

## Printing with Capturx

### How It Works, Getting Started, Requirements, Troubleshooting & FAQs

Capturx software turns ordinary paper into extensions of computer desktop applications for forms-based data collection, notes and building plan markups. Capturx software adds a digital watermark which enables handwritten data with Capturx Digital Pens to be integrated into the original files and applications.

The digital watermarks are patterns of microscopic dots which are created by Capturx software as it prints using office printers and ordinary paper. The dot pattern appears as a light grey background on prints.

Think of the dot pattern as a 2D bar code. Like a bar-code scanner, the digital pen has an infrared sensor which tracks the dot pattern as it writes. Each digital watermark is unique to each print out, enabling the Capturx software to associate the right handwritten information to the correct original digital files. Each 6mm-diameter section of dot pattern is also unique – enabling Capturx to track the exact location of written information on each page.

When you print with Capturx software, you use normal paper with 4-color laser postscript printers. As your print job is sent to your printer, Capturx creates the unique dot patterns and adds it to your print job. The dot pattern is printed with black ink. The black ink contains carbon which is the only color “visible” to the infrared sensor on the digital pen. Postscript support is required to ensure a precise printing of the dot pattern to be read by the digital pen.

The data on the file which is visible to humans is printed using your printer’s yellow, magenta, and cyan inks. Any visible lines that look black are actually combinations of those color inks. For that reason, prints for use with Capturx software MUST be made with 4-color postscript printers.

#### Printer Requirements:

- 256MB of printer memory
- 4-color printing with a carbon-based black ink
- Postscript support

A broad range of printers have been tested for use with Capturx, including: HP, Okidata, Oce, Ricoh, Xerox, and Canon. Some color printers may require minor setting adjustments for optimal use. [Follow this link](#) to see lists of sample printers which work well with Capturx software and a few exceptions of printers which will not work. Reasons that color printers may NOT work include their use of wax instead of ink or poor postscript emulation instead of native postscript support.

## Getting started with Printing

1. Check the printer list
  - Make sure your printer is not on the exception list
  - Check the compatible list to see if your printer requires any special settings
2. Confirm Basic Requirements
  - 256MB of printer memory
  - 4-color printing with a carbon-based black ink
  - Postscript support
3. Test your printer
  - Install your Capturx software and print a sample
  - You will see a light grey watermark in the background of your print
  - Mark the print with your digital pen and upload the data by docking your pen
  - If your handwritten data is successfully uploaded into your file, then your printer works

## Printer Issue Troubleshooting

**Question:** Does your organization use printer cost tracking software installed on your print server?

**Answer:** Some printer cost tracking can interfere with how your PC communicates with printers, by creating a file to store before it sends the job to a print queue. It may interfere with Capturx software. Try to print using Capturx software as a test. If it interferes, temporarily disable the printer cost tracking and try again. For best results, please disable printer cost tracking when using Capturx software.

**Questions:** When you print...

- Do you specify the printer name using an IP address such as //192.168.27.03?
- Is printing on your network controlled by a web-based printing service?

**Answer:** Your default drivers might be bypassing the Microsoft's WDM (Windows Driver Model) used by Capturx software to communicate with printers. To print with Capturx software, you must install a WDM driver for your printer on your PC. The simplest way to do this is to use the Windows Add Printer wizard; this wizard is available through the Printers and Faxes control panel.

**Question:** I'm using a Capturx software-compliant printer, but I cannot print using the Capturx printing dialogs.

**Answer:** If you print using IP addresses or a web-based printing service, then you must install a WDM driver for your printer on your PC. The simplest way to do this is to use the Windows add printer wizard; this wizard is available through the printers and faxes control.

**Question:** Why does the pen buzz as I write?

**Answer:** The buzzing pen means that the pen cannot read the digital dot pattern. Your printer may require adjustments. First, ensure that your printer meets the minimum specs and is NOT on the incompatible list at [http://www.adapx.com/printers/Sample\\_List](http://www.adapx.com/printers/Sample_List). If your printer is not listed and meets other requirements, then contact support and describe the issue. Support may be able to provide a tool which can adjust your printer settings to enable printing with Capturx software.

**Questions:**

- Why does my relatively small file create a huge file for the printer?
- Why do I get the following errors as I print – either in the printer display or printed instead of my print job: “error: limit check” “stack overflow” “not enough memory” “memory overflow” “Not enough printer memory”?

**Answer:** When Capturx software prints it creates the digital watermark which gets sent to the printer at the same time as the visual information in the documents. Since the Capturx Digital Pen requires a precisely printed digital watermark, a lot of detail is added to the print job creating a very large temporary file for printing. The temporary file can be 100MB or more. (The original file which is saved on your PC simply retains a reference to the dot pattern – so it will only grow by a small amount).

If you see the errors mentioned above or other references to printer memory, then your printer likely does not have enough memory. You can add more memory to the printer or try printing the job on a different printer.

**Question:** When I print with Capturx software, why do I get a large number of sheets each with a few lines of gibberish instead of my file data?

**Answer:** Your printer is not interpreting the postscript data correctly. Your printer may not be postscript or the driver you have installed does not support postscript. This error –which can also occur with other applications that create postscript files – can result in a large number of sheets getting printed. You should cancel the print job and clear the printer’s memory. You should then make sure that you have the most recent driver for that printer – ideally a native postscript driver. If your driver is not the latest, then please install the latest driver and try again. If you are using the most current driver which is a postscript emulator AND the error continues, then please try printing the job on a different printer.

## Other Frequently Asked Printer Questions

**Question:** Are there any reasonably priced printers which work well with Capturx software?

**Answer:** Capturx software works with a broad range of color postscript printers. The OKI 6150, for example, is good for letter-sized sheets and is often available for less than \$699. The OKI C830, for example, is a high-volume network printer capable of supporting tabloid sized sheets, and is often available for less than \$2499.

**Questions:**

- If my printer is listed as requiring adjustments, how do I go about making those adjustments?
- If my printer meets the specified requirements and none of the troubleshooting steps apply to me, what should I do?

**Answer:** Please [click on this link](#) which will create and email to: Tech.Support@adapx.com with “Capturx Printer” Subject line. In the body of the mail, please indicate the printer make and model and any description of the issue.

**Question:** What if I print with a one-color or black and white postscript printer?

**Answer:** Depending on the amount of information on the print out, Capturx software may work with some black and white prints. The information in the file – whether it’s text on a form or building plans – will all be printed with black ink which will turn the underlying dot pattern for that section into a solid black. The infrared sensor on the Capturx Digital Pen – which is looking for dot pattern – will not be able to track information written on or immediately next to that area. As the pen approaches within a few millimeters of that area,

it will give a buzz to communicate that some of the nearby dot pattern is obscured. When the pen writes over a completely obscured area – it will buzz continuously communicating that no information is being recorded.

If you have a simple form without any background colors and large open spaces for writing – it may be possible to use that form successfully with a black-and-white (1-color) postscript printer. There may be intermittent pen buzzing as the form filler writes close to any black information. Whenever the pen buzzes, ink is not being captured and may be lost.

If you have a complex building plan with a lot of dense features printed – then a black-and-white print will likely lead to a lot of buzzing and data collection may be incomplete. We do not recommend a black-and-white printer for this scenario. Similarly, if you have any background color or shading on a building plan or form – then the dot pattern will become obscured, the pen will buzz, and data will not be consistently collected.

For these reasons, we recommend 4-color postscript printers.

**Question:** If my team doesn't have a color postscript printer, can I still use Capturx technology?

**Answer:** Many teams print forms or building plans in advance at corporate sites or at printing houses for use with Capturx software in the field or on job sites. They simply find a qualified printer and print the forms or building plans using their laptop with Capturx software connected to the printer. When finished, the original files will retain a reference to the dot pattern which was generated at the time of printing.