



Unit 7 Greenways Business Park  
Bellinger Close  
Chippenham  
Wiltshire SN15 1BN

Telephone: 01249 800100  
Facsimile: 01249 800101

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**RFI Global Services Ltd**  
**Pavillion A**  
**Ashwood Business Park**  
**Basingstoke**  
**Hampshire**  
**RG23 8BG**

**RE: 2.5GHz PCI Express Mini Module FCC ID: PKTPEMAAU1 MPE Calculation**

To Whom It May Concern,

The IPWireless PCI Express Min Module is considered to be mobile equipment and intended for operation with a minimum separation gap of 20cm between the user and the equipment, therefore the RF Exposure performance can be assessed by a Maximum Permissible Exposure (MPE) calculation.

The IPWireless PCI Express Mini module uses time division duplex (TDD) technology in normal operation with a maximum duty cycle of 80%, therefore source based averaging can be applied in the MPE calculation.

<b>MPE Distance Calculation</b>	5.5MHz Channel		11MHz Channel	
Antenna Gain	9	dBi	9	dBi
Line Loss	0	dB	0	dB
Antenna Gain Ratio	7.943282347		7.943282	
PCIe Mini Module Model AAU Tx Output Power	24	dBm	24	dBm
Output Power mW	251.19	mW	251.19	mW
Maximum EIRP (per Channel)	1995.26	mW	1995.26	mW
MPE Limit from 1.1310	1	mw/cm <sup>2</sup>	1	mw/cm <sup>2</sup>
Un-controlled/General Public Limit				
<b>Minimum Distance to meet MPE Limit</b>	<b>12.60</b>	<b>cm</b>	<b>12.60</b>	<b>cm</b>
(100% Duty Cycle)	4.96	inches	4.96	inches

**Table 1: 100% Duty Cycle Calculation**

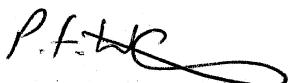
<b>Sourced Based Duty Cycle Adjustment</b>				

Total Timeslots in Frame	15		15
Timeslots for Transmit	12		12
Timeslots for Receive	10		10
Percentage time transmitting in Tx timeslot	100	%	100 %
Power Control Attenuation	0	dB	0 dB
Duty Cycle Correction Factor	80.00	%	80.00 %
<b>Minimum Distance to meet MPE Limit</b>	<b>11.27</b>	<b>cm</b>	<b>11.27</b> cm
(33.33% Duty Cycle)	4.43	inches	4.43 inches

**Table 2: Source Based Averaging Calculation**

The calculations above show the 2.5GHz PCI Express Mini Module complies with the un-controlled /General Public limit of 1mW/cm<sup>2</sup> at a minimum distance of 11.3cm for operation using either 5.5MHz or 11MHz channels.

Yours Faithfully



P Warburg  
Technical Associate  
IPWireless UK Ltd