# Codonics Horizon Operating Software

## Version 2.0.0 Release Notes (Changes Since Version 1.8.8 and Version 1.9.1)

### Summary

Version 2.0.0 software provides product improvements for all Codonics Horizon® Imagers that were previously only available on Horizon XL Imagers. This software also contains several improvements that are available for the first time.

The most recent software version for Horizon XL Imagers was 1.9.1. The most recent software version for all other Horizon Imagers was 1.8.8. Version 2.0.0 software unifies all Horizon Imagers to use one common software version.

This document details the changes from version 1.9.1 software (for users of Horizon XL Imagers) and version 1.8.8 software (for users of all other Horizon Imagers). Changes to both software versions are listed as "for all users." Changes to 1.8.8 that already were in 1.9.1 are listed as "for 1.8.8 users." Changes to 1.9.1 that were already in 1.8.8 are listed as "for 1.9.1 users."

### Products Affected

This upgrade applies to all Horizon Imagers. Any Horizon Imager running software versions 1.5.x through 1.9.1 can be upgraded to version 2.0.0. If your Horizon Imager is running version 1.4.x software, please contact Codonics Technical Support.

The Imager Software Version can be determined using the Control Panel by viewing the Imager Info screen from the Utilities menu.

### New Features

This section details new features available with Horizon 2.0.0 software for all users.

◆ **Image Nudge Job Setting for DICOM only.** The image nudge setting allows a user to adjust the position of an image on the film by up to 20 pixels (1.6 mm) in any direction.

This section details new features available with Horizon 2.0.0 software for 1.8.8 users.

◆ **IHE Support.** Support added for IHE Consistent Presentation of Images Profile (CPI) including Grayscale Standard Display Function and Presentation LUTs.

◆ **Full support for 12-bit DICOM images.** Support for 12-bit images sent via DICOM. Previous software versions converted 12-bit images to 8-bit prior to printing.

◆ **Scale Factor added to Default User Settings and Custom Job Settings.** Combined with Crop Anchor, the Scale Factor setting will allow hosts unable to utilize Requested Image Size to magnify the image by a given multiplier.

◆ **Quick Info menu.** A Quick Info menu has been added to the Control Panel to allow quicker access to useful imager information.

◆ **Extended Status test print.** A new test print has been added that generates five sheets containing imager status information, media counters, error logs, and Custom Job Settings.

### Product Improvements

This section details features which have been improved with Horizon version 2.0.0 software for all users.

◆ **All Horizon Imagers now use the same software.** Previously Horizon XL Imagers used 1.9.x software and all other Horizon imagers used 1.8.x software or earlier.

◆ **Improved support for Image Concatenation on XL Media.** Incoming concatenation print jobs will now be sorted by the sending IP Address and Called AE Title in addition to the Calling AE Title to improve the usability of the feature.

◆ **Improved density calibration.** Version 2.0.0 software introduced variable print speeds for accurate true size imaging. Horizon 2.0.0 software improves film density calibration to compensate for these variable print speeds.

◆ **Firewall option.** An option has been added to the network setting menu to disable the firewall that was added in version 2.0.0.

◆ **Long DirectVista® Paper support.** Support for printing on 36" and 51" DirectVista Paper. Note: 36" and 51" DirectVista Paper is not available at this time.

This section details features which have been improved with Horizon version 2.0.0 software for 1.8.8 users.

◆ **Reliability Improvements.**

   ◆ Removes unused DICOM log files from the imager's hard drive, decreasing the time required to save log files to a Zip disk.

   ◆ Corrected a firmware issue which caused a thin line to be printed on DirectVista Paper, resulting in a wasted sheet. (obscure)

**CODONICS**®

- Upgraded the main operating system to Red Hat Linux 7.3 which includes the 2.4.20 Linux Kernel. Advantages include better process scheduling (resulting in smoother Control Panel operation), improved network security, file system improvements, and more efficient virtual memory handling.

- Ensures enough disk space is available before accepting FTP jobs and saving log files to a Zip disk.

- Added a software firewall to prevent unwanted access and to increase system security. Upgrades to many of the internal image format libraries protect against various security vulnerabilities. Directory listing is no longer allowed in the FTP interface.

- Provides support for the Progressive JPEG format.

- Increases the storage for log files so a greater amount of historical information is retained.

- Prohibits the Film View sheet setting for DirectVista Paper and ChromaVista Paper.

- Added firmware support for a larger TPH EEPROM. (new hardware support)

- General reliability improvements to the print engine firmware.

- **DICOM Interface Improvements.**

  - Added an alternative/shorter AE Title to select the imager's default color and default grayscale medias. DMC (Default Media Color) resolves to DefaultColor and DMG (Default Media Grayscale) resolves to DefaultGrayscale.

- **Control Panel Improvements.**

  - A warning has been added to the Control Panel that suggests the pick tires may need cleaning.

  - Enhances the Custom Job Settings menu to allow for easier editing and copying.

  - Added MCMBRACKET and GCSBRACKET to the Custom Job Settings menu allowing media type and size to be modified. These Job Settings were available in previous software versions but were not changeable via the Control Panel. This change allows bracket printing and media selection to be controlled with a single Job Settings file (typically selected by an AE title).

  - Control Panel now beeps whenever a job is queued for a media that is not loaded.

  - When copying a Custom Job Settings file using the Control Panel, now automatically traverse into editing the new setting instead of returning to the list of Custom Job Settings.

- When copying a Custom Job Setting, the original name is now used as the base name instead of using COPY*X*. For example MRI would be copied into MRI1 instead of COPY1.

- Job Settings file names are now always converted to upper case.

- New Custom Job Settings now appear immediately.

- Faster response when processing print jobs.

- **Service and Production Utility Improvements.**

  - Added a pq_dump utility that performs a text dump of the contents in the print queue.

  - Added a getjobsettings utility to dump the current Custom Job Settings.

  - Added a geterrors utility to dump both the software error log and the engine firmware error log.

  - Enhancements to the directory and filename format when saving logs to a Zip disk. New functionality was added so that multiple logs from the same imager can be saved on one Zip disk.

  - Added additional functionality to the Status Test Print allowing for an extended status print that includes logs, media counters, and Custom Job Settings.

  - Report which receive tray a print was ejected to in the system log.

  - Additional counters were added to report ChromaVista and DirectVista media jams requiring operator intervention.

This section details features which have been improved with Horizon version 2.0.0 software for 1.9.1 users.

- **Improvements to increase the operating life and reliability of all Horizon Imagers.**

- **Improvements to the Imager Status test print.**

## Defects Repaired

This section details defects which have been repaired with Horizon version 2.0.0 software for 1.8.8 users.

- **Ribbon Barcode Failure.** Fixed issue in which the ribbon barcode read fails after entering a new feature key.

- **Unsupported symbolic printer names.** Symbolic printer names were not being handled correctly over the LPR and FTP interfaces. (Example: system now resolves to device 0, unscaled resolves to device 1, etc.).

- **LifeImager Test Prints omitted.** Certain Test Prints were added to LifeImager products that were previously omitted.

**CODONICS**®

◆ **Unable to set DV Paper Darkness to -10.** The DV Paper Darkness feature added for 1.8.0 now displays the setting of -10 correctly on the Control Panel.

◆ **Incorrect network information displayed.** Corrected issue in which the network IP address information was being incorrectly reported when IP aliasing is used on a class A or B network.

This section details defects which have been repaired with Horizon version 2.0.0 software for 1.9.1 users.

◆ **PostScript Crop Margin no longer fails on blank pages.** Users can safely set Crop Margin = true even when sending print jobs with blank pages.

## Known Issues

◆ **Unsupported DICOM image compression results in an "out of memory" error at the host.** (obscure)

◆ **PostScript cropping or padding.** Images pre-scaled to the full page size may experience slight cropping or padding due to rounding effects from converting between points and pixels. (obscure)

◆ **Captions not supported with DICOM landscape printing.**

◆ **SA-1000/2000 Frame Grabber incompatibility.** Version 2.0.0 software has an incompatibility with the SA-1000/2000 Analog to Digital Converter that affects the transmission time. The images are transmitted successfully, but much slower than in previous versions of software.

◆ **Color Linear Ramp test print results in a blank page.** Imager prints a blank page when the user attempts to print the Color Linear Ramp test print.

◆ **Illumination and Reflected Light values are incorrect on the Imager Status test print.** The values printed on the Imager Status print page are 100 times the actual settings. The values displayed on the Control Panel are correct.

◆ **Calibration print jobs do not purge.** Removing Print Length Calibration or Film Calibration print jobs from the queue will occasionally result in a Control Panel message indication that there are sheets queued. Power-cycling the imager will clear these jobs. (obscure)

## Technical Support

If problems occur during software installation, contact Codonics Technical Support between the hours of 8:30AM and 5:30PM EST (weekends and U.S. holidays excluded).

Phone:     440-243-1198
Email:      support@codonics.com
Website:   www.codonics.com

---

*Get it all with just one call*
*1-800-444-1198*

**CODONICS**®
*We bring the future into focus*