICAL SPECIFICATIONS POWER SUPPLY code 963GE020000117	
Power supply voltage	from 100 Vac to 240 Vac
Frequency	from 50 Hz to 60 Hz
Output	24 V, 2.5 A
Power	60 W
ENVIRONMENTAL CONDITIONS	
Operating temperature	from 0 °C to +40 °C
Relative humidity (RH)	from 0% to 80% (w/o condensation)
Storage temperature	from -20 °C to +70 °C
Storage relative humidity (RH)	from 10% to 90% (w/o condensation)

NOTE:

- (1): Respecting the regular schedule of cleaning for the device components.(2): Damages caused by scratches, ESD and electromigration are excluded.

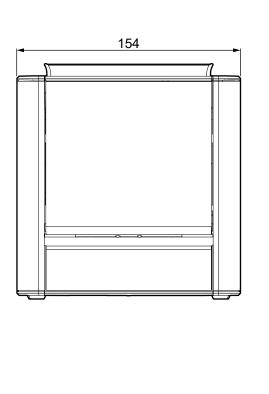


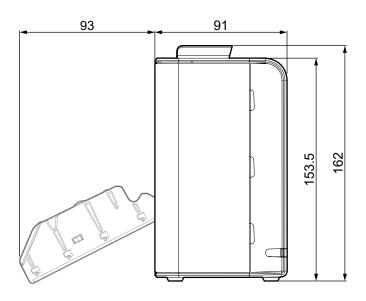


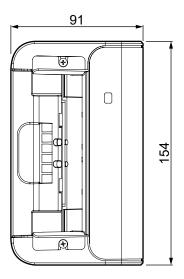
6.2 Device dimensions

Length	91 mm (with cover closed) 184 (with cover open)
Height	162 mm
Width	154 mm
Weight	1056 g

All the dimensions shown in following figures are in millimetres.





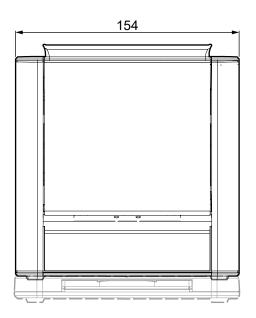


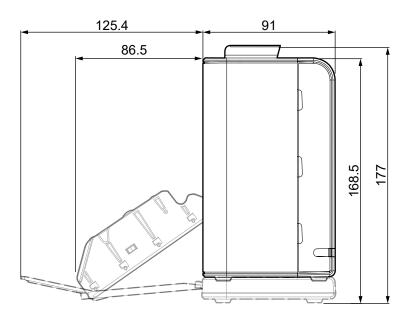


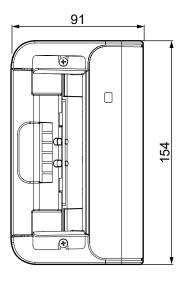
6.3 Device dimensions with ticket tray cod. 996LV010000001 (optional)

Length	91 mm (with cover closed and ticket tray closed) 177.5 (with cover open and ticket tray closed) 216.4 mm (with ticket tray open)
Height	177 mm
Width	154 mm
Weight	1184 g

All the dimensions shown in following figures are in millimetres.











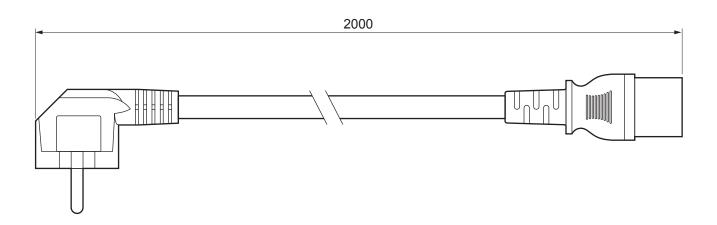
6.4 Power supply, power cord and adapter for power supply dimensions

The following table shows the dimensions of the power supply, the power cord and the adapter for power supply optionals for the device:

POWER CORD code 26100000000311	
Length	2000 mm
ADAPTER FOR POWER SUPPLY code 2690000000005	
Length	200 mm
POWER SUPPLY code 963GE020000117	
Length	130 mm
Height	36 mm
Width	57 mm

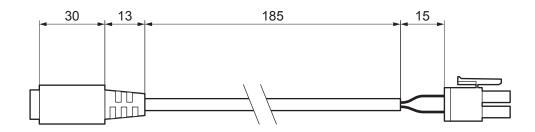
All the dimensions shown in following figures are in millimetres.

Power cord code 2610000000311

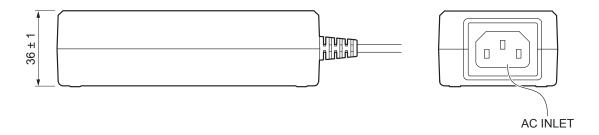


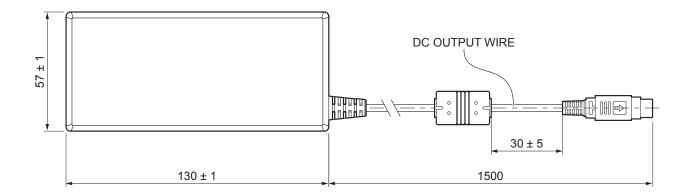


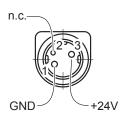
Adapter for power supply code 2690000000005



Power supply code 963GE020000117





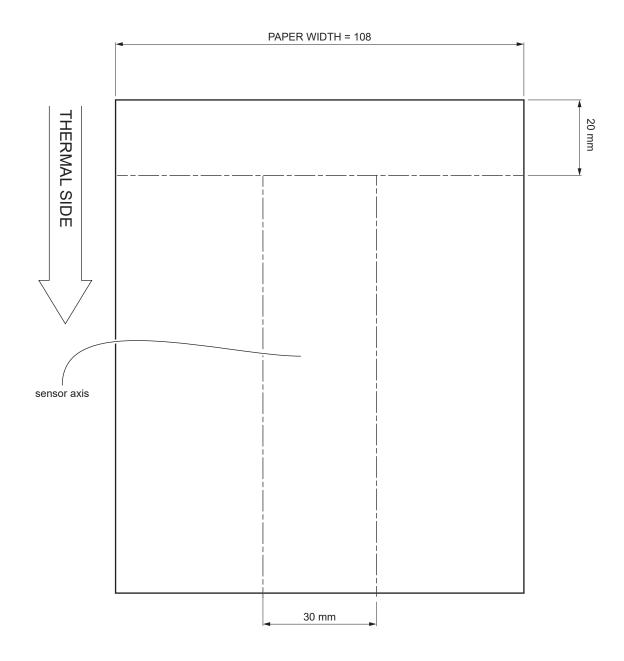






6.5 Paper specification

The following figure shows an example of thermal paper and the printable area (see paragraph 4.4). All the dimensions shown in following figures are in millimetres.





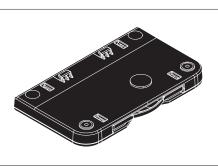


7 ACCESSORIES

The following table shows the list of available accessories for the device.

996LV010000001

TICKET TRAY (for technical specifications paragraph 6.3)









8 TECHNICAL SERVICE

In case of failure, contact the technical service accessing the website www.custom4u.it and using the support tools on the homepage. It is advisable to keep the identification data of the product at hand.

The product code, the serial number and the hardware release number can be found on the product label (see paragraph 2.4). The firmware release number (SCODE) can be found connecting the device to a PC and using the libraries (see chapter 4) or starting the "PrinterSet" tool (see paragraph 5.3).







CUSTOM S.p.A.
World Headquarters
Via Berettine, 2/B - 43010 Fontevivo, Parma ITALY
Tel. +39 0521 680111 - Fax +39 0521 610701 info@custom.biz - www.custom.biz

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