

VehiclePro 420

Operator's Manual



PRINTEKMOBILE™

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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.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. 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 to correct the interference by one or more of the following measures:

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

This equipment complies with Canadian and FCC radiation exposure limits set forth for an uncontrolled environment. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Part 15.21 Caution: Changes or modifications not expressly approved by Printek could void the user’s authority to operate the equipment.



Statement of compliance:
The following products have been tested and comply with FCC Part 15, Subpart B and ANSI C63.4-2014 standard limits.

Printek Branded Mobile Thermal Printers:

Series/Model:	Tested by:	Report number:
Vehicle Pro series, VP420	AGC Attestation of Global Compliance	AGC05548190101FE01, AGC05548190102FE01
Interceptor series, I820 Interceptor series, I80	EST Technology Co., Ltd EST Technology Co., Ltd	ESTE-R1709080, ESTE-R1709081 ESTE-F2103037
FieldPro series, FPS30, FPS30L FieldPro FPS30sL, Payload	EMTEK Co., Ltd AGC Attestation of Global Compliance	E5180516013E, E5180516014E AFCC05548180801FE01, AGC05548180802FE01
FieldPro FPS41 MLP Series, MLP35	WH Technology Corp. EST Technology Co., Ltd	CF17110506 ESTE-F1907016

Printek Branded Dot Matrix printers:

FormsPro 5100 Series Printer	Underwriters Laboratory	4788630615.1
PrintMaster 700 Series Printer	WH Technology Corporation	CF16100107

These devices comply with Part 15 of the FCC rules. Operation is subject to the following two conditions: (1) These devices may not cause harmful interference, and (2) these devices must accept any interference received, including interference that may cause undesired operation.

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Signature:

Date: April 7, 2021



This device fulfills the European standards requirements by complying with the Directive relating to electromagnetic compatibility and relating to low-voltage electrical equipment. Furthermore, it fulfills the requirements for RoHS and R&TTE if applicable.

Conformity with the above-mentioned Directives is indicated by the CE symbol attached to the device.

Note: Conformity may be affected by:

- using interface cables not complying with the specifications
- non-observance of important instructions in the operator's manual
- installing components not approved for this device by the manufacturer
- unauthorized manipulation



Dieses Gerät erfüllt die Anforderungen der Europäischen Normen durch Einhaltung der Richtlinien bezüglich der Elektromagnetischen Verträglichkeit sowie bezüglich Elektrischer Betriebsmittel mit Niederspannung. Des Weiteren werden die Anforderungen bezüglich RoHS und falls anwendbar R&TTE erfüllt.

Die Konformität zu den oben angeführten Richtlinien ist durch das am Gerät angebrachte CE-Zeichen gekennzeichnet.


Hinweis: Die Konformität kann beeinflusst werden durch:

- Benutzung von nicht spezifizierten Schnittstellen
- Nichtbeachtung wichtiger Hinweise der Bedienungsanleitung
- Ersetzen von Bauteilen, die nicht vom Hersteller für dieses Gerät freigegeben wurden
- Feinariffe durch Unbefugte



This device complies with the requirements of the United Kingdom (UK) legislation of Electrical Safety Regulations, Electromagnetic Compatibility Regulations, if applicable the Radio Regulations and the Restriction of the Hazardous Substances in Electrical and Electronic Equipment Regulations.



 (Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your Local Authority or local store for recycling advice.)

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Wi-Fi is a registered trademark of the Wi-Fi Alliance

Windows is a registered trademark of Microsoft Corporation

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Read all set up and operating instructions before proceeding with operation. Do not operate in an enclosure unless properly ventilated. Do not operate near a heat source.



Lesen Sie vor der Inbetriebnahme die Aufbau- und Bedienungsanleitung. Betreiben Sie den Drucker nicht in einem kleinen, geschlossenen Raum, es sei denn dieser wird ordnungsgemäß belüftet. Nehmen Sie den Drucker nicht in der Nähe einer Wärmequelle in Betrieb.



No user-serviceable parts inside. Refer service or repairs to a qualified service professional. Use of genuine Printek replacement parts is required to warrant proper, safe operation. Any alteration or modification of this device voids the user warranty and may make the product unsafe to operate. The print head and motors get hot during use. Wait until they cool before touching them. Make certain the printer is disconnected from AC power before removing any covers or performing any required cleaning or maintenance. Connecting this printer to an ungrounded receptacle can result in electrical shock. Never place the printer near inflammable or explosive substances. Do not operate near liquid or spill liquid into the printer at any time.



Enthält keine Teile, die vom Bediener instandgesetzt werden können. Bitte wenden Sie sich bei Instandsetzung oder Reparatur an qualifiziertes Kundendienstpersonal. Die Verwendung von echten Printek Ersatzteilen ist notwendig, um ordnungsgemäßen, sicheren Betrieb zu gewährleisten. Änderungen oder Modifikationen dieses Geräts machen die Garantie ungültig und können den sicheren Betrieb des Produkts gefährden. Während des Druckens werden Druckerkopf und Motoren heiß. Warten Sie, bis sich die Teile abgekühlt haben, bevor Sie sie berühren. Vergewissern Sie sich, dass der Drucker nicht mehr an die Stromquelle angeschlossen ist, bevor Sie Abdeckungen abnehmen oder das Gerät reinigen bzw. warten. Schließen Sie diesen Drucker nicht an eine ungeerdete Steckdose an; dies kann zum Elektroschock führen. Setzen Sie den Drucker niemals in die Nähe von feuer- oder explosionsgefährlichen Stoffen. Betreiben Sie den Drucker nicht in der Nähe von Flüssigkeiten und lassen Sie keine Flüssigkeiten in den Drucker gelangen.

Specifications are subject to change without notice.

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Introduction

Thank you for purchasing a Printek VehiclePro 420 Model Series mobile thermal printer. Each printer is shipped with a Quick Start Guide, and one roll of receipt paper.

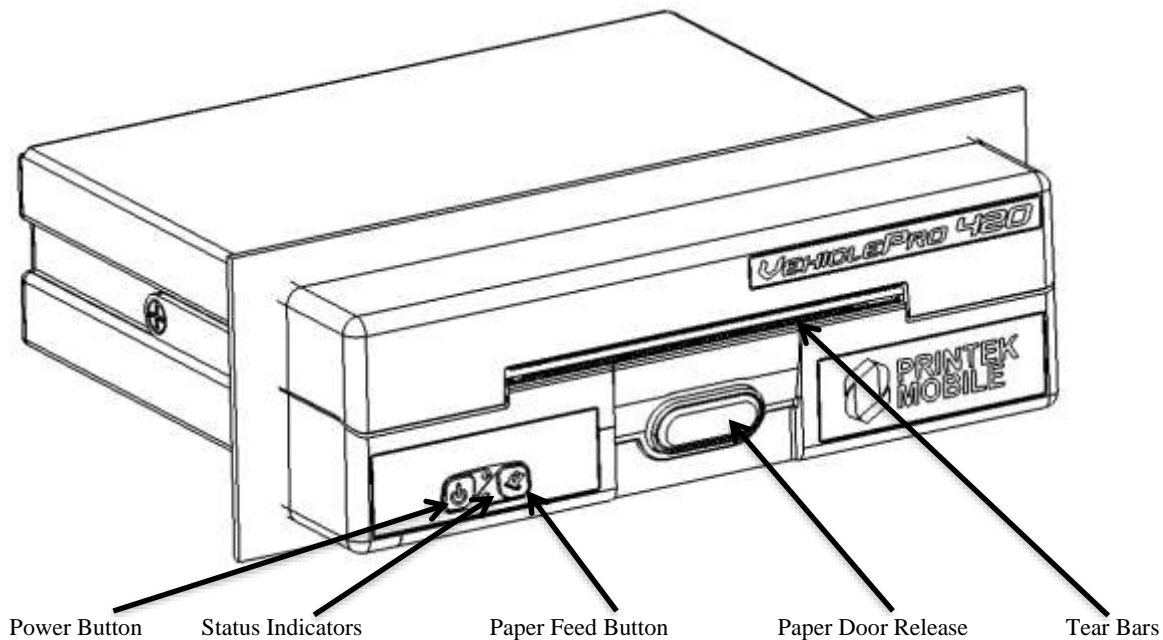
The VehiclePro series offers a variety of configurations to suit any printing environment. The 420 Model prints on receipt paper supplied in roll form up to 4.125 inches wide and includes “black mark” sensing capabilities on the printed side of the media. Standard interface is USB. All models also support an optional internal Bluetooth or WI-FI interface. Complete specifications may be found in [Appendix A – VehiclePro 420 Printer Specifications](#).

Please visit www.printek.com to download latest printer drivers and manuals.

The remainder of this manual focuses on preparing the printer for initial use and tasks that will be encountered during everyday use. Maintenance and Troubleshooting describes how to maintain the printer for optimal performance and has information on how to diagnose any problems that may occur.

Printek recommends using genuine Printek supplied media and accessories.

Printer Features



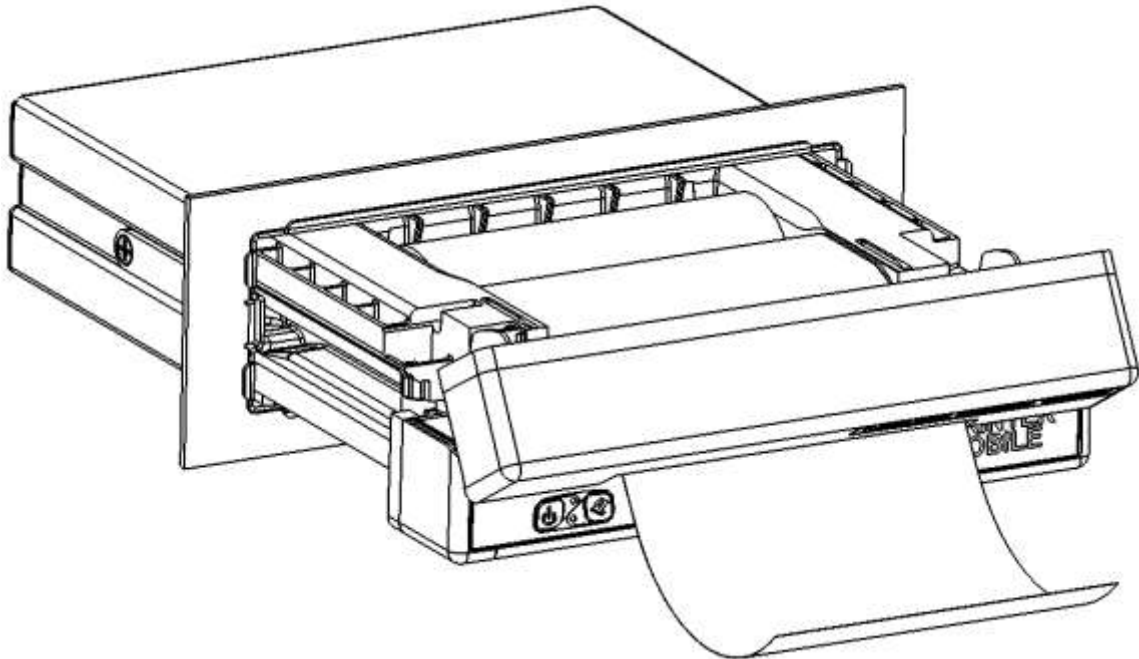
Your VehiclePro 420 features:

- Easy-to-read control face and simple drop-in paper loading.
- Quickly prints a wide variety of tickets, and receipts.
- IP54 rated for water and dust resistance.
- Extensive fonts, character sets, barcodes, and graphic capabilities.
- Compatible with Windows, WindowsMobile, Android.
- Emulations that allow the printer to be a drop-in replacement for nearly any mobile printer.

For detailed specifications reference [Appendix A – VehiclePro 420 Printer Specifications](#).

Quick Start Instructions

A. Paper Load



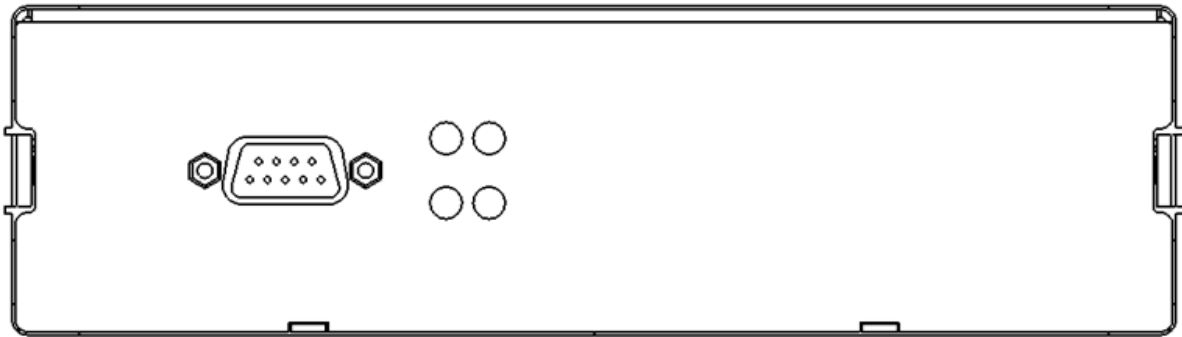
Push paper door release, pull out drawer, drop in paper roll and route through door as shown.

Printouts can be torn off in either direction.

B. Cable Installation

Printek provides a single 9-pin D-connector that plugs into the back of the VP420 printer. This connection provides both data communication and power to the printer. The cable has a USB-A connection to plug into the host. The cable has two unterminated power wires coming out of the connector. The positive cable is marked red.

The Red labeled wire in the power cable may be connected to a 9-32 VDC source and the Black wire is to be connected to vehicle ground. The printer's power input is internally fused but may be connected to a fused circuit that is capable of providing at least 5A.

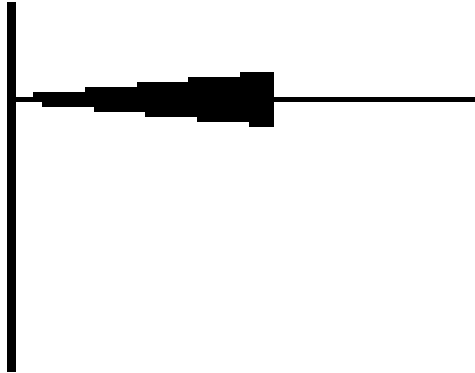


Data/Power Connector Pin Assignments

Pin	Description
1	USB Ground
2	D-
3	D+
4	USB +5V
5	Power Ground
6	USB Shield*
7	NC
8	Power (9-32 VDC)
9	NC

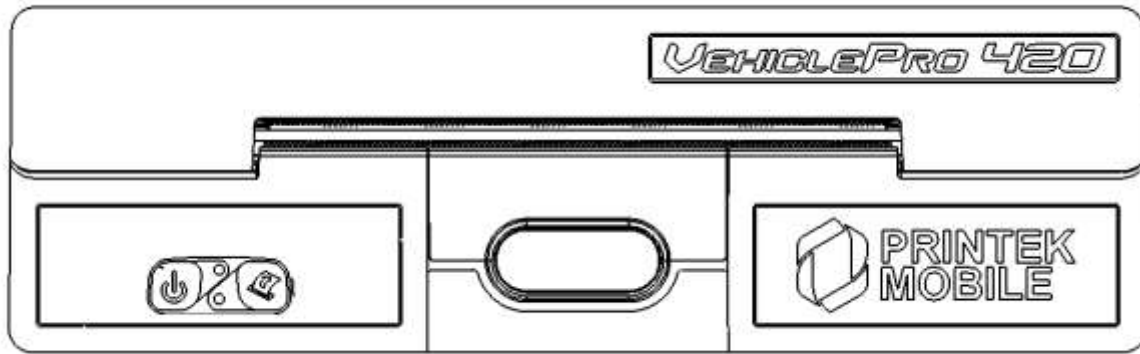
*Note: Do not use USB Shield as power ground.

C. Printer Installation



To complete the installation, secure the data/power cable connector to the back of the printer, insert the printer into the dash/console.

D. Status Indications – Patterns & Meanings



○		Printer is Off.
●	Green	Printer is On.
☀	Green	Printer is receiving data and/or printing, or is in Setup mode.
☀	RED	Paper out, Paper Door is open, or printer is in set up mode.

○ = Off ● = On ☀ = Flashing

E. Performing a Printer Self-Test

To print configuration page and conduct printer self-test, with power on, double click the paper feed button.

Integrating the Printer into your Business Applications Step by Step – Creating a Link from Host to Printer

Print Drivers

Printer drivers can be downloaded from our web site; <https://www.printek.com/windows-desktop/>

Select the I820 / VP420 / FP530 driver. This driver will work for both 32 and 64 bit operating systems.

The drivers are downloaded as .zip files. Unzip the file into a folder. For best results do not unzip the files to your desktop.

Run the DriverSetup.exe program to install the Windows driver.

A. Windows Laptop/Desktop

I. USB

- a) When connected through the USB cable the driver will recognize the printer and assign the proper port during driver installation.

II. Bluetooth

- a) Using the Bluetooth Manager on your PC, the printer discover name will be VP-XXXxxxxx (XXXxxxxx is the serial number of the printer).
- b) The default passkey is 0000 (4 zeros).
- c) The Bluetooth Manager will assign a virtual com port number to the connection. Make note of the COM port number
- d) You will need to use this COM port number when installing the Windows printer driver.
- e) Use the Manual installation option and select the COM port number assigned by the Bluetooth manager.

B. Android Tablets and Smartphones

I. Bluetooth

- a) Using the Bluetooth Manager on your Android device, scan for available Bluetooth devices.
- b) The printer discover name will be VP- XXXxxxxx (XXXxxxxx is the serial number of the printer).
- c) The default passkey is 0000 (four zeros).

NOTE: The device will pair to the printer but does not connect until a print job is sent to the printer.

C. Apple Tablets and Smartphones

This feature and/or specific directions for use were not available as of this printing.

D. Windows Tablets and Smartphones

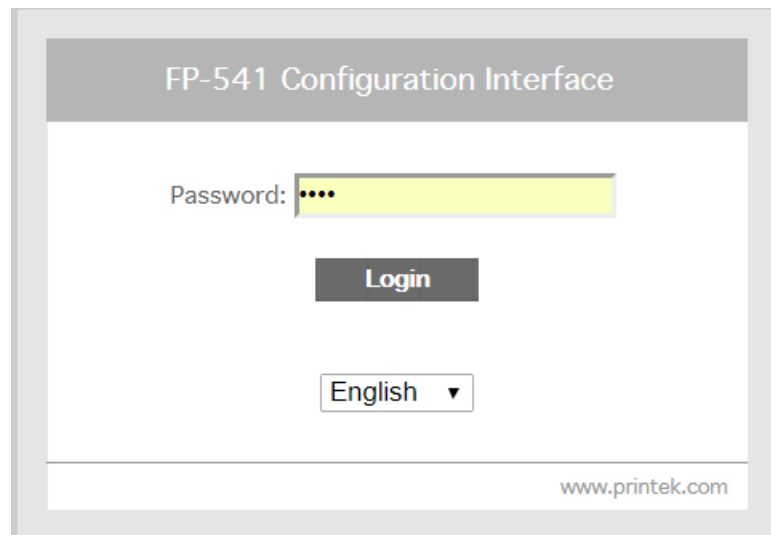
Bluetooth

- a) Using the Bluetooth Manager on your PC, the printer discover name will be VP-XXXXxxx (XXXXxxx is the serial number of the printer).
- b) The default passkey is 0000(four zeros).
- c) The Bluetooth Manager will assign a virtual com port number to the connection. Use this COM port number in application when printing to the printer.

Configuration

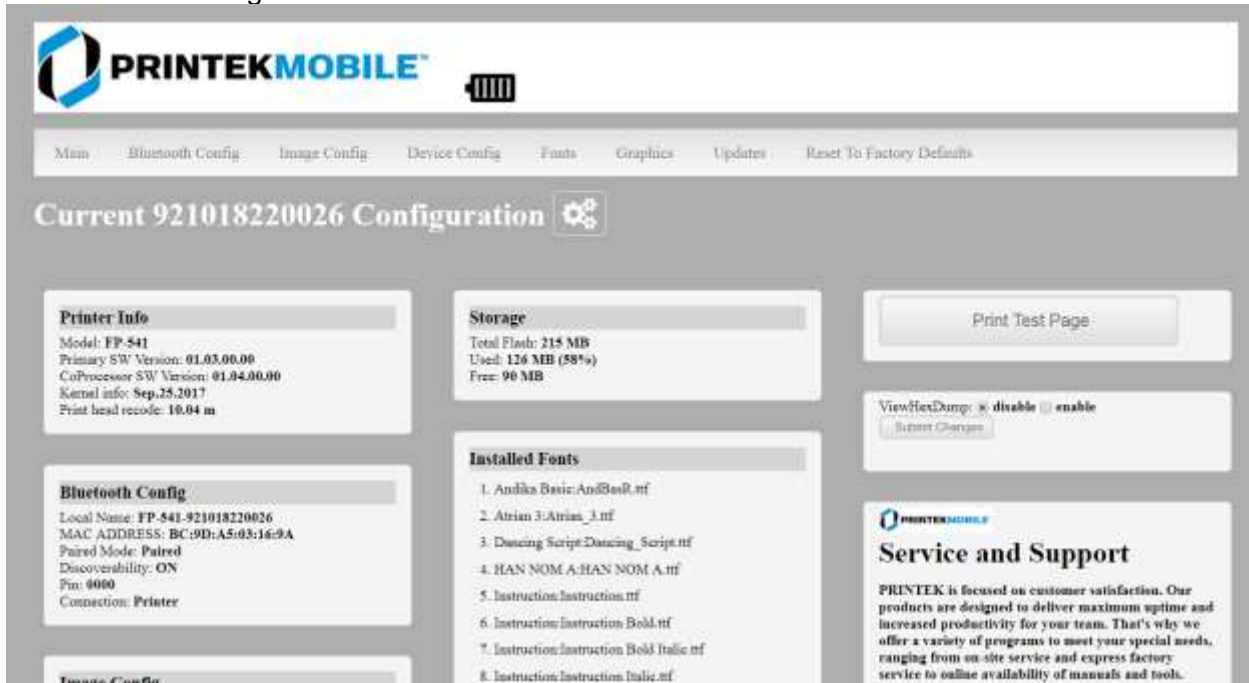
Configuration of the VP420 printer is done through a built-in web page. This allows you to configure the printer from any device that has a browser and is compatible with your VP420 communication capabilities.

1. Turn the printer ON.
2. Connect a USB cable between the printer and a PC.
3. To access the VP420 web page, push the Power button twice rapidly. This will put the printer into Configuration mode.
4. When the printer is in Configuration mode the POWER and FAULT LEDs will flash together.
 - a. Open browser on your PC and type **169.254.200.1** into the address bar of the browser and hit Enter - A login box should appear:



- b. Type "0000" and hit Enter- you should now be at the home page for VP420 Configuration.

5. The main configuration screen of the VP420:



This is an overview of the printer configuration.

To return the printer to normal operating mode, double-click the Power button. The POWER LED will be returned to a solid light.

At the top of the Main Page are selections to access the sub-menus.

A. Connectivity Parameters

This page allows you to set up the connection to your printer. Depending on the optional interface installed, you will see either Bluetooth Config or WI-FI Config. In the detailed descriptions, an asterisk (*) indicates the factory default value.

Bluetooth Config:

The screenshot shows the Printek Mobile Bluetooth configuration page. At the top, there is a navigation menu with links for Main, Bluetooth Config (selected), Image Config, Device Config, Fonts, Graphics, and Updates. The main heading is "Bluetooth Config" with a gear icon. The configuration area includes:

- Local Name: FP-541-KAB66666
- MAC ADDRESS: 00:16:A4:06:B1:71
- Paired Mode: UnPaired Paired
- Discoverability: Off On
- Pin: 0000
- Connection: Printer Personal Area Network

At the bottom of the configuration area are two buttons: "Submit Changes" and "Discard Changes".

Paired Mode:

Possible values: UnPaired, Paired*

This feature allows Bluetooth pairing to occur between the printer and the connecting device whenever Pairing is required by either device. Pairing requires that the PIN on the printer and the connecting device exactly match each other.

Discoverability:

Possible Values: Off, On*

This feature is used to set whether the printer may be discovered by other Bluetooth devices. It should only be set to "Off" after the printer has been discovered and paired with a host computer.

PIN:

Possible Values: 0000*, Up to 16 Numeric Characters.

Note that this feature is only available if Pairing Mode is set to "Paired". The PIN value must exactly match the PIN value set in the Bluetooth manager on the host computer.

Connection:

Possible Values: Printer*, Personal Area Network

This feature selects the role of the printer's interface in the Bluetooth network.

In Printer mode, the printer behaves as a regular Bluetooth device.

In Personal Area Network mode, the printer behaves similar to a Wi-Fi access point. The Power LED will flash off every two seconds while in this mode.

After pairing with the printer, the host Bluetooth icon will appear different, indicating that an access point is present.



Some hosts require an extra connect step after pairing. After connecting, the printer will issue an IP address to the host and the host can communicate to the printer as if it were a Wi-Fi printer. The printer's address to the host is always **169.254.200.1**.

In the host device's browser (if equipped) this address may be entered in the address bar to access the printer web page.

WI-FI Config:

Field	Value
IP Address	169 254 200 1
SubnetMask	255 255 0 0
Gateway	0 0 0 0
SSID	FP-541-KAB66666
Passphrase	DASCOM123
Address Method	<input type="radio"/> Static <input type="radio"/> DHCP <input checked="" type="radio"/> Access Point
WiFi Port	8023

Wireless Configuration

This will display the current Wi-Fi configuration:

IP Address – user defined. If Static Address Method is selected, type in the address the printer will use on the network.

SubNetMask – user defined. If Static Address Method is selected, type in the subnet mark of the network.

Gateway – user defined. If Static Address Method is selected, type in the gateway address of the network.

SSID – user defined. Network name broadcasted by printer when set to Access Point mode.

Passphrase – user defined. Password used to access the printer in Access Point mode.

WiFi Port – user defined. Type in the IP port to be used by the printer. (default value = 8023)

Address Method – user selectable

Static – printer will always connect to the network using the IP address defined.

DHCP – printer will acquire an IP address from your network DHCP server

Access Point –The printer will broadcast itself as a network connection. The Power LED will flash off every two seconds while in this mode. The SSID will be the serial number of the printer. When connecting to the printer, the passphrase is DASCOM123.

Access Point mode can also be activated outside of the printer web page.

To enter Personal Area Network mode, press and hold the Power and Paper Feed buttons until the Power and Alert LEDs light. Release both buttons, and the printer will restart in Personal Area Network mode. To exit Personal Area Network mode, press and hold the Power and Paper Feed buttons until the Power and Alert LEDs light. Release both buttons, and the printer will restart in normal Wi-Fi mode.

Current Connection 📶

wpa_state

SCANNING

show details hide details

Details

Previously Connected Networks 📶

Network ID	SSID	BSSID	Status	Connect/Disconnect	Remove

Available Networks 📶

BSSID	Frequency	Signal Level	Flags	SSID	Add/Connect
10:be:f5:19:83:3c	2462	206	[WPA-PSK-TKIP+CCMP][WPA2-PSK-TKIP+CCMP][WPS][ESS]	Printek3	Add/Connect
e4:6f:13:45:18:00	2412	200	[WPA-PSK-TKIP+CCMP][WPA2-PSK-TKIP+CCMP][WPS][ESS]	Printek2	Add/Connect
8c:0f:6f:55:b7:28	2437	196	[WPA-PSK-TKIP+CCMP][WPA2-PSK-TKIP+CCMP][WPS][ESS]	CBCI-D25A-2.4	Add/Connect
10:05:01:2e:43:00	2462	181	[WPA-PSK-TKIP+CCMP][WPA2-PSK-TKIP+CCMP][WPS][ESS]	CBCI-8F7D-2.4	Add/Connect
c8:d7:19:90:63:da	2412	170	[WPA2-PSK-CCMP][WPS][ESS]	Cisco7411	Add/Connect
c0:e1:e0:75:e1:22	2412	197	[WPS][ESS]	tsupport	Add/Connect
a0:f3:e1:ab:de:a2	2437	185	[WPS][ESS]	Testing	Add/Connect
4e:dc:dd:c9:dc:94	2462	195	[IBSS]	SETUP	Add/Connect

Current Connection – access points added through Add/Edit.

Previously Connected Networks – access points detected by the printer or added through Add/Edit Network will be displayed. Select Connect to use one of these access points or Remove to delete it from printer.

Available Networks – access points detected by the printer will be displayed. Select Add/Connect to use one of these access points.

The image shows a screenshot of a printer's configuration interface with three main sections:

- Add Personal Network:** Contains fields for SSID (with 'ssid' entered), Password (with '****' entered), and a dropdown menu for Authentication (showing 'No Authentication', 'WPA-Personal(PSK)', 'WPA2-Personal(PSK)', and 'Static WEP(no authentication)'). Below this is an Encryption dropdown (showing 'TKIP') and a 'Submit' button.
- Add Enterprise Network:** Contains fields for SSID (with 'ssid' entered), Password (with '****' entered), and a dropdown menu for Authentication (showing 'Static WEP(Shared Key)', 'IEEE 802.1X', 'WPA-Enterprise(EAP)', and 'WPA2-Enterprise(EAP)'). Below this is an Encryption dropdown (showing 'TKIP'), an Identity text field, and a 'Submit' button.
- Upload Digital Certificate:** Contains a 'Filename:' label, a 'Choose File' button, a text field showing 'No file chosen', and an 'Upload' button.

Add Personal Network and Add Enterprise Network

Enter the SSID of a network connection. If authentication is used select the authentication type. Click Next.

The following form will change depending on the authentication type:

WPA-PSK

Enter the password for the network connection.

WPA-EAP or IEEE8021X

These are Enterprise network settings. Consult your server manual for recommended settings.

Upload Digital Certificate

If your enterprise network uses digital certificates as another form of authentication, you can upload the certificates here.

B. Image Config

This page allows you to make selections about the image to be printed.

Setting	Value
Encoding	<input checked="" type="radio"/> GB18030 <input type="radio"/> UNICODE <input type="radio"/> UTF-8
Current Emulation	ESCPOS
Font Type	Font A Font A: 12*24 Font B: 9*17
Letter Shape	Art Style
Digit Shape	Normal
Chinese Font Type	Font A Font A: 24*24 Font B: 32*32
Character Type	Chinese Character Set
Default Line Spacing	30 Unitpoint

Current Emulation:

Possible Values: ESCPOS*, PRINTEK, ZPL, CPCL, AUTOIMAGE, PDF, POSTSCRIPT, IMAGE

The VP420 printer is capable of using several different emulation modes. This feature sets the family of printer commands that may be used by a host application program to control the various capabilities of the printer. The printer will only respond to commands valid for the currently selected emulation. For more information, please refer to the *Integrator's Guide*.

Besides the popular printer languages to choose from, the following selections allow the VP420 to print many other file formats directly, without the need for a driver.

AUTOIMAGE – selected when mixed PDF and POSTSCRIPT images are sent to the printer. The printer will determine which type of file has been sent. This can increase printer response time.

PDF – When in this mode the printer will directly print Portable Document Files (PDF).

POSTSCRIPT – When in this mode the printer will directly print Postscript formatted files (.ps). You can also use a generic Postscript driver to print when in this mode.

IMAGE – selected if just image files are being sent to the printer. When in this mode the printer will directly print the following file types: .png, .jpg, .bmp, .pbm, .svg, .tiff

Default Font:

The VP420 has the ability to use True Type Fonts. All True Type Fonts loaded into printer memory are listed here. When using emulations that do not specify the font for each line of text, select the font you would like to use as the default font. All print jobs will use the default font unless a command is sent to the printer to use another font.

Chars Per Inch and Default Text Line Spacing:

NOTE: These settings only function in Printek Emulation

This determines how large the characters are and how many characters will print in a one-inch space. The higher the number, the greater the number of lines per vertical inch of print.

C. Device Config



This page allows you to set certain hardware parameters on the printer.

Device Config

Form

Units	inch ▾
Max Paper Speed	5.0 ▾ inches per sec.
Mark Seek	<input checked="" type="radio"/> RollPaper <input type="radio"/> Front <input type="radio"/> Rear <input type="radio"/> Gap
Paper Sensor Threshold	40 % range 0-100%
Backup Distance Before Printing	0.0 inches
Feed Distance After Printing	0 inches
Left Margin	0 inches
Contrast	5 ▾ 1 - 10
Power Sleep	Disabled ▾ min(s)

Paper Sensitivity

Thermal paper settings: Locked  	Thermal paper type: 8 ▾
---	-------------------------

Units

Select between inches or millimeters. If you change units, do so before entering other settings.

Max Paper Speed

Possible values: 1.0 to 5.0 ips, Default = 5.0

When using labels or heavy paper stock, you may need to decrease the paper speed to prevent paper jams.

Mark Seeking

Possible values: Off*, Front.

Set the value when using regular or label media with black alignment. Depending on the value selected here you may or may not see some of the sensor threshold settings listed below.

NOTE: Before adjusting black mark gap thresholds set the Mark Width to match the width of the black mark or label gap on your media.

Paper Sensor Threshold

When using paper with a black mark on the front adjust this setting to ensure the paper stops at the black mark. Normal value is between 70-90 %.

Backup Distance Before Printing

Used with Mark Seek. User defined. This is the distance the printer will pull in the paper before starting to print.

Stop Distance after Mark

Use with Mark Seeking. User defined. This is the distance the printer will advance the paper after the mark is detected.

Left Margin

Setting this value will tell the printer how far from the left edge of the paper to start the print job.

Contrast

Possible values 0 – 10. Default value is 5

The lower the value the lighter the print. The higher the value the darker the print.

Power Sleep

Possible values: Disabled*, 10, 30, 60, 120, 180 minutes.

Set this value to have the printer power off after a specified time of inactivity.

Paper Energy Values

This is a locked value. These are preset configurations for different thermal paper grades. Higher numbers will produce darker printing.

D. Fonts

Font Family Name	Index	Indicator(System default fonts, which cannot be removed.)
Andika Basic	A	x
Liberation Mono	B	x
MICR	C	x
Instruction	D	x
Liberation Sans	E	x
OCRA	F	x
HAN NOM A	G	x
Liberation Serif	H	x
VCR OSD Mono	I	x
Dancing Script	J	x
Atrium 5	K	x
OCR B Std	L	x

Upload Font File

TrueType Fonts (.tff, .otf, .ttc and .bdf) can be uploaded here. Languages like ZPL and CPCL can use the fonts by referring to them by their Font Family Name. Printek emulation uses the Index value when selecting a font.

Font Aliases

Languages like ZPL and CPCL can use an uploaded Font Alias Table so legacy jobs can have their font names mapped to other uploaded fonts. Contact Printek Technical Support at (800) 368-4636 for more information.

E. Graphics

This menu will allow you to load a graphics file into printer memory for use in creating your output. For instance, logos can be stored for recall and use by your host program (see *Integrator's Guide* for more details).

Logo Name	Index	Image(not actual size)	Size
-----------	-------	------------------------	------

Note: may need to refresh page to update mapping after upload or removal.

Upload File

Select the graphics file to load into printer memory. Acceptable graphics formats are .jpeg, .pbm, .pcx, .bmp, .png and .svg.

Set Width

Select the width you want to use to display your logo: full width, half width, or small width.

Set index

Depending on the Index value used, you can automatically print the graphics file as a header (prints at the beginning of the print job), footer (prints at the end of a print job) or use the graphics print command to print anywhere on your receipt or label. See *Integrator's Guide* for more information on graphics commands.

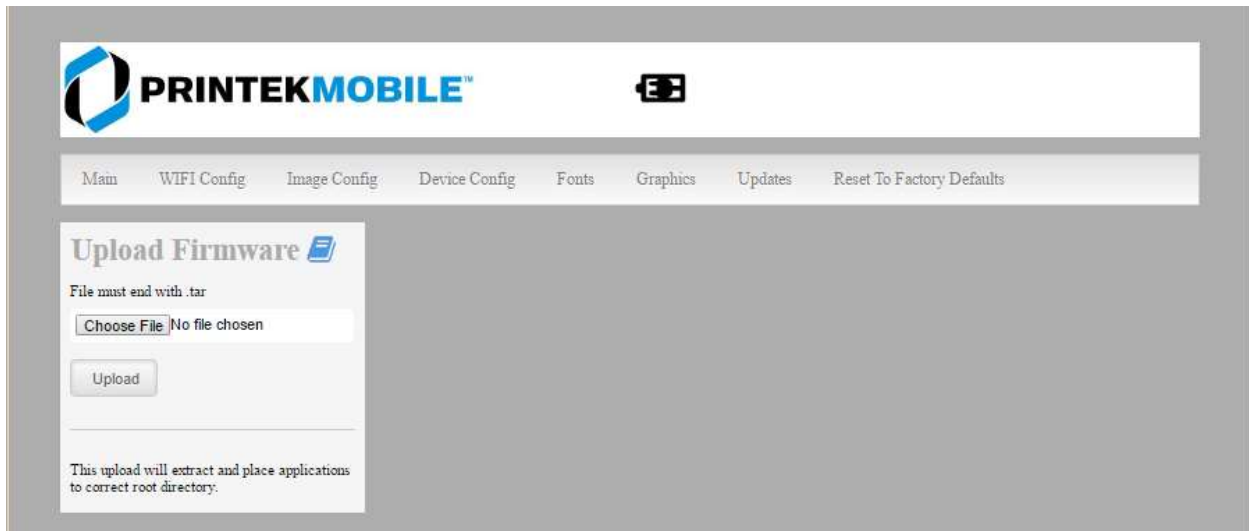
When selecting header, the graphics file will automatically print the logo at the beginning of each print job. When selecting footer, the graphics file will automatically print the logo at the end of each print job.

You must set each of these values before selecting Upload Logo or the default values will be associated with your image.

Current Logo Mapping

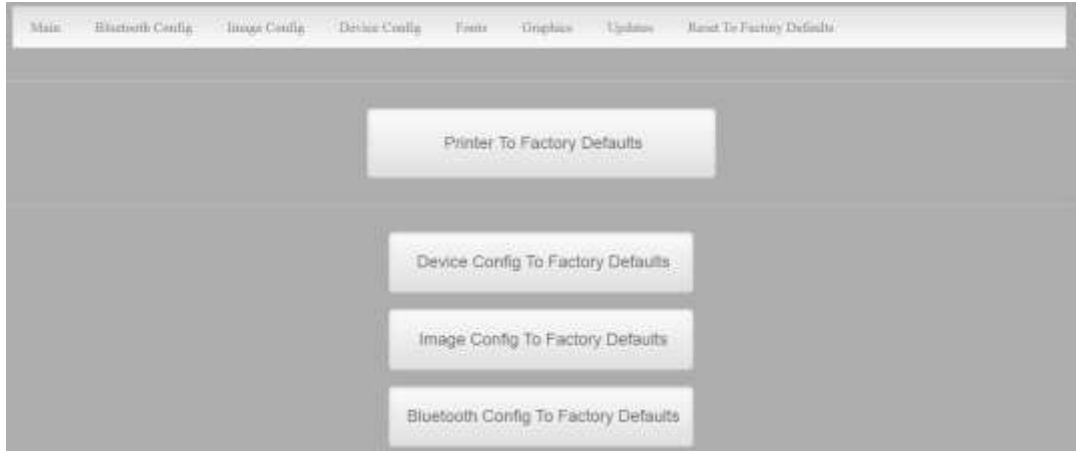
Once uploaded into the printer memory, your image and settings will be displayed here.

F. Update Printer Firmware, Upload Files to Printer Memory



Printer Application Updates, OEM information and Manuals and more can be uploaded here. Contact Printek Technical Support at (800) 368-4636 for more information.

G. Reset Printer Configuration to Factory Defaults (Safe Mode)



Printer settings can be restored to factory configurations.

Note that WIFI network configurations will be lost when Network Config to Factory Defaults is checked.

Media

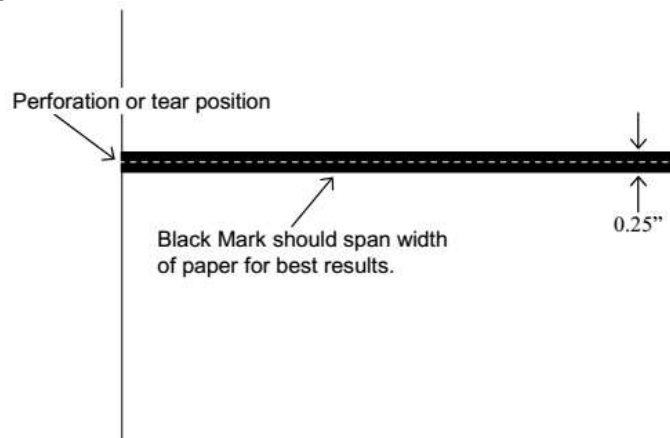
A. Standard Media

Printek offers a variety of media types. You may visit our website or contact your PrintekMobile sales representative for a complete and up to date description of our consumables and accessory products.

B. Black Mark Media Position

For automatic ticket printing, the black mark should be positioned as shown in the figure below. The black mark **MUST** be on the front of the paper. When using Mark Sensing mode, VehiclePro printers will automatically position the output for tear-off and printing following a Form Feed command or by pressing the Paper Feed button.

For non-automatic paper positioning, refer to the *FP-541 Integrator's Manual* for sensing and positioning commands.



Optimum Black Mark Position

Maintenance and Troubleshooting

A. Cleaning

In normal environments, the printer should be cleaned after printing a few rolls of paper or if there are voids in the printout. For optimum performance and life, you should clean the Print Head and Platen Roller whenever you load new paper.

To clean the printer areas as described below, use a Thermal Head Cleaning Pen available from Printek, or you may use cotton swabs moistened with isopropyl alcohol.

- Turn the printer off. Open the Paper Door and remove the paper.
- Using a Thermal Head Cleaning Pen, clean the surface indicated on the Print Head.
Caution: Do not use sharp objects to clean the print head. This may damage the printer and require service. Such damage is not covered under the warranty.
- Clean the Black Mark Sensor below the print head.
- Clean the Platen Roller. Turn the platen roller with your finger to clean the entire surface.

You may also experience a buildup of paper dust in the printer. This may be removed using a can of compressed air or by vacuuming.

To clean the exterior of the printer, turn the printer off and use a soft cloth moistened with a mild detergent.

B. Troubleshooting

When encountering problems, the cause may be the printer or may sometimes be due to other problems with your system. Please review the following tables to solve common problems you may encounter with your printer. You may also visit www.printek.com for additional “FAQ’s” that may assist you.

If you are still unable to solve your problem, please contact the company where you purchased your printer since they are most familiar with your systems. If they are unable to help you, you may contact Printek Technical Support at (800) 368-4636.

I. Error Conditions

Whenever the printer detects an error condition the Error Indicator will either flash or stay on. In some cases, the audible alarm will also sound. Please refer to the following table for a list of what causes these conditions and how they may be corrected.

Error Indicator	Possible Cause	Solution
Flashes Red	Paper Out	Install paper and press the Paper Feed Button to clear the error.
Flashes Green/Amber, Without Alarm	Paper door not fully closed.	Make sure the door is fully closed by opening the door and closing it again until the door “clicks” closed. Check the platen roller for damage.
Flashes Green, Without Alarm, No Printout	Communications error.	Verify communications settings in the Interface Menu. Printer must be turned off to clear error.

II. Other Problems

Problem	Possible Cause	Solution
Poor print quality.	Print head dirty.	Clean print head as described in Maintenance and Troubleshooting .
	Poor quality or “old” paper.	Verify paper from approved source. Try new roll of paper.
Paper not feeding.	Obstruction in paper path or paper improperly installed.	Check paper path and reinstall paper.
	Poor quality paper.	Verify paper from approved source.
	Paper Door not fully closed.	Verify door is closed.
Paper not feeding reliably or print is compressed vertically	Poor quality paper.	Verify paper from approved source.
	Heavy or thick forms. Specialty paper with slick finish.	Lower the Max Paper Speed in Format Menu.
	Paper Door not fully closed.	Verify door is closed.
Print Garbled.	Improper Serial Interface configuration.	Verify printer and host settings match.
	Paper Door not fully closed.	Verify door is closed.
Printer will not print.	Paper not loaded correctly.	Check paper path and reinstall paper.
	Improper interface configuration.	Verify printer and host settings match. Print a self-test to verify printer settings and to verify printer is functioning properly.
Cannot print via optional interface.	Interface not configured correctly.	Print a self-test to verify printer settings. Make sure the interface is selected and make sure printer and host set ups match.

C. Obtaining Service

If service is required for your printer, please contact the company where you purchased your printer. If they are unable to assist you, contact Printek Customer Service at (800) 368-4636.

If you wish to return your printer to Printek for service, please contact Printek Customer Service at (800) 368-4636 to obtain a Return Authorization Number. Units returned without a Return Authorization will not be accepted.

APPENDIX

A. Appendix A – VehiclePro 420 Printer Specifications

Printing Specifications

Printing Method: Direct thermal.
Printing Resolution: 203 dpi (8 dots per mm).
Printing Speed: Up to 4 ips
Printing Width: Up to 4.1 inches (10.4 cm).
Paper Width: 4.125 inches (10.8 cm).

Fonts/Characters/Bar Codes

Fonts: A wide range of font types and sizes, from ~6 cpi to 34 cpi depending on emulation chosen, plus scaling.
Bar Codes: Code 39, Code 128, Intiv 2 of 5, EAN08 & 13, PDF-17 and UPC, depending on emulation chosen.
Downloadable graphics, logos. Accepts any .tff font for download.

Connectivity

Standard: RS232, USB (optional cable required)

Wireless Options:

Bluetooth®

Bluetooth® 4.0

Including:

Protocols: L2CAP, RFCOMM, SDP

Profiles: GAP, SDAP, SPP

Wi-Fi 802.11b/g/n compatible

Software

Drivers and Utilities: Drivers for WIN 7, WIN 10. Compatible with Windows Mobile, Android

Printer Setup Program provides convenient configuration via a Windows Interface from any computer, tablet PC, or smartphone.

Emulations: Emulates many popular printer brands and languages including: CPCL, ZPL and ESCPOS

Print Media

Paper Type: Direct Thermal Roll.

Roll Size: Maximum roll diameter 1.75" (4.3 cm), roll widths from 2.9" to 4.125" (7.4 to 10.5 cm)

Roll Capacity: Approx. 65' (19.8 m). or approx. 130 – 6" long receipts (with 2.4 mil thick media). max.

Core Size: 0.75" Recommended (19 mm).

Power Management

9-32 VDC in-vehicle power.
Auto ON/OFF with vehicle power.

Physical Specifications

Fits standard console, 3" high panel with a 5" depth.

Weight: 44.8 ounces with face panel.

Environmental Specifications

Operating Temp: -4° to 122°F (-20° to 50°C).

Storage Temp: -4° to 140°F (-20° to 60°C).

Humidity: 10% to 90% RH (non-condensing).

Rated IP54 per IEC 529

Operator Controls and Indicators

LED indicator for general status.

Button for paper feed.

Latch for paper compartment door.

All located conveniently on front face.

Memory Capacity

215MB Flash, 512MB DRAM. Standard memory supports large and graphic intensive print jobs.

Durability and Reliability

Case is all metal, consistent with heavy duty Police/Fire/Rescue equipment.

MTBF: >13 million print lines (Approx. 3,500 paper rolls)

Regulatory Approvals

CE mark, UL listed AC adapters, E-mark

Warranty

Two-year printer warranty on the entire printer- case and print head included.

Optional extended warranty available, ask your sales rep for details.

Options and Accessories

- Media in case quantities.

Glossary of Terms

802.11	Wireless networking communication standards created by IEEE.
Ad-Hoc	A Wi-Fi network consisting of only stations (no access point). Same as Peer-to-Peer.
authentication	The process a Wi-Fi station uses to identify itself to another station.
baud rate	The rate at which characters are transmitted over a serial interface. This is also often referred to as bits per second.
Bluetooth	A definition for short range radio frequency communications.
client	Any node on a network that requests services from another node (server).
character pitch	The horizontal spacing of characters. Measured in cpi.
cpi	Characters per inch.
default	Value or configuration assumed when the printer is powered on or reset.
DHCP	Dynamic Host Configuration Protocol. A method used to centrally control the assignment of IP addresses on a network.
dpi	Dots per inch. Generally used to refer to graphics density or resolution.
font	A group of characters of a given shape or style.
infrastructure	A Wi-Fi network consisting of stations connecting to a wired network or other stations via an access point.
interface	The connection between the printer and the host computer.
IP	Internet Protocol. A specification for packets, or datagrams, of data and an addressing method to allow the exchange of data with another system. Must be combined with another protocol such as TCP to create a complete connection with the other system.
LAN	Local Area Network.
LED	Light emitting diode.
lpi	Lines per inch.
margin	An area along any edge of a form where data may not be printed.
Peer-to-Peer	A network consisting of only stations (no access point or central server). Same as Ad-Hoc.

reset	Initialization of various operating features of the printer to the value or state assumed when the printer is powered on.
server	Any node on a network that provides services to another node (client).
SSID	Service Set Identifier. An identifier attached to packets on a Wi-Fi network that identify the particular network the packets are intended for.
TCP	Transmission Control Protocol. A specification that controls the connection between systems on a network.
top of form	The vertical position where the first line is printed on the paper. Also, the position the paper is advanced to when a form feed (FF) character is received from the host or the Form Feed button is pressed on the printer's control panel.
USB	Universal Serial Bus.
WAN	Wide Area Network. Refers to connections that allow one LAN to communicate with another LAN(s).
WEP	Wired Equivalent Privacy. A security protocol for wireless LANs designed to provide data security similar to a wired LAN.
Wi-Fi	Refers to any of the IEEE 802.11 standards.
WLAN	Wireless Local Area Network. A LAN made up of wireless nodes.

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