Datacard® DSLR-1 Camera Plug-in
User's Guide

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About This Document

This document is one of three sources of information about the Datacard® DSLR-1 camera plug-in. It includes background information as well as step-by-step procedures specific to using the plug-in. The other sources of information are an online Help system and a Read Me file. You access the online Help system by clicking the Help button or by pressing the F1 key when the configuration editor is active. Help topics give step-by-step instructions for performing camera configuration tasks. The Read Me file contains information about the applications and operating systems this software supports as well as information critical to the proper use of this software. The Read Me file is available from the **Start** menu under **Datacard | Capture Plug-ins**.

This document assumes you have basic knowledge of concepts related to Datacard identification software and the Microsoft® Windows® operating system you are using. For more detailed information about your Datacard identification software application, see your application's user documentation.

About the Datacard DSLR-1 Camera Plug-in

The DSLR-1 camera plug-in lets you capture photo images that you can save in a database field or as separate files using your identification software application. Then you can view the images on a computer monitor or print the images on plastic cards or paper reports.

The DSLR-1 camera plug-in will capture a photo and crop it automatically, manually, or not at all.

- **Auto-capture:** When an operator initiates a photo capture, the camera takes the picture without further operator intervention.

Use this option when speed in enrolling is the primary consideration.

- **Manual Capture:** When an operator initiates a photo capture, a live video image window frames the subject. Operators confirm the subject's position and expression before clicking a **Take Photo** button. Manual capture is useful when the camera or backdrop might get moved (for example, when the camera is locked up at the end of the day and returned to the tripod each morning).
- **Auto-crop:** After an image is captured, it is automatically cropped using parameters specified in the configuration editor and returned to your application.
- **Manual Crop:** After an image is captured, it appears in a Photo Crop and Adjust editor. You then select the portion of the total image that will be saved and used in your application.
- **No Crop:** The captured image is sent to the identification software application without alteration.

If you are permitted to configure capture devices, you can select the resolution of the captured images, configure the capture and cropping options, and set the parameters used for the Auto-crop feature.

Changes you make to the configuration are stored in the computer until you change them again.

Installation

1. If you have not already done so, install the Datacard identification software application.
2. Navigate to the location where you downloaded the plug-in software and double-click **Setup.exe**. Follow the on-screen instructions.
3. Install the AC adapter kit for the camera according to directions included with the adapter or camera.

   Consider setting the Auto Power-off Time to **[Off]**. See your camera instruction manual for details. If the Auto Power-off feature is on, the camera will power off after inactivity and will not respond when the Datacard identification software application attempts to capture a photo.

4. Install the camera on a tripod.
5. Plug in the power supply.
6. Attach the USB cable to the camera but *do not* connect it to the computer.
7. Set the camera mode switch to the P setting.
8. Turn the camera power switch to ON.
9. Attach the USB cable to the computer.

Arrange the Site

The main factors in choosing a location for the camera are lighting and space.

Lighting

Although the camera's flash compensates for a wide variety of lighting conditions, it is important to pay close attention to the intensity and source of ambient light when choosing a site. Use the following guidelines:

- Ensure the ambient lighting is indirect, evenly distributed, and consistent.
- Avoid sites where sun or other strong lighting may cause glare and dark shadows. A room without windows is best.
- Ensure the room is bright enough for colors to appear natural, but not so bright that they seem exaggerated.
- Avoid light directly above the subject; it can cause unflattering shadows.
- Light that causes shadows on the backdrop (for example, using the flash at the minimum distance) can result in poor auto-cropping.

Space

Consider the following requirements when selecting a location for your photo ID capture station:

- Allow 4 to 6 feet (1 to 2 meters) between the camera and the subject. Ambient lighting (windows or other bright light sources) will make the flash less effective, so adjust the distance accordingly.

  When using an external flash option, allow 6 to 15 feet (2 to 5 meters) between the camera and the subject.

- Provide seating for the subject. It is easier for a subject to sit still than to stand still. A chair with arms but no wheels is best.
- The computer and monitor must be close enough to the camera to be able to connect the camera cable to the computer. In the illustration, the subject is able to see the monitor and approve the image. Not allowing the subject to approve the image can speed the capture process. In that case, rotate the operator's station 180 degrees.

Configuration

Configure the Software

The DSLR-1 Camera configuration editor lets you establish settings for the DSLR-1 camera photo source selection.

The software configuration information is stored in the computer. You must configure each computer in a system with multiple computers.

If you intend to use the camera's flash to capture photos, open the flash before starting the configuration editor. See your camera instruction manual for details.

1. Access the DSLR-1 camera configuration editor through your Datacard identification software application.

   - Datacard® ID Works® or Datacard® IDCentre™ identification software users log in to the Administrator application (from the Windows **Start** menu select **Programs**, **Datacard**, **ID Works** or **IDCentre**, and then **ID Works Administrator** or **IDCentre Administrator**) and then, from the menu bar, select **Capture** and then **Configure Capture Devices**. The Configure Capture Devices dialog box opens.

You must have "Configure capture device" privileges to change the photo software configuration.

   - Datacard® WebID™ identity information software users click the Windows **Start** button and select **Programs**, **WebID Workstation**, and then **Workstation Utility**. The Datacard Workstation Utility dialog box opens.

Click **Configure Capture Devices**. The Configure Capture Devices dialog box opens.

2. Select **DSLR-1 Camera** from the list of installed capture sources and then click **Configure** (ID Works and IDCentre users) or **OK** (WebID users). The configuration editor opens with the Camera tab active and a live video image.

Configure the Camera Settings

The following steps determine default settings for your camera. You can still make adjustments manually.

1. Center the backdrop in the live video window and, if necessary, adjust the zoom manually. The live video mode reflects the current zoom setting.

   If the video is out of focus, either manually focus the camera or take a photo to have the camera focus itself. If you take a photo, click **Live Video** to return to live video.

   Do not zoom in too close if you will be using the Auto-crop feature. The top of the live video window should be at the top of the backdrop and the bottom of the window at the seat of the subject's chair.

2. Choose an exposure setting with the **Exposure (darker — lighter)** slider control. This adjusts how much light the camera uses when capturing a photo to make a darker or lighter image (equivalent to changing the f-stop on a film camera).

3. Choose an uncropped Image Size and Compression from the list.

   The recommended setting for most situations is **Small Fine JPEG**. Selecting a high resolution photo will increase the time it takes to download, process, and store images.

4. If necessary, select a **White balance** setting according to your lighting environment to capture the most realistic colors.

5. If necessary, select a **Camera rotation** setting. The image area changes to reflect your selection.

6. Click **Take Photo** to take a photo using the current camera settings. An uncropped photo is displayed.

   If the photo appears other than right side up, change the Camera rotation setting.

7. If the sample photo is not acceptable, click **Live Video** to return the image area to live video and change settings.
8. If the configuration is complete, click **OK**. Otherwise, click **Apply** to save your changes and continue with the next section.

Configure the Capture Settings

Click on the Capture tab to customize how photos will be captured and choose whether they will be cropped.

1. Choose from the following Capture modes.
   - **Auto —** This option causes the camera to take the photo immediately when the operator initiates a photo capture.
   - **Manual —** Provides live video for the operator to confirm positioning and facial expression. The operator takes the photo by clicking the **Take Photo** button.
2. Choose a Crop mode.
   - **Auto —** Choose to automatically crop the photo without operator intervention.

     To have the operator manually proof the cropped photo, check the box labeled **Proof cropped photo with option to manually crop**. This option is useful if you anticipate a large variation in hair style (especially hair volume) from subject to subject.

     To have the operator manually select the brightness of the cropped image, check the box labeled **Display cropped photo in multi-photo select window**. This option is useful if you anticipate a large variation in skin tone from subject to subject.

     To have the photo immediately returned to the Datacard identification software application, leave both of these options unchecked.

Auto-crop failure action — Choose the course of action should the auto-crop fail.

- **Manual crop photo** will provide the Photo Crop and Adjust editor for the user.
- **Cancel photo capture** will return the user to the Datacard identification software application to attempt the photo capture process again.

- **Manual —** The captured image is returned in the Photo Crop and Adjust editor. The operator can then crop the photo by moving and sizing the boundaries of the cropping frame.
- **None —** The uncropped image is returned to the identification software application.

3. If you selected **Auto** in step 2, click **Apply** to save your settings and continue with the next section. If you selected **Manual** or **None**, the configuration is complete; click **OK**.

Configure the Auto-crop Settings

If you have selected auto-cropping, you must use the Auto-crop tab to set up the way auto-cropping works.

1. Place a chair in front of the backdrop. The chair should be in the middle of the backdrop and as close to the backdrop as possible.
2. Ask a subject of average height to sit in front of the backdrop and click **Take Photo**.

3. Move and size the dashed-line rectangle on the screen until it is completely filled with backdrop and the yellow line is at the subject's nose level.

4. If the photo field aspect ratio you plan to use is not portrait (1:1.3), click **Advanced Settings**.

A. Select the aspect ratio you plan to use for the cropped photo and then click **Optimize** to set the optimum cropping parameters for this aspect ratio. The settings in the **Expert Mode** section of the dialog box change.

B. Adjust the **Expert Mode** settings if you have special auto-crop requirements:

- **Auto-crop left/right back off** — Backs away from each side of the subject's head by the percentage of head width you specify. Larger values make the bottom of the cropped photo lower. Choose from 5 to 50%. The default varies with the aspect ratio selected.

- **Auto-crop top back off** — Backs away from the top of the subject's head by the percentage of head width you specify. Larger values result in more backdrop between the top of the subject's head and the top of the photo and raise the bottom edge of the cropped photo. Choose from 5 to 50%. The default is 10%.

- **Auto-crop maximum asymmetry —** Determines the amount the subject can be positioned off center and still appear centered in the cropped photo. The auto-crop fails when the subject is positioned so near the edge of the auto-crop search area that the left and right back off amount differ by more than this percentage. Larger values allow the subject to be farther off center. Choose from 5 to 100%. The default is 10%.

C. Click **OK** to return to the Auto-crop tab.

5. *(Optional)* To minimize the difference in photo size that might occur when photographing a range of hairstyles and head sizes, select a minimum crop width. This keeps the face size relatively consistent when photographing, for example, subjects with close-cut or thinning hair and subjects with full, curly hair. A larger number here will accommodate a larger head size. Choose from a range of 10 to 70%. The default is 20%.

6. To try out the settings you have applied, click **Test Auto-crop**. The Test Auto-crop window shows the photo with the current auto-crop settings applied.

You can adjust the auto-crop settings and click the **Test Auto-crop** button repeatedly without having to retake the photo.

7. Click **OK** to return to the crop box view.
8. When the configuration is complete, click **OK**.

You might find it helpful to keep notes about the configuration settings and the position of the camera, tripod, backdrop, and chair. If your setup is inadvertently changed, you will be able to reconstruct it in the fewest steps.

Using the Camera

Refer to your Datacard identification software application documentation for information on accessing the capture device (in this case, the DSLR-1 Camera).

When your Datacard identification software application initiates a photo capture, the DSLR-1 camera plug-in software immediately starts the process of capturing an image in one of four ways described below.

Auto-capture Mode with Auto-cropping

When you initiate a photo capture, the image is captured, cropped, and may be displayed in the application without any other operator action. Alternatively, the photo can appear in a Manual Proof window or in the Photo Selection window, depending on the selections made in the configuration editor. See "Auto-capture Mode" on page 16 and "Auto-crop Mode" on page 17 for more information.

Auto-capture Mode with Manual Cropping

When you initiate a photo capture, the image is captured, and then the captured photo is displayed in the Photo Crop and Adjust editor for the operator to select the area displayed in the final photo. The operator optionally may access the Photo Selection dialog box to choose from one of several different exposures. See "Manual Crop Mode" on page 19 and "Using the Photo Crop and Adjust Editor" on page 20 for more information.

Manual Capture Mode with Auto-cropping

The subject appears in a live video display when you initiate a photo capture. When the subject is ready, you click the **Take Photo** button to capture the photo, which is then cropped and may be displayed in the application. Alternatively, the photo can appear in a Manual Proof

window or in the Photo Selection window, depending on the selections made in the configuration editor. See "Manual Capture Mode" on page 16 and "Auto-crop Mode" on page 17 for more information.

Manual Capture Mode with Manual Cropping

The subject appears in a live video display when you start a photo capture. When the subject is ready, you click the **Take Photo** button to capture the photo. The captured photo is displayed in the Photo Crop and Adjust editor for you to select the area to be displayed in the final photo. You can optionally access the Photo Selection dialog box to choose from one of several different exposures. See "Manual Capture Mode" on page 16, "Manual Crop Mode" on page 19, and "Using the Photo Crop and Adjust Editor" on page 20.

Auto-capture Mode

When the camera is set up for auto-capture, the image is captured without the intermediate live video window. What happens next depends on whether **Auto-crop Mode** or **Manual Crop Mode** is selected.

Manual Capture Mode

When the camera is set up for manual capture, initiating a photo capture will start a live video window.

If **Auto-crop Mode** is selected, the auto-crop search rectangle appears, as shown below. This is the area in which the software will search for the subject, so the subject must appear in the rectangle.

If **Manual Crop Mode** is selected, no rectangle is displayed. The subject can appear anywhere within the live video area.

The operator clicks the **Take Photo** button when the subject is ready. What happens next depends on which crop mode is selected.

Auto-crop Mode

When **Auto-crop Mode** is selected, the captured and cropped image appears in one of three ways, depending on Auto-crop options selected:

- Directly in the software application. If the image is not acceptable (for example, if the subject's eyes were closed), you can recapture the image. Refer to your Datacard identification software application documentation for more information.
- In an Auto-crop Proof window. You can accept the image or click **Manual Crop** to make adjustments. See "Using the Photo Crop and Adjust Editor" on page 20 for more information about making manual adjustments.

- In the Photo Selection window. This option is useful if you anticipate a large variation in skin tone from subject to subject. A table with variations of the cropped photo allows you to select the best exposure.

Manual Crop Mode

If the camera is set up for manual cropping, the captured image appears in the Photo Crop and Adjust editor.

Evaluate the photo and do one of the following:

- If the image is not acceptable (for example, if the subject's eyes were closed), click **Cancel**. A warning message appears. After you click **Yes**, the Datacard identification software application displays no image. You can try again to capture an acceptable photo.
- If the image is acceptable, use the Photo Crop and Adjust editor, described in the next section, to refine the image as necessary. Click **OK** to return the image to the Datacard identification software application.

No Crop Mode

When you initiate a photo capture, the image is captured and displayed in the application without any other operator action.

Using the Photo Crop and Adjust Editor

The Photo Crop and Adjust editor lets you crop out unnecessary background, rotate the captured image, or select a different exposure for the captured image.

Any cropping or adjusting you do is lost when you rotate a photo. If you need to rotate the image, do that first (see "Rotating the Image" on page 21) and then crop and adjust.

Cropping the Image

Crop the image to use only part of the image:

1. Move the mouse pointer to one of the black corner squares. The pointer becomes a two-way arrow.

If no black squares appear on the image, cropping has been disabled in the project.

2. Click and drag the mouse to make the cropping frame smaller.
3. Release the mouse button. The frame may change size to maintain a constant aspect ratio (width-to-height proportion).
4. To move the cropping frame:
   A. Move the mouse pointer to inside the frame. The pointer becomes a four-way arrow.
   B. Click and drag the frame to a new location.
   C. Release the mouse button.

Rotating the Image

If the image is not oriented correctly, click **Rotate**. The image turns 90 degrees clockwise. You can click **Rotate** as many times as necessary.

If your camera is installed and configured properly, you will not have to rotate the images you capture.

Selecting an Exposure

If the photo seems too light or too dark, follow these steps.

1. Click **Photo Selection**. A window similar to the following one appears.

The center photo contains the original exposure

2. Select the best photo by clicking it with the mouse or by using the arrow keys to move the selection box.
3. Click **OK** to accept the current photo.

   or

   To adjust the contrast of the photo, click **More**.
4. Again, select the best photo.

5. Click **OK** to accept the current photo.

   or

   To adjust the saturation of the photo, select the **More** button.

   or

   Click **Start Over**.

6. Select the best photo, and then click **OK**. The Photo Selection dialog box closes and the photo you selected appears in the Photo Crop and Adjust dialog box.

Saving the Image

When you are satisfied with the image in the Photo Crop and Adjust editor, click **OK**. The Datacard identification application displays the photo you selected.

The capture software saves only the portion of the image that is within the cropping frame.

Taking Good Photos

Here are some tips for taking good photos:

- Tell the subject just before you initiate a photo capture.
- If you get glare from a subject's eyeglasses, ask the subject to tip his or her head down slightly. Or ask the subject to look slightly to the side.
- Recommend that subjects dress in solid-color clothing with a dull finish. Small checks and shiny fabrics do not photograph well.
- With the camera positioned as it will be during production, use the Datacard DSLR-1 camera configuration editor to adjust the camera to take pictures at the best brightness level.
- When using Auto-crop, adjust the camera zoom so the backdrop does not fill the entire image. Adjust the auto-crop search rectangle inside the edges of the backdrop. Leave enough space between the rectangle and the backdrop edges such that the auto-crop search rectangle stays within the backdrop area if the camera is bumped. Make the rectangle large enough so that subjects can sit in slightly different positions and still be within the auto-crop search rectangle.

Troubleshooting Tips

As with any equipment, you may encounter problems with the equipment setup or photo quality.

"No camera detected" Message

If you see the "No camera detected" message:

- Check that the USB connector is seated firmly at both the camera and computer.
- Check that the camera software is installed before plugging in the USB connection.
- Check that the camera is powered on. If the Auto Power-off feature is not set to **[Off]**, the camera may have turned itself off after a period of inactivity.
- Check that the camera mode switch is set to P.

Auto-crop Fails

If the auto-crop feature appears to be failing:

- Check whether the camera or backdrop have moved. If you are using Auto-capture Mode, you will need to run the Datacard DSLR-1 camera configuration editor (explained on page 6) to confirm this.
- Check that the subject's head is well-centered in the auto-crop search area. If you are using Auto-capture Mode, you will need to run the Datacard DSLR-1 camera configuration editor (explained on page 6) to confirm this.

Live Video Window Is Empty

If there is no display in the live video window but the camera does take a picture:

1. Return the camera to factory default settings. (See your camera instruction manual for specific instructions. Look in the index for "Revert to default settings".)
2. If your camera supports it, set the camera's **Live View function settings > Live View shoot** option to **Enable**.
3. If your camera supports it, set the camera's **LCD off/on button > Shutter button** option to **Shutter/DISP**.

Photo Appears Upside Down

If the photo appears upside down:

- If your camera support it, set the camera's **auto rotate** option to Off.