

sewoo

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sewoo



MOBILE PRINTER
MODEL : LK-P21

USER'S MANUAL

All specifications are subject to change without notice

**This device complies with part 15 of the FCC Rules.
Operation is subject to the following two conditions.**

- 1) This device may not cause harmful interference, and
- 2) This device must accept any interference received, including interference that may cause undesired operation.

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Disposal of Old Electrical&Electronic Equipment(Applicable in the European Union and other European countries with separate collection systems)

This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronics equipment. For more detailed information about recycling of this product, please contact your local city office, your household waste disposal service or the shop where you purchased the product.

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1. Safety Precautions

For better safety and reliability, adhere to the following precautionary measures.
Read and follow the instructions carefully before operation of the product.

Indication



Prohibition



Must follow



Do not disassemble



Unplug the power from the outlet



Grounding to prevent electric shock



Do not handle the product with wet hands



WARNING

Failure to follow these instructions could result in fire, electric shock, other injuries, or property damage.



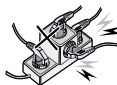
Do not pull or touch the power plug with wet hands.

Potential risk of electric shock or fire



Do not bend the wire and do not allow the wire to be pinched or crushed by heavy objects.

Potential risk of electric shock or fire



Do not overload an electrical outlet.

Potential risk of electric shock or fire



If a power plug is broken or a plug is cut or worn, do not use it.

Potential risk of electric shock or fire





WARNING

Failure to follow these instructions could result in fire, electric shock, other injuries, or property damage.



Do not unplug the power cable to turn off the product.

Turn off the power using the power button



Do not disassemble, repair or modify the product.

Potential risk of malfunction, electric shock, or fire. When the product needs to be repaired, please contact your reseller



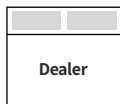
CAUTION

Failure to follow these instructions could result in fire, electric shock, other injuries, or property damage.



Do not install the product on an unstable or inclined surface.

May cause damage or injury



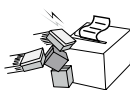
If the product needs to be repaired, please contact your reseller.

Potential risk of fire or unit malfunction



Keep product away from the water and other material.

Potential risk of fire or unit malfunction



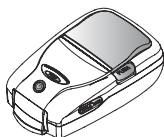
Avoid excessive shock or drops.

Potential risk of fire or property damage

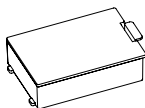


2. Unpacking

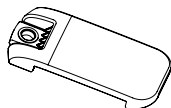
Standard



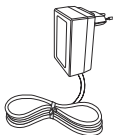
Printer



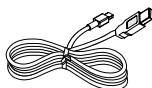
Battery



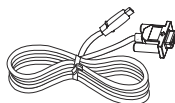
Belt Clip



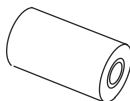
Charger



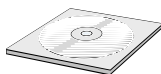
USB Cable



Serial Cable



Roll Paper



CD



Quick Manual

Optional



Battery Cradle



Car Adapter



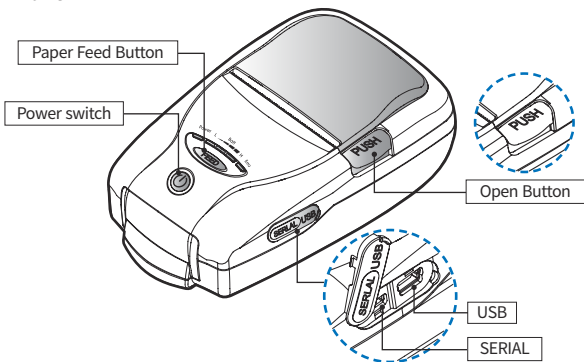
Leather Case



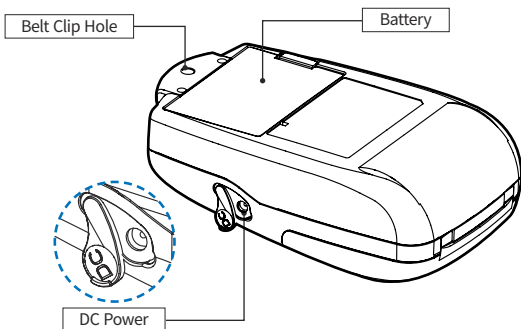
Shoulder Strap

3. Product overview

Front

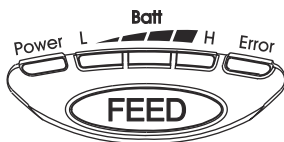






Bottom



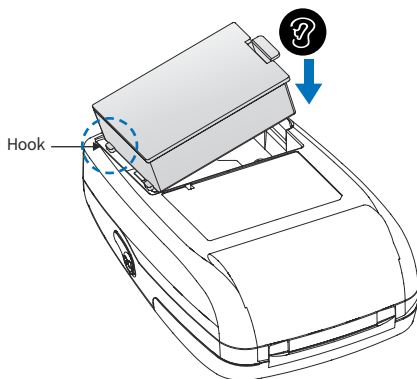
4. Usage and Installation

4-1. Control Panel Usage



Button	Name	function
	Power Button	<ul style="list-style-type: none">- This button is used to turn the printer on and off.- When the printer is off, press this button for approximately 3 seconds and the printer will power on. When you press this button while the printer is powered on, the printer will turn off.
	Paper Feed Button	<ul style="list-style-type: none">- This button can be used to manually feed the paper.- Additionally, this button is also used to initiate self-tests and Hexadecimal Dumping. <p>01 Refer to the Self Test section of this manual for information regarding self-tests.</p> <p>02 Refer to the Note in Self Test section of this manual for information regarding Hexadecimal Dumping.</p>
	Battery Status Lamp	<ul style="list-style-type: none">- If the Batt LED is lit, the battery is fully charged.- If you can hear a beeping sound and LED light is turned off, the battery is at the lowest level.- If the battery is not charged at all, the printer turns off automatically.
	Error Lamp	<ul style="list-style-type: none">- If the red light is turned on, there is no paper or the paper cover is open.

4-2. Battery Installation

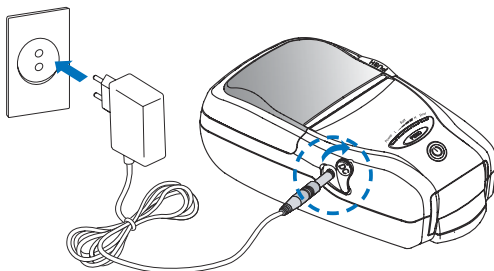


- 1 Align battery hook as shown in the picture.
- 2 Push the battery into the printer until it locks in place.

✓ NOTE

As the battery is not charged at the time of your purchase, charge the battery prior to using the printer. (Battery charger or Cradle can be used to charge)

4-3. Charging Battery



- 1 Make sure the printer is turned off.
- 2 After opening the DC JACK cover, connect the DC JACK to the printer.
- 3 Plug the power cord into the electrical outlet.

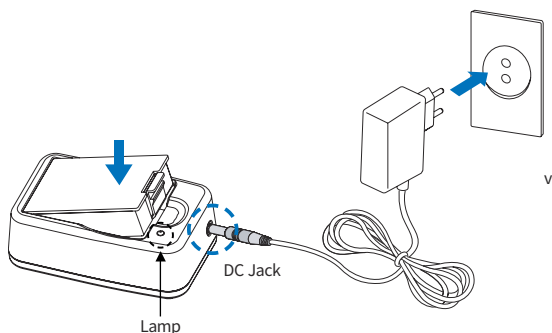
The charging status LED

Status	charging	charging complete
Charging Lamp	Red	Green

✓ NOTE

- 01 If the charger provided by the manufacturer is not used, the printer can be damaged, and the manufacturer is not liable for the consequential damage.
- 02 Before removing the battery, make sure that power is turned off.
- 03 The printer does not work when only connected to the charger.
- 04 The battery needs to be installed to operate the printer.
- 05 While charging, do not turn on the power.
- 06 Do not operate the printer while charging the battery.
- 07 Do not connect the charger while the printer is operating.

4-4. Charging Cradle *Optional*



- 1 Insert the battery into the battery charger as shown above.
- 2 Connect the DC JACK to the electrical outlet.
- 3 Plug the power cord into the electrical outlet.
- 4 Once the charging is completed, remove the battery from the charger.

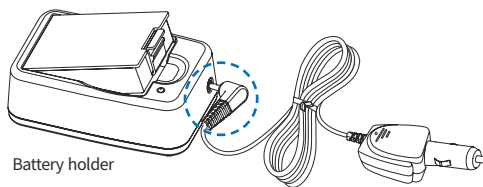
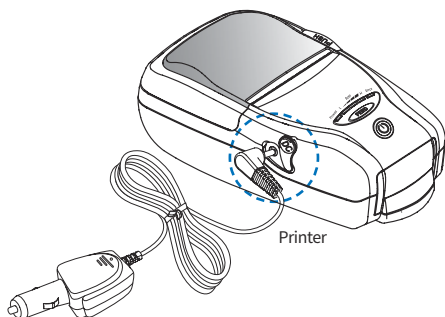
The charging status LED

Status	charging	charging complete
Charging Lamp	Red	Green

✓ NOTE

In the case the battery is not inserted properly, the red LED will blink. Remove and reinsert the battery.

4-5. Car Charger Usage *Optional*



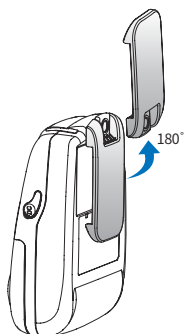
Connect the car charger into the printer or battery cradle.

Input	12 ~ 24V
Output	8.4V 0.8 ~ 1.2A

✓ NOTE

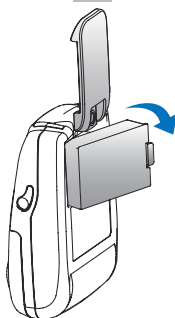
Only use the car charger included with the printer.

4-6. Battery Removal



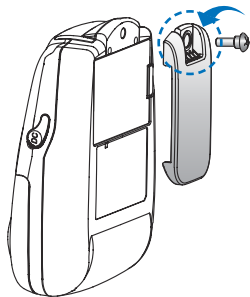
Rotate the Belt clip 180 degrees so it points upward.

1
2



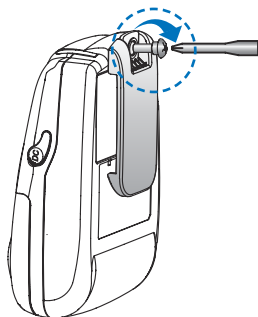
After flipping the belt clip up, remove the battery as shown above.

4-7. Belt clip Usage



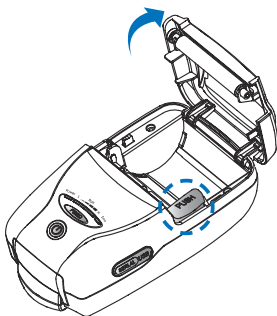
Insert the belt clip screw into the hole of the belt clip.

1
2

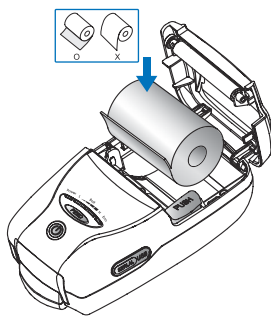


Tighten the screw with a screwdriver as shown in the picture above.

4-8. Paper Installation

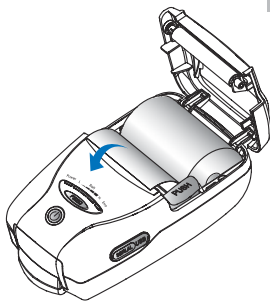


Press the PUSH button to open the paper cover.

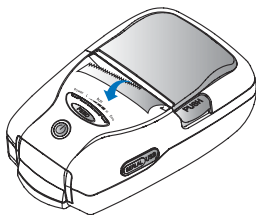


Insert the paper in the correct direction. See the image above.

1 2
3 4



Pull a short length of paper out of the printer and close the cover.

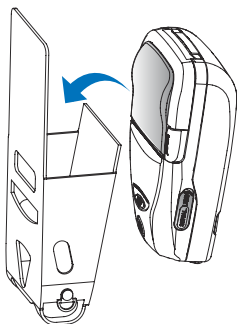


Tear off the additional paper using tear bar.

4-9. Leather Case Usage *Optional*

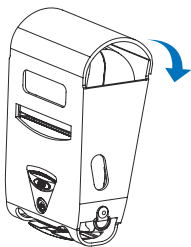


Open the leather case.

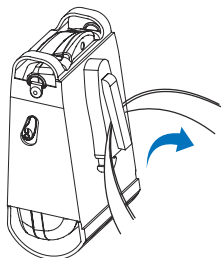


Place the printer into the leather case.

1 2
3 4

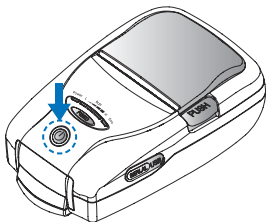


Close the cover and press down on the Velcro.

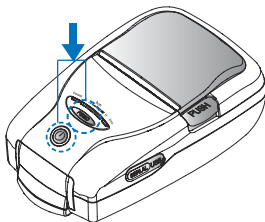


Fasten to the belt by using the clip at the rear of the leather case.

4-10. Self Test

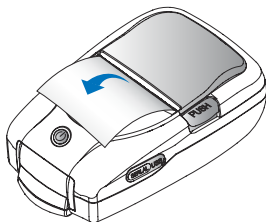


Turn off the power by pressing the power button for approximately 3 seconds.



While you are holding the FEED button, press the power button.

1 2
3



The self-test will print.

✓ NOTE

- 01 To print ASCII pattern additionally, press the Feed button once more.
- 02 After printing ASCII pattern, the self test will be finished automatically.
- 03 If the Feed button is not pressed to print ASCII pattern, self test will be finished automatically after 3 seconds.

Self-Test Printout Sample

```
SELF-TEST
*****
Printer is as follows
*****
Firmware Version      Ver 0.09
*****
ENGFONT              Install
Codepage 437         Install
*****
Serial Interface
  Baud rate          : 115200
  Data bits          : 8 bits
  Parity              : none
  Stop bits          : 1 bit or more
  Handshaking        : DTR/DSR
  Receive error      : ignore
*****
Bluetooth
  BD_ADDR            : 00:13:7B:52:06:ED
  Passkey            : 0000
*****
MSR
  Read Mode          : Auto TRACK1/2
*****
Emulation             : ESC/POS
PrintDensity          : Normal
Characters            : 32 Char/Line
*****
Low Power Mode        : Not Install
Off Time              : 0 min
*****

Please press FEED button.....

abcdefghijklmnopqrstuvwxyz{|}~`C
bcdefghi jklmnopqrstuvwxyz{|}~`C
cdefghi jklmnopqrstuvwxyz{|}~`C
defghi jklmnopqrstuvwxyz{|}~`C
efghi jklmnopqrstuvwxyz{|}~`C
fghi jklmnopqrstuvwxyz{|}~`C
ghi jklmnopqrstuvwxyz{|}~`C
hijklmnopqrstuvwxyz{|}~`C
ijklmnopqrstuvwxyz{|}~`C
jklmnopqrstuvwxyz{|}~`C
klmnopqrstuvwxyz{|}~`C
lmnopqrstuvwxyz{|}~`C
mnopqrstuvwxyz{|}~`C
nopqrstuvwxyz{|}~`C
opqrstuvwxyz{|}~`C
pqrstuvwxyz{|}~`C
qrstuvwxyz{|}~`C
rstuvwxy{|}~`C
stuvwxy{|}~`C
tuvwxy{|}~`C
vwxyz{|}~`C
wxyz{|}~`C
xyz{|}~`C
yz{|}~`C
z{|}~`C
```

Upon initial installation or for troubleshooting, you can run the diagnostic test to get information about:

- Firmware version, emulation, codepage, sensor settings, interface settings, etc.

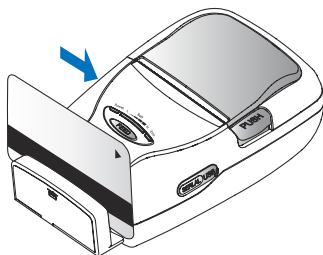
If no issues are found with the diagnostic test, examine other devices and software.

The diagnostic test is working independently of devices and software.

※ Motor protection from being overheated

To prevent the motor from overheating, stop the printer for at least 30 seconds after continuously printing 1.5 meters.

4-11. MSR Usage *Optional*

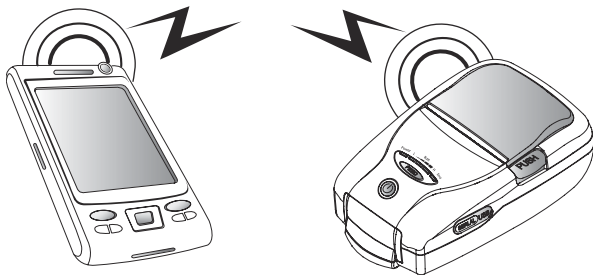


Insert and swipe the card in the direction of the arrow as shown in the picture.

5. Peripheral Connection

This product can communicate with other devices via Bluetooth, a communication cable.

5-1. Bluetooth Connection *Optional*

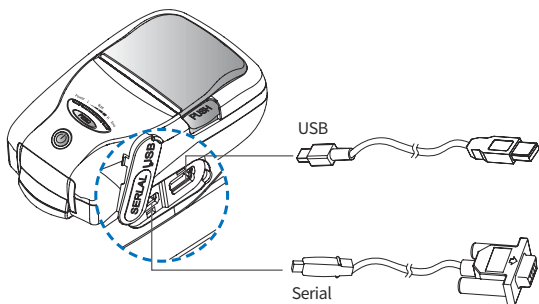


- 1 The Printer can be connected to devices equipped with Bluetooth communication capabilities(PDAs, PCs, etc.).
- 2 Use the Bluetooth connection function supported by your device to connect to the printer.

✓ NOTE

– Please refer to the configuration manual for details.

5-2. Interface Cable Connection



- 1 Connect USB or Serial cable to the connector on the printer.

✓ NOTE

- Only use cables included with the printer.

- 2 Connect the interface cable to the USB port of the device(PDA, PC, etc.).

6. Printer Specification

Printing Method		Direct Thermal
Printing Speed		80 mm/s
Resolution		203 DPI
Character	ESC/POS	FontA(12x24), FontB(9x17), Asian Font(KOR, JPN, CHN_GB2312, CHN_BIG5)
	CPCL	Font0/1/2/4/5/6/7, 24x24 Asian Font(KOR, JPN, CHN_GB2312, CHN_BIG5), Resident TTF, Downloadable TTF
	ZPL	FontA~H, FontGS, Resident TTF(Font0), Downloadable TTF
Barcode	ESC/POS	- 1D : EAN-8, EAN-13, Code39, ITF, UPC-A, UPC-E, Codabar, Code93, Code128 - 2D : QR, PDF417
	CPCL	- 1D : LUPC-A(+2,+5), UPC-E(+2, +5), EAN13(+2, +5), EAN8(+2,+5), Code39 etc. (CPCL) - 2D : QR, PDF417, MicroPDF417, Maxicode, Datamatrix, Aztec, TLC39, RSS14
	ZPL	- 1D : Code11, ITF, Code39, Planet, EAN-8, UPC-E, Code93, Code128 etc. (ZPLII) - 2D : QR, PDF417, MicroPDF417, Maxicode, Datamatrix, Aztec, TLC39, RSS14
Emulation		ESC/POS, CPCL, ZPL Command compatible
Driver		Windows Driver(10, 2012, 8, 7, 2008, VISTA, 2003, XP, 32bit & 64bit), Window CE & Mobile Driver & SDK(CE 4.2~, Mobile 5.0~), Linux Driver, Mac Driver, OPOS Driver, Java POS Driver, iOS SDK, Android(2.1~) SDK, Blackberry SDK, Symbian
Sensor		Paper End Sensor

Paper	Paper type	Thermal paper
	Width	Max. 58 mm
	Thickness	0.06 mm ~ 0.09 mm
	Roll Max Diameter	48 mm
	Roll Core	12.5 mm \pm 0.5 mm
Reliability	TPH	50 km
	Battery	Continuous printing: 29min Stand by: 19hours Printing length: 130m
Communications	Standard	Serial(RS-232C), USB, Bluetooth Class2
MSR (Optional)	Card Standard	ISO7811/2, JIS
	Track	1Track, 2Track, 3Track, JIS-II
	Magnetic Head Life	300,000 Passes(minimum)
Battery Charger	Input	AC100~240V, 50/60 Hz
	Output	8.4V , 800~1400mA
Battery	Battery type	Li-ion
	Output	7.4V, 1130mAh
	Charging time	2.2 hours
Size	WXDXH(mm)	80 x 133 x 47
	WXDXH(inch)	3.14 \times 5.21 x 1.84
Weight		240 g (with Battery)
Temperature	Operation	-10 ~ 50°C
	Storage	-20 ~ 60°C
Humidity	Operation	35 ~ 95%
	Storage	10 ~ 90%

7. Certification

FCC Information

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 01 This Device may not cause harmful interface, and
- 02 This device must accept any interference received, including interference that may cause undesired operation.

NOTE

This equipment has been tested and found to comply with the limits for CLASS B digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try correct the interference by one or more of the following measures:

- 01 Reorient or relocate the receiving antenna.
- 02 Increase the separation between the equipment and receiver.
- 03 Connect the equipment into an outlet on a circuit different from that to which receiver is connected.
- 04 Consult the dealer or experienced radio/TV technician for help.



WARNING

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.



CAUTION

Antenna shall be mounted in such a manner to minimize the potential for human contact during normal operation. The antenna should not be contacted during operation to avoid the possibility of exceeding the FCC radio frequency exposure limit.

The device meets the FCC requirements for radio frequency (RF) radiation exposure in the standard body worn configuration with no minimum configuration. In this configuration, which applies whether the belt clip or shoulder strap is used, the face of the printer from which paper is transported is facing away from the user's body. The standard configuration must always be used when the printer is body worn.

8. Utilities

The following utilities and concerned manual can be found on the CD or homepage.

No.	Name	Description
1	Configuration Tool	This is a utility that allows you to set printers by interface. Detailed settings such as Wi-Fi, Ethernet, and COM ports can be configured.
2	Download Tool(F/W)	Printer F/W and Font Download are available, and BT, Wi-Fi module F/W Download is supported. – P22, 20II can download ICR F/W. – BT/Wi-Fi Download function is not supported for P400, P21, P25. – P400 supports SD Card Download function instead of Font Download.
3	NVUpload (ESC/POS)	With NVUpload running on Windows OS, you can upload and remove the bmp file as Logo in the printer's flash memory, and print test is possible.
4	Bitmap Font Download(CPCL)	It is a utility that allows you to change Windows Fonts stored on your PC into Bitmap Fonts for use on the printer.
5	LabelMaker(CPCL)	This program is for label form design and designed label printing.
6	Android Utility (Sewoo M_Utility) (ESC/POS)	It is a utility app that prints text, barcodes, images, etc. through Bluetooth and Wi-Fi communication, and able to printer settings.

9. S/W

We provides SDK, Driver, etc. as follows to respond to various S/W usage environments.

You can download this S/W from the homepage.

No	Name	Description
1	Windows Driver	This is an install program used to print a Mobile printer in Windows OS.
2	Linux Driver	This is the Cups Driver used to print a Mobile printer in the Linux environment.
3	OPOS Driver (ESC/POS)	This is a driver that controls Mobile printers using the OPOS standard. It can be used after initial setting(Mobile Printer&MSR) using the setting tool.
4	JavaPOS Driver (ESC/POS)	JavaPOS driver is an interface standard for POS software written in Java, and can be used in Mobile Printer when printing a receipt.
5	Mac Driver	This is the Cups Driver used to print a Mobile printer in the Mac OS environment.
6	Android Plugin (Sewoo Print Service Plugin) (ESC/POS)	This is a print service plug-in that allows you to print documents, images, and web pages without installing additional apps.
7	Windows SDK	This is library for communication and data output with Mobile printer in Windows OS.
8	Android SDK	This is library for communication and data output with Mobile printers in Android OS.
9	iOS SDK	This is library for communication and data output with Mobile printers in iOS.

PATENT

