



Questions & Answers

Q: What is ColorMark+ Software?

A: ColorMark+ Advanced Color Management System is a suite of software applications that enhance the standard ColorMark® Color Management System and ColorSpan print server software. It is designed to increase your productivity and allow you to expand your business offering.

Q: What does it do?

A: ColorMark+ enables you to:

1. **Create custom color profiles.** Color profiles are used by the color management system (CMS) to ensure accurate color matching from device to device. These profiles define, or characterize, the color properties of a specific media and ink combination on a given printer type. You can create custom ColorMark profiles for specialty media applications and ICC profiles for integration into an ICC workflow.
2. **Adjust the color properties in RIP Saver® files.** This enables you to crop and resize the image, adjust its hue, saturation, lightness, and contrast properties and print it again without Re-RIPing the file. You can also adjust the color balance in the shadows, mid-tones, and highlights of an image.

Q: Why would I want to adjust color at the RIP and not in Photoshop?

A: There are times you may want to make small adjustments to the overall color of an image. For example, to take out a green cast or bump up the saturation to give it more “pop.” This is a simple process with ColorMark+ plus it gives you an immediate preview of the changes on the print servers' monitor. Once complete, you just move the adjusted RIP Saver file to the output queue to be re-printed.

This is in contrast to going back and opening the original file in Photoshop, making the desired adjustments, saving the file, spooling the file to the RIP, re-RIPing the file, and printing it.

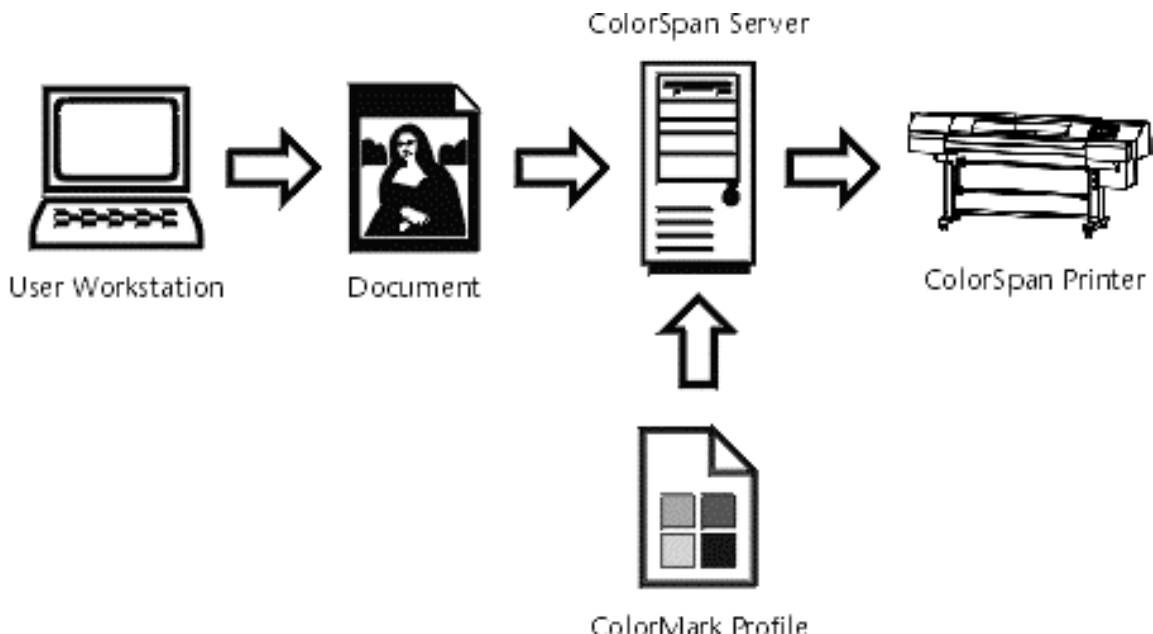
Q: Why do I need color profiles?

A: Attempting to compensate for all of the color variations in the printing process by trial and error correction at the application side is much too expensive and time consuming. The CMS solves this by translating colors from the color gamut of one device into a device-independent color model and then maps that color information to another device's color gamut. Color profiles are electronic files that contain the necessary information to make the translation to a specific ink, media, and printer combination.

ColorMark⁺ software generates profiles in two formats: ColorMark (.cx) and ICC (.icm).

ColorMark Profiles

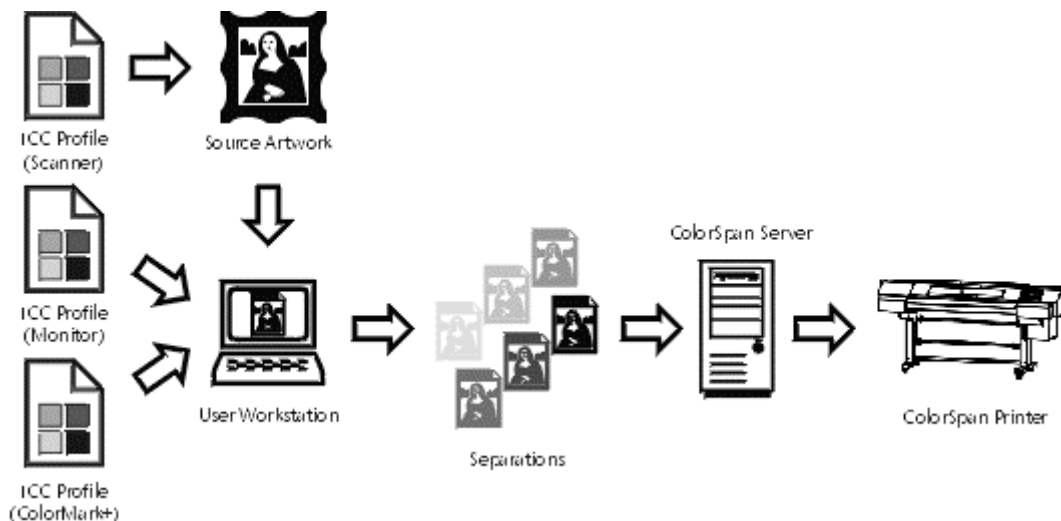
ColorSpan supplies a large number of [standard output profiles](#) for the most popular media and ink combinations. With the ColorMark⁺ software, you can create specialty output profiles yourself, using ColorSpan or third-party media. The profiles are stored on the ColorSpan print server and can be copied between ColorSpan servers that have ColorMark⁺ software.



One advantage of the ColorMark profile system is that you can change the profile (media and ink selection) of a RIPed file and print the file without having to re-RIP the file

ICC Profiles

The International Color Consortium (ICC) has defined a high-quality and interchangeable color profile format. The ICC color profiles are described in a platform-independent format and can be used to translate color data created on one device into another device's native color space. Once created, the profile is copied to the user's workstation, where it is used by applications that support ICC profiles. The application then sends color-corrected output to the ColorSpan print server. In this case, the print server only applies dot gain and linearization information to the color-corrected file.



In the ICC workflow, if you choose to print a file using a different set of ink or media, you must go back to the original file on the user workstation to select a new profile.

Q: How is a color profile created?

A: You characterize an ink and media combination by printing and scanning a reference target. The target contains a large number of CMYK color patches. The results are accurately read with a supported input device (calibrator). ColorMark⁺ uses the measured values to create a unique color profile.

Q: What are the specific steps to creating a color profiles?

A: The easy-to-use Profile Wizard guides you through the following steps:

1. Perform an AutoSet calibration. Getting the cartridges properly aligned and jets mapped as needed is essential to creating an accurate profile.
2. Select the color (ink) set for the profile. Each color set has a different profile target.

3. Select the maximum ink level by printing and inspecting the maximum ink level patches and selecting the patch with the maximum ink coverage without bleeding. This ensures that the printer will not deliver more ink than the media can absorb.
4. Linearize (calibrate) each ink channel. This compares measured printer output against expected reference data and accounts for the differences between them.
5. Read the characterization target – the patches printed by the ColorSpan printer with a specific ink and media combination. (The number of patches required depends on the different colors of ink in the ink set.) Profile creation is performed only once per ink and media combination.
6. Save the profile to the server hard disk. The profile is automatically saved in both ColorMark and ICC formats.

Q: What calibration devices are supported for reading the color patches?

A: Any of these input devices may be used to read the characterization target:

1. The ColorSpan DisplayMaker Mach 12, Series XII and Esprit printers can read the target automatically using its onboard camera. The Mach 12 camera can characterize up to 8 process colors (or a complete 12-color ink set). The Series XII and Esprit can characterize up to 6 process colors (total of 10 inks maximum, including multi-density inks). Although completely automated, this method can take several hours to read all of the patches. This can be run unattended.
2. The ColorMark Calibrator, optional hand-held spectrophotometer for use with ColorSpan print servers can be used to manually read the patches in approximately one hour.
3. The X-Rite DTP-41 auto-scanning spectrophotometer strip reader can be used to read the patches in minutes.

Q: What does it cost?

A: ColorMark⁺ software has a US retail price of \$1,995.