HP Latex 3x00 Printer Series

TECHNICAL NEWSLETTERS FROM CUSTOMER ASSURANCE

Date: August 2017   **Impact/Severity:** High
Region: WW   **Support Area:** PLTW Firmware, Software, Upgrade/Migrate
Audience: Support   **Confidentiality:** Public

New FW, IPS and Print Care Update Package available – MR9.1

New versions of firmware and software (IPS and Print Care) for the HP Latex 3x00 Printer Series are available to download.

IMPORTANT: HP strongly recommends that all the printers are upgraded to the new firmware and software as soon as possible. New printers may need to be upgraded during installation.

Remember that this upgrade is user installable, so please contact customers to advise them about this new release.

New release available from www.hp.com/go/Latex3000/downloads:

- Firmware: ALTAMIRA_11_01_01.4 (aka MR9.1).
- HP Internal Print Server (IPS): v2017.5.6.3.
- Print Care: v2.2.5.1

IMPORTANT: Ensure that the printer is connected and able to synchronize so that Print Care can get proactive update warnings from the HP servers whenever a bug has been fixed or a new version is available.

This is a General Availability version. It should be installed in all new and existing printers following the instructions below.

Upgrade instructions

The three components (FW, IPS and Print Care) must be installed together. No other combination is supported. On this release, an upgrade tool that includes the IPS software and Print Care has been developed, so the installation/running order will be:
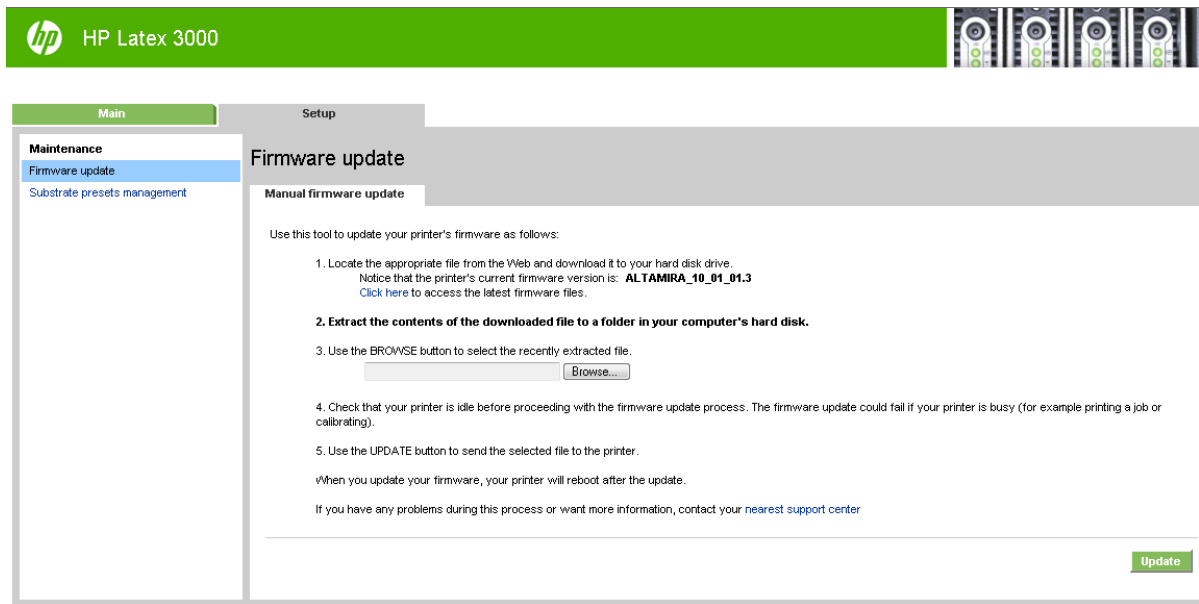
1. Firmware
2. IPS upgrade tool

1. How to upgrade the firmware

a. Download the **HPLatex3000_11_01_01.4.fmw** file.

b. In the Internal Print Server, select **Firmware update** from **Tools** menu.
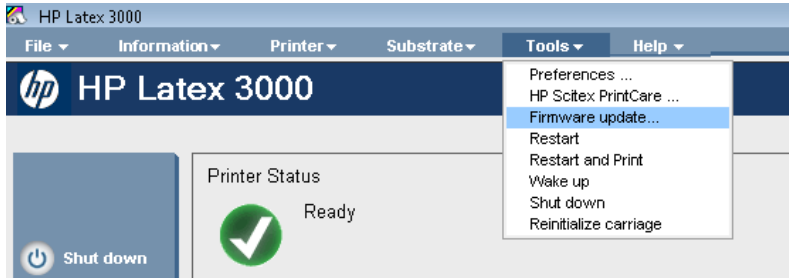
c. In the Embedded Web Server, browse to select the downloaded file and click **Update**.


Firmware installation takes about 20-30 minutes. The printer will reboot after installation without any interaction. If it does not, reboot the printer.

2. How to upgrade the IPS and Print Care

IMPORTANT: It is **mandatory to unzip and execute the downloaded files from a USB memory stick**, otherwise the IPS and Print Care upgrade will fail. If the upgrade fails even running the files from a USB stick, you are recommended to save the generated logs for analysis.

a. Download the **UpgradeTool_2017_06_16.zip** file and unzip the contents onto a **USB memory stick**.

b. Execute the **Upgrade Tool.exe** file and click the **Upgrade** button.
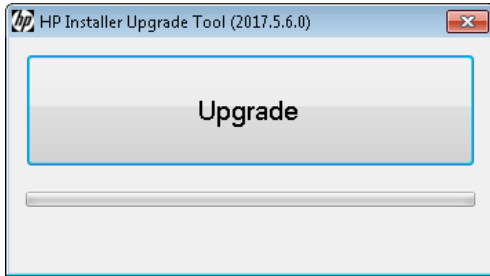

By running this file:

- The IPS, IPS services and HP Info Retriever (if installed) software will be uninstalled from the printer's built-in computer.

- The new IPS and IPS services software will be installed.

- The Print Care will be upgraded to version 2.2.5.1 and the Print Care patch will be installed.

c. Once the IPS, IPS Services and Print Care upgrade is completed, the following window will pop up. Press **OK** to continue with the Print Care patch installation.
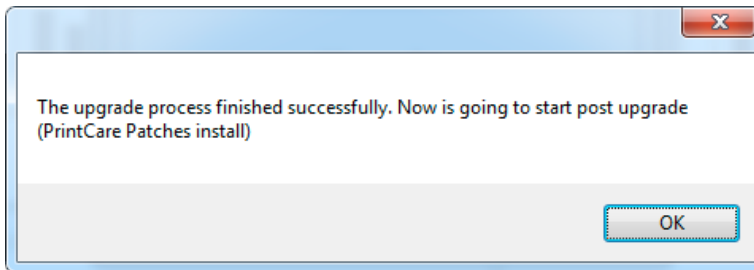

d. During the installation of the Print Care patch, the following window will appear. Once the installation is completed, the window will be closed automatically.
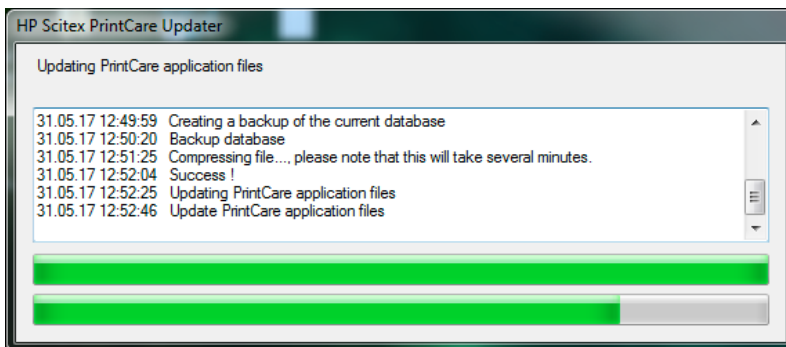

e. Once the installation process of IPS is completed, open the IPS application. At first boot, the Printer Data Sharing Agreement (PSDA) window will appear.

HP strongly suggests to enable it in order to take advantage of the info retriever functionalities and of a faster and better remote support.
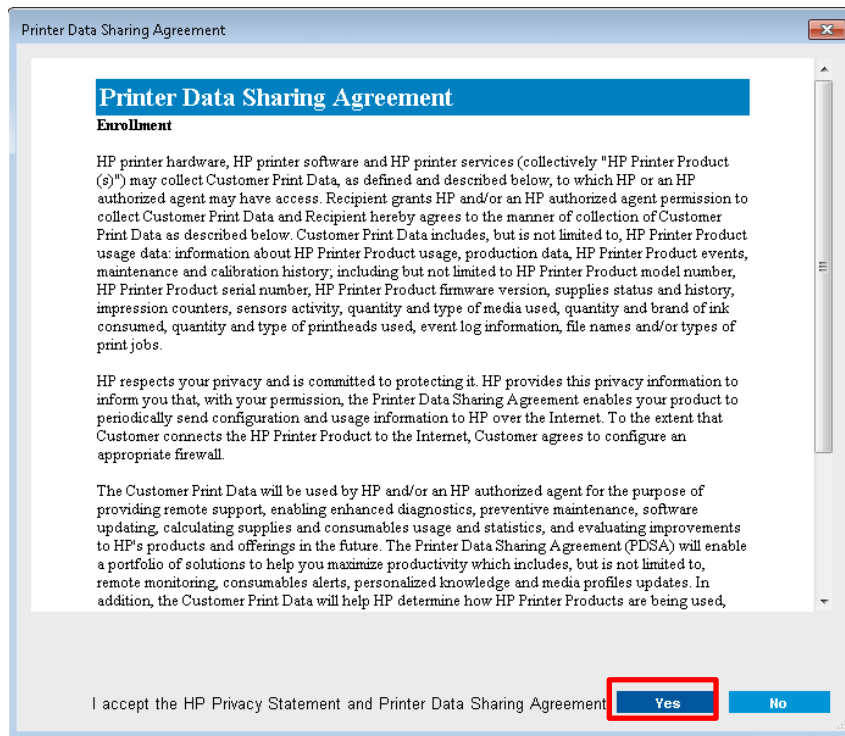
f. Enable the Remote assistance from IPS. For this purpose, in the IPS go to **Tools > Preferences** and check the **Enable Remote Assistance** check box on the **Remote assistance** tab.
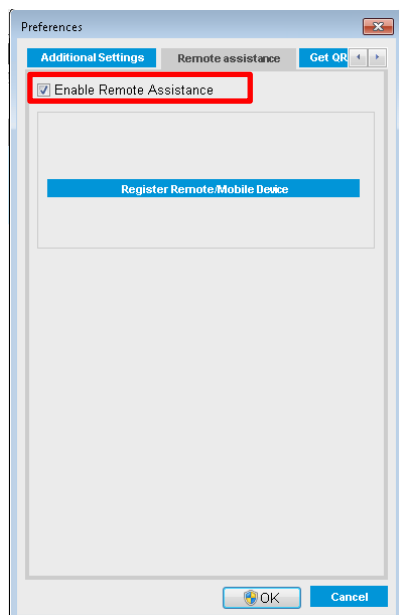
Release notes

The MR9.1 release includes the following improvements and new functionalities with respect to the previous versions.

Firmware

A. New functionalities:

- **Tiling mode** to get the best possible color consistency on tiling applications. See Appendix 1 – Tiling mode.

- **Uniformity masks vs Large masks.** A new type of mask named **Uniformity mask** has been included. The new **Uniformity mask** is recommended for applications such as wall-covering or vehicle wrapping. See Appendix 2 – Printing masks.

- Printing **double-sided jobs with dual-roll.** Now it is possible to print side A of a double-sided job with dual-rolls. To print side B, each roll has to be printed one at a time. See Appendix 3 – Printing a double-sided job with dual-roll.

- **Optimized time of operations with substrate presets.** The time needed to clone, rename, delete and refresh the substrate list has been reduced.

- **Advance calibration plot length increased.**

    o The manual advance calibration plot available on **Printer menu > Advance calibration...** has increased its length to achieve a stable advance. The previous length was not allowing the system to get stable enough when printing the latest advance patterns.

- **Scan-axis encoder check.**

    o The printer will now collect logs about the health of the scan-axis encoder. This action will be done sometimes while performing a carriage reinitialization, where the carriage will move along the complete scan-axis.

- **Improved tracking of the ink usage at every printhead**. This will be noticed specially in cases when the ink consumed was not matching after a printhead reinsertion.

B. Bug fixes:

- Improvements to prevent SE 61.02 due to E-box performance issues.

- After a firmware upgrade, the manual Printhead alignment values shown were the default values (15 and 20). The new firmware fixes this issue, showing the previously selected values. This was a cosmetic issue, because, internally, the printer was keeping the proper values.

- Under certain conditions, the remaining printing time was not shown. The time-remaining reporting has been improved in the firmware side to solve this bug.

- Some fixes included regarding the EOR detection.

IPS

A. New functionalities:

- **Support for tiling mode.** By adding **Optimize for tiling**, **preparation plot** and **color bars** options.

- **Uniformity mask** support.

- **Proxy configuration removed from the IPS.**
  - o To avoid conflicts with the proxy configuration that Windows provides, the proxy configuration has been removed from the IPS software.

Appendix 1 – Tiling mode

This mode allows to get the best possible color consistency on tiling applications. When using this mode, the printer activates specific processes to ensure stable conditions along the full job.

The tiling mode

- Creates a new media structure, based on existing ones, with tiling specific optimizations.
- Reduces color variations during long printing to maximum color difference ⩽ 1 dE 2000 (95% of color) *****.
- Includes a workflow to create media optimized for tiling based on customer media.
- Optionally, adds a preparation plot and color bars to ensure system stability during long runs.
- Is a printer to printer color consistency solution.
- Does not modify existing print modes or media.

The tiling mode is supported on the following print modes:

- 8 pass 70% – 120%
- 10 pass 70% – 150%
- 14 pass 70% – 150%

* The color variation inside a job printed with tiling optimized media has been measured to be with a maximum color difference (95% of colors) ⩽1 dE 2000. The test was executed on wallpaper (Ahlstrom 5087) with stable printing condition within a nominal printer.

How to optimize a media for tiling

1. Select **Substrate > Optimize for tiling**, and then select the required substrate from the list. Set a new name and press **Create**.
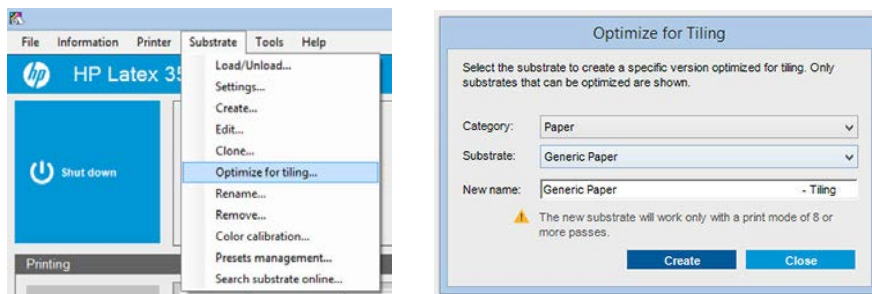

   NOTE: Only substrates that can be optimized for tiling appear in the list. Supported types are: front-lit media, vinyl, wallpaper and PVC banner. Substrates that have been converted as optimized for tiling will not appear.

   NOTE: A "Tiling" suffix is added to the name of the substrate, you can edit the name, but you cannot erase the suffix.

2. A window appears to remind you to perform a color calibration before the substrate is used for the first time.
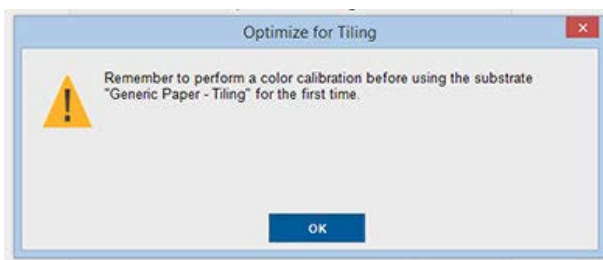
3. **System Preheat** is automatically checked for the selected tiling substrate. Only the recommended solution space (number of passes and ink levels) appears in the tiling window.
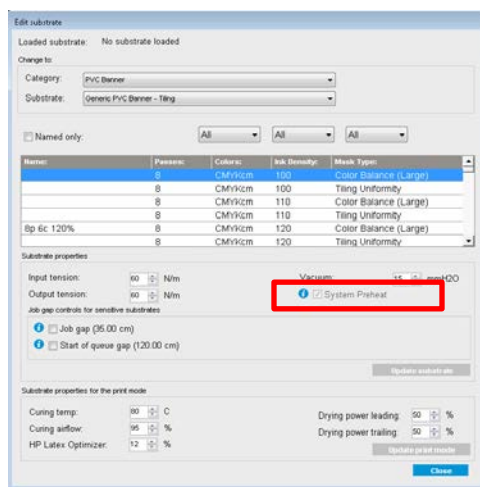

> **NOTE**: If the paper mode from the original substrate is not within the recommended solution space, it is deleted from the list. If the existing paper modes have been deleted during creation, a recommended paper mode is automatically added.

4. During creation, the Color calibration color reference is reset and the status appears as **Color reference not set** in the IPS.
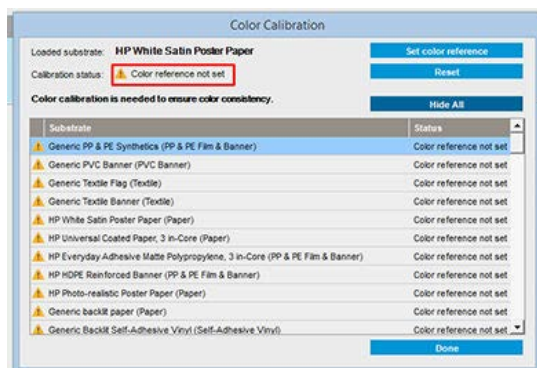
> **NOTE**: After creation, a Color calibration is required to create the reference for future color calibration. A warning window will appear straight after substrate creation. You can create an ICC profile from the RIP and manage the substrate as a normal one from this point on.

5. A beginning of job preparation plot (A) and sideway color bars (B) are automatically added. These are recommended for obtaining the best performance, but they can be disabled.
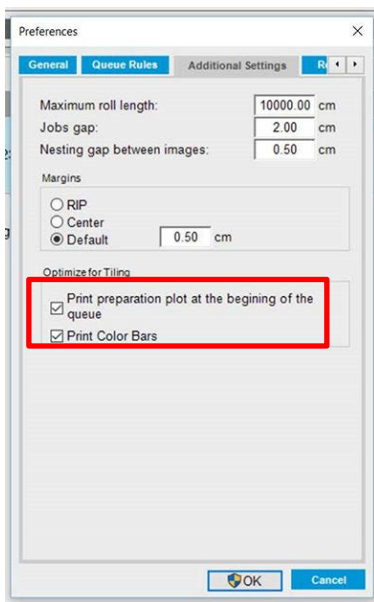
NOTE: When tiling optimized substrate is loaded, the specific workflow changes and the beginning of job preparation plot and the sideway color bars are automatically introduced. The workflow for non-optimized substrates is not affected.

6. The substrate can be exported from one printer to another through the Embedded Web Server.

Appendix 2 – Printing masks

As a matter of fact, the concept of **printing masks** refers to the relative positions of the ink drops on the media. The mask uses a randomization algorithm to avoid visual patterns. The result is a visually smooth surface with minimal graininess and no banding.

However, inaccurate alignment or media advance can interfere with the algorithm, causing different grain patterns along long jobs. On tiling applications, differences between panels can lead to visible seams.

The new **Uniformity mask** is more robust against this kind of phenomenon, delivering a uniformly texturized look in long runs and enabling seamless tiling applications even when using Dual Roll.

Hence, the **Uniformity mask** is recommended for applications such as wall-covering or vehicle wrapping; while the **Large mask** is recommended for applications such as posters, roll-up banners or backlit signs.

The following images show the performance of the two types of masks when the media does not advance uniformly.

Large mask

Uniformity mask

How to select the type of mask

1. You can select the desired mask by creating the corresponding print mode on the **Edit Substrate** menu. Remember that generic media presets must be cloned before being edited.

2. Provide a name to the print mode with **Uniformity mask** to make it accessible for printing.

By default, all the generic print modes use the **Large mask**.

Consider also the option **Optimize for Tiling** to get the best color consistency when printing tiles.

Appendix 3 – Printing a double-sided job with dual-roll

Now it is possible to print side A of a double-sided job with dual-rolls. To print side B, each roll has to be printed one at a time.

IMPORTANT: Rolls that weigh more than 200 kg (441 lb) on narrow rolls of less than 178 cm (70 inches) can cause a dangerous spindle bow that can in turn lead to spindle deformation.

1. When you have printed all the jobs on side A, make a small mark on the registration line so that it can be aligned later with the platen.

   NOTE: When loading side A, check the **Dual-roll** and **Load side A** boxes.
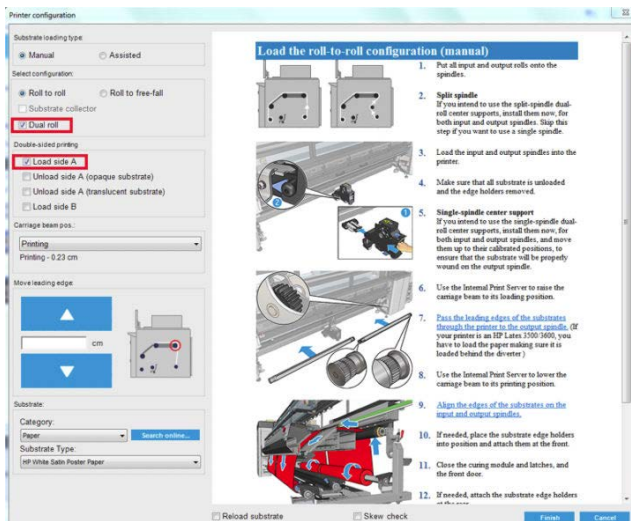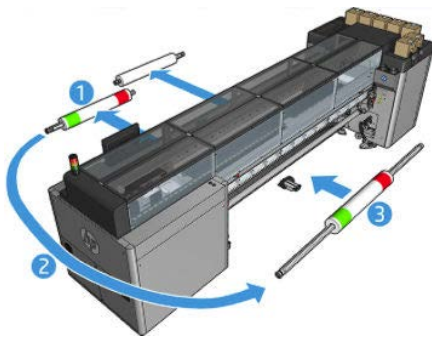
2. Cut the substrate on the output side, near the spindle.

    NOTE: Before unloading the substrate, select the **Substrate load/unload** button in the IPS, and select **Unload side A** (opaque substrate).
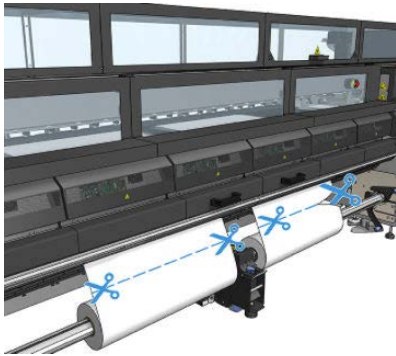
3. Put one of the two already-printed rolls onto a single spindle and place it in the input position. It is important that the substrate orientation remains the same.

4. Once side B is on the first roll, put the second roll onto the single spindle and print side B. Again, it is important that the substrate orientation remains the same.