

Cambo Sliding Back Adapter for Medium Format Digital Backs



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Introduction

In the following report we provide information on the results of our test and evaluation of a Cambo CMSLB-45 sliding back adapter for medium format digital backs. The Cambo CMSLB-45 sliding back adapter was provided by Cambo directly in The Netherlands (but their equipment is readily available from Calumet Photo in the US and elsewhere around the world). To test the CMSLB-45 sliding back we photographed a long arrangement of maize obtained from Chilasco, a small village located in the picturesque Sierra the las Minas, in Baja Verapaz, Guatemala.

The CMSLB-45 sliding back adapter is made by Cambo, the same company that makes the Cambo Ultima large format camera, There are at least four or five other companies that make sliding back adapters:

- Arca-Swiss
- Kapture Group, QuadStitch and other models
- Phase One FlexAdapter
- Silvestri

There are probably Chinese companies too, but we evaluate only produces that are from recognized manufacturers that exhibit at either PMA, PhotoEast, or Photokina.

FLAAR has a long-term interest in sliding back adapters. In the past we have used the BetterLight Pano/WideView for doing panoramic photography in Central America, Greece, and the US (just Google BetterLight pano FLAAR and you will see them, or go to the A to Z index of www.digital-photography.org). But increasingly we are using medium format cameras for landscapes since they are so much faster. A shot with a tri-linear scanning camera can take two to three hours for set-up, test shots, and take-down. Plus the landscape can't have anything that moves, so no wind and not really any rough waves on the water. So naturally we use medium format more often now.

Our first experiment was with a nice Phase One Flex Adapter, sliding back. But this would not fit the Cambo 4x5 camera.



Figure 1. Cambo Ultima Large Format 4x5 camera with Schneider-Kreuznach Makro Symmar lens.

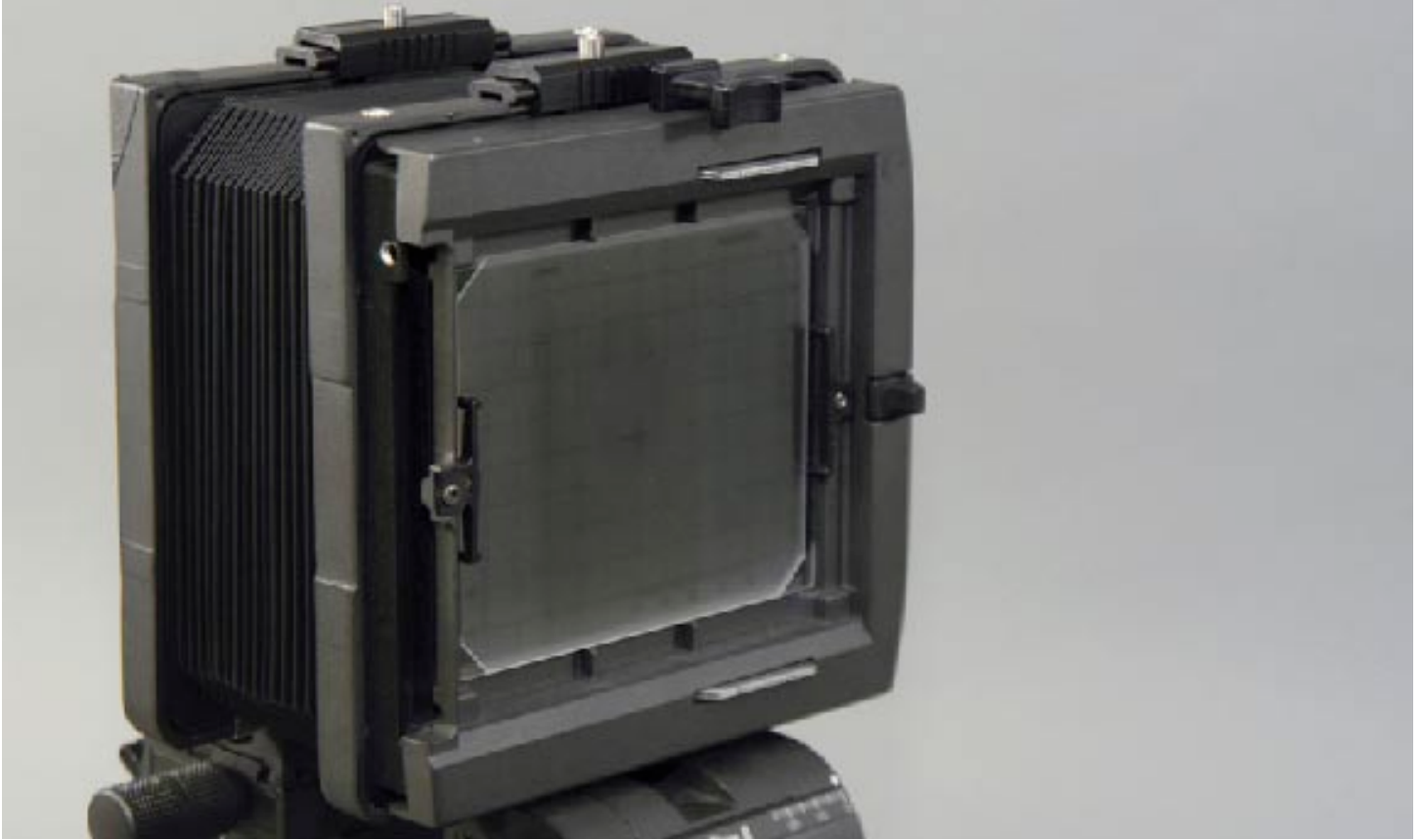


Figure 2. Cambo Ultima rear standard with ground glass



Figure 3. The sliding back adapter is placed in the rear standard of the camera by removing the ground glass.



Figure 4. Cambo rear standard



Figure 5. Cambo rear standard ready to receive the sliding back adapter.



Figure 6. The Cambo sliding back adapter fits perfectly to the rear standard of the Cambo Ultima large format camera.

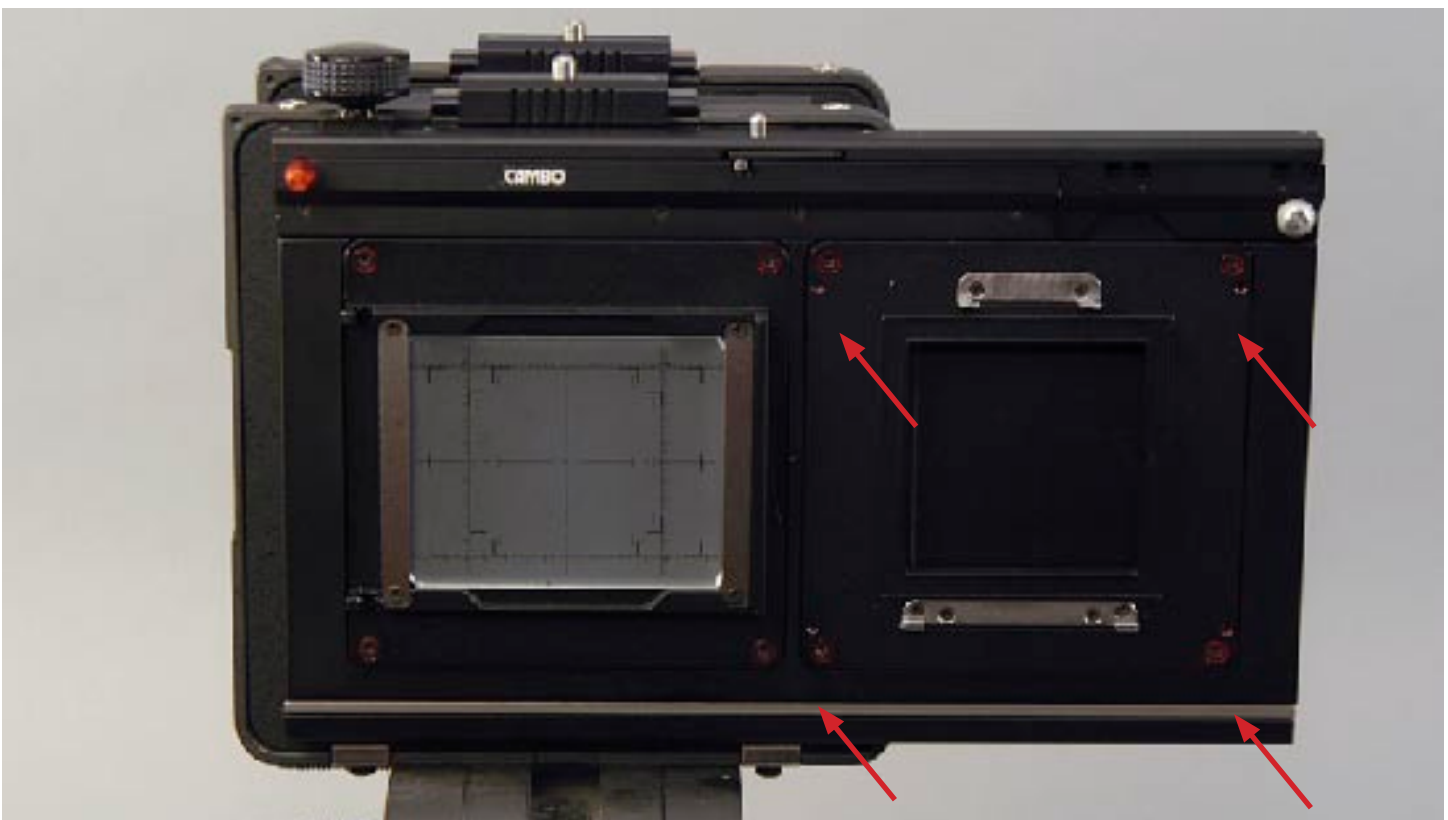


Figure 7. The sliding back has a ground glass for adjusting focus. Once in focus the digital back can be placed in the image plane for capture, a wide array of medium format digital backs can be placed by changing the adapter. This adapter is for a Phase One P25+ system. Red arrows indicate the adapter screws. Also the adapter can be rotated.



Figure 8. To position the digital back the sliding plate moves to the image plane.



Figure 9. The upper knob moves the sliding plate to the image plane.



Figure 10. The security pin will lock the digital back to the image plane.

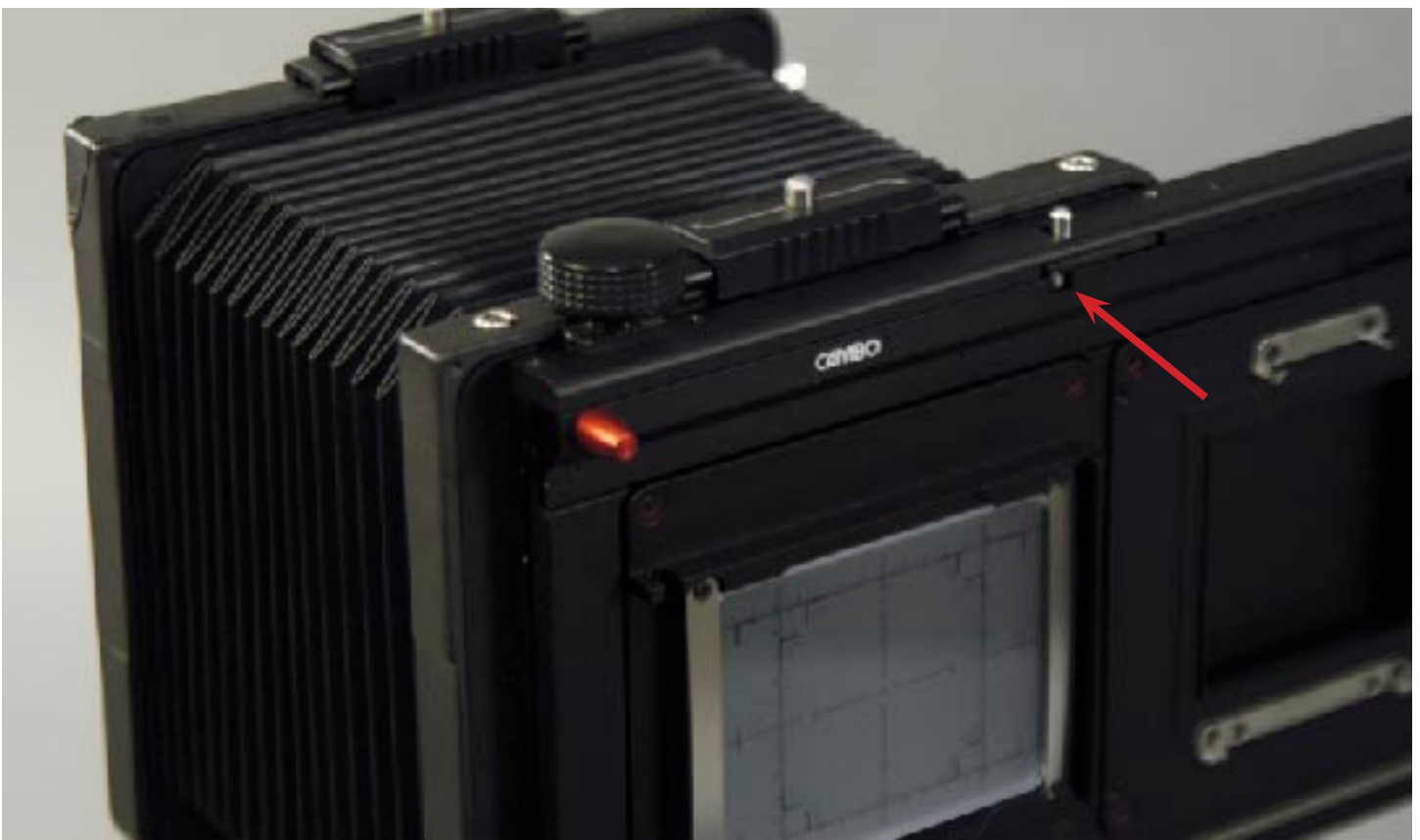


Figure 11. The red arrow shows the security pin that locks the digital back in position for image capture.



Figure 12. Red arrow points to the click stop plate screw



Figure 13. To change between one shot or multishot the click stop plate in the upper right corner must be changed.



Figure 14. One shot click stop plate



Figure 15. Multiple shot click stop plate.



Figure 16. Once in its placed the multiple shot plate can be used with the digital back either in horizontal or vertical position.



Figure 17. FLAAR Mesoamerica's photography studio in Guatemala where we conducted the sliding back adapter evaluation.



Figure 18. A Phase One P25+ was used with the sliding back adapter. Notice the viewing hood.



Figure 19. Figure 20. Used in the horizontal position, the two images are the result of each position of the Sliding Plate.

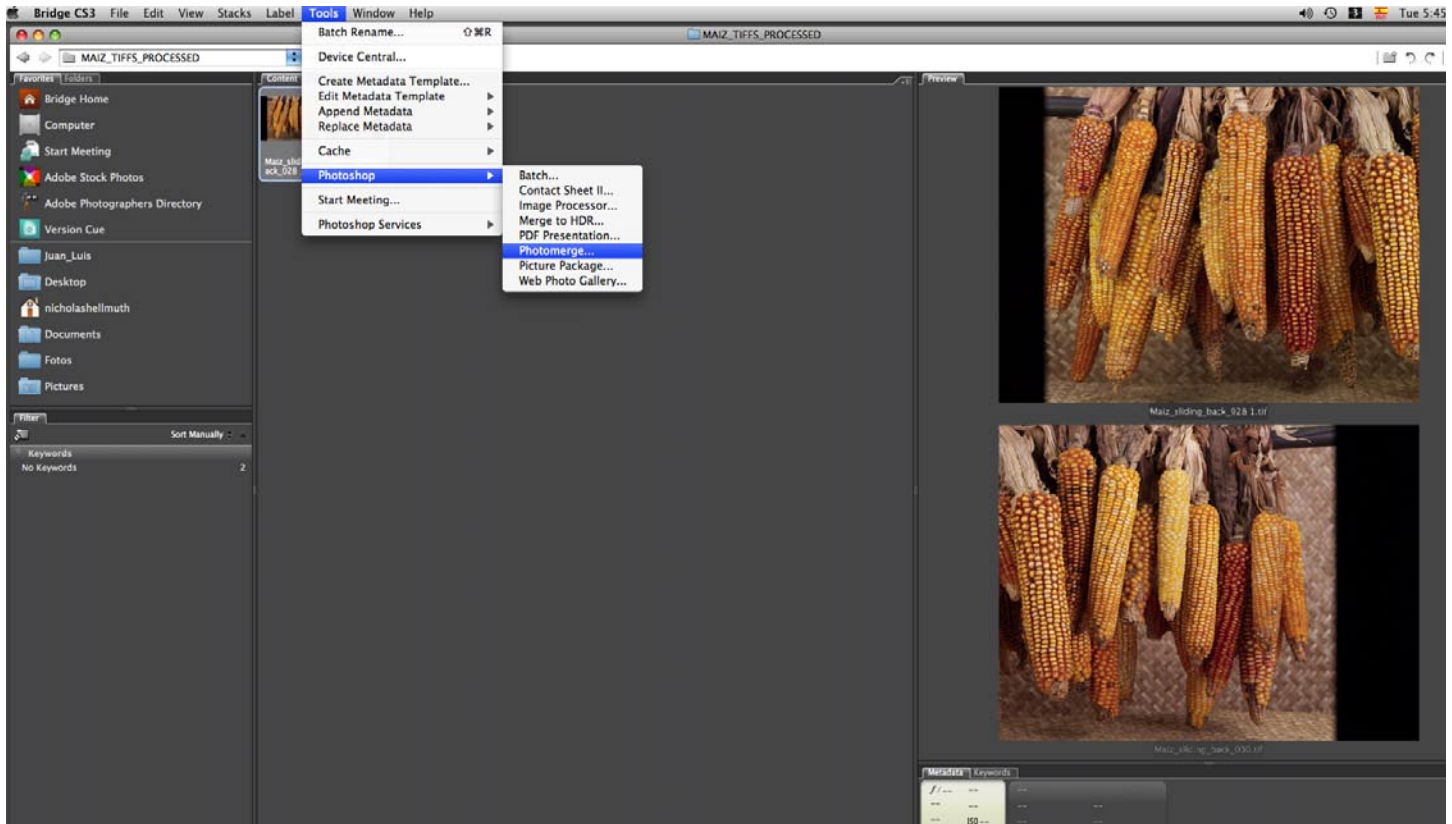


Figure 21. Using the Photomerge tool from Adobe Photoshop's Bridge, the two images were merged together.

The Phase One FlexAdapter was about 1 mm off. You would need to retrofit it and/or the Cambo back to make them fit. So after I received the Phase One FlexAdapter and saw that it would not fit, I sent it back. The Cambo CMSLB-45, sliding stitching back for the Ultima 4x5 of course fits perfectly and works perfectly too.

Medium format digital backs have become very popular in the past recent years, our experience has been that once professional photographers learn about the advantages of Medium Format Digital Backs they will stop working with 35mm DSLR cameras.

BetterLight is the only company that makes a digital trilinear scanner for Large Format Cameras, and the results are quite amazing, if you have the patience to set up the equipment to operate it. FLAAR has a BetterLight System that was provided by Mike Collete so we could evaluate it for archaeological circumpherential rollout and panorama photography.

If you are a professional photographer and are thinking about upgrading your equipment to medium format or if you already have a large format camera then one option is to use a sliding back adapter. The advantages of using the Cambo CMSLB-45 sliding back adapter is that it fits perfectly to the rear standard of Cambo cameras and they can accept a wide array of medium format digital backs any distributor would be able to retrofit the sliding back for your choice of digital back (Figure 7)

The Cambo sliding back is designed with precision like every other piece of European equipment made by Cambo. This model can be used to take single shots or multiple shots, allowing the digital back to take advantage of the wide field of view in the image plane in both vertical and horizontal positions. To switch between single and multiple shots the sliding plate has a small click stop plate in the upper right corner. A small silver screw holds this small click stop plate to the sliding plate. The two shot plate allows the security pin to lock into place, a "V" and "H" correspond to vertical or horizontal position of the digital back, other sliding backs allow 4 shots and can be moved horizontally and vertically but this one can only take two shots. Images must be stitched together in any post processing or panorama software after image capture. (Figure12-15)

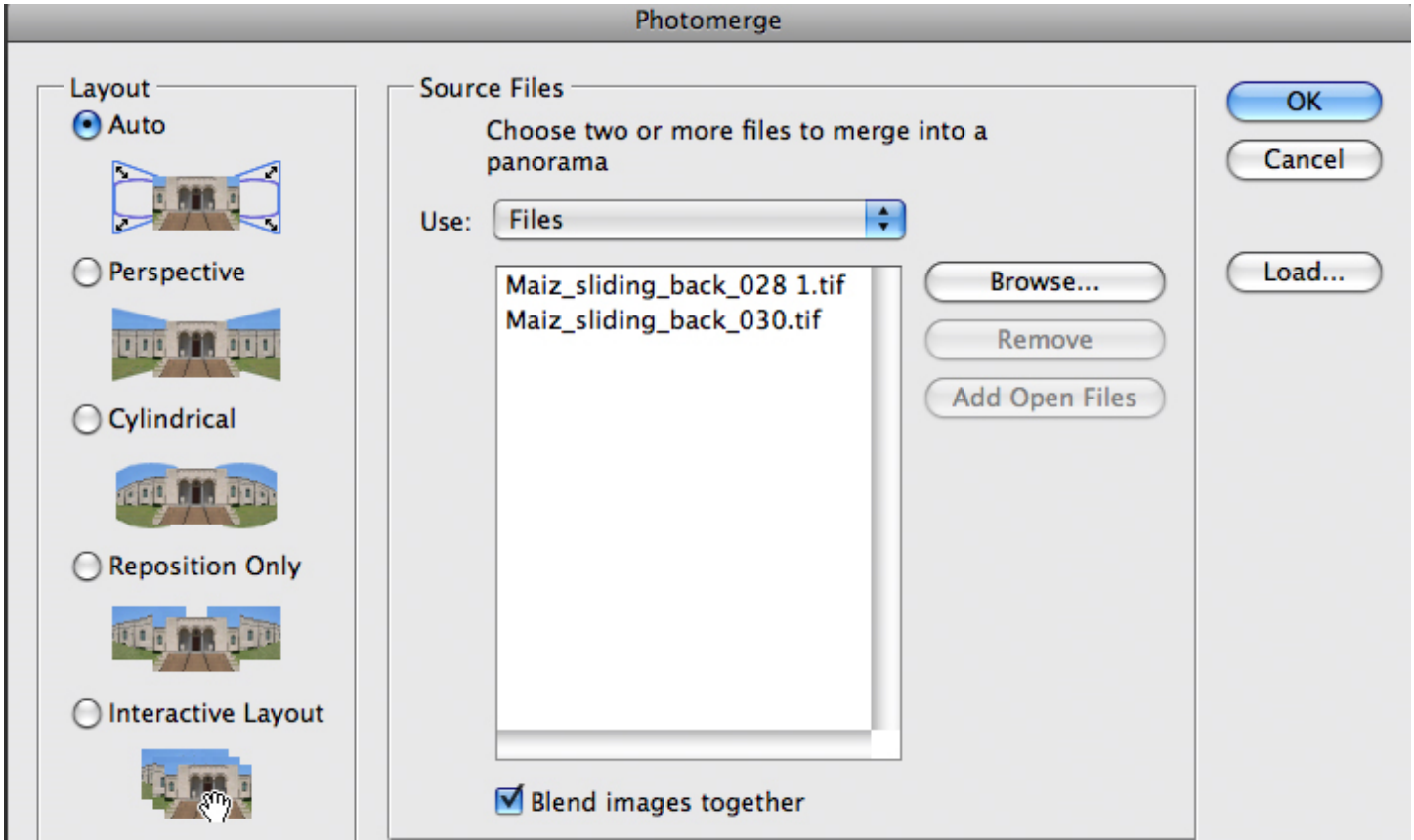


Figure 22. Dialog box from Photomerge tool. We used the first layout option, this is fully automated.

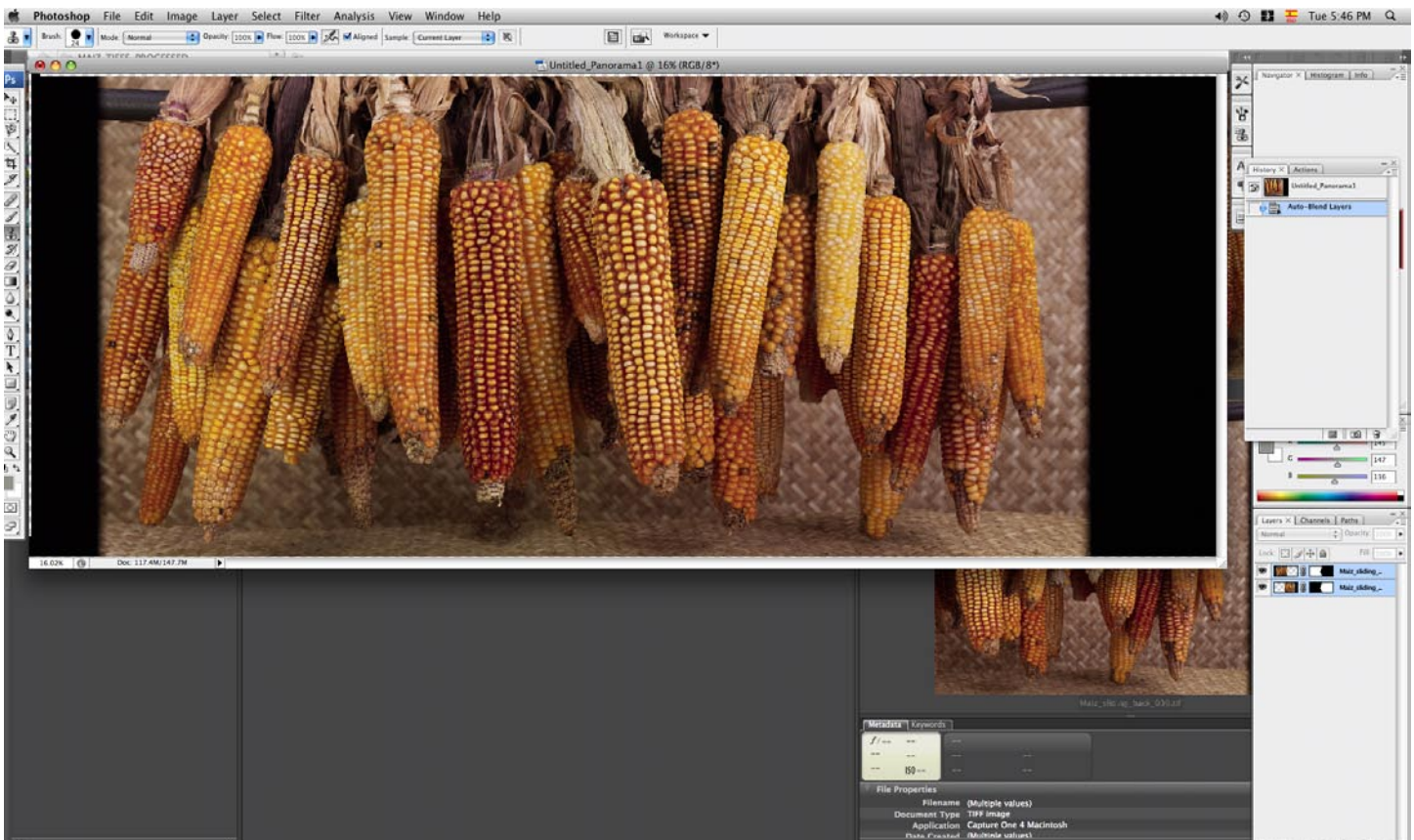


Figure 23. The merged result still has both black sides that were left from the original images. A crop is made to obtain the final image.



Figure 24. Final Image about 40MP resolution (two times the digital back resolution minus the bit that overlaps). The image is maize raised by local Maya farmers in Chilasco , Baja Verapaz, Guatemala.

To focus, the Cambo CMSLB-45 sliding back comes with a viewing hood, but you could also use the ground glass with a loupe to adjust focus in a studio set up. (Figure 18)

We tested the two shot mode in our studio, the images are the result for each shot taken and the final image was the result from stitching both using Adobe Photoshop's Photomerge tool. The process of stitching is very simple and will take only the time that Photoshop needs to process the information; using a powerful Mac computer this takes about 10 seconds. Of course some cropping is needed at the end but the results is one nice seamless image. Figures (19-24)

Aknowledgements

FLAAR, Dr Nicholas Hellmuth, and myself, Eduardo Sacayon, wish to thank Henk Brands managing director of Cambo Netherlands for providing this sliding back adapter for our evaluation. Nicholas will be returning to Guatemala in June to do more tests of this sliding back, this time also for panoramas.

Contact information for the Cambo sliding back adapter, worldwide (USA, Europe, and elsewhere) is "Henk Brands" info@cambo.com

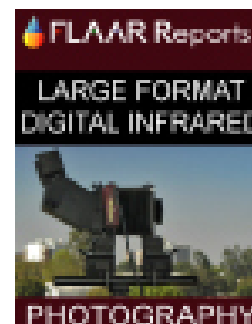
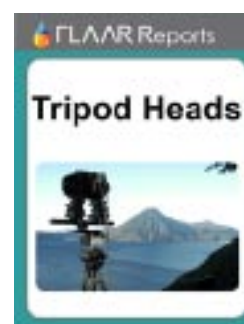
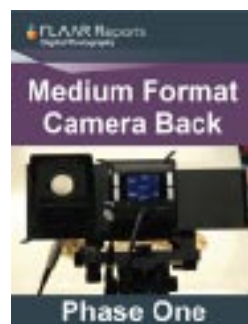
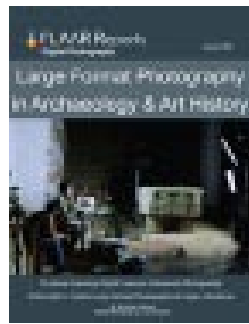
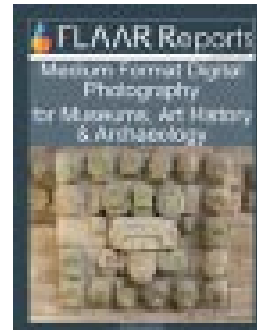
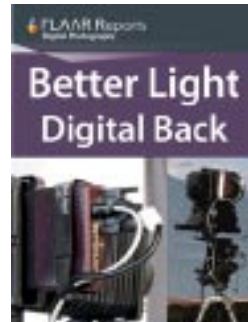
The Phase One P25+ was provided by Global Imaging Inc. We thank Greg Lamb, CEO of Global Imaging for this medium format digital back.

The Cambo 4x5" camera was provided courtesy of Calumet Photo, main offices in the Chicago area, about five years ago. We have included this Cambo camera in many evaluations and reviews every year all five years.







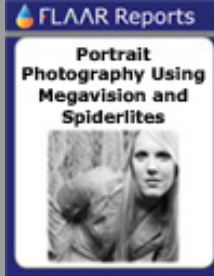

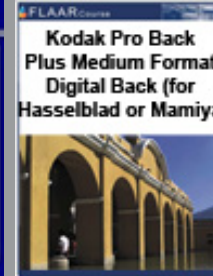

The lighting equipment was provided by Lowel Lighting and by Westcott.

The tripods were provided by Bogen Imaging. The tripod heads were also courtesy of Bogen Imaging: we use both Gitzo and Manfrotto tripod heads.

Inside these reports we feature the Cambo Ultima 4x5 camera because this is the camera body that we use the most often.



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