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Date: **June 10, 2014**

RF exposure analysis for the equipment LE910-NVG (FCC ID: RI7LE910NV; IC: 5131A-LE910NV)

The device (FCC ID: RI7LE910NV; IC: 5131A-LE910NV) is a module designed to be installed in other devices. This device is to be used only for fixed and mobile applications. If the final product after integration is intended for portable use, new applications and FCC and IC are required.

The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all the persons and must not be co-located or operating in conjunction with any other antenna or transmitter except as under the conditions described KDB 447498 D01 General RF Exposure Guidance.

MPE exposure limits

The table below is excerpted from Table 1B of 47 CFR 1.1310 titled Limits for Maximum Permissible Exposure (MPE), Limits for General Population/Uncontrolled Exposure:

Frequency Range (MHz)	Power density (mW/cm^2)	Averaging time (minutes)
300 – 1500	f (MHz) /1500	30
1500 – 100.000	1,0	30

The table below is excerpted from RSS-102, Issue 4, 4.2, titled "RF Limits for Devices used by the General Public":

Frequency Range (MHz)	Power density (W/m^2)	Averaging time (minutes)
300 – 1500	f (MHz) /150	6
1500 – 100.000	10	6

EIRP/ERP limits

Frequency Band	"FCC EIRP limit per §22.913, §24.232 and §27.50 (W)"	"IC EIRP limit per SRSP-503, SRSP-510, SRSP-513 and SRSP-518 (W)"
700 MHz	4,92	5,00
850 MHz	11,48	11,50
1700 MHz	1,00	1,00
1900 MHz	2,00	2,00

Using the equation $S = \frac{PG}{4\pi R^2}$ to calculate the exposure to electromagnetic fields

where: S = power density (in appropriate units, e.g. mW/cm^2)
P = power input to the antenna (in appropriate units, e.g., mW)
G = power gain of the antenna in the direction of interest relative to an isotropic radiator
R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

compliance with FCC/IC MPE and EIRP limits is demonstrated following the calculations shown in the ANNEX 1 of this document.

Yours sincerely,

EMEA R&D Manager
Antonino Sgroi

RF Exposure Analisys – ANNEX 1

Product Name: **LE910-NVG**
FCC ID: **RI7LE910NV**
IC: **5131A-LE910NV**

Frequency Band	Mode	Frequency Range (MHz)	Reference Frequency (Lowest Freq.) (MHz)	Maximum Conducted Output Power (per Tune Up) (dBm)	Duty Cycle (%)	FCC/IC MPE Limit (mW/cm2)	FCC EIRP limit per §22.913 §24.232 and §27.50 (W)	IC EIRP limit per SRSP-503, SRSP-510, SRSP-513 and SRSP-518 (W)	Evaluation distance for compliance with MPE limits (cm)	Antenna Gain to meet FCC/IC MPE limit (dBi)	Antenna Gain to meet FCC EIRP limit (dBi)	Antenna Gain to meet IC EIRP limit (dBi)	Maximum Antenna Gain to meet all the limits (dBi)	Maximum Antenna Gain to meet all the limits per frequency band (dBi)
FDD 13	LTE Cat. 3 - 5MHz BW	779.5 - 784.5	779.5	25.00	100%	0.520	4.92	5.00	20	9.16	11.91	11.98	9.16	Maximum antenna Gain for 700 MHz frequency Band 9.16
	LTE Cat. 3 - 10MHz BW	782	782.0	25.00	100%	0.521	4.92	5.00	20	9.18	11.91	11.98	9.18	
FDD V	UMTS / HSPA	826.4 - 846.6	826.4	25.00	100%	0.551	11.48	11.50	20	9.42	15.59	15.60	9.42	Maximum antenna Gain for 850 MHz frequency Band 9.42
FDD 4	LTE Cat. 3 - 5MHz BW	1712.5 - 1752.5	1752.5	25.00	100%	1.000	1.00	1.00	20	12.01	5.00	5.00	5.00	Maximum antenna Gain for 1700 MHz frequency Band 5.00
	LTE Cat. 3 - 10MHz BW	1715.0 - 1752.5	1715.0	25.00	100%	1.000	1.00	1.00	20	12.01	5.00	5.00	5.00	
	LTE Cat. 3 - 20MHz BW	1720.0 - 1745.0	1720.0	25.00	100%	1.000	1.00	1.00	20	12.01	5.00	5.00	5.00	
FDD II	UMTS / HSPA	1852.4 - 1907.6	1852.4	25.00	100%	1.000	2.00	2.00	20	12.01	8.01	8.01	8.01	Maximum antenna Gain for 1900 MHz frequency Band 8.01