



ScanPro 3000

Comparison Scans for selected Microfilm Scanners

We have been asked how the ST ViewScan III microfilm scanner compares to the ScanPro 3000 microfilm scanner. When making these microfilm scanner comparisons, one of the most important considerations is the image quality that is captured by the scanner. Image quality describes the readability of a document that has been scanned. Readability is important when reading small text and inspecting fine details. Plus, having the best possible readability from the scanner is especially important when working with poor quality film.

This is a summary of our comparison results:

1. ViewScan III microfilm scanner

52-Week		Stock	Div	Yld %	Sales P/E	Sales				
High	Low					High	Low	Las		
52.65	36.38	AvalonBay	2.80	7.2	18	3474	39.40	38.90	39.1	
12.73	1.12	Avaya	...	...	dd	15052	2.48	2.19	2.4
74.21	48.00	Aventis	.51	e 0.9	...	1352	54.25	53.28	54.1	
69.70	52.06	AveryD	1.44	f 2.4	23	4051	61.50	60.10	61.0	
14.80	6.01	Aviall	...	...	dd	951	8.15	7.90	8.0
16.60	8.75	Avista	.48	4.2	21	1580	11.83	11.50	11.5	
29.24	5.55	Avnet	.07	j	...	dd	7067	11.18	10.56	10.8
57.10	43.49	Avon	.80	1.5	29	6970	54.17	52.94	53.8	
25.90	11.00	Aztar	9	1848	14.76	14.00	14.2

B

2. ViewScan III microfilm scanner

1. ScanPro 3000 microfilm scanner

52-Week		Stock	Div	Yld %	Sales P/E	Sales				
High	Low					High	Low	Las		
52.65	36.38	AvalonBay	2.80	7.2	18	3474	39.40	38.90	39.1	
12.73	1.12	Avaya	dd	15052	2.48	2.19	2.4	
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57.10	43.49	Avon	.80	1.5	29	6970	54.17	52.94	53.8	
25.90	11.00	Aztar	9	1848	14.76	14.00	14.2

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2. ScanPro 1100 microfilm scanner

52-Week			Yld		Sales					
High	Low	Stock	Div	%	P/E	100s	High	Low	Las	
52.65	36.38	AvalonBay	2.80	7.2	18	3474	39.40	38.90	39.1	
12.73	1.12	Avaya	...	...	dd	15052	2.48	2.19	2.4	
74.21	48.00	Aventis	.51	e 0.9	...	1352	54.25	53.28	54.1	
69.70	52.06	AveryD	1.44	f 2.4	23	4051	61.50	60.10	61.0	
14.80	6.01	Aviall	...	...	dd	951	8.15	7.90	8.0	
16.60	8.75	Avista	.48	4.2	21	1580	11.83	11.50	11.5	
29.24	5.55	Avnet	.07	j	...	dd	7067	11.18	10.56	10.8
57.10	43.49	Avon	.80	1.5	29	6970	54.17	52.94	53.8	
25.90	11.00	Aztar	9	1848	14.76	14.00	14.2

B

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69.70	52.06	AveryD	1.44	f 2.4	23	4051	61.50	60.10	61.0	
14.80	6.01	Aviall	dd	951	8.15	7.90	8.0	
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25.90	11.00	Aztar	9	1848	14.76	14.00	14.2

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These image scans confirm the superior image quality of the ScanPro microfilm scanners.

Image quality is primarily dependent on camera resolution which is typically measured in megapixels. There are other factors that contribute to image quality but camera resolution is the primary contributor and most commonly used measurement. **However, note Comparison 2**, is an example where the higher megapixel camera resolution specification does not correctly identify the better image quality. We believe that this is counterintuitive until you consider 1) the ScanPro's pixels which are more than 6 times larger than that of the ViewScan III, 2) the negative effects of diffraction on the small pixels of the ViewScan III, 3) the distortion caused by the polychromatic (white) illumination lamp used in the ViewScan.

Important Note: It is important to realize the camera resolution (measured in megapixels) is not the same as image size (also measured in megapixels). **Camera resolution** is a major component of optical resolution and readability of an image (and requires the use of hardware). **Image size** is a measure of how large the image is (and can be accomplished using just software). What is misleading is combining these two statements so that the reader concludes that the two are the same and that the large image size number identifies the best image readability.

How we tested: the ST Imaging ViewScan III vs e-ImageData Scan Pro 3000 and ScanPro 1100: The same New York Times Newspaper page, Wednesday, January 1, 2003-New York Stock Exchange Page was used for all tests (selected for small letters and fine details). The currently available software was used for each microfilm scanner. The same scan area was used for each scanner. Care was exercised to make the best possible adjustments for each scan.

The Comparison Results:

1. The ScanPro 3000 with its 26 megapixel camera has significantly better image quality than the 14 megapixel camera of the ViewScan III.
2. Even the ScanPro 1100 with its 6.6 megapixel camera has better image quality than the 14 megapixel camera of the ViewScan III (**note Comparison 2 above**).

Resolution measurements:

We also tested the **ST Imaging ViewScan III, the e-ImageData Scan Pro 3000 and ScanPro 1100** using a USAF 1951 Test Target at the same settings as used with the New York Times Newspaper page. Using a Test Target is a common way to obtain objective comparisons of optical imaging equipment such as cameras and imaging scanners.

Model	ScanPro 1100	ScanPro 2000	ScanPro 3000	ScanPro i9300	ViewScan III
Resolution line pairs/mm	45 lp/mm	45 lp/mm	57 lp/mm	57 lp/mm	36 lp/mm
Resolution Improvement over the ST ViewScan III	25%	25%	58%	58%	0