

UGRA

Display Analysis & Certification Tool

Report

Basics

Date: 2011-12-23 23:28:10
Report-Version: v1.3.1
Monitor-Name: DELL U2412M
EDID-Name: DELL U2412M
EDID-Serial: Y1H5T1A61UML
Profile: /Users/sergeybobkov/Library/.../Profiles/23.12.11-6000K-22-100%.icc
Created: 2011-12-23 22:22
Measurement device: eye-one display 2, Rev. 2 | Serial: 801855

Summary

The monitor has passed the certification according to the UGRA DACT specifications.

Calibration

White Point	yes
Gray balance	yes
Profile quality	yes

Softproofing

Depends on the calibration verification.

MultiColor, HighBody	no
Offset/Gravure Paper Type 1/2	yes
Offset on uncoated paper	yes
Newspaper Printing	yes
sRGB	yes
AdobeRGB	no
ECI-RGB	no

Diagram



Whitepoint

The whitepoint should be as close as possible to the black body curve and the calibration target. The maximum allowed distance to the target whitepoint is DeltaE 2.0.

XYZ:	90.23 94.90 94.77
XYZ (normalized):	95.08 100.00 99.86
Luminance:	94.9 Cd/m2
Next Temperature:	5962 Kelvin
Assumed Target Whitepoint:	6000.0 Kelvin
Distance to assumed Target Whitepoint:	0.8 DeltaE

Blackpoint

The blackpoint is not defined in ISO 12646. Therefore UDACT does only measure but not assess it.

Luminance:	0.1 Cd/m2
Chromaticity:	1.4 Chroma (Lab)

Gray balance

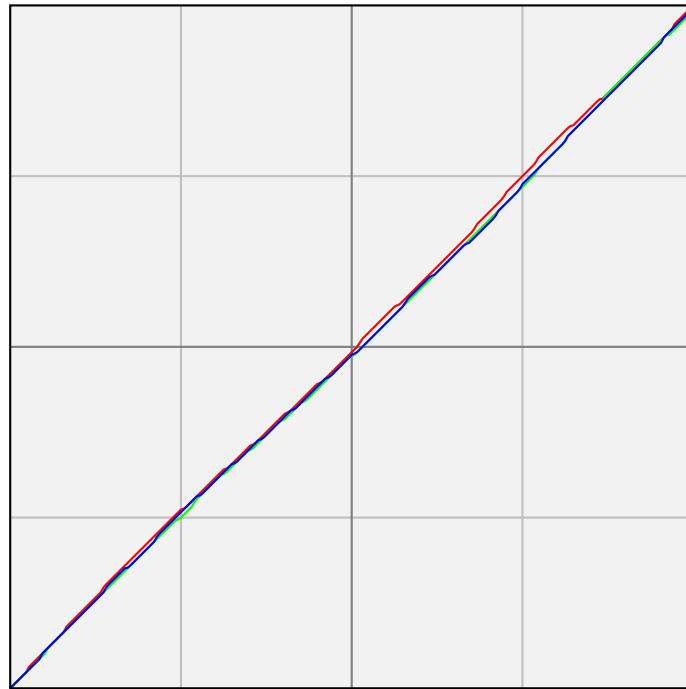
Average and maximum calculation will respect measurements with 1%% minimum luminance only. The L-deviation shows the difference between the profile and measurement value.

The maximum allowed deviations to comply with this test are an average of DeltaC 1.0 and a range of DeltaC 2.0.

%	Kelvin	Cd/m2	L	Chroma	Gamma
0	13729	0.12	1.16	1.41	
5	8167	0.27	2.53	1.27	2.18
10	6432	0.73	6.90	0.82	2.21
15	6030	1.62	13.89	0.27	2.19
20	5938	2.94	20.42	0.08	2.19
25	5957	4.52	26.04	0.70	2.21
30	5943	6.84	32.28	0.09	2.20
35	5960	9.58	38.02	0.14	2.20
40	5977	12.91	43.66	0.32	2.19
45	5985	16.26	48.42	0.31	2.22
50	5942	20.71	53.84	0.30	2.21
55	5915	25.56	58.92	0.32	2.20
60	5973	31.13	64.00	0.19	2.19
65	5966	36.59	68.43	0.05	2.22
70	5929	43.36	73.34	0.45	2.21
75	5944	50.50	78.00	0.28	2.20
80	5928	58.41	82.67	0.37	2.18
85	5927	66.12	86.84	0.39	2.24
90	5929	75.23	91.36	0.31	2.22
95	5933	85.05	95.84	0.29	2.17
100	5962	94.90	100.00	0.00	
Average	5952			0.27	2.20
Max				0.70	
Range				1.10	

Tone values

This tests checks the calibration curves of the graphic card. Through the calibration of a display tone values can be lost. A display for the printing industry should show at least 95% of the incoming tone values.



Tone values = 96.9%

Profile Quality

This test displays and measures RGB values and compares them with the transformation of the profile. The maximum allowed deviations to comply with this test are an average of DeltaE 3.0 and a maximum of DeltaE 6.0.

The assumed chromatic adaptation is: Bradford

RGB	Lab	deltaLab	DeltaE
0 0 0	1.1 0.1 -1.4	-1.1 -0.1 1.4	1.8
0 0 128	14.9 29.0 -62.8	-0.1 0.3 -0.9	0.9
0 0 255	35.0 49.7 -106.1	0.2 -1.1 0.6	1.3
0 128 0	45.1 -49.8 56.3	0.3 -0.0 1.7	1.7
0 128 128	47.9 -33.6 -8.8	0.1 0.3 -0.5	0.6
0 170 255	66.8 -20.5 -52.8	-0.0 0.0 0.0	0.0
0 255 0	86.0 -82.6 96.8	-0.1 0.0 -0.7	0.7
0 255 170	87.8 -70.3 28.1	-0.1 0.1 -1.1	1.1
0 255 255	90.2 -55.3 -14.9	-0.2 0.1 -0.4	0.4
85 85 85	36.3 -0.1 0.2	-0.4 0.1 -0.2	0.5
128 0 0	27.5 48.7 35.6	-0.3 1.1 1.8	2.2
128 0 128	32.1 52.4 -35.2	-0.1 0.4 -0.2	0.5
128 128 0	51.9 -7.6 62.2	0.1 -0.1 0.6	0.6
128 128 128	54.2 -0.0 0.3	-0.2 0.0 -0.3	0.4
128 128 255	60.7 19.8 -63.1	-0.3 -0.0 -0.2	0.3
128 255 128	89.5 -55.8 53.0	-0.2 -0.6 -0.5	0.8
170 0 255	49.7 70.1 -81.6	0.1 -0.4 0.6	0.7
170 170 170	70.3 -0.1 0.2	-0.1 0.1 -0.2	0.2
170 255 0	90.6 -46.7 100.5	-0.1 -0.3 -1.0	1.0
170 255 255	94.5 -27.9 -8.4	-0.2 -0.3 -0.3	0.5
255 0 0	55.6 82.9 63.3	0.1 -0.2 -0.4	0.5
255 0 170	58.9 85.2 -18.3	0.2 -0.5 0.3	0.7
255 0 255	63.3 88.1 -59.2	0.2 -0.6 0.6	0.9
255 128 128	69.8 50.8 23.1	-0.0 0.2 0.1	0.2
255 170 0	76.7 28.4 85.5	0.2 -0.4 -0.9	1.0
255 170 255	81.9 39.7 -28.9	-0.0 0.0 0.1	0.1
255 255 0	96.5 -12.3 105.4	0.0 -0.5 -1.4	1.5
255 255 170	98.1 -7.1 41.8	-0.1 -0.1 -0.1	0.2
255 255 255	100.0 0.0 0.0	0.0 -0.0 -0.0	0.0
170 85 85	47.9 37.5 17.3	-0.2 0.5 0.1	0.5
85 170 85	62.3 -41.6 39.2	-0.1 -0.4 -0.0	0.5
85 85 170	41.0 14.7 -46.6	-0.3 0.1 -0.6	0.6
85 170 170	64.5 -29.4 -8.4	-0.0 -0.2 -0.3	0.4
170 85 170	51.2 43.3 -30.3	-0.2 0.3 -0.3	0.5
170 170 85	68.2 -7.2 46.8	-0.0 -0.1 0.1	0.1
Average			0.7
Maximum			2.2

Gamut-Volume

These measurements are only informative.

Gamut-Volume	
Gamut-Volume (ISO)	94 %
sRGB	95 %
AdobeRGB	78 %
ECI-RGB v1.0	74 %

ISO-Gamut

This test displays and measures Lab values and compares them with the reference. The maximum allowed deviations to comply with this test are an average of DeltaE 4.0 and a minimum Gamut volume of 90% for ISOcoated.

Reference (Lab)	Measurement (Lab)	DeltaE
55.0 -37.0 -50.0	57.8 -19.7 -44.9	18.2
66.9 -24.7 -37.1	66.9 -24.5 -37.1	0.3
79.7 -12.5 -21.8	79.9 -12.5 -21.4	0.4
48.0 74.0 -3.0	48.5 73.2 -2.5	1.0
60.8 50.6 -6.7	61.0 50.2 -7.0	0.5
76.4 25.8 -6.9	76.4 25.8 -7.3	0.4
89.0 -5.0 93.0	89.2 -4.9 94.0	1.0
90.3 -4.7 62.6	90.4 -4.6 62.8	0.2
92.2 -3.5 31.1	92.4 -3.8 31.5	0.5
53.1 37.7 28.9	53.4 37.6 29.0	0.4
41.5 22.7 16.8	41.9 22.2 16.4	0.7
31.9 40.0 24.0	32.5 39.3 23.9	0.8
32.5 44.4 -1.8	33.1 43.7 -1.6	0.9
51.3 1.3 44.5	51.3 1.7 44.1	0.6
34.6 -36.4 13.9	34.7 -34.8 13.9	1.6
36.0 -26.2 -20.9	36.9 -22.0 -18.8	4.7
20.9 9.6 -23.6	21.6 8.9 -23.0	1.2
89.0 0.0 -1.8	89.0 0.2 -1.7	0.2
82.8 0.0 -1.7	83.1 0.0 -1.3	0.5
69.3 0.0 -1.4	69.5 -0.2 -0.9	0.5
54.1 0.0 -1.0	54.3 0.2 -0.9	0.3
36.6 -0.0 -0.5	37.1 -0.2 0.2	0.9
16.0 0.0 0.0	16.8 -0.3 0.1	0.9
24.0 22.0 -46.0	24.6 21.2 -44.8	1.6
40.9 17.9 -36.6	41.2 17.5 -36.1	0.7
63.7 10.3 -23.8	63.8 10.2 -23.6	0.2
47.0 68.0 48.0	47.3 67.9 47.9	0.3
58.5 47.1 37.9	58.6 46.9 37.4	0.5
74.2 22.9 21.4	74.2 22.7 21.4	0.2
50.0 -65.0 27.0	51.6 -49.3 29.5	16.0
62.1 -39.8 21.0	62.4 -39.8 21.5	0.5
77.0 -19.1 11.0	77.1 -19.2 11.4	0.4
71.2 18.8 17.3	71.5 18.9 17.3	0.3
71.2 22.2 73.1	71.2 22.0 73.1	0.2
47.7 71.2 16.2	47.9 70.9 16.2	0.3
38.0 55.4 -20.9	38.3 54.9 -20.7	0.6
73.7 -22.8 67.6	73.8 -23.4 67.6	0.7
52.3 -52.3 -20.2	54.6 -33.9 -16.3	18.9
43.3 -17.0 -48.6	44.5 -9.8 -46.2	7.7
95.0 0.0 -2.0	95.2 -0.0 -1.8	0.3
88.5 -0.4 -3.1	88.6 0.0 -2.7	0.5
82.0 -0.9 -4.1	82.1 -0.9 -3.9	0.3
67.7 -2.0 -4.4	67.6 -2.0 -4.4	0.0
52.2 -2.5 -3.5	52.4 -2.6 -3.0	0.5

37.5 -3.9 -3.1	38.0 -4.3 -2.5	1.0
26.3 -6.8 -3.4	26.5 -6.2 -3.7	0.7
Average		1.9
Gamut-Volume		94 %

Measurement Data

This table lists all RGB measurements. The XYZ values represent the values from the measurement device.

RGB	XYZ	RGB	XYZ
255 255 255	90.23 94.90 94.77	85 85 170	13.54 11.48 36.12
0 0 0	0.12 0.12 0.21	85 170 170	23.51 32.00 37.79
12 12 12	0.25 0.27 0.34	170 85 170	27.07 18.44 37.12
25 25 25	0.68 0.73 0.77	170 170 85	31.71 36.09 11.14
38 38 38	1.55 1.62 1.65	0 146 215	20.47 24.92 60.48
51 51 51	2.79 2.94 2.92	58 173 227	27.93 35.17 69.19
63 63 63	4.34 4.52 4.59	155 203 236	47.33 53.91 77.12
76 76 76	6.51 6.84 6.81	211 0 117	31.03 15.99 17.56
89 89 89	9.10 9.58 9.54	218 104 156	40.17 27.51 32.45
102 102 102	12.23 12.91 12.85	227 168 199	55.08 47.79 54.82
114 114 114	15.48 16.26 16.35	243 228 34	62.95 70.05 7.53
127 127 127	19.66 20.71 20.54	242 231 110	65.79 72.71 20.53
140 140 140	24.36 25.56 25.42	240 235 174	70.73 77.08 44.25
153 153 153	29.55 31.13 31.06	188 99 79	27.03 20.03 8.83
165 165 165	34.78 36.59 36.54	134 84 73	14.27 11.68 6.87
178 178 178	41.17 43.36 42.94	130 46 42	10.80 6.77 2.52
191 191 191	48.11 50.50 50.44	132 40 80	11.92 7.08 7.65
204 204 204	55.68 58.41 58.24	137 121 51	17.44 18.36 4.33
216 216 216	62.86 66.12 65.59	0 96 63	4.42 7.96 4.68
229 229 229	71.58 75.23 74.77	0 96 116	6.58 9.12 15.79
242 242 242	80.91 85.05 84.57	53 48 85	3.76 3.27 8.05
0 0 128	3.65 1.97 18.66	221 222 226	67.03 70.37 72.31
0 0 255	16.71 8.82 86.92	204 205 208	56.27 59.13 60.42
0 128 0	6.73 13.89 1.29	167 168 170	36.14 38.06 38.71
0 128 128	10.44 16.01 19.91	128 128 130	20.13 21.11 21.53
0 170 255	29.49 35.28 88.89	87 87 87	8.64 9.11 9.04
0 255 0	31.30 64.37 5.29	44 44 44	2.03 2.15 2.14
0 255 170	38.22 68.21 40.26	59 44 124	5.89 4.19 17.97
0 255 255	48.13 73.51 91.91	101 84 153	13.86 11.54 29.11
85 85 85	8.23 8.68 8.60	156 145 193	32.64 31.02 49.66
128 0 0	9.30 4.86 0.74	208 35 31	27.83 14.96 2.75
128 0 128	12.96 6.78 19.63	217 103 77	35.32 24.80 9.01
128 128 0	16.14 18.84 1.85	227 166 143	49.67 44.32 28.59
128 128 128	20.01 21.05 20.87	0 144 77	10.00 18.80 7.69
128 128 255	33.14 28.09 88.79	79 169 114	18.85 29.30 17.25
128 255 128	44.71 71.43 24.99	158 200 169	39.98 49.02 39.10
170 0 255	33.98 17.73 88.18	211 161 143	44.25 40.39 28.16
170 170 170	37.11 39.05 38.84	227 159 38	44.05 39.69 5.31
170 255 0	48.82 73.32 6.34	210 23 86	29.47 15.45 9.91
170 255 255	65.74 82.50 93.22	154 32 121	17.56 9.66 17.84
255 0 0	42.24 21.62 2.66	163 194 60	33.59 43.77 7.61
255 0 170	49.06 25.19 38.28	0 145 157	14.71 21.62 31.11
255 0 255	58.87 30.39 89.68	0 108 180	12.35 13.78 40.47
255 128 128	52.82 37.83 23.06	239 240 244	79.50 83.58 85.84
255 170 0	54.94 47.74 4.71	219 221 227	66.22 69.56 72.67
255 170 255	71.86 57.05 91.83	198 203 210	54.39 57.49 61.40
255 255 0	73.68 85.87 7.75	157 164 171	33.41 35.63 38.90
255 255 170	80.60 89.80 43.69	118 125 129	18.11 19.52 21.01
170 85 85	21.73 15.61 9.48	81 91 93	8.62 9.57 10.31
85 170 85	18.22 29.16 10.24	53 67 69	4.03 4.68 5.39