

Table 1. MAX4455 update times for various conditions and modes

MAX4455 memory update rate										
Description			Processor sustained I/O speed	Horizontal Line	Time Stamp Only	Date/Time Stamp	Location + Date/Time Stamp	Large Graphic	Large Text	Total NTSC Visible
Configuration	8 channels blanked or enabled	Auto-increment or individual address mode		1 Horizontal scan line	1 text line - 7 characters, 126 pixels by 18 lines	1 text line - 15 characters, 270 pixels by 18 lines	2 text lines - 15 char/line, 270 pixels by 45 lines	192 pixels by 145 lines	4 text lines - 20 char/line, Each char - 32 lines, 640 pixels by 128 lines	640 pixels by 484 lines
# of Horizontal Pixels				640	126	270	270	192	640	640
# of Vertical Lines				1	18	18	45	145	128	484
Total # of pixels				640	2268	4860	12150	27878.4	81920	309760
% of total NTSC visible area				0.2%	0.7%	1.6%	3.9%	9.0%	26.4%	100.0%
Time for 8 channels	Blanked	auto-inc	6.00E-08	4.6E-04	1.7E-03	3.6E-03	8.9E-03	2.0E-02	5.9E-02	2.2E-01
Equivalent # of Horizontal Lines	Blanked	auto-inc	6.00E-08	7.3	26.5	55.9	139.8	322.7	934.7	3,534.2
Equivalent # of Vertical Fields	Blanked	auto-inc	6.00E-08	0.03	0.10	0.21	0.53	1.23	3.56	13.47
Time for 8 channels	Enabled	auto-inc	6.00E-08	4.6E-04	3.6E-03	1.4E-02	3.4E-02	8.4E-02	2.5E-01	9.5E-01
Equivalent # of Horizontal Lines	Enabled	auto-inc	6.00E-08	7.2	57.1	228.1	538.7	1,320.2	3,927.6	14,970.9
Equivalent # of Vertical Fields	Enabled	auto-inc	6.00E-08	0.03	0.22	0.87	2.05	5.03	14.96	57.04
Time for 8 channels	Blanked	Ind address	6.00E-08	9.2E-04	3.3E-03	7.0E-03	1.7E-02	4.0E-02	1.2E-01	4.5E-01
Equivalent # of Horizontal Lines	Blanked	Ind address	6.00E-08	14.5	51.4	110.2	275.5	632.2	1,857.7	7,024.5
Equivalent # of Vertical Fields	Blanked	Ind address	6.00E-08	0.06	0.20	0.42	1.05	2.41	7.08	26.76
Time for 8 channels	Enabled	Ind address	6.00E-08	4.6E-04	1.5E-02	6.0E-02	1.4E-01	3.5E-01	1.1E+00	4.0E+00
Equivalent # of Horizontal Lines	Enabled	Ind address	6.00E-08	7.2	235.1	940.9	2,265.6	5,559.9	16,681.6	63,583.7
Equivalent # of Vertical Fields	Enabled	Ind address	6.00E-08	0.03	0.90	3.58	8.63	21.18	63.56	242.25
Time for 8 channels	Blanked	auto-inc	1.25E-07	9.7E-04	3.5E-03	7.4E-03	1.8E-02	4.3E-02	1.2E-01	4.7E-01
Equivalent # of Horizontal Lines	Blanked	auto-inc	1.25E-07	15.2	55.3	116.5	291.3	672.3	1,947.2	7,362.9
Equivalent # of Vertical Fields	Blanked	auto-inc	1.25E-07	0.06	0.21	0.44	1.11	2.56	7.42	28.05
Time for 8 channels	Enabled	auto-inc	1.25E-07	9.6E-04	1.4E-02	3.1E-02	7.7E-02	1.8E-01	5.2E-01	2.0E+00
Equivalent # of Horizontal Lines	Enabled	auto-inc	1.25E-07	15.1	225.1	485.0	1,211.9	2,850.5	8,244.4	31,271.5
Equivalent # of Vertical Fields	Enabled	auto-inc	1.25E-07	0.06	0.86	1.85	4.62	10.86	31.41	119.14
Time for 8 channels	Blanked	Ind address	1.25E-07	1.9E-03	6.8E-03	1.5E-02	3.6E-02	8.4E-02	2.5E-01	9.3E-01
Equivalent # of Horizontal Lines	Blanked	Ind address	1.25E-07	30.3	107.2	229.6	574.0	1,317.1	3,870.3	14,634.4
Equivalent # of Vertical Fields	Blanked	Ind address	1.25E-07	0.12	0.41	0.87	2.19	5.02	14.75	55.76
Time for 8 channels	Enabled	Ind address	1.25E-07	9.6E-04	5.9E-02	1.3E-01	3.3E-01	7.7E-01	2.2E+00	8.4E+00
Equivalent # of Horizontal Lines	Enabled	Ind address	1.25E-07	15.1	922.9	2,050.7	5,122.0	12,053.5	34,981.0	132,830.9
Equivalent # of Vertical Fields	Enabled	Ind address	1.25E-07	0.06	3.52	7.81	19.51	45.92	133.28	506.09
Time for 8 channels	Blanked	auto-inc	2.50E-07	1.9E-03	7.0E-03	1.5E-02	3.7E-02	8.5E-02	2.5E-01	9.4E-01
Equivalent # of Horizontal Lines	Blanked	auto-inc	2.50E-07	30.5	110.6	233.1	582.6	1,344.6	3,894.5	14,725.9
Equivalent # of Vertical Fields	Blanked	auto-inc	2.50E-07	0.12	0.42	0.89	2.22	5.12	14.84	56.11
Time for 8 channels	Enabled	auto-inc	2.50E-07	5.1E-03	2.9E-02	6.2E-02	1.5E-01	3.6E-01	1.0E+00	4.0E+00
Equivalent # of Horizontal Lines	Enabled	auto-inc	2.50E-07	80.1	450.0	969.9	2,424.6	5,701.9	16,488.6	62,542.9
Equivalent # of Vertical Fields	Enabled	auto-inc	2.50E-07	0.31	1.71	3.70	9.24	21.72	62.82	238.29
Time for 8 channels	Blanked	Ind address	2.50E-07	3.8E-03	1.4E-02	2.9E-02	7.3E-02	1.7E-01	4.9E-01	1.9E+00
Equivalent # of Horizontal Lines	Blanked	Ind address	2.50E-07	60.5	214.4	459.3	1,148.1	2,634.2	7,740.5	29,268.7
Equivalent # of Vertical Fields	Blanked	Ind address	2.50E-07	0.23	0.82	1.75	4.37	10.04	29.49	111.51
Time for 8 channels	Enabled	Ind address	2.50E-07	1.8E-02	1.2E-01	2.6E-01	6.5E-01	1.5E+00	4.4E+00	1.7E+01
Equivalent # of Horizontal Lines	Enabled	Ind address	2.50E-07	279.5	1,846.7	4,100.3	10,249.9	24,210.0	70,003.3	265,661.8
Equivalent # of Vertical Fields	Enabled	Ind address	2.50E-07	1.06	7.04	15.62	39.05	92.24	266.71	1,012.17