A Test Lab Techno Corp.

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MPE Report

Test Report No.	:	**1006FS12**
Applicant	:	**Netcomm Limited**
Manufacturer	:	**Netcomm Limited**
Product Type	:	**3G Router**
Trade Name	:	**Netcomm**
Model Number	:	**3G10WVR**
FCC ID	:	**XIA-3G10WVR**
IC ID	:	**8847A-3G10WVR**
Dates of Test	:	**Jun. 03, 2010**
Test Specification	:	**47 CFR § 2.1091**
		47 CFR §1.1310
		ANSI / IEEE Std.C95.1-1999
Location of Test Lab.	:	**Chang-an Lab.**

1. The test operations have to be performed with cautious behavior, the test results are as attached.
2. The test results are under chamber environment of A Test Lab Techno Corp. A Test Lab Techno Corp. does not assume responsibility for any conclusions and generalizations drawn from the test results with regard to other specimens or samples.
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Sam Chuang **20100604**
Approve Signer

Alex Wu **20100604**
Testing Engineer

Contents

1. Description of Equipment under Test (EUT)

Applicant	Netcomm Limited
Applicant Address	2-6 Orion Road, Lane Cove,NSW,2066 Australia
Manufacturer	Netcomm Limited
Manufacturer Address	2-6 Orion Road, Lane Cove,NSW,2066 Australia
Product Type	3G Router
Trade Name	Netcomm
Model Number	3G10WVR
FCC ID	XIA-3G10WVR
IC ID	8847A-3G10WVR
Frequency Range	2412 - 2462 MHz (IEEE 802.11b / IEEE 802.11g)
Transmit Power (mean conducted power)	IEEE 802.11b: 0.031 W / 14.97 dBm IEEE 802.11g: 0.015 W / 11.90 dBm
Modulation Technique	IEEE 802.11b:DSSS(CCK, DQPSK, DBPSK) IEEE 802.11g:DSSS(CCK, DQPSK, DBPSK)+ OFDM(QPSK, BPSK, 16-QAM, 64-QAM)
Software Ver.	T01_R03
Hardware Ver.	V1.0
Antenna Specification	1.47 dBi
Antenna Designation	External diople antenna
Temperature Range	-30 ~ +70°C

The above equipment was tested by Compliance Certification Services Inc. For compliance with the requirements set forth in 47 CFR § 2.1091 & 47 CFR § 1.1310. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties

1.1 RF Output Power

Band	Data Rate	Frequency (MHz)	Peak Power (dBm)	Average Power (dBm)	Worst Case
IEEE 802.11b	1	2412	19.16	14.97	■
		2437	18.58	14.08	□
		2462	18.64	14.30	□
	11	2412	19.45	14.48	□
		2437	18.86	13.64	□
		2462	18.70	13.81	□
IEEE 802.11g	6	2412	23.16	11.79	□
		2437	23.25	11.87	□
		2462	23.27	11.90	■
	54	2412	22.56	9.40	□
		2437	22.93	9.49	□
		2462	22.87	9.57	□

2. Human Exposure Assessment

Due to the design and installation of this product, it is not possible to conduct SAR evaluation. This is because client either manufactures or supplies the antenna(s) that will be used in the installation of this product. Therefore, this product will be evaluated as a mobile device per 47 CFR §1.1310 titled "Radiofrequency radiation exposure limits", generally referred to as MPE limits.

In 47 CFR § 2.1091, paragraph (b) defines a mobile device as "a transmitting device designed to be used in other than fixed locations and to generally be used in such a way that a separation distance of at least 20 cm is normally maintained between the transmitter's radiating structure(s) and the body of the user or nearby persons. " This product is intended to be installed into a vehicle such that the unit is physically secured at one location. In the installation guide supplied with the product,

Client has made the following statement: "IMPORTANT: To meet the FCC's RF Exposure Guidelines, the antenna should be installed so there is at least 20 cm of separation between the body of the user and nearby persons and the antenna". Based on the installation of the transceiver and the antenna, the transmitters radiating structure is more than 20 cm from the user. Thus, this product is a "mobile device" as defined in section § 2.1091 paragraph (b).

Exposure evaluation
Equation from page 18 of OET Bulletin 65, Edition 97-01 $S = \frac{PG}{4\pi R^2}$ Where S: power density P: power input to the antenna 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.

2.1 Test Result

Band	Data Rate	Frequency (MHz)	Limit (mw)	Distance (cm) [R]	Power (dBm) [P]	ANT Gain (dBi) [G]	[P]+ [G] (W) [TP]	Power Density [S]	Min. distance (cm)
IEEE 802.11b	1	2412.0	1.000	20	14.97	1.23	0.042	0.008	20cm
		2437.0	1.000	20	14.08	1.47	0.036	0.007	20cm
		2462.0	1.000	20	14.30	1.44	0.037	0.007	20cm
IEEE 802.11g	6	2412.0	1.000	20	11.79	1.23	0.020	0.004	20cm
		2437.0	1.000	20	11.87	1.47	0.022	0.004	20cm
		2462.0	1.000	20	11.90	1.44	0.022	0.004	20cm

Band	Frequency (MHz)	Limit (mw)	Distance (cm) [R]	Power (dBm) [P]	ANT Gain (dBi) [G]	[P]+ [G] (W) [TP]	Power Density [S]	Min. distance (cm)
GSM 850	824	0.550	20	32.00	3.00	3.162	0.315	20cm

Simultaneous MPE	Frequency(MHz)	MPE	Σ highest MPE for mobile transmitter(mW/cm²)	Limit(mW/cm²)
Cellular Band(824-849MHz)	824	0.315	**0.323**	**1.000**
802.11b_Rate 1M	2412	0.008		