

ple, Prosilica includes its SDK and driver free of charge. According to Marty Furse, several third-party software vendors including National Instruments (NI), Matrox, Stemmer Imaging, and Unibrain are working with Prosilica to complete the development

of their GigE Vision drivers. According to Furse, NI has already demonstrated Prosilica's GE650 camera with its native driver. In addition to third-party support, Prosilica also offers its GigE Vision SDK modeled after the company's DCAM SDK.

While work by the AIA and EMVA still needs to be solidified to bring GigE cameras to the forefront of machine vision, system latency can be a problem due to the multi-tasking nature of the Windows and Linux IP communications stacks. "In some vision

<b>BENCHMARK COMPARISON (CPU USAGE) FOR IEEE 1394 DIGITAL CAMERA SDKs* (%)</b>						
Mode	ActiveDcam	Basler BCAM	Carnegie Mellon	NI-IMAQ	Sony IIDC	Unibrain
640 x 480 x 30 frames/s, Mono8	3	10	22	22	15	27
640 x 480 x 30 frames/s, Mono16	7	n/a	24	29	74	43
640 x 480 x 30 frames/s, RGB24	8	10	24	25	n/a	27
640 x 480 x 30 frames/s, Raw8, real-time RGB conversion	10	40	n/a	32	43	34
640 x 480 x 30 frames/s, Raw16, real-time RGB48 conversion	22	n/a	n/a	54	92	45
640 x 480 x 30 frames/s, YUV422	33	36	44	38	47	50
1024 x 768 x 30 frames/s, Mono8	4	15	57	33	46	54
1024 x 768 x 30 frames/s, Raw8, real-time RGB conversion	25	54	n/a	58	71	65

\*Benchmark comparison was performed on Dell Latitude 1.73-GHz Intel Centrino notebook with Dynex PCMCIA 1394 adapter using ISG-1.3-8-C, Pixelink A741, and Sony XCD-SX-710CR cameras. Manufacturers-provided viewer applications were used for testing.

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