

UGRA

Display Analysis & Certification Tool

Report

Basics

Date: 2010-4-6 21:36:08
Report-Version: v1.3.1
Monitor-Name: DELL U2410
EDID-Name: DELL U2410
EDID-Serial: F525M9AL1NLL
Profile: /Library/.../Dell-sRGB-angep-06.04.10-6500K-22-120cd-lut.icc
Created: 2010-4-6 21:26
Measurement device: DTP94-LCD mode (Wide Gamut S-IPS (generic))

Summary

WARNING: You are using a LookUpTable-Profile. Some applications do not support LUT-Profiles correctly. The monitor has passed the certification according to the UGRA DACT specifications.

Calibration

White Point	yes
Gray balance	yes
Profile quality	yes

Softproofing

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:	113.23 118.98 129.68
XYZ (normalized):	95.17 100.00 108.99
Luminance:	119.0 Cd/m2
Next Temperature:	6495 Kelvin
Assumed Target Whitepoint:	6500 Kelvin
Distance to assumed Target Whitepoint:	0.2 deltaE

Blackpoint

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

Luminance:	0.2 Cd/m2
Chromaticity:	1.2 Chroma (Lab)

Gray balance

Average and maximum calculation will respect measurements with 1% minimum luminance only. 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	13867	0.18	1.40	1.21	
5	9397	0.29	2.17	1.02	2.38
10	7237	0.95	7.18	1.07	2.20
15	6642	2.05	13.96	0.36	2.20
20	6485	3.69	20.46	0.47	2.20
25	6524	5.66	26.04	0.72	2.23
30	6509	8.48	32.10	0.13	2.21
35	6515	11.97	37.96	0.15	2.20
40	6510	16.02	43.46	0.14	2.20
45	6450	20.32	48.36	0.20	2.23
50	6488	25.75	53.65	0.24	2.22
55	6477	31.94	58.83	0.44	2.21
60	6516	38.82	63.86	0.18	2.20
65	6482	45.75	68.35	0.16	2.23
70	6504	53.97	73.13	0.24	2.22
75	6528	63.10	77.89	0.24	2.21
80	6490	72.87	82.51	0.82	2.22
85	6468	82.50	86.67	0.40	2.27
90	6507	94.16	91.30	0.11	2.22
95	6506	106.50	95.79	0.55	2.21
100	6495	118.98	100.00	0.00	
Average	6505			0.31	2.22
Range				1.06	
Max				0.82	

Tone values = 98.0%

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.

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	1.4 -0.5 -1.2	-0.1 0.1 0.1	0.2
0 0 128	13.7 34.0 -63.7	0.0 -1.0 1.7	2.0
0 0 255	32.9 58.4 -107.6	-0.2 -0.0 0.4	0.4
0 128 0	45.7 -49.0 47.6	-0.6 1.1 -0.3	1.3
0 128 128	47.9 -32.1 -9.7	0.6 0.5 0.2	0.8
0 170 255	66.4 -17.4 -52.8	-0.2 0.5 0.0	0.6
0 255 0	86.7 -82.0 81.5	-0.1 0.1 -0.1	0.2
0 255 170	88.1 -69.0 24.7	-0.2 0.1 0.1	0.3
0 255 255	90.2 -53.0 -15.9	-0.1 -0.2 0.1	0.2
85 85 85	36.3 -0.1 0.2	0.2 0.4 -0.2	0.5
128 0 0	27.4 47.6 37.7	-0.9 -1.1 -0.9	1.7
128 0 128	31.5 53.3 -34.4	0.5 0.6 -0.0	0.8
128 128 0	52.2 -8.3 55.8	0.4 0.5 0.4	0.7
128 128 128	54.1 0.2 -0.0	0.1 -0.1 0.0	0.2
128 128 255	59.9 22.8 -62.9	-0.2 -0.0 0.2	0.3
128 255 128	89.9 -55.8 47.9	-0.3 0.0 -0.1	0.3
170 0 255	48.4 74.5 -81.3	-0.3 -0.2 -0.2	0.4
170 170 170	70.2 0.0 0.1	0.1 0.0 -0.1	0.2
170 255 0	91.2 -47.8 87.1	-0.2 -0.4 -0.2	0.5
170 255 255	94.5 -27.4 -8.9	-0.3 -0.4 -0.1	0.5
255 0 0	56.2 81.0 69.6	-0.5 -0.5 -0.4	0.8
255 0 170	59.1 85.0 -15.0	-0.2 -0.3 0.1	0.4
255 0 255	63.0 89.9 -56.8	-0.6 -0.1 -0.5	0.8
255 128 128	70.1 49.8 24.5	-0.3 -0.6 -0.0	0.7
255 170 0	77.4 26.4 80.9	-0.3 -0.1 -0.3	0.4
255 170 255	81.7 40.2 -27.5	-0.4 0.1 -0.5	0.6
255 255 0	97.1 -14.6 94.2	-0.0 0.1 0.1	0.2
255 255 170	98.3 -8.3 39.9	-0.2 -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	47.8 36.5 18.0	0.6 -0.0 -0.5	0.7
85 170 85	62.6 -41.8 35.4	0.4 1.6 -0.6	1.8
85 85 170	40.3 17.1 -46.2	0.9 0.2 0.6	1.1
85 170 170	64.5 -28.6 -8.8	0.4 1.0 -0.1	1.1
170 85 170	50.6 44.0 -29.2	0.5 -0.1 0.1	0.5
170 170 85	68.5 -8.2 44.0	0.3 0.5 -0.5	0.7
Average			0.6
Maximum			2.0

Gamut-Volume

These measurements are only informative.

Gamut-Volume	
ISO	93 %
sRGB	98 %
AdobeRGB	78 %
ECI-RGB v1.0	71 %

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	deltaLab
55.0 -37.0 -50.0	58.1 -16.9 -45.2	20.9
66.9 -24.7 -37.1	66.7 -25.5 -37.4	0.8
79.7 -12.5 -21.8	79.9 -12.5 -22.1	0.4
48.0 74.0 -3.0	48.5 72.5 -1.9	1.9
60.8 50.6 -6.7	60.7 51.4 -6.6	0.8
76.4 25.8 -6.9	76.7 26.0 -6.2	0.7
89.0 -5.0 93.0	89.3 -5.1 88.3	4.7
90.3 -4.7 62.6	90.7 -5.2 62.3	0.7
92.2 -3.5 31.1	92.3 -3.7 31.3	0.3
53.1 37.7 28.9	52.5 38.2 29.6	1.0
41.5 22.7 16.8	41.0 23.0 17.7	1.1
31.9 40.0 24.0	31.2 40.7 25.6	1.9
32.5 44.4 -1.8	31.8 44.7 -0.8	1.3
51.3 1.3 44.5	50.6 1.0 45.5	1.2
34.6 -36.4 13.9	34.2 -34.3 15.1	2.4
36.0 -26.2 -20.9	36.1 -20.3 -18.6	6.3
20.9 9.6 -23.6	20.2 9.4 -23.8	0.7
89.0 0.0 -1.8	89.1 -0.2 -1.7	0.3
82.8 0.0 -1.7	82.9 -0.7 -1.1	0.9
69.3 0.0 -1.4	69.1 0.3 -1.4	0.4
54.1 0.0 -1.0	54.1 0.4 -1.1	0.5
36.6 -0.0 -0.5	36.6 -0.4 -0.3	0.5
16.0 0.0 0.0	16.0 -0.3 0.5	0.6
24.0 22.0 -46.0	22.7 22.4 -47.7	2.1
40.9 17.9 -36.6	40.1 17.5 -36.9	0.9
63.7 10.3 -23.8	63.4 10.3 -24.2	0.5
47.0 68.0 48.0	47.1 68.6 49.8	1.9
58.5 47.1 37.9	58.2 48.1 39.0	1.5
74.2 22.9 21.4	74.3 23.6 21.6	0.8
50.0 -65.0 27.0	51.6 -49.8 31.9	16.0
62.1 -39.8 21.0	61.5 -41.6 21.4	2.0
77.0 -19.1 11.0	76.9 -19.5 11.2	0.5
71.2 18.8 17.3	71.1 18.7 17.4	0.2
71.2 22.2 73.1	71.6 22.7 73.9	1.0
47.7 71.2 16.2	47.7 71.2 17.2	1.0
38.0 55.4 -20.9	37.0 55.3 -21.0	1.0
73.7 -22.8 67.6	73.5 -24.2 68.3	1.6
52.3 -52.3 -20.2	54.6 -32.8 -15.4	20.2
43.3 -17.0 -48.6	44.4 -6.7 -46.6	10.5
95.0 0.0 -2.0	95.1 -0.2 -1.8	0.3
88.5 -0.4 -3.1	88.8 -0.4 -2.8	0.4
82.0 -0.9 -4.1	82.0 -1.5 -3.5	0.8
67.7 -2.0 -4.4	67.5 -2.0 -4.5	0.2
52.2 -2.5 -3.5	52.3 -2.6 -3.5	0.1
37.5 -3.9 -3.1	37.4 -4.7 -2.8	0.9
26.3 -6.8 -3.4	25.9 -7.4 -2.8	0.9
Average		2.5
Gamut-Volume		93 %

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	113.23 118.98 129.68	85 85 170	17.32 14.01 47.86
0 0 0	0.16 0.18 0.30	85 170 170	29.96 40.17 52.08
12 12 12	0.26 0.29 0.39	170 85 170	33.71 22.61 48.86
25 25 25	0.88 0.95 1.09	170 170 85	39.36 45.51 16.74
38 38 38	1.94 2.05 2.26	0 148 218	27.62 31.96 84.22
51 51 51	3.49 3.69 3.97	37 175 227	35.30 44.02 94.59
63 63 63	5.33 5.66 6.10	153 204 237	60.16 67.93 106.91
76 76 76	8.06 8.48 9.24	212 0 120	38.40 19.88 23.67
89 89 89	11.37 11.97 13.05	219 102 158	50.15 33.94 43.58
102 102 102	15.22 16.02 17.46	228 169 201	69.77 60.46 74.39
114 114 114	19.36 20.32 22.05	246 226 0	77.90 87.69 12.40
127 127 127	24.56 25.75 28.13	245 230 103	81.81 91.52 28.57
140 140 140	30.31 31.94 34.57	242 234 171	87.93 96.22 60.56
153 153 153	36.89 38.82 42.34	188 95 77	32.47 23.93 11.22
165 165 165	43.51 45.75 49.72	134 81 70	17.14 13.91 8.51
178 178 178	51.43 53.97 59.01	130 40 38	12.74 7.78 2.84
191 191 191	59.96 63.10 68.92	131 35 78	14.08 8.14 9.40
204 204 204	69.02 72.87 78.78	136 119 40	20.70 22.16 5.24
216 216 216	78.41 82.50 89.39	0 94 57	5.36 9.67 5.84
229 229 229	89.61 94.16 102.81	0 94 114	8.24 11.00 20.73
242 242 242	101.04 106.50 115.68	49 46 84	4.40 3.71 10.45
0 0 128	4.87 2.30 24.79	221 223 226	84.22 88.53 99.26
0 0 255	22.42 10.33 115.51	204 205 208	69.85 73.69 81.79
0 128 0	8.69 17.83 3.04	167 167 170	44.94 47.05 52.75
0 128 128	13.56 20.19 27.96	128 128 130	25.15 26.29 29.44
0 170 255	38.64 44.00 120.53	85 86 86	10.49 11.07 12.19
0 255 0	39.98 82.33 13.08	42 42 41	2.35 2.49 2.63
0 255 170	49.01 86.42 59.50	50 43 126	7.03 4.69 24.50
0 255 255	62.26 92.47 127.61	96 84 154	16.87 13.77 38.92
85 85 85	10.33 10.88 11.79	154 146 195	40.89 38.53 68.04
128 0 0	11.25 5.98 0.82	211 24 34	34.37 18.37 3.40
128 0 128	16.12 8.21 25.70	219 99 75	43.60 30.38 11.43
128 128 0	20.08 23.85 3.61	229 164 143	62.43 55.54 39.11
128 128 128	25.01 26.24 28.63	0 143 66	12.31 23.56 9.58
128 128 255	42.56 34.47 118.73	73 167 108	22.22 35.51 22.62
128 255 128	56.38 90.49 38.89	158 199 167	49.75 61.19 53.39
170 0 255	43.41 21.30 116.47	212 159 142	54.39 49.85 37.89
170 170 170	46.42 48.78 53.03	230 157 21	55.42 50.15 7.15
170 255 0	60.98 93.19 14.12	212 9 88	36.39 19.01 13.01
170 255 255	83.14 103.46 128.42	152 28 121	20.88 11.23 23.20
255 0 0	52.50 27.52 2.81	163 192 37	40.83 54.21 9.82
255 0 170	61.48 31.59 49.38	0 145 155	18.92 27.19 41.71
255 0 255	74.77 37.78 117.74	0 109 181	16.57 17.40 55.76
255 128 128	65.79 47.68 30.95	239 240 244	99.51 104.57 117.21
255 170 0	68.27 60.78 8.03	219 222 227	83.38 87.71 100.04
255 170 255	90.49 71.26 122.61	198 203 210	67.77 71.79 83.19
255 255 0	91.20 109.00 15.68	157 164 171	41.85 44.54 53.19
255 255 170	100.23 113.06 62.40	117 125 129	22.63 24.33 28.89
170 85 85	26.68 19.42 12.67	79 90 92	10.46 11.64 13.83
85 170 85	22.90 36.90 15.90	50 66 67	4.77 5.65 6.87