Operational Description

This device is a Wireless-B/G/N Mobile Broadband Router, which operates in the 2.4GHz frequency spectrum with throughput of up to 300Mbps which OFDM technique will be applied. If the signal to noise rate is too poor which could not support 300Mbps, the 11Mbps data rate with DSSS technique will be applied.

Note

1. There are two sets antennas provided to this EUT, please refer to the following table:

Set No.	Transmitter Circuit	Antenna Type	Antenna Gain (dBi)	Antenna Connector
Set 1	Chain(0)	PIFA	3.47654	NA
	Chain(1)			
Set 2	Chain(0)	Dipole	4.98	MMCX
	Chain(1)			

2. The EUT could be applied with three 3.5G 1XEV-DO cards and following four different models could be chosen; therefore emission tests are added for simultaneously transmit between wireless LAN and 3.5G 1XEV-DO function. The emission tests have been performed at the worst channel of both WLAN and 3.5G 1XEV-DO, and recorded in other report.

Interface	Brand	Model No.	FCC ID
Cardbus	KYOCERA	KPC650	OVFKWC-KPC650
USB port	SIERRA WIRELESS	AirCard 875U	N7N-MC8775U
		AirCard 595U	N7N-MC8725U
Express card	Sprint	AirCard 597E	N7NAC597E

From the above 3.5G 1XEV-DO cards, Model No.: **KPC650, AirCard 875U & AirCard 597E** were selected for testing. Only one card can transmit on different interface for 1XEV-DO.

3. The EUT must be supplied with a power adapter and following four different models could be chosen:

Adapter 1	
Brand:	ELEMENTECH
Model No.:	Au-79AOn
Input power :	AC 100-240V, 600mA, 50-60Hz Cable:1.8m/unshielded/w/o core
Output power :	DC 12V, 2A Cable:1.5m/unshielded/with one core
Adapter 2	
Brand:	ELEMENTECH
Model No.:	AU79Dmu
Input power :	AC 100-240V, 0.5A, 50/60Hz
Output power :	DC 12V, 1.5A Cable:1.8m/unshielded/without core
Adapter 3	
Brand:	PHIHONG
Model No.:	PSA18R-120P
Input power :	AC100-240V, 50-60Hz, 0.5A
Output power :	DC 12V, 1.5A Cable:1.9m/unshielded/with one core
Adapter 4	
Brand:	JENTEC
Model No.:	AH1812-B
Input power :	AC100-240V, 50-60Hz, 0.4A
Output power :	DC 12V, 1.5A Cable:1.8m/unshielded/without core

4. The EUT was pre-tested under the following modes:

Test Mode	Description
Mode A	**Level-set (Put on tabletop) with PIFA antenna**
Mode B	**Tower-set (Wall-mounted) with PIFA antenna**
Mode C	**Level-set (Put on tabletop) with Dipole antenna**
Mode D	Tower-set (Wall-mounted) with Dipole antenna

From the above modes, the spurious emission below 1GHz worst case was found in **Mode A & C**. The spurious emissions above 1GHz worst cases were found **Mode B & C**. Therefore only the test data of the modes were recorded in this report.

5. The EUT incorporates a MIMO function with 802.11g and draft 802.11n. Physically, the EUT provides two completed transmits and two completed receivers.

6. The EUT is 2 * 2 spatial MIMO without beam forming function. The antenna configuration is two transmitter antennas and two receiver antennas, as there are 2 PIFA or Dipole antennas.   Spatial multiplexing modes for simultaneous transmission using 2 antennas, and for simultaneous receiver using 2 antennas. The 11b legacy mode is limited to single transmitter only.

7. When the EUT operating in draft 802.11n, the software operation, which is defined by manufacturer, MCS (Modulation and Coding Schemes) from 0 to 15.

8. The EUT complies with draft 802.11n standards and backwards compatible with 802.11b, 802.11g products.

9. The above EUT information was declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.