

M.E.RF & Antenna Solution

Dwight Eisenhower 3 Apartment 55

Tel:+972-9-8650103 Cel:+972-53-7788308

מרדכי אלקובי מ.א.פתרונות רדיו ואנטנות

דווייט אייזנהאואר 3/55 נתניה 4209022

טל: 09-8650103 סלולר: 053-7788308

תאריך: 01/05/2022

LiveU

LU800 Configuration test required
for FCC ID
Efficiency Test Report

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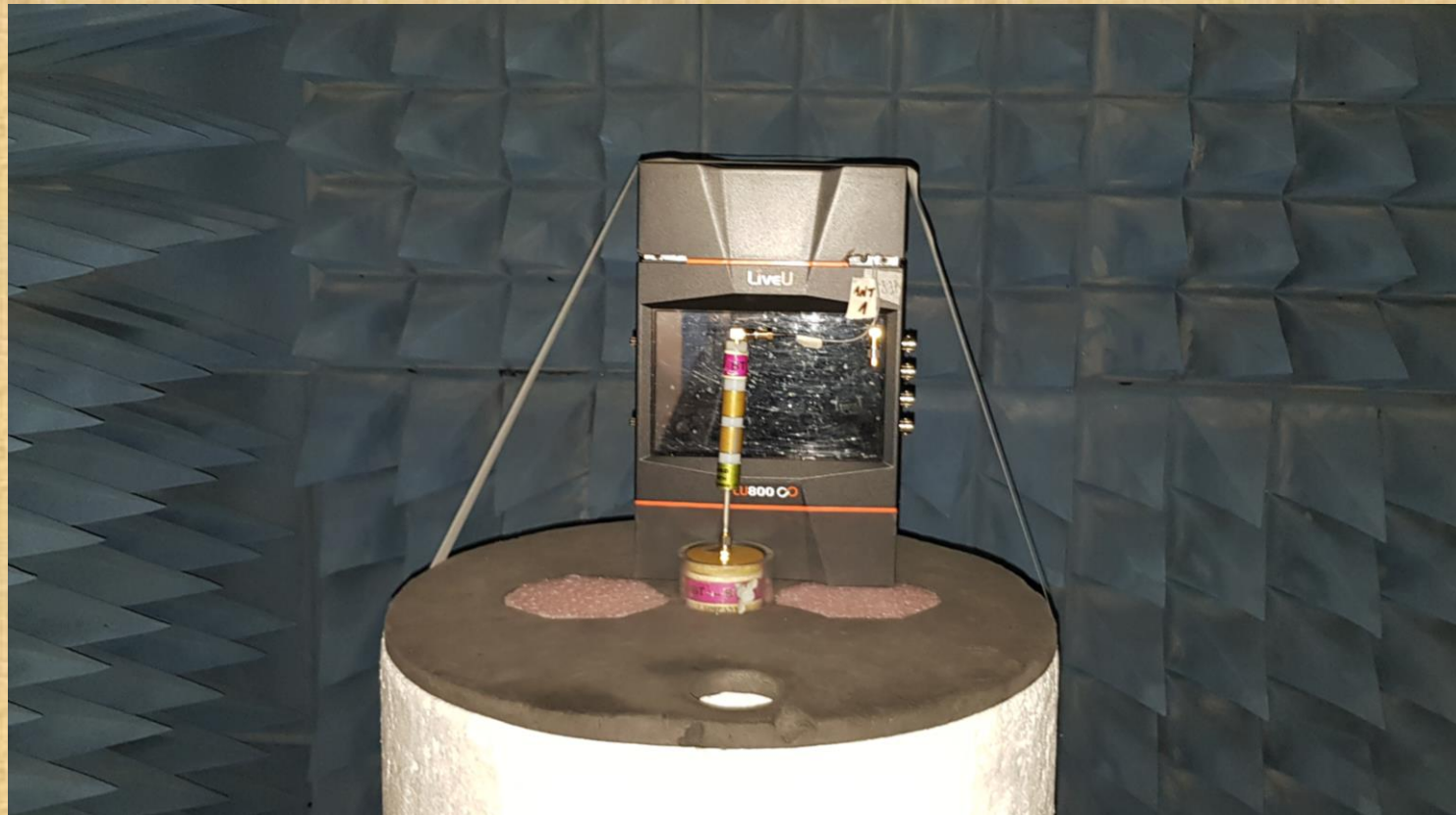
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טל: 09-8650103 סלולר: 053-7788308

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LiveU

LU800 3D Efficiency Test Set-Up



LiveU

LU800 Top Side Antenna Location



LTE ANT #2
Type: Monopole PCB
Printed Antenna
Polarization: LV & LH
Omni-Directional

Wi-Fi#2
Type: PCB Printed
Antenna Inverted F
Polarization: LV & LH
Omni-Directional

Wi-Fi#1
Type: PCB Printed
Antenna Inverted F
Polarization: LV & LH
Omni-Directional

LTE ANT #1
Type: Monopole PCB
Printed Antenna
Polarization: LV & LH
Omni-Directional

LiveU**ANT #1 Efficiency Test Results**

Band Designator	Frequency MHz	Ant EFF [%]	Ant EFF [db]	Ant peak gain [dBi]
B71 TX	663	12.86	-8.91	-3.25
B71 TX	698	18.57	-7.31	-1.68
B12 TX	699	18.33	-7.37	-1.83
B12 TX	716	18.32	-7.37	-2.35
B13 TX	777	15.25	-8.17	-3.29
B13 TX	787	15.50	-8.10	-2.91
B14 TX	788	14.84	-8.29	-3.09
B14 TX	798	15.05	-8.22	-3.08
B5 TX	824	13.79	-8.60	-3.05
B5 TX	836	12.95	-8.88	-3.28
B5 TX	849	15.74	-8.03	-2.60
B4/B66 TX	1710	30.37	-5.18	0.94
B4/B66 TX	1733	35.69	-4.47	0.61
B4/B66 TX	1755	41.81	-3.79	1.47
B2 TX	1850	38.89	-4.10	2.25
B2 TX	1880	39.43	-4.04	2.06
B2 TX	1910	44.14	-3.55	1.91

LiveU**ANT #2 Efficiency Test Results**

Band Designator	Frequency MHz	Ant EFF [%]	Ant EFF [db]	Ant peak gain [dBi]
B71 TX	663	8.15	-10.89	-5.15
B71 TX	698	12.98	-8.87	-3.19
B12 TX	699	12.71	-8.96	-3.36
B12 TX	716	13.81	-8.60	-3.85
B13 TX	777	12.19	-9.14	-3.89
B13 TX	787	12.83	-8.92	-3.61
B14 TX	788	12.31	-9.10	-3.76
B14 TX	798	12.64	-8.98	-3.96
B5 TX	824	12.31	-9.10	-4.27
B5 TX	836	11.18	-9.52	-4.68
B5 TX	849	11.88	-9.25	-4.16
B4/B66 TX	1710	34.01	-4.68	2.37
B4/B66 TX	1733	43.78	-3.59	1.21
B4/B66 TX	1755	52.03	-2.84	2.66
B2 TX	1850	39.11	-4.08	2.09
B2 TX	1880	40.92	-3.88	2.20
B2 TX	1910	41.73	-3.80	2.33

LiveU

Wi-Fi #1 Efficiency Test Results

Band Designator	Frequency, MHz	Ant EFF [%]	Ant EFF [dB]	peak gain dBi
WiFi 802.11 g	2412	42.37	-3.73	0.62
WiFi 802.11 g	2442	36.54	-4.37	0.25
WiFi 802.11 g	2484	34.95	-4.57	0.20
WiFi 802.11 a	5200	53.28	-2.73	5.28
WiFi 802.11 a	5500	44.01	-3.56	4.40
WiFi 802.11 a	5800	36.75	-4.35	3.60

LiveU**Wi-Fi #2 Efficiency Test Results**

Band Designator	Frequency, MHz	Ant EFF [%]	Ant EFF [dB]	peak gain dBi
WiFi 802.11 g	2412	49.02	-3.10	1.35
WiFi 802.11 g	2442	44.87	-3.48	0.88
WiFi 802.11 g	2484	41.71	-3.80	0.75
WiFi 802.11 a	5200	49.87	-3.02	4.27
WiFi 802.11 a	5500	43.59	-3.61	4.25
WiFi 802.11 a	5800	36.08	-4.43	3.72

LiveU

LU800 Bottom Side Antenna Location

LTE ANT #4
Type: Monopole PCB
Printed Antenna
Polarization: LV & LH
Omni-Directional

LTE ANT #6
Type: Monopole PCB
Printed Antenna
Polarization: LV & LH
Omni-Directional

Wi-Fi#4
Type: PCB Printed
Antenna Inverted F
Polarization: LV & LH
Omni-Directional

LTE ANT #5
Type: Monopole PCB
Printed Antenna
Polarization: LV & LH
Omni-Directional

Wi-Fi#3
Type: PCB Printed
Antenna Inverted F
Polarization: LV & LH
Omni-Directional

LTE ANT #3
Type: Monopole PCB
Printed Antenna
Polarization: LV & LH
Omni-Directional



LiveU

ANT #3 Efficiency Test Results

Band Designator	Frequency MHz	Ant EFF [%]	Ant EFF [db]	Ant peak gain [dBi]
LTE US	617	33.33	-4.77	-2.12
LTE US	652	32.21	-4.92	-1.73
LTE US	663	30.96	-5.09	-1.76
LTE US	698	44.14	-3.55	-0.41
LTE US	716	39.01	-4.09	-0.70
LTE US	728	39.28	-4.06	-0.77
LTE US	746	39.12	-4.08	-0.93
LTE US	758	44.40	-3.53	-0.41
LTE US	777	42.01	-3.77	-0.93
LTE US	798	38.40	-4.16	-0.69
AMPS	824	37.28	-4.29	-0.91
AMPS	836	33.54	-4.74	-1.32
AMPS	849	34.37	-4.64	-1.32
AMPS	869	34.30	-4.65	-1.21
AMPS	881	34.06	-4.68	-1.46
AMPS	894	28.10	-5.51	-2.28
GSM	915	23.21	-6.34	-3.00
GSM	925	20.67	-6.85	-2.88
GSM	943	16.27	-7.89	-3.41
GSM	960	16.54	-7.81	-2.81
LTE1500	1428	80.35	-0.95	1.99
LTE1500	1500	68.16	-1.66	1.43
DCS	1710	68.93	-1.62	2.13
DCS	1748	69.44	-1.58	2.23
DCS	1785	65.00	-1.87	2.11
DCS	1805	64.84	-1.88	2.11
DCS	1843	72.15	1.42	2.60

Band Designator	Frequency MHz	Ant EFF [%]	Ant EFF [db]	Ant peak gain [dBi]
PCS	1850	73.84	-1.32	2.55
PCS	1880	72.29	-1.41	2.03
PCS	1910	75.80	-1.20	2.57
PCS	1930	73.81	-1.32	2.54
PCS	1960	71.57	-1.45	2.78
PCS	1990	70.69	-1.51	2.99
UMTS	2110	79.28	-1.01	3.95
UMTS	2140	80.32	-0.95	4.02
UMTS	2170	75.82	-1.20	3.94
LTE US/EU	2310	75.58	-1.22	4.92
LTE US/EU	2355	69.67	-1.57	4.32
LTE US/EU	2500	60.89	-2.15	3.60
LTE US/EU	2600	60.24	-2.20	3.28
LTE US/EU	2700	61.23	-2.13	3.14
LTE US/EU	3100	70.65	-1.51	4.47
LTE US/EU	3300	58.65	-2.32	3.27
LTE US/EU	3500	56.67	-2.47	4.01
LTE US/EU	3700	67.19	-1.73	5.23
LTE US/EU	4200	69.76	-1.56	5.63
LTE US/EU	4400	68.19	-1.66	5.02
LTE US/EU	4700	57.40	-2.41	2.99
LTE US/EU	5000	61.83	-2.09	3.74
LTE US/EU	5250	62.05	-2.07	3.59
LTE US/EU	5500	56.24	-2.50	3.16
LTE US/EU	5875	42.53	-3.71	2.84

LiveU

ANT #4 Efficiency Test Results

Band Designator	Frequency MHz	Ant EFF [%]	Ant EFF [db]	Ant peak gain [dBi]
LTE US	617	29.56	-5.29	-2.91
LTE US	652	23.60	-6.27	-2.80
LTE US	663	23.74	-6.25	-2.95
LTE US	698	38.05	-4.20	-0.75
LTE US	716	35.12	-4.54	-1.26
LTE US	728	36.40	-4.39	-1.13
LTE US	746	36.52	-4.37	-1.17
LTE US	758	42.53	-3.71	-0.44
LTE US	777	41.12	-3.86	-0.03
LTE US	798	38.05	-4.20	0.01
AMPS	824	38.29	-4.17	-0.47
AMPS	836	34.79	-4.59	-0.97
AMPS	849	35.07	-4.55	-1.11
AMPS	869	34.82	-4.58	-1.43
AMPS	881	34.91	-4.57	-0.92
AMPS	894	29.55	-5.29	-1.72
GSM	915	25.09	-6.00	-1.98
GSM	925	22.35	-6.51	-2.25
GSM	943	18.38	-7.36	-3.02
GSM	960	19.11	-7.19	-2.47
LTE1500	1428	81.57	-0.88	2.44
LTE1500	1500	69.37	-1.59	2.19
DCS	1710	69.56	-1.58	1.17
DCS	1748	69.45	-1.58	1.41
DCS	1785	66.18	-1.79	0.91
DCS	1805	65.83	-1.82	0.99
DCS	1843	72.93	-1.37	1.89

Band Designator	Frequency MHz	Ant EFF [%]	Ant EFF [db]	Ant peak gain [dBi]
PCS	1850	73.97	-1.31	2.04
PCS	1880	71.54	-1.45	1.85
PCS	1910	76.08	-1.19	2.25
PCS	1930	74.54	-1.28	2.28
PCS	1960	71.73	-1.44	2.46
PCS	1990	71.66	-1.45	2.80
UMTS	2110	78.51	-1.05	4.05
UMTS	2140	80.23	-0.96	4.33
UMTS	2170	76.28	-1.18	4.17
LTE US/EU	2310	75.11	-1.24	4.46
LTE US/EU	2355	68.07	-1.67	4.05
LTE US/EU	2500	62.22	-2.06	3.88
LTE US/EU	2600	60.74	-2.17	3.59
LTE US/EU	2700	64.01	-1.94	3.61
LTE US/EU	3100	52.61	-2.79	3.22
LTE US/EU	3300	57.85	-2.38	3.60
LTE US/EU	3500	56.34	-2.49	3.46
LTE US/EU	3700	69.10	-1.61	4.99
LTE US/EU	4200	69.57	-1.58	5.66
LTE US/EU	4400	68.46	-1.65	5.11
LTE US/EU	4700	61.44	-2.12	3.99
LTE US/EU	5000	64.91	-1.88	3.88
LTE US/EU	5250	63.28	-1.99	4.29
LTE US/EU	5500	57.66	-2.39	3.04
LTE US/EU	5875	45.91	-3.38	3.41

LiveU

ANT #5 Efficiency Test Results

Band Designator	Frequency MHz	Ant EFF [%]	Ant EFF [db]	Ant peak gain [dBi]
LTE US	617	35.09	-4.55	-2.05
LTE US	652	26.14	-5.83	-2.72
LTE US	663	26.40	-5.78	-2.81
LTE US	698	40.68	-3.91	-0.75
LTE US	716	37.65	-4.24	-1.05
LTE US	728	38.73	-4.12	-0.94
LTE US	746	39.80	-4.00	-0.69
LTE US	758	45.69	-3.40	-0.36
LTE US	777	43.14	-3.65	-0.87
LTE US	798	39.60	-4.02	-0.69
AMPS	824	38.32	-4.17	-0.91
AMPS	836	34.57	-4.61	-1.28
AMPS	849	34.90	-4.57	-1.33
AMPS	869	34.76	-4.59	-1.65
AMPS	881	34.24	-4.65	-1.51
AMPS	894	27.94	-5.54	-2.02
GSM	915	23.77	-6.24	-2.49
GSM	925	20.96	-6.79	-2.86
GSM	943	16.62	-7.79	-3.49
GSM	960	17.05	-7.68	-2.78
LTE1500	1428	80.28	-0.95	1.88
LTE1500	1500	68.34	-1.65	1.00
DCS	1710	68.48	-1.64	2.11
DCS	1748	69.10	-1.61	1.86
DCS	1785	65.03	-1.87	1.62
DCS	1805	65.17	-1.86	1.67
DCS	1843	72.55	-1.39	2.30

Band Designator	Frequency MHz	Ant EFF [%]	Ant EFF [db]	Ant peak gain [dBi]
PCS	1850	72.69	-1.39	2.37
PCS	1880	69.62	-1.57	2.35
PCS	1910	75.60	-1.21	3.03
PCS	1930	72.94	-1.37	2.99
PCS	1960	70.13	-1.54	3.14
PCS	1990	68.55	-1.64	3.26
UMTS	2110	76.01	-1.19	4.32
UMTS	2140	77.61	-1.10	4.48
UMTS	2170	73.88	-1.31	4.23
LTE US/EU	2310	73.60	-1.33	4.72
LTE US/EU	2355	68.12	-1.67	4.40
LTE US/EU	2500	60.88	-2.16	3.76
LTE US/EU	2600	59.87	-2.23	3.45
LTE US/EU	2700	62.78	-2.02	3.59
LTE US/EU	3100	71.31	-1.47	4.51
LTE US/EU	3300	58.26	-2.35	3.38
LTE US/EU	3500	54.70	-2.62	3.17
LTE US/EU	3700	67.23	-1.72	4.88
LTE US/EU	4200	68.30	-1.66	5.65
LTE US/EU	4400	66.41	-1.78	4.93
LTE US/EU	4700	58.08	-2.36	3.50
LTE US/EU	5000	64.58	-1.90	4.15
LTE US/EU	5250	65.98	-1.81	4.34
LTE US/EU	5500	56.70	-2.46	3.39
LTE US/EU	5875	45.04	-3.46	3.82

LiveU

ANT #6 Efficiency Test Results

Band Designator	Frequency MHz	Ant EFF [%]	Ant EFF [db]	Ant peak gain [dBi]
LTE US	617	28.62	-5.43	-2.50
LTE US	652	26.73	-5.73	-2.45
LTE US	663	26.10	-5.83	-2.53
LTE US	698	38.87	-4.10	-0.87
LTE US	716	35.40	-4.51	-1.33
LTE US	728	36.39	-4.39	-1.26
LTE US	746	36.28	-4.40	-1.22
LTE US	758	42.41	-3.73	-0.43
LTE US	777	41.16	-3.86	-0.30
LTE US	798	36.17	-4.42	-0.35
AMPS	824	37.69	-4.24	-0.86
AMPS	836	34.42	-4.63	-1.20
AMPS	849	34.29	-4.65	-1.29
AMPS	869	34.27	-4.65	-1.23
AMPS	881	34.61	-4.61	-1.01
AMPS	894	29.32	-5.33	-1.48
GSM	915	24.67	-6.08	-1.91
GSM	925	22.17	-6.54	-2.31
GSM	943	18.35	-7.36	-3.18
GSM	960	18.64	-7.30	-2.60
LTE1500	1428	80.47	-0.94	2.16
LTE1500	1500	68.60	-1.64	1.68
DCS	1710	70.35	-1.53	1.09
DCS	1748	71.44	-1.46	1.10
DCS	1785	68.16	-1.66	1.48
DCS	1805	68.13	-1.67	1.67
DCS	1843	76.16	-1.18	2.13

Band Designator	Frequency MHz	Ant EFF [%]	Ant EFF [db]	Ant peak gain [dBi]
PCS	1850	76.25	-1.18	2.22
PCS	1880	73.74	-1.32	2.45
PCS	1910	75.35	-1.23	2.69
PCS	1930	73.67	-1.33	2.53
PCS	1960	71.04	-1.48	2.54
PCS	1990	69.47	-1.58	2.78
UMTS	2110	78.49	-1.05	4.09
UMTS	2140	79.45	-1.00	4.50
UMTS	2170	75.46	-1.22	4.38
LTE US/EU	2310	76.11	-1.19	4.42
LTE US/EU	2355	69.58	-1.58	3.97
LTE US/EU	2500	61.42	-2.12	3.35
LTE US/EU	2600	61.37	-2.12	3.25
LTE US/EU	2700	62.46	-2.04	3.38
LTE US/EU	3100	69.18	-1.60	4.27
LTE US/EU	3300	56.02	-2.52	3.09
LTE US/EU	3500	54.65	-2.62	3.37
LTE US/EU	3700	67.44	-1.71	4.97
LTE US/EU	4200	68.52	-1.64	5.71
LTE US/EU	4400	68.32	-1.65	5.26
LTE US/EU	4700	60.61	-2.17	3.91
LTE US/EU	5000	64.63	-1.90	3.43
LTE US/EU	5250	63.40	-1.98	4.00
LTE US/EU	5500	57.30	-2.42	4.00
LTE US/EU	5875	46.86	-3.29	3.35

LiveU**Wi-Fi #3 Efficiency Test Results**

Band Designator	Frequency, MHz	Ant EFF [%]	Ant EFF [dB]	peak gain dBi
WiFi 802.11 g	2412	73.23	-1.35	4.18
WiFi 802.11 g	2442	63.56	-1.97	3.39
WiFi 802.11 g	2484	65.92	-1.81	3.40
WiFi 802.11 a	4900	63.61	-1.96	6.05
WiFi 802.11 a	5000	64.67	-1.89	6.18
WiFi 802.11 a	5100	67.92	-1.68	6.25
WiFi 802.11 a	5200	69.19	-1.60	6.18
WiFi 802.11 a	5300	72.83	-1.38	6.55
WiFi 802.11 a	5400	65.61	-1.83	6.10
WiFi 802.11 a	5500	62.77	-2.02	5.63
WiFi 802.11 a	5600	64.75	-1.89	5.35
WiFi 802.11 a	5700	55.64	-2.55	4.56
WiFi 802.11 a	5800	46.97	-3.28	3.52
WiFi 802.11 a	5900	44.25	-3.54	3.07

LiveU**Wi-Fi #4 Efficiency Test Results**

Band Designator	Frequency, MHz	Ant EFF [%]	Ant EFF [dB]	peak gain dBi
WiFi 802.11 g	2412	74.59	-1.27	3.38
WiFi 802.11 g	2442	64.62	-1.90	3.04
WiFi 802.11 g	2484	67.65	-1.70	3.07
WiFi 802.11 a	4900	63.61	-1.96	6.00
WiFi 802.11 a	5000	65.30	-1.85	6.08
WiFi 802.11 a	5100	68.49	-1.64	6.23
WiFi 802.11 a	5200	67.99	-1.68	6.10
WiFi 802.11 a	5300	70.61	-1.51	6.23
WiFi 802.11 a	5400	63.72	-1.96	5.58
WiFi 802.11 a	5500	60.97	-2.15	5.22
WiFi 802.11 a	5600	63.33	-1.98	5.23
WiFi 802.11 a	5700	55.00	-2.60	4.50
WiFi 802.11 a	5800	47.29	-3.25	3.62
WiFi 802.11 a	5900	43.97	-3.57	3.04