

Product name: UIW4010ECH  
Manufacturer: TECHNICOLOR  
FCC Id: G95-UIW4010ECH

**Prediction of MPE limit at a given distance**

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

**Transmitter n°1 (Wi-Fi: 2400-2483,5 MHz)**

Maximum peak output power at the antenna terminal: 17,11 (dBm)  
Maximum peak output power at the antenna terminal: 51,40436516 (mW)  
Antenna gain(typical): 3,9 (dBi)  
Maximum antenna gain: 2,454708916 (numeric)  
Prediction distance: 20 (cm)  
Prediction frequency: 2412 (MHz)  
MPE limit for uncontrolled exposure at prediction frequency: 1 (mW/cm<sup>2</sup>)  
**Power density** at prediction frequency: 0,025103 (mW/cm<sup>2</sup>)

*Note: Transmitter n°1 includes 2 antennas for 2.4GHz  
Equivalent maximum gain for the 2 combined antenna is equal to 3,9dBi  
17,11 dBm is the maximum power delivered to the 2 combined antennas*

**Transmitter n°2 (Wi-Fi: 5150-5850 MHz)**

Maximum peak output power at the antenna terminal: 16,60 (dBm)  
Maximum peak output power at the antenna terminal: 45,70881896 (mW)  
Antenna gain(typical): 5,7 (dBi)  
Maximum antenna gain: 3,715352291 (numeric)  
Prediction distance: 20 (cm)  
Prediction frequency: 5150 (MHz)  
MPE limit for uncontrolled exposure at prediction frequency: 1 (mW/cm<sup>2</sup>)  
**Power density** at prediction frequency: 0,033785 (mW/cm<sup>2</sup>)

*Note: Transmitter n°2 includes 2 antennas for 5150-5850 MHz band  
Equivalent maximum gain for these 2 combined antennas equal to 5,7dBi  
16,6 dBm is the maximum power delivered to the 2 combined antennas*

**Transmitter n°4 (Bluetooth EDR: 2400-2483,5 MHz)**

Maximum peak output power at the antenna terminal: 2,77 (dBm)  
Maximum peak output power at the antenna terminal: 1,892343619 (mW)  
Antenna gain(typical): 5,4 (dBi)  
Maximum antenna gain: 3,467368505 (numeric)  
Prediction distance: 20 (cm)  
Prediction frequency: 2402 (MHz)  
MPE limit for uncontrolled exposure at prediction frequency: 1 (mW/cm<sup>2</sup>)  
**Power density** at prediction frequency: 0,001305 (mW/cm<sup>2</sup>)

**Transmitter n°4 (Bluetooth LE: 2400-2483,5 MHz)**

Maximum peak output power at the antenna terminal: 2,33 (dBm)  
Maximum peak output power at the antenna terminal: 1,710015315 (mW)  
Antenna gain(typical): 5,4 (dBi)  
Maximum antenna gain: 3,467368505 (numeric)  
Prediction distance: 20 (cm)  
Prediction frequency: 2402 (MHz)  
MPE limit for uncontrolled exposure at prediction frequency: 1 (mW/cm<sup>2</sup>)  
**Power density** at prediction frequency: 0,001180 (mW/cm<sup>2</sup>)

**Transmitter n°1 + Transmitter n°2 + Transmitter n°3 + Transmitter n°4 :**

$[Pd(1)/LPd(1)] + [Pd(2)/LPd(2)] + [Pd(3)/LPd(3)] + [Pd(4)/LPd(4)] = 0,06137 < 1$
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