

Aptina Demo 3 - tested/supported sensor combinations

October 30, 2013

Observed performance (1)

Sensor / Sensor+CC	Output port (HiSPi, MIPI or parallel)	Output format	Protocol	PC model	Sensor fps	Datalink fps	Display fps	Demo3 FW version	
AR0130	Parallel	12-bit Bayer (SDR)		Lenovo W520	45.5	45.5	15.5	E.20B	
AR0132 / MT9M024 / MT9M034 / MT9M025	Parallel	12-bit Bayer (SDR)		Lenovo W520	45.5	45.5	8.4	E.20B	
	Parallel	12-bit companded Bayer (HDR)		Lenovo W520	45.5	45.5	0.5	E.20B	
	HiSPi (2 lanes)			SP	Lenovo W520	45.5	45.5	7.4	E.20B
				Packetized SP	Lenovo W520	45.5	45.5	7.4	E.20B
				SP		45.5	45.5	0.4	E.20B
				Packetized SP	Lenovo W520	45.5	45.5	0.4	E.20B
				SP	Lenovo W520	39	39	0.4	E.20B
				Packetized SP	Lenovo W520	39	39	0.6	E.20B
	HiSPi (3 lanes)			Packetized SP	Lenovo W520	27.3	27.3	7.4	E.20B
				Packetized SP	Lenovo W520	27.3	27.3	0.4	E.20B
				Packetized SP	Lenovo W520	27.3	27.3	0.4	E.20B
HiSPi (4 lanes)			Packetized SP	Lenovo W520	27.3	27.3	0.4	E.20B	
MT9M021/31 & AR0134	Parallel	12-bit SDR		Lenovo W520	45.1	45.1	8.1	E.20B	
	HiSPi (2 lanes)		SP	Lenovo W520	45.1	45.1	8.1	E.20B	
			Packetized SP	Lenovo W520	45.1	45.1	8.3	E.20B	
	HiSPi (3 lanes)			Packetized SP	Lenovo W520	45.1	45.1	8.1	E.20B
AR0140	Parallel	12-bit SDR		Lenovo W520	59.9	59.9	60	E.20B	
	Parallel	12-bit companded Bayer HDR (1288x732)		Lenovo W520	56.5	56.5	1.1	E.20B	
		12-bit SDR	Streaming S	Lenovo W520	59.9	60	30	E.20B	
	HiSPi (4 lanes)			SP	Lenovo W520	59.9	60	30	E.20B
				Packetized SP	Lenovo W520	59.9	60	30	E.20B
				Streaming S	Lenovo W520	56.5	56.5	1	E.20B
				SP	Lenovo W520	56.5	56.5	1.1	E.20B
Packetized SP	Lenovo W520	56.5	56.5	1	E.20B				
AR0330CS	Parallel	12-bit Bayer		Lenovo W520	29.4	29.4	4	E.20B	
	MIPI (1 lane)	12-bit (1280x720)		Lenovo W520	30	30	12	E.20B	
	MIPI (2 lanes)	12-bit		Lenovo W520	30.1	30.1	4	E.20B	
AR0330CM	MIPI (1 lane)	12-bit (1280x720)		Lenovo W520	30	30	12	E.20B	
	MIPI (2 lanes)	12-bit		Lenovo W520	30	30	4	E.20B	
	HiSPi (4 lanes)		Streaming S	Lenovo W520	60	60	4	E.20B	
			Packetized SP	Lenovo W520	60	42.5	4	E.20B	
	MIPI (4 lanes)	12-bit		Lenovo W520	60	42.5	4	E.20B	

Sensor / Sensor+CC	Output port (HiSPi, MIPI or parallel)	Output format	Protocol	PC model	Sensor fps	Datalink fps	Display fps	Demo3 FW version		
AR0331	Parallel	12-bit Bayer (SDR)		Lenovo W520	20	20	4	E.20B		
	Parallel	12-bit ALTM Bayer (HDR)		Lenovo W520	20	20	4	E.20B		
	HiSPi (4 lanes)	12-bit SDR	Streaming S		Lenovo W520	30	30	4	E.20B	
			SP		Lenovo W520	30	30	4	E.20B	
			Packetized SP		Lenovo W520	30	30	4	E.20B	
			12-bit ALTM HDR VCO = 445.5	Streaming S		Lenovo W520	30	30	4	E.20B
			SP		Lenovo W520	30	30	4	E.20B	
			Packetized SP		Lenovo W520	30	30	4	E.20B	
			14-bit ALTM HDR VCO = 519.75	Streaming S		Lenovo W520	30	30	4	E.20B
SP		Lenovo W520	30	30	4	E.20B				
Packetized SP		Lenovo W520	30	30	4	E.20B				
AP0100+AR0130	Parallel-Parallel	8bpp YUV (720x487)		Lenovo T430s	30	30	30	E.20B		
AP0100+AR0132	Parallel-Parallel	8bpp YUV (720x487)		Lenovo T430s	30	30	30	E.20B		
AP0100+AR0140	Parallel-Parallel	8bpp YUV YUV (1280x800)		Lenovo T430	45	45	45	E.20B		
AP0100+ARX550	Parallel-Parallel	8bpp YUV (720x487)		Lenovo T430	30	30	30	E.20B		
AP0101+AR0130	Parallel-Parallel	8bpp YUV		Lenovo T430s	30	30	30	E.20B		
		YCbCr422_8_8 (1280x960)		Lenovo T430s	30	30	30	E.20B		
		10bpp YUV		Lenovo T430s	30	30	30	E.20B		
		YCbCr422_10_10 (1280x960)		Lenovo T430s	30	30	30	E.20B		
AP0101+AR0132	Parallel-Parallel	8bpp YUV		Lenovo T430s	30	30	30	E.20B		
		10bpp YUV		Lenovo T430s	30	30	30	E.20B		
AP0101+AR0140	Parallel-Parallel	8bpp YUV		Lenovo T430s	30	30	30	E.20B		
		YCbCr422_8_8 (1280x960)		Lenovo T430s	30	30	30	E.20B		
		10bpp YUV		Lenovo T430s	30	30	30	E.20B		
		YCbCr422_10_10 (1280x960)		Lenovo T430s	30	30	30	E.20B		
AP0101+ARX550	Parallel-Parallel	8bpp YUV			30	30	30	E.20B		
		10bpp YUV			30	30	30	E.20B		
		YCbCr 16 (840x630)		Lenovo T430	30	30	30	E.20B		
ASX340	Parallel	8bpp YUV (720x487)		Lenovo T430	30	30	30	E.20B		
ASX350	Parallel	8bpp YUV (720x487)		Lenovo T430	30	30	30	E.20B		
MT9V128	Parallel	8bpp YUV (720x487)		Lenovo T430	30	30	30	E.20B		
MT9V127	Parallel	8bpp YUV (720x487)		Lenovo T430	30	30	30	E.20B		
MT9V024/034	Parallel	10-bit		Lenovo W520	60	60	40	E.20B		
	Parallel	12-bit		Lenovo W520	11	11	2.7	E.20B		

Sensor / Sensor+CC	Output port (HiSPi, MIPI or parallel)	Output format	Protocol	PC model	Sensor fps	Datalink fps	Display fps	Demo3 FW version
MT9P004	MIPI (1-lane)	12-bit (2592x1944)		Lenovo T430	13.7	13.x-14.x	13.x-14.x	E.106/E.20B/26
MT9P006	Parallel	12-bit		Lenovo W520	14.1	14.1	3	E.20B
MT9J003	Parallel	12-bit		Lenovo W520	7.3	7.3	1.7	E.20B
	HiSPi	12-bit	Streaming S	Lenovo W520	14.7	12.7	1.7	E.20B
MT9F002	Parallel	12-bit		Lenovo W520	6.3	6.3	1.2	E.20B
	HiSPi	12-bit	Streaming S	Lenovo W520	13.7	8.8	1.2	E.20B
MT9V115	Parallel	8bpp YUV		Lenovo W520	30	30	30	E.20B
MT9M114	Parallel	8bpp YUV		Lenovo W520	15.3	15.3	10.6	E.20B
MT9D131	Parallel	8bpp YUV		Lenovo W520	10	10	7.5	E.20B

(1) Display FPS will differ from Sensor and Datalink in cases where the output format (e.g. Bayer) requires SW processing.