REGULATORY COMPLIANCE REPORT

TITLE: FCC & IC Test Report for MPE

100GDLAN – Remote

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REV	CCO	DESCRIPTION OF CHANGE	DATE	APPROVALS	
001		INITIAL RELEASE		Engineering	
				Regulatory	

REVISION HISTORY

A	n/a	ready to upload	12jan11	Engineering	
				Regulatory	
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				Regulatory	

NOTICE OF PROPRIETARY INFORMATION

1.1310 & 2.1091(mobile) or 2.1093(portable) / RSS-102 Sec 4.2-Canada Safety Code 6;Table 5

Maximum Permissible Exposure (MPE)

Radiofrequency radiation exposure limits. - The criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radiofrequency (RF) radiation as specified in §1.1307(b), except in the case of portable devices which shall be evaluated according to the provisions of §2.1093 of this chapter.

1.1307 (b) In addition to the actions listed in paragraph (a) of this section, Commission actions granting construction permits, licenses to transmit or renewals thereof, equipment authorizations or modifications in existing facilities, require the preparation of an Environmental Assessment (EA) if the particular facility, operation or transmitter would cause human exposure to levels of radiofrequency radiation in excess of the limits in §§1.1310 and 2.1093 of this chapter.

Mode	unit 3019 Field strength (dbuV/m)	EIRP (dbm)	unit 1234568 conducted power (dbm)	conducted power (watts)	antenna gain (dbi)	antenna gain numeric
Network AM	120.67	26.67	24.47	0.280	2.2	1.66
Mobile AM	106.24	12.24	9.46	0.009	2.78	1.90
FM	121.62	27.62	25.71	0.372	1.91	1.55

Determine the maximum power density for the general / uncontrolled population minimum separation distance of 20 cm. (f_{MHz} / 1500 mW/cm^2 == f_{MHz} / 150 W/M^2)
The power density is calculated as:

P_d = power density in *mW/cm^2*

P_t = transmit power in milliwatts

$$P_d = \frac{P_t \times G}{4 \times \pi \times r^2}$$

G = numeric antenna gain
r = distance between body and transmitter in centimeters.

FCC Limits: 926.8MHz / 1500 = 0.618 mW / cm^2 @ 20cm
IC Limits: 926.8MHz / 150 = 6.18 W / M^2 (@ 0.2M)

FM Mode
Max antenna gain = 1.91 dBi = 1.55 numeric
Max TX power = 25.71 dBm = 372 milliwatts
results: P_D = (372 x 1.55) / (4 x pi x 20cm^2) = 0.115 mW / cm^2 @ 20 cm
                W/m2 = 10 times mW/cm^2 = 1.15 *W/M^2* @ 0.2 M

Network AM Mode
Max antenna gain = 2.2 dBi = 1.66 numeric
Max TX power = 24.47 dBm = 280 milliwatts
results: P_D = (280 x 1.66) / (4 x pi x 20cm^2) = 0.092 mW / cm^2 @ 20 cm
                W/m2 = 10 times mW/cm^2 = 0.92 *W/M^2* @ 0.2 M

Mobile AM Mode
Max antenna gain = 2.78 dBi = 1.90 numeric
Max TX power = 9.46 dBm = 9 milliwatts

results: P_D = (9 x 1.90) / (4 x pi x 20cm^2) = 0.003 mW / cm^2 @ 20 cm
                W/m2 = 10 times mW/cm^2 = 0.03 *W/M^2* @ 0.2 M

These results are not in excess of the limits set forth in the rules, therefore an EA is not required.