



## MT9P014: 1/2.5-Inch 5Mp Digital Image Sensor Die Bond Pad Location and Identification Tables

# 1/2.5-Inch 5-Megapixel CMOS Digital Image Sensor Die

## MT9P014

### Bond Pad Location and Identification Tables

**Table 1: MT9P014 Bond Pad Location From Center of Pad 1**

The information in Table 1 is subject to change when the design is finalized.

Pad	MT9P014	"X"1 Microns	"Y"1 Microns	"X"1 Inches	"Y"1 Inches
1	VDD2	0.00	0.00	0.0000000	0.0000000
2	DGND2	170.52	0.00	0.0067134	0.0000000
3	VDDIO2	341.04	0.00	0.0134268	0.0000000
4	FLASH	511.56	0.00	0.0201402	0.0000000
5	SHUTTER	718.04	0.00	0.0282693	0.0000000
6	VDDIO3	888.56	0.00	0.0349827	0.0000000
7	DGND3	1059.08	0.00	0.0416961	0.0000000
8	GPI0	1229.60	0.00	0.0484094	0.0000000
9	GPI1	1400.12	0.00	0.0551228	0.0000000
10	GPI2	1570.64	0.00	0.0618362	0.0000000
11	GPI3	1741.16	0.00	0.0685496	0.0000000
12	SCL	1911.68	0.00	0.0752630	0.0000000
13	SDA	2082.20	0.00	0.0819764	0.0000000
14	VDD3	2252.72	0.00	0.0886898	0.0000000
15	TEST	2423.24	0.00	0.0954031	0.0000000
16	DGND4	2593.76	0.00	0.1021165	0.0000000
17	VDDIO4	2906.96	0.00	0.1144472	0.0000000
18	EXTCLK	3077.59	0.00	0.1211648	0.0000000
19	RESET_BAR	3248.58	0.00	0.1278969	0.0000000
20	PLLGN1	3419.11	0.00	0.1346106	0.0000000
21	VDDPLL1	4974.66	0.00	0.1958528	0.0000000
22	CLK_P	5202.76	0.00	0.2048331	0.0000000
23	CLK_N	5432.76	0.00	0.2138882	0.0000000
24	DATA0_P	5662.77	0.00	0.2229435	0.0000000
25	DATA0_N	5892.77	0.00	0.2319986	0.0000000
26	DATA1_P	6122.77	0.00	0.2410539	0.0000000
27	DATA1_N	6352.77	0.00	0.2501091	0.0000000
28	VDD_TX0	6614.32	0.00	0.2604063	0.0000000
29	VDD4	6784.84	0.00	0.2671197	0.0000000
30	DGND5	6955.36	0.00	0.2738331	0.0000000
31	VDDIO5	7125.88	0.00	0.2805465	0.0000000
32	DNU <sup>2</sup>	7407.18	-315.52	0.2916213	-0.0124220



## MT9P014: 1/2.5-Inch 5Mp Digital Image Sensor Die Bond Pad Location and Identification Tables

**Table 1: MT9P014 Bond Pad Location From Center of Pad 1 (continued)**

The information in Table 1 is subject to change when the design is finalized.

Pad	MT9P014	"X"1 Microns	"Y"1 Microns	"X"1 Inches	"Y"1 Inches
33	VAA4	7407.18	-1043.42	0.2916213	-0.0410795
34	AGND7	7407.18	-1213.94	0.2916213	-0.0477929
35	VAA3	7407.18	-2536.34	0.2916213	-0.0998559
36	AGND6	7407.18	-2706.86	0.2916213	-0.1065693
37	VAAPIX3	7407.18	-2877.38	0.2916213	-0.1132827
38	VAAPIX2	7407.18	-3047.90	0.2916213	-0.1199961
39	VAAPIX1	7407.18	-3218.42	0.2916213	-0.1267094
40	DNU	7407.18	-3349.50	0.2916213	-0.1318701
41	DNU	7407.18	-3459.70	0.2916213	-0.1362087
42	DNU	7407.18	-3569.90	0.2916213	-0.1405472
43	VPP0	7407.18	-3728.24	0.2916213	-0.1467811
44	AGND5	7407.18	-3902.24	0.2916213	-0.1536315
45	AGND4	7407.18	-4072.76	0.2916213	-0.1603449
46	AGND3	7407.18	-4243.28	0.2916213	-0.1670583
47	AGND2	7407.18	-4413.80	0.2916213	-0.1737717
48	VAA2	7407.18	-4584.32	0.2916213	-0.1804850
49	AGND1	7407.18	-5891.64	0.2916213	-0.2319543
50	VAA1	7407.18	-6062.16	0.2916213	-0.2386677
51	VDD1	-61.48	-6077.24	-0.0024205	-0.2392614
52	DGND1	-61.48	-5906.72	-0.0024205	-0.2325480
53	VDDIO1	-61.48	-5736.20	-0.0024205	-0.2258346

- Notes: 1. Reference to center of each bond pad from center of bond pad 1.  
2. DNU = do not use.



## MT9P014: 1/2.5-Inch 5Mp Digital Image Sensor Die Bond Pad Location and Identification Tables

**Table 2: MT9P014 Bond Pad Location From Center of Die (0, 0)**  
The information in Table 2 is subject to change when the design is finalized.

Pad	MT9P014	"X"1 Microns	"Y"1 Microns	"X"1 Inches	"Y"1 Inches
1	VDD2	-3672.85	3316.44	-0.1446004	0.1305685
2	DGND2	-3502.33	3316.44	-0.1378870	0.1305685
3	VDDIO2	-3331.81	3316.44	-0.1311736	0.1305685
4	FLASH	-3161.29	3316.44	-0.1244602	0.1305685
5	SHUTTER	-2954.81	3316.44	-0.1163311	0.1305685
6	VDDIO3	-2784.29	3316.44	-0.1096177	0.1305685
7	DGND3	-2613.77	3316.44	-0.1029043	0.1305685
8	GPI0	-2443.25	3316.44	-0.0961909	0.1305685
9	GPI1	-2272.73	3316.44	-0.0894776	0.1305685
10	GPI2	-2102.21	3316.44	-0.0827642	0.1305685
11	GPI3	-1931.69	3316.44	-0.0760508	0.1305685
12	SCL	-1761.17	3316.44	-0.0693374	0.1305685
13	SDA	-1590.65	3316.44	-0.0626240	0.1305685
14	Vdd3	-1420.13	3316.44	-0.0559106	0.1305685
15	TEST	-1249.61	3316.44	-0.0491972	0.1305685
16	DGND4	-1079.09	3316.44	-0.0424839	0.1305685
17	VDDIO4	-765.89	3316.44	-0.0301531	0.1305685
18	EXTCLK	-595.27	3316.44	-0.0234356	0.1305685
19	RESET_BAR	-424.27	3316.44	-0.0167035	0.1305685
20	PLLGN1	-253.74	3316.44	-0.0099898	0.1305685
21	VDDPLL1	1301.81	3316.44	0.0512524	0.1305685
22	CLK_P	1529.91	3316.44	0.0602327	0.1305685
23	CLK_N	1759.91	3316.44	0.0692878	0.1305685
24	DATA0_P	1989.92	3316.44	0.0783431	0.1305685
25	DATA0_N	2219.92	3316.44	0.0873982	0.1305685
26	DATA1_P	2449.92	3316.44	0.0964535	0.1305685
27	DATA1_N	2679.92	3316.44	0.1055087	0.1305685
28	VDD_TX0	2941.47	3316.44	0.1158059	0.1305685
29	VDD4	3111.99	3316.44	0.1225193	0.1305685
30	DGND5	3282.51	3316.44	0.1292327	0.1305685
31	VDDIO5	3453.03	3316.44	0.1359461	0.1305685
32	DNU <sup>2</sup>	3734.33	3000.92	0.1470209	0.1181465
33	VAA4	3734.33	2273.02	0.1470209	0.0894890
34	AGND7	3734.33	2102.50	0.1470209	0.0827756
35	VAA3	3734.33	780.10	0.1470209	0.0307126
36	AGND6	3734.33	609.58	0.1470209	0.0239992
37	VAAPIX3	3734.33	439.06	0.1470209	0.0172858
38	VAAPIX2	3734.33	268.54	0.1470209	0.0105724
39	VAAPIX1	3734.33	98.02	0.1470209	0.0038591
40	DNU	3734.33	-33.06	0.1470209	-0.0013016
41	DNU	3734.33	-143.26	0.1470209	-0.0056402
42	DNU	3734.33	-253.46	0.1470209	-0.0099787
43	VPP0	3734.33	-411.80	0.1470209	-0.0162126
44	AGND5	3734.33	-585.80	0.1470209	-0.0230630



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**Table 2: MT9P014 Bond Pad Location From Center of Die (0, 0)**  
The information in Table 2 is subject to change when the design is finalized.

Pad	MT9P014	"X"1 Microns	"Y"1 Microns	"X"1 Inches	"Y"1 Inches
45	AGND4	3734.33	-756.32	0.1470209	-0.0297764
46	AGND3	3734.33	-926.84	0.1470209	-0.0364898
47	AGND2	3734.33	-1097.36	0.1470209	-0.0432031
48	VAA2	3734.33	-1267.88	0.1470209	-0.0499165
49	AGND1	3734.33	-2575.20	0.1470209	-0.1013858
50	VAA1	3734.33	-2745.72	0.1470209	-0.1080992
51	VDD1	-3734.33	-2760.80	-0.1470209	-0.1086929
52	DGND1	-3734.33	-2590.28	-0.1470209	-0.1019795
53	VDDIO1	-3734.33	-2419.76	-0.1470209	-0.0952661

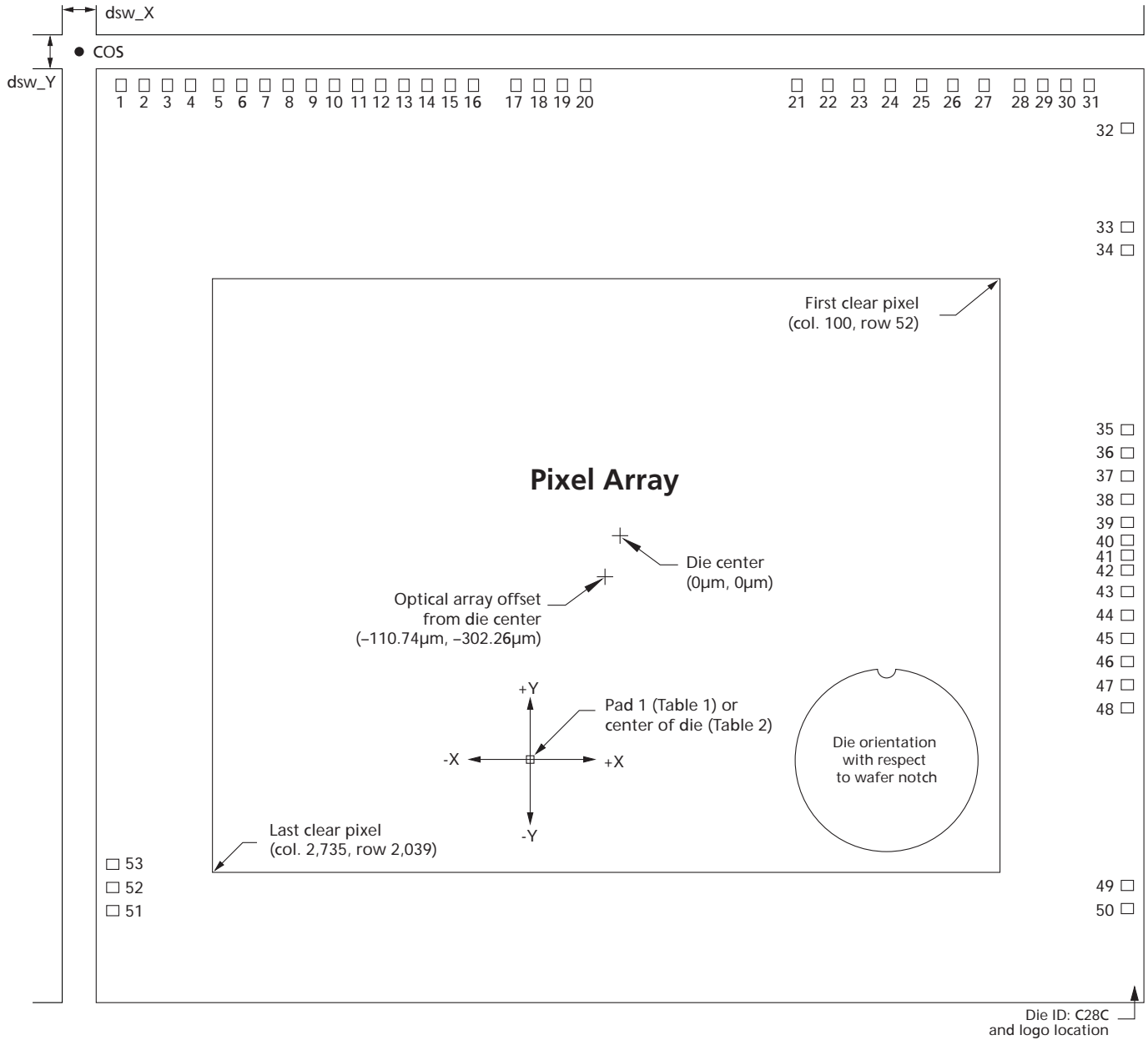
- Notes: 1. Reference to center of each bond pad from center of die (0, 0).  
2. DNU = do not use.



# MT9P014: 1/2.5-Inch 5Mp Digital Image Sensor Die Die Features

## Die Features

Figure 1: Die Outline (Top View)



- Notes:
1. Die dimensions are subject to change when the design is finalized.
  2. Die street widths are not drawn to scale.



## MT9P014: 1/2.5-Inch 5Mp Digital Image Sensor Die Physical Specifications

### Physical Specifications

**Table 3: Physical Dimensions**

The information in Table 3 is subject to change when the design is finalized.

Feature	Dimension
Wafer diameter	200mm
Die thickness	200 $\mu$ m $\pm$ 12 $\mu$ m
Singulated die size (after wafer saw) Width (X dimension): Length (Y dimension):	7,683 $\mu$ m $\pm$ 25 $\mu$ m 6,847 $\mu$ m $\pm$ 25 $\mu$ m
Bond pad size (MIN)	85 $\mu$ m x 100 $\mu$ m
Passivation openings (MIN)	75 $\mu$ m x 90 $\mu$ m
Minimum bond pad pitch Between any two bondable bond pads:	170.52 $\mu$ m
Optical array offset From center from die center: From center from center of pad 1:	X = -110.74 $\mu$ m, Y = -302.26 $\mu$ m X = 3,562.11 $\mu$ m, Y = -3,618.70 $\mu$ m
First clear pixel (col 100, row 52) From die center: From center of pad 1:	X = 2,796.65 $\mu$ m, Y = 1,892.24 $\mu$ m X = 6,469.50 $\mu$ m, Y = -1,424.20 $\mu$ m
Last clear pixel (col 2,735, row 2,039) From die center: From center of pad 1:	X = -3,000.35 $\mu$ m, Y = -2,479.17 $\mu$ m X = 672.50 $\mu$ m, Y = -5,795.61 $\mu$ m



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**Advance: This data sheet contains initial descriptions of products still under development.**



# MT9P014: 1/2.5-Inch 5Mp Digital Image Sensor Die Revision History

## Revision History

<b>Rev. 2, Advance</b> .....	<b>.07/07</b>
• Updated singulated die size	
<b>Rev. 1, Advance</b> .....	<b>.06/07</b>
• Initial release.	