

Annex 1: Measurement diagrams to
TEST REPORT
 No.: 17-1-0180901T13

According to:

FCC Regulations
 Part 15.107
 Part 15.109

ISED Regulations
 ICES-003, Issue 6
 RSS-Gen, Issue 4

for

Datalogic S.r.l.

FALCON X4
 Type:E00ANM4HS0GF0A4

FCC ID: U4GFX4WB

IC: 3862E-FX4WB

PMN: FALCON X4 | HVIN: FX4 WB GUN | FVIN: Not Applicable







Laboratory Accreditation and Listings			
 DAkks Deutsche Akkreditierungsstelle D-PL-12047-01-01	 FCC FEDERAL COMMUNICATIONS COMMISSION USA MRA US-EU 0003	 Industry Canada Reg. No.: 3462D-1 Reg. No.: 3462D-2 Reg. No.: 3462D-3	 Voluntary Controls for Electromagnetic Emissions Reg. No.: R-2666 C-2914, T-1967, G-301
 WiFi ALLIANCE AUTHORIZED RF LABORATORY	 ctia Authorized TM Test Lab Lab Code: 20011130-00		
accredited according to DIN EN ISO/IEC 17025			
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1. Radiated Field Strength Measurements

1.1. Conducted Emissions on AC-Power lines – 150kHz to 30 MHz

Diagram No.: 1.01 Mode 1

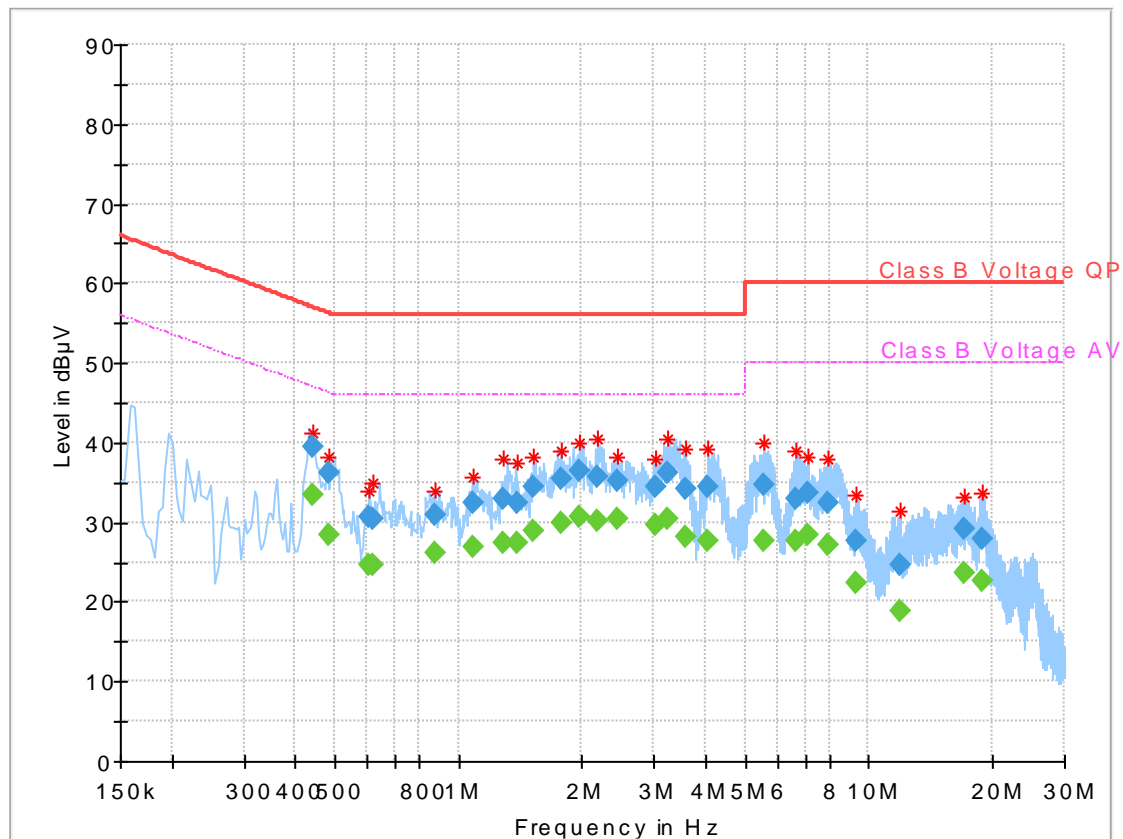
Common Information

Test Description:	Conducted Voltage Measurement Class B
Test Site & Location:	Conducted Emission, CETECOM GmbH Essen
Test Software:	R&S EMC32 v9.15
Test Specification:	FCC 15.109 Class B RSS-Gen. Issue 4 ICES-003 Issue 6 Class B
Operating Mode:	Mode 4
Measured on line:	N/LI
Diagram details:	Shows the peak values as a sum of measured ports in maxhold mode
Environmental Conditions:	Humidity: 42%rH; Temperature: 20°C
Operator:	TFra
Comments:	

EUT Information

Manufacturer:	Datalogic S.r.l.
EUT MODEL:	FALCON X4
EuT Type:	E00ANM4HS0GF0A4
P/N:	945550001
S/N:	Z17P02008
HW Version:	BETA
SW Version:	Android 4.4.4
Firmware Version:	2.01.46.20180109
Input:	empty Internal Battery charging
Battery Type:	BT-26 Li-ion 3.7V DC 5200mAh (2 Cylindrical Cells)

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBµV)	CAverage (dBµV)	Limit (dBµV)
0.440469	---	33.50	47.05
0.440469	39.57	---	57.05
0.485156	36.10	---	56.25
0.485156	---	28.34	46.25
0.604531	30.76	---	56.00
0.604531	---	24.69	46.00
0.619688	---	24.70	46.00
0.619688	30.47	---	56.00
0.879688	30.99	---	56.00
0.879688	---	26.03	46.00
1.086094	---	26.99	46.00
1.086094	32.39	---	56.00
1.291563	32.99	---	56.00
1.291563	---	27.43	46.00
1.387969	32.51	---	56.00
1.387969	---	27.45	46.00
1.529219	---	28.82	46.00
1.529219	34.55	---	56.00
1.779219	---	29.87	46.00
1.779219	35.50	---	56.00
1.976250	36.49	---	56.00
1.976250	---	30.65	46.00
2.173750	---	30.11	46.00
2.173750	35.80	---	56.00
2.428750	---	30.35	46.00
2.428750	35.27	---	56.00
3.032500	---	29.54	46.00
3.032500	34.43	---	56.00
3.217344	---	30.38	46.00
3.217344	36.18	---	56.00
3.582813	---	28.24	46.00
3.582813	34.28	---	56.00
4.043750	---	27.53	46.00
4.043750	34.42	---	56.00
5.549375	34.76	---	60.00
5.549375	---	27.55	50.00
6.622969	32.99	---	60.00
6.622969	---	27.61	50.00
7.119063	33.65	---	60.00
7.119063	---	28.30	50.00
7.958906	32.54	---	60.00
7.958906	---	27.18	50.00
9.276406	---	22.30	50.00
9.276406	27.75	---	60.00
11.918750	---	18.82	50.00
11.918750	24.58	---	60.00
17.063281	---	23.63	50.00
17.063281	29.06	---	60.00
18.982813	---	22.63	50.00
18.982813	27.95	---	60.00

1.2. Radiated Field Strength Emissions – 30 MHz to 1 GHz

Diagram No. 3.01 Mode 1

Date:	23.10.2017	Page 1 of 1
Test description:	Electric Field Strength Measurement	
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3m measurement distance	
Version of Testsoftware:	EMC32 V9.25.0	
Distance correction:	not used	
Technical Data:	Please see page 2 for detailed data of measurement setup	
Used filter:	not used	
Test specification:	FCC15.109, class B; RSS-Gen.: Issue 4	
Operator:	HLa	
Operating conditions:	Mode 1	
Measured sides of EUT:	front, right, rear, left	
Power during tests:	full loaded batteries	

EUT Information

Manufacturer:	Datalogic S.r.l.
EUT MODEL:	FALCON X4
EuT Type:	E00ANM4HS0GF0A4
P/N:	945550001
S/N:	Z17P02008
HW Version:	BETA
SW Version:	Android 4.4.4
Firmware Version:	2.01.46.20180109
Input:	fully Internal Battery charging
Battery Type:	BT-26 Li-ion 3.7V DC 5200mAh (2 Cylindrical Cells)

Final Result

Frequency (MHz)	Quasi Peak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
124.810000	24.09	43.5	19.41	15000.0	120.000	171.0	H	95.0	0.0	3.1
156.800000	23.65	43.5	19.85	15000.0	120.000	126.0	H	119.0	90.0	2.9
169.650000	18.39	43.5	25.11	15000.0	120.000	191.0	H	91.0	0.0	1.8
960.150000	32.00	46.0	14.00	15000.0	120.000	134.0	V	306.0	90.0	17.1

Full Spectrum

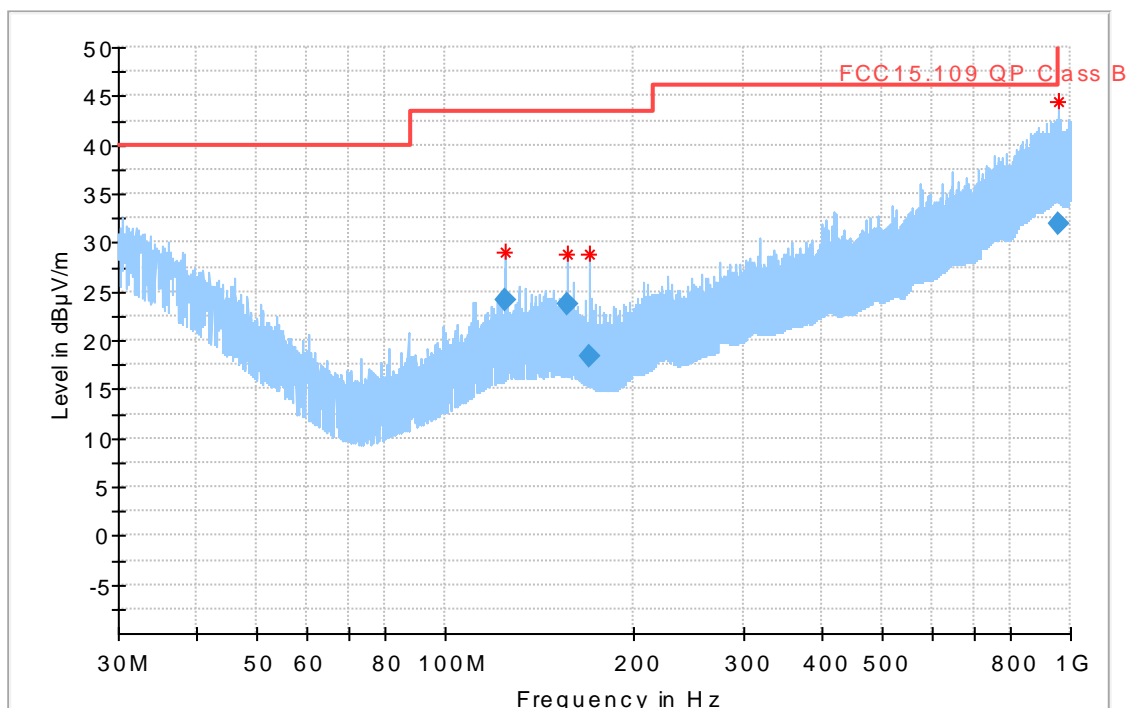


Diagram No. 3.02 Mode 2

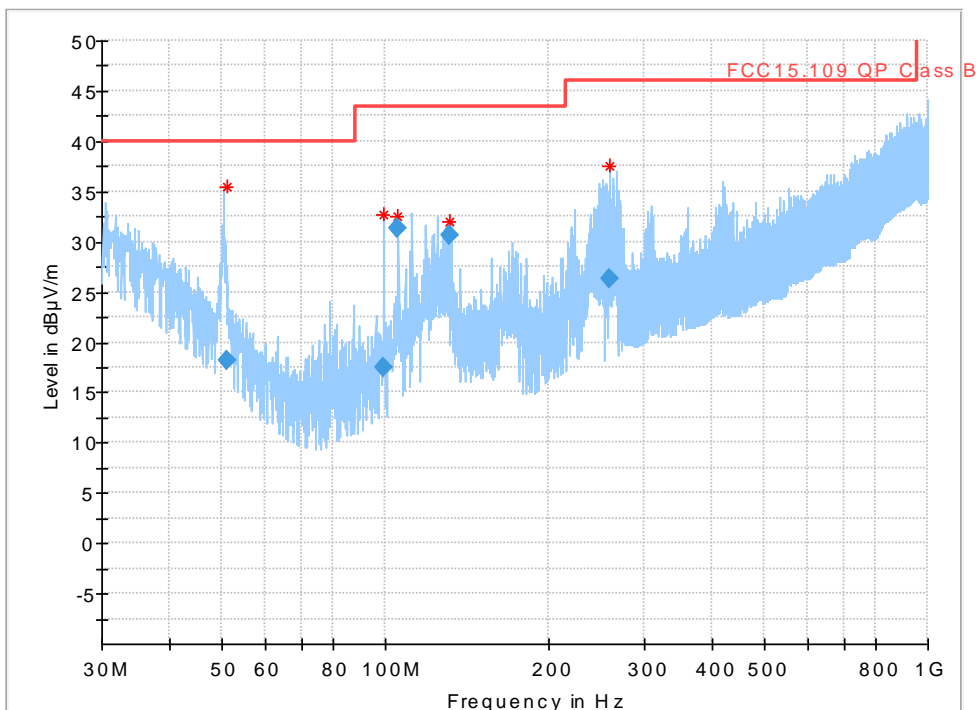
Test description: Electric Field Strength Measurement
 Test site and distance: Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3m measurement distance
 Version of Testsoftware: EMC32 V9.25.0
 Distance correction: not used
 Technical Data: Please see page 2 for detailed data of measurement setup
 Used filter: not used
 Test specification: FCC15.109, class B; RSS-Gen.: Issue 4

Operator: HLa
 Operating conditions: Mode 2
 Measured sides of EUT: front, right, rear, left
 Power during tests: full loaded batteries

EUT Information

Manufacturer: Datalogic S.r.l.
 EUT MODEL: FALCON X4
 EuT Type: E00ANM4HS0GF0A4
 P/N: 945550001
 S/N: Z17P02008
 HW Version: BETA
 SW Version: Android 4.4.4
 Firmware Version: 2.01.46.20180109
 Input: fully Internal Battery charging
 Battery Type: BT-26 | Li-ion|3.7V DC 5200mAh (2 Cylindrical Cells)

Full Spectrum



Final_Result

Frequency (MHz)	Quasi Peak (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
51.180000	18.19	40.0	21.81	15000.0	120.000	125.0	H	134.0	0.0	4.3
99.170000	17.43	43.5	26.07	15000.0	120.000	220.0	V	201.0	90.0	0.4
105.590000	31.27	43.5	12.23	15000.0	120.000	105.0	V	248.0	0.0	1.1
131.200000	30.65	43.5	12.85	15000.0	120.000	222.0	H	313.0	0.0	3.1
259.610000	26.23	46.0	19.77	15000.0	120.000	121.0	H	84.0	90.0	4.5

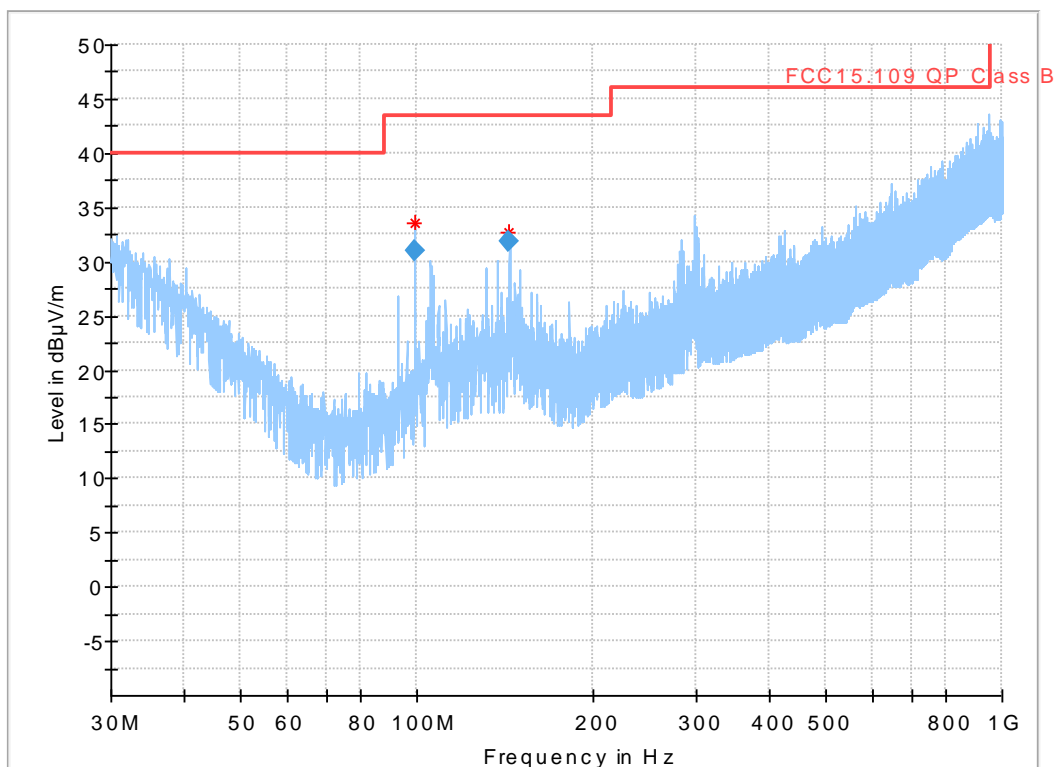
Diagram No. 3.03 Mode 3

Date:	24.10.2017	Page 1 of 2
Test description:	Electric Field Strength Measurement	
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3m measurement distance	
Version of Testsoftware:	EMC32 V9.25.0	
Distance correction:	not used	
Technical Data:	Please see page 2 for detailed data of measurement setup	
Used filter:	not used	
Test specification:	FCC15.109, class B; RSS-Gen.: Issue 4	
Operator:	HLa	
Operating conditions:	Mode 3	
Measured sides of EUT:	front, right, rear, left	
Power during tests:	full loaded batteries	

EUT Information

Manufacturer:	Datalogic S.r.l.
EUT MODEL:	FALCON X4
EuT Type:	E00ANM4HS0GF0A4
P/N:	945550001
S/N:	Z17P02008
HW Version:	BETA
SW Version:	Android 4.4.4
Firmware Version:	2.01.46.20180109
Input:	fully Internal Battery charging
Battery Type:	BT-26 Li-ion 3.7V DC 5200mAh (2 Cylindrical Cells)

Full Spectrum



Final Result

Frequency (MHz)	QuasiPeak (dBµV/m)	Limit (dBµV/m)	Margi n (dB)	Meas. Time (ms)	Bandwidt h (kHz)	Heigh t (cm)	Pol	Azimet h (deg)	Elevatio n (deg)	Corr . (dB)
99.190000	30.92	40.00	12.58	15000.0	120.000	216.0	H	143.0	0.0	0.4
143.960000	31.82	40.00	11.68	15000.0	120.000	142.0	H	279.0	90.0	3.1

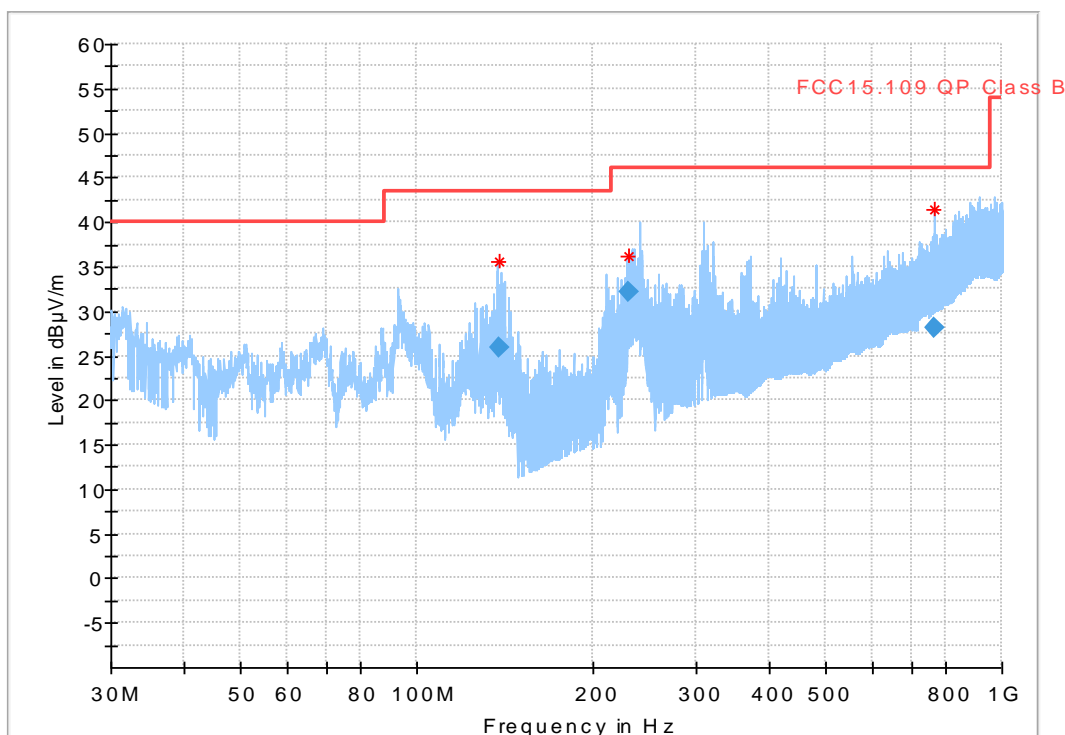
Diagram No. 3.04 Mode 4

Test description:	Electric Field Strength Measurement
Test site and distance:	Ref.-Nr. 441 Semi Anechoic Room (SAR) with 3m measurement distance
Version of Testsoftware:	EMC32 V9.25.0
Distance correction:	not used
Technical Data:	Please see page 2 for detailed data of measurement setup
Used filter:	not used
Test specification:	FCC15.109, class B; RSS-Gen.: Issue 4
Operator:	HLa
Operating conditions:	Mode 4
Measured sides of EUT:	front, right, rear, left
Power during tests:	120 V AC 60 Hz

EUT Information

Manufacturer:	Datalogic S.r.l.
EUT MODEL:	FALCON X4
EuT Type:	E00ANM4HS0GF0A4
P/N:	945550001
S/N:	Z17P02008
HW Version:	BETA
SW Version:	Android 4.4.4
Firmware Version:	2.01.46.20180109
Input:	fully Internal Battery charging
Battery Type:	BT-26 Li-ion 3.7V DC 5200mAh (2 Cylindrical Cells)

Full Spectrum



Final Result

Frequency (MHz)	Quasi Peak (dBµV /m)	Limit (dBµV /m)	Margin (dB)	Bandwidth h (kHz)	Height (cm)	Pol	Azimuth (deg)	Corr (dB)
138.240000	25.97	43.50	17.53	120.000	109.0	V	203.0	-1.3
229.980000	32.20	46.00	13.80	120.000	126.0	H	256.0	2.4
764.680000	28.08	46.00	17.92	120.000	117.0	H	197.0	14.2

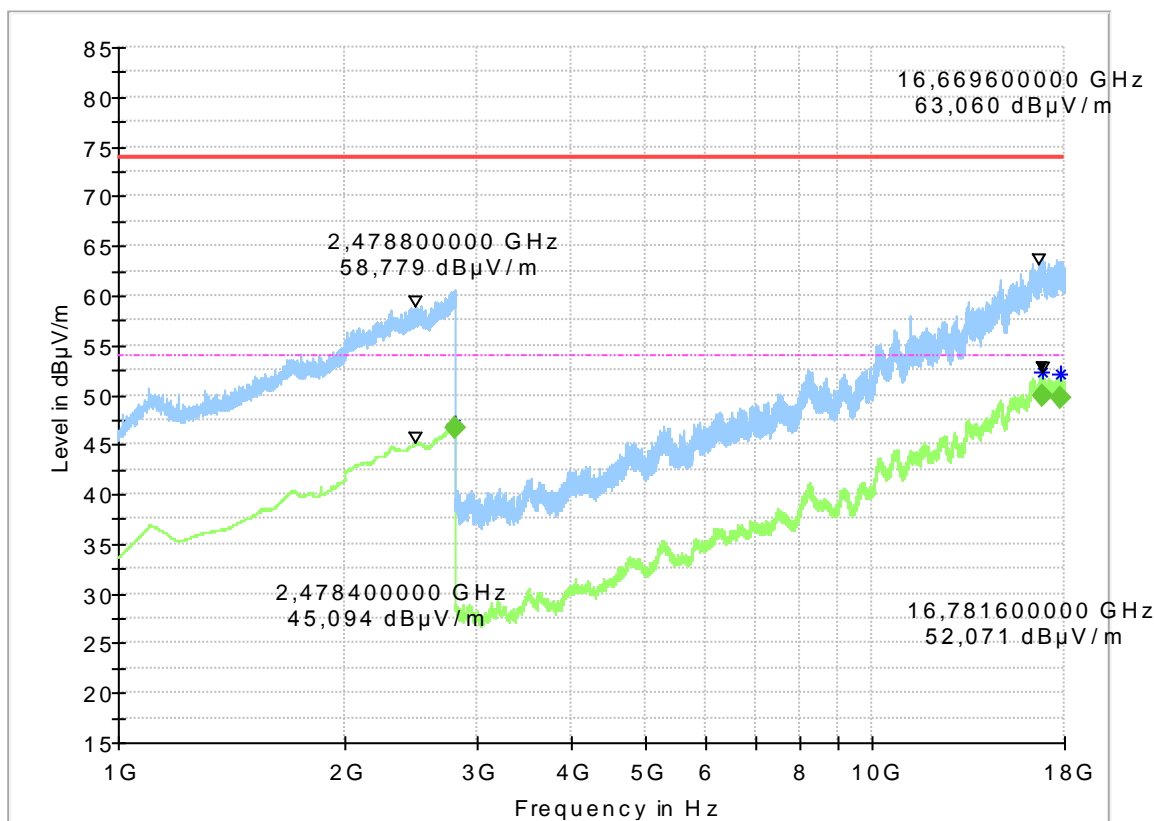
1.3. Radiated Field Strength Emissions – 1 GHz to 18 GHz Diagram No. 4.01 Mode 1

Test Description: Radiated Field Strength Emission
 Test Site Location: CETECOM GmbH Essen
 Test Site: Fully Anechoic Room (FAR)
 Test Standard: FCC Part 15.109, class B / RSS-Gen., Issue 4
 Operating Mode: Mode 1:EUT Stand alone + Test with full batteries, barcode reading 1scan/s
 Equipment Class: Class B
 Environmental Conditions: Humidity: 48%rH; Temperature: 20°C
 Operator: KlV

EUT Information

Manufacturer: Datalogic S.r.l.
 EUT MODEL: FALCON X4
 EuT Type: E00ANM4HS0GF0A4
 P/N: 945550001
 S/N: Z17P02008
 HW Version: BETA
 SW Version: Android 4.4.4
 Firmware Version: 2.01.46.20180109
 Input: fully charged Internal Battery
 Battery Type: BT-26 | Li-ion|3.7V DC 5200mAh (2 Cylindrical Cells)

Full Spectrum



Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
2790.620000	---	46.76	54.00	7.24	100.0	1000.000	V	157.0	0.0	38.4
16835.140000	---	49.85	54.00	4.15	100.0	1000.000	V	143.0	0.0	26.3
17764.140000	---	49.68	54.00	4.32	100.0	1000.000	H	62.0	0.0	26.4

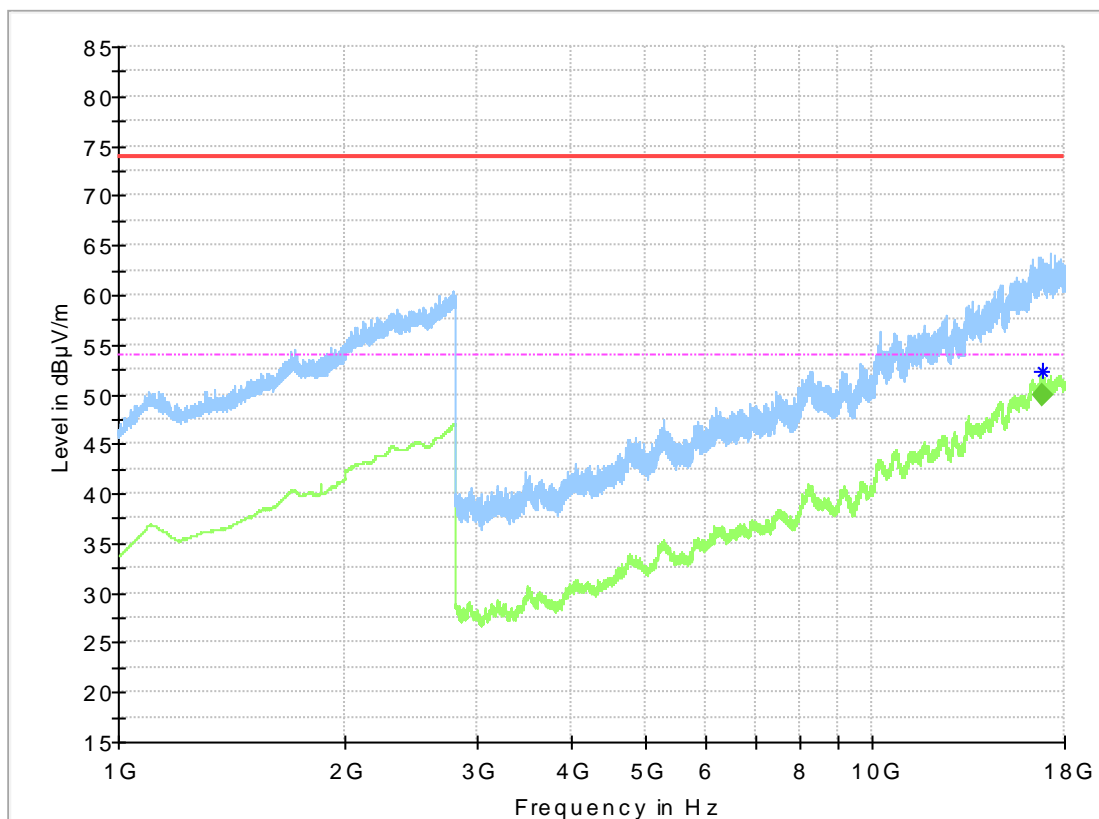
Diagram No. 4.02 Mode 2

Test Description:	Radiated Filed Strength Emission
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 15.109, class B / RSS-Gen., Issue 4
Operating Mode:	Mode 2
Equipment Class:	Class B
Environmental Conditions:	Humidity: 48%rH; Temperature: 20°C
Operator:	Klv

EUT Information

Manufacturer:	Datalogic S.r.l.
EUT MODEL:	FALCON X4
EuT Type:	E00ANM4HS0GF0A4
P/N:	945550001
S/N:	Z17P02008
HW Version:	BETA
SW Version:	Android 4.4.4
Firmware Version:	2.01.46.20180109
Input:	fully charged Internal Battery
Battery Type:	BT-26 Li-ion 3.7V DC 5200mAh (2 Cylindrical Cells)

Full Spectrum



Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
16810.820000	---	49.96	54.00	4.04	100.0	1000.000	V	263.0	90.0	26.4

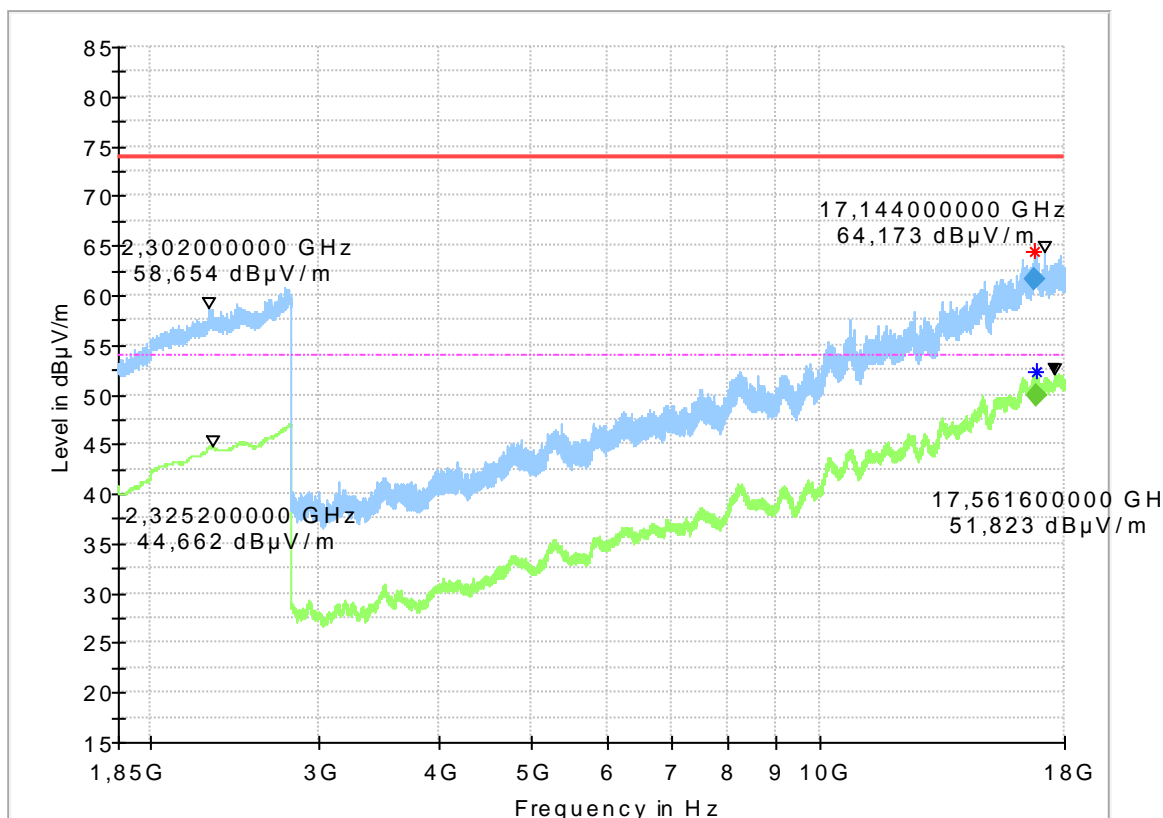
Diagram No. 4.03 Mode 3

Test Description:	Radiated Field Strength Emission
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 15.109, class B / RSS-Gen., Issue 4
Operating Mode:	Mode 3: With Host PC + Test with full batteries, handylink -RS232 connection to host PC using PUTTY, barcode reading 1scan/s
Equipment Class:	Class B
Environmental Conditions:	Humidity: 48%rH; Temperature: 20°C
Operator:	HEI

EUT Information

Manufacturer:	Datalogic S.r.l.
EUT MODEL:	FALCON X4
EuT Type:	E00ANM4HS0GF0A4
P/N:	945550001
S/N:	Z17P02008
HW Version:	BETA
SW Version:	Android 4.4.4
Firmware Version:	2.01.46.20180109
Input:	fully charged Internal Battery
Battery Type:	BT-26 Li-ion 3.7V DC 5200mAh (2 Cylindrical Cells)

Full Spectrum



Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Meas. Time	Bandwidth (kHz)	Pol	Azimuth (deg)	Elevation (deg)	Corr. (dB)
16768.060000	61.54	---	74.00	12.46	100.0	1000.000	H	149.0	0.0	26.4
16789.180000	---	49.88	54.00	4.12	100.0	1000.000	V	7.0	0.0	26.4

Diagram No. 4.04 Mode 4

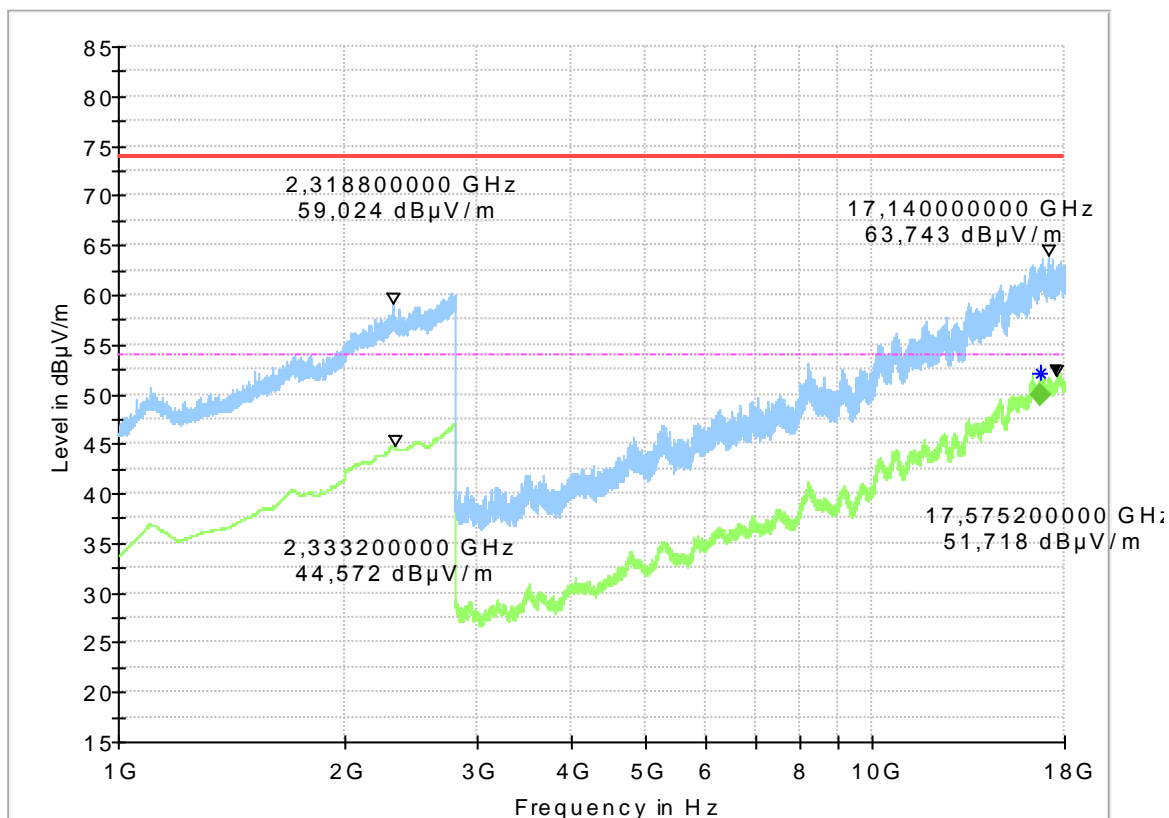
Common Information

Test Description:	Radiated Field Strength Emission
Test Site Location:	CETECOM GmbH Essen
Test Site:	Fully Anechoic Room (FAR)
Test Standard:	FCC Part 15.109, class B / RSS-Gen., Issue 4
Operating Mode:	Mode 4: With Cradle + Test with empty discharged batteries, inserted into single slot cradle, connected to host PC RS232 with PUTTY and USB with ADB
Equipment Class:	Class B
Environmental Conditions:	Humidity: 48%rH; Temperature: 20°C
Operator:	HEI

EUT Information

Manufacturer:	Datalogic S.r.l.
EUT MODEL:	FALCON X4
EuT Type:	E00ANM4HS0GF0A4
P/N:	945550001
S/N:	Z17P02008
HW Version:	BETA
SW Version:	Android 4.4.4
Firmware Version:	2.01.46.20180109
Input:	fully charged Internal Battery
Battery Type:	BT-26 Li-ion 3.7V DC 5200mAh (2 Cylindrical Cells)

Full Spectrum



Final Result

Frequency (MHz)	MaxPeak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margi n (dB)	Meas . Time	Bandwid th (kHz)	Pol	Azimat h (deg)	Elevatio n (deg)	Corr . (dB)
16766.420000	---	49.88	54.00	4.12	100.0	1000.000	H	341.0	0.0	26.4

1.4. Radiated Field Strength Emissions – 18 GHz to 40 GHz Diagram No.: 4.01a Mode 1

Common Information

Test Description:	Radiated field strength emission in 1m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC15.109, Class B RSS-Gen. Issue 4 ICES-003 Issue 6 Class B
Antenna polarisation:	horizontal/vertical
Distance correction factor	3 to 1m: -10.5 dB applying to measurement results
SW-Version:	EMC32 V8.53.0
Operation mode:	TX mode continuous
Operator Name:	TFR
Operating conditions:	Mode 1

EUT Information

Manufacturer:	Datalogic S.r.l.
EUT MODEL:	FALCON X4
EuT Type:	E00ANM4HS0GF0A4
P/N:	945550001
S/N:	Z17P02008
HW Version:	BETA
SW Version:	Android 4.4.4
Firmware Version:	2.01.46.20180109
Input:	fully charged Internal Battery
Battery Type:	BT-26 Li-ion 3.7V DC 5200mAh (2 Cylindrical Cells)

EMIScan_18_40GHz_Pre

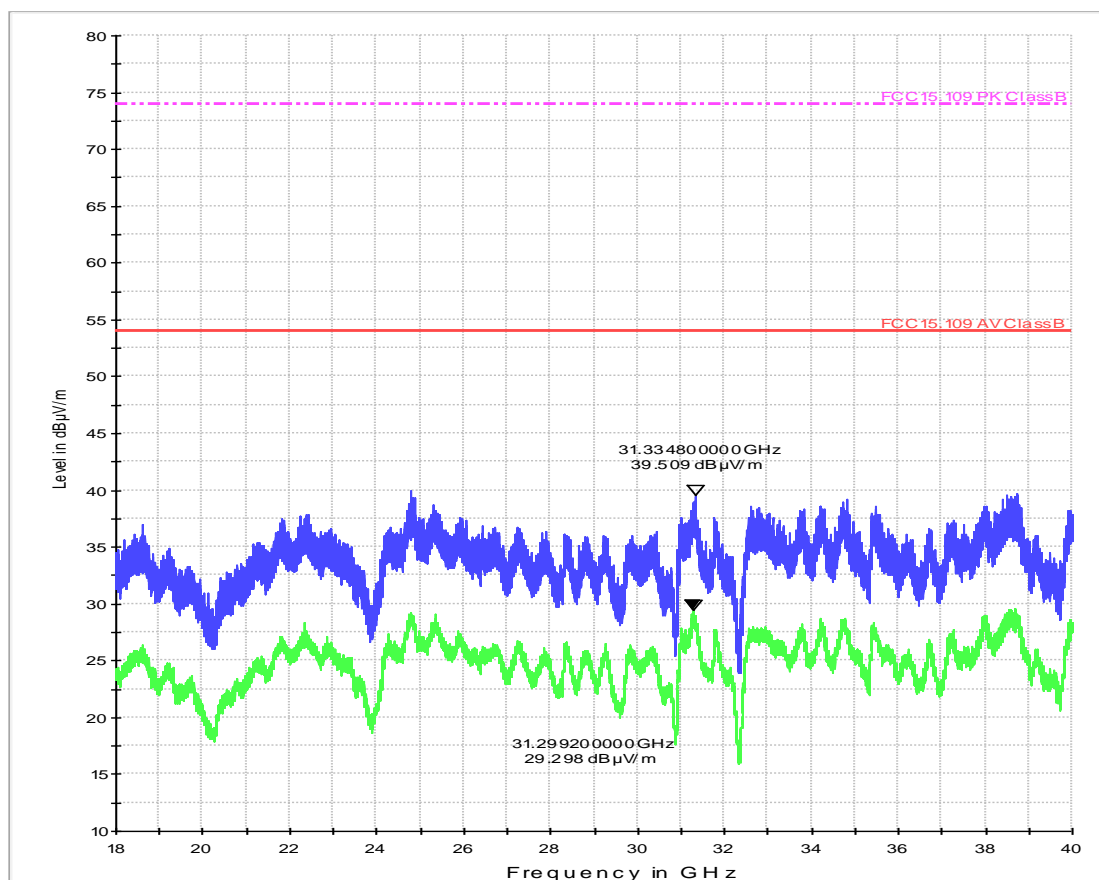


Diagram No.: 4.02a Mode 2**Common Information**

Test Description:	Radiated field strength emission in 1m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC15.109, Class B RSS-Gen. Issue 4 ICES-003 Issue 6 Class B
Antenna polarisation:	horizontal/vertical
Distance correction factor	3 to 1m: -10.5 dB applying to measurement results
SW-Version:	EMC32 V8.53.0
Operation mode:	TX mode continuous
Operator Name:	TFr
Operating conditions:	mode 2

EUT Information

Manufacturer:	Datalogic S.r.l.
EUT MODEL:	FALCON X4
EuT Type:	E00ANM4HS0GF0A4
P/N:	945550001
S/N:	Z17P02008
HW Version:	BETA
SW Version:	Android 4.4.4
Firmware Version:	2.01.46.20180109
Input:	fully charged Internal Battery
Battery Type:	BT-26 Li-ion 3.7V DC 5200mAh (2 Cylindrical Cells)

EMI Scan_18_40GHz_Pre

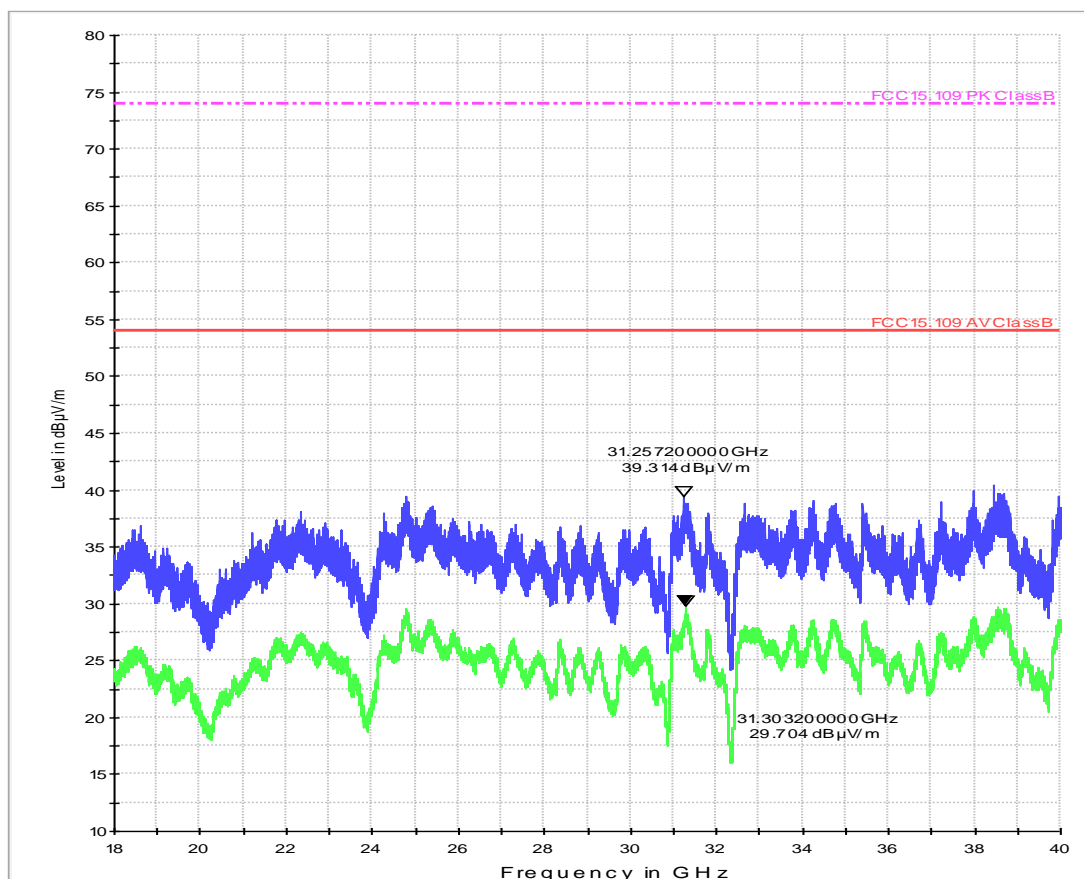


Diagram No.: 4.03a Mode 3

Common Information

Test Description:	Radiated field strength emission in 1m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC15.109, Class B RSS-Gen. Issue 4 ICES-003 Issue 6 Class B
Antenna polarisation:	horizontal/vertical
Distance correction factor	3 to 1m: -10.5 dB applying to measurement results
SW-Version:	EMC32 V8.53.0
Operation mode:	TX mode continuous
Operator Name:	TFr
Operating conditions:	Mode 3

EUT Information

Manufacturer:	Datalogic S.r.l.
EUT MODEL:	SKORPIO X4
EuT Type:	00ANM4HS0GF0A4
P/N:	942600012
S/N:	Z16P01742
HW Version:	BETA
SW Version:	Android 4.4.4
Firmware Version:	2.00.29
Input:	Fully charged Internal Battery
Battery Type:	BT-0016 Li-ion 3.7V DC 5200mAh (2 Cylindrical Cells)

EMIScan_18_40GHz_Pre

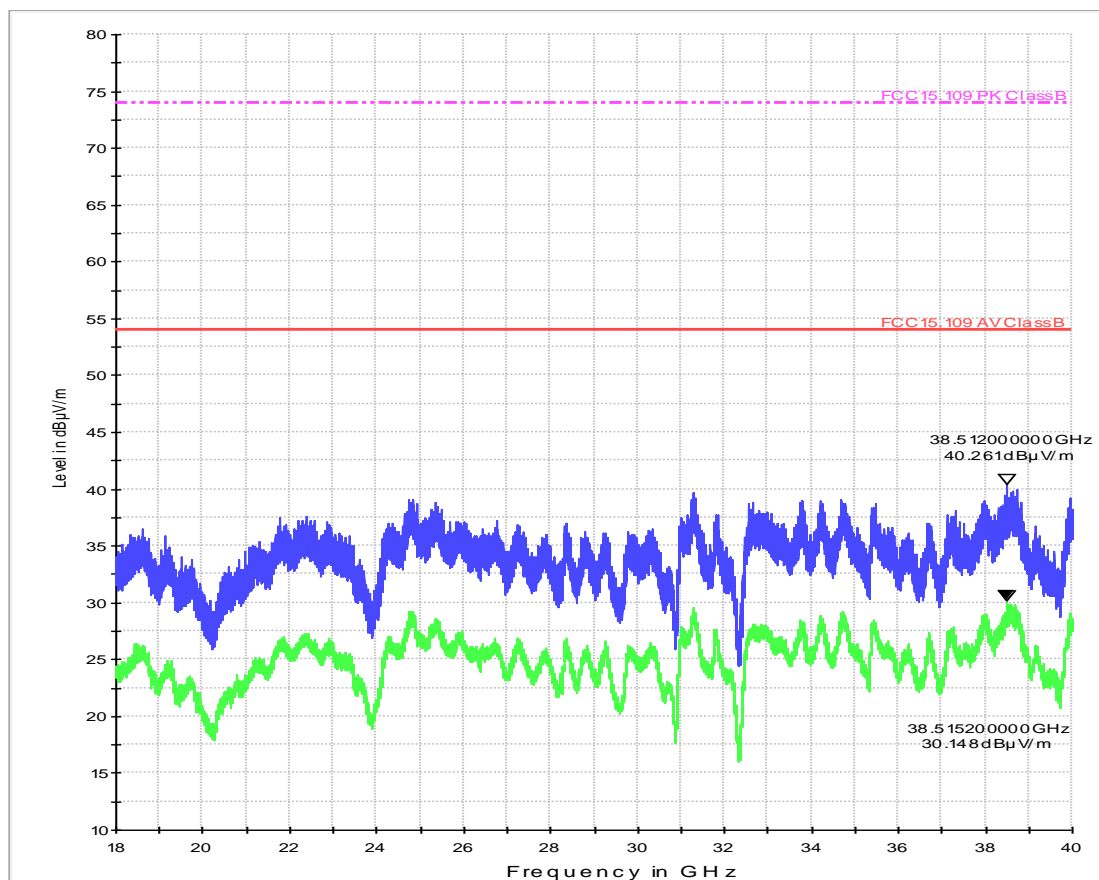


Diagram No.: 4.04a Mode 4**Common Information**

Test Description:	Radiated field strength emission in 1m distance
Test Site:	CETECOM GmbH Essen
Test Standard:	FCC15.109, Class B RSS-Gen. Issue 4 ICES-003 Issue 6 Class B
Antenna polarisation:	horizontal/vertical
Distance correction factor	3 to 1m: -10.5 dB applying to measurement results
SW-Version:	EMC32 V8.53.0
Operation mode:	TX mode continuous
Operator Name:	TFR
Operating conditions:	Mode 4

EUT Information

Manufacturer:	Datalogic S.r.l.
EUT MODEL:	FALCON X4
EuT Type:	E00ANM4HS0GF0A4
P/N:	945550001
S/N:	Z17P02008
HW Version:	BETA
SW Version:	Android 4.4.4
Firmware Version:	2.01.46.20180109
Input:	fully charged Internal Battery
Battery Type:	BT-26 Li-ion 3.7V DC 5200mAh (2 Cylindrical Cells)

EMI Scan_18_40GHz_Pre

