Slidescanner - Vectra Polaris - Part1: Start up

How to startup the Vectra Polaris (Schlieren). How to load Slides for the Vectra Polaris.

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INTRODUCTION

In this guide of the Center for Microscopy and Image Analysis you will learn how to start-up and load slides on the Akoya Vectra Polaris widefield fluorescence microscope. You should have a basic understanding of light microscopy, specifically of histologically and fluorescently stained tissue samples.
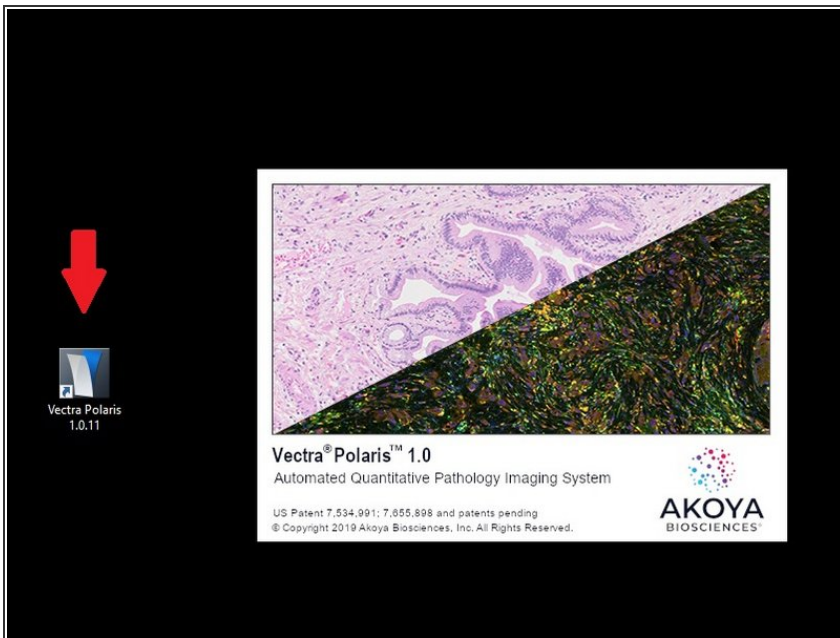
Step 1 — Main Power

ⓘ The system should not be switched off by the users. If you find the system not powered on, please follow the steps below.

● Press the main power switch.

⚠ Wait 30 s to power up the system before starting the imaging software.

Step 2 — Start the imaging software

● Login with your Core login and password.

● Start the Vectra Polaris software using the desktop link.

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Step 3 — Unmount Slide Carrier

- Move your hand in front of the door sensor to open the system door (the door also opens automatically after software start...).

- Remove the slide carrier by pulling the carrier handle.

- Each slide carrier can hold up to 4 slides. Make sure you have unmounted sufficient carriers for your slides.

- (i) Please put slides in the **labeled box inside the fridge of room WAD-K-126** in case the machine is still loaded from previous acquisition and you do not find enough free carriers for your experiment

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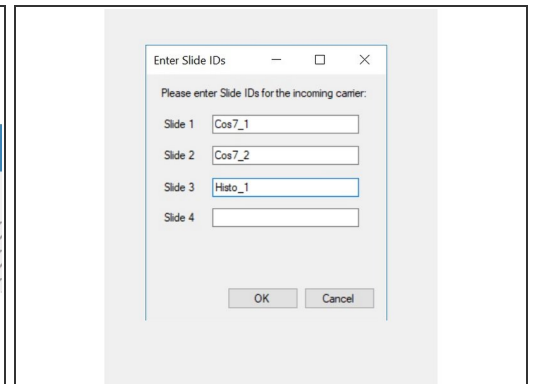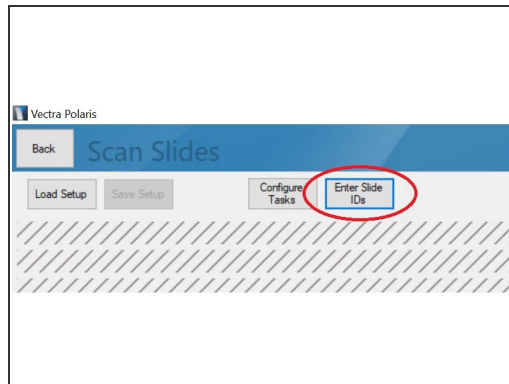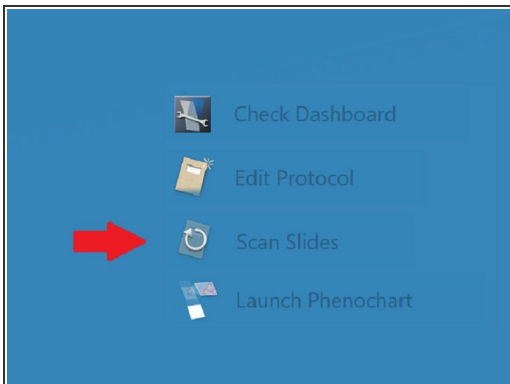
Step 4 — Loading Slides into Carrier

⚠ Do not load damaged slides (cracks, broken coverslips...).

⚠ Slides should be free of debris, fingerprints and dust.

● Place the slide carrier on table.

● Hold the slide by the label and push the opposite end against the "spring-loaded tab". Carefully position the label end into the slide carrier (the tab will keep the slide in place).

● Load up to four slides (they do not need to be contiguous).
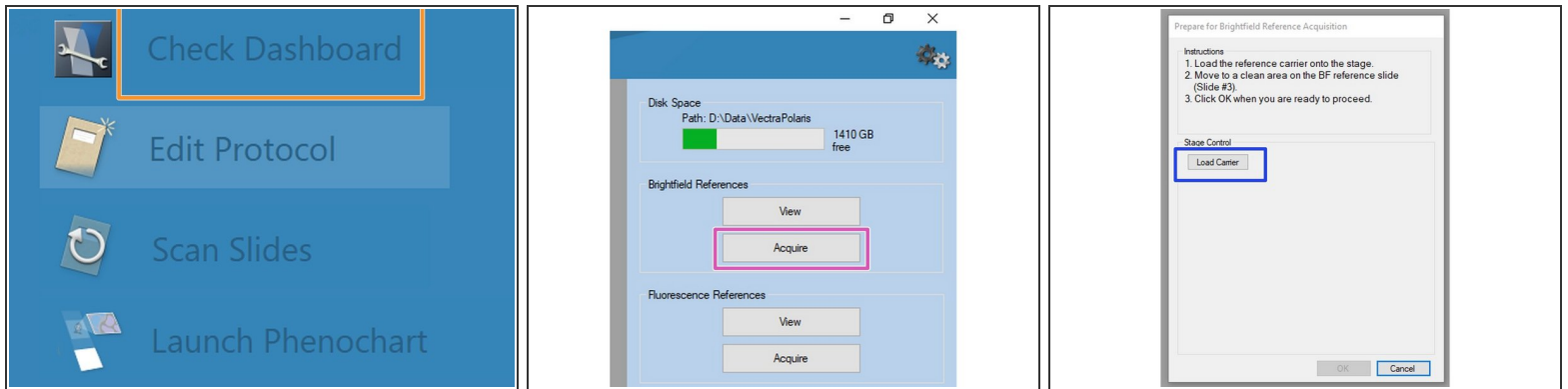
Step 5 — Enter Slide IDs

● In Vectra Polaris software click on "Scan Slides".

● Click on "Enter Slide IDs" button.

● Enter "Slide IDs" for the slides you have previously inserted in the carrier.

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Step 6 — Loading Slide Carrier into Instrument

- Hold carrier by the handle with the slice labels facing upwards.

- Load the slide carrier with the insert indicator in front.

- Halfway into the holder the carrier engages a roller which creates a small amount of friction. Push the carrier further until its fully seated and a click noise appears.

- The slide carrier status light next to the slot should turn white. A red light indicates an incorrectly loaded slide. Remove carrier and retry.

- Repeat procedure and load up to 20 carriers. Finally move your hand over door sensor to close the system door.

- ⓘ Slide carriers can also be loaded before launching the software. However, you will need to enter all slide IDs after launching the software which may be more error-prone than doing it sequentially.

- Repeat steps 4-6 until you have loaded all slides you want to record.

- ⚠ Do not forget to unload your slides after recording. We have an emergency temporary slide depository in the fridge of room WAD-K-126 (box labelled "Akoya slides") if you do not manage to collect your slides before the next user starts.

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Step 7 — Optional: Updating Brightfield Reference

- Some users reported problems with the **automated focus function** when recording in Brightfield mode. In this case it may help to update the "Brightfield Reference"

⚠ Generate a reference slide using the same object holder, coverslip and embedding media as used for your samples. Ensure the slide is free of dust when loading.

- Load your reference slide in a slide carrier and click on "Check Dashboard" on the main screen.

- Select "Acquire" under Brightfield References.

- Load the reference slide using the Load Carrier button and follow instructions.

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