

**POLICY ON THE USE OF FIXED BROADBAND WIRELESS ACCESS IN THE 2.4 GHz AND 5.8 GHz
FREQUENCY BANDS**

In 2004 the Government created the Policy on the use of Fixed Broadband Wireless Access (FBWA) Frequency Bands (FBWA Policy) which set out the operational requirements for operating in the 2.4 GHz (2400-2483.5 MHz) and 5.7 GHz (5725-5825 MHz) frequency bands. The FBWA Policy was created to allow other users to operate low powered short range devices, in the two frequency bands on a licence-exempt basis, whilst protecting the high powered FBWA operation of the two Internet Service Providers (ISPs) in these bands. However, in line with the Government's aim to promote the expansion of a nationwide, all pervasive wireless access network for Internet access, the FBWA Policy has been reviewed in accordance with international best practices and with the consultation of the telecommunications service providers and ISPs. The eligibility criteria, licensing and operational requirements for operating in the 2.4 GHz and 5.7 GHz bands have been modified in order that all ISPs, present and prospective, can contribute towards the deployment of wireless access nationwide. Operation in these bands shall be license-exempt for all users. However, there shall be two categories of users, telecommunication service providers, including ISPs, operating at high power and other users including the general public operating at low power. The Policy is split up into three parts; the first part lays out the eligibility criteria, licensing and operational requirements for operating in these bands, the second part lays down the conditions pertaining to licence-exempt operation, and the third part identifies the regulation which includes provisions for the importation of radio equipment in the 2.4 GHz and 5.7 GHz bands.

PART 1

The 2.4 GHz Band

- (i) The 2.4 GHz band shall be used for deployment of FBWA and Nomadic BWA (NBWA) applications including Radio Local Area Network (RLAN);
- (ii) The operation of BWA applications including RLAN in the 2.4 GHz band shall be licence-exempt, with the following eligibility criteria:
 - Only licensed telecommunications service providers, including Internet Service Providers (ISPs), shall be allowed to operate in this band under high power conditions for point-to-multipoint, with maximum Effective Isotropic Radiated Power (EIRP) of 4 W (36 dBm), and point-to-point, with maximum EIRP of 200 W (53 dBm), in accordance with FCC Part 15.247;
 - Other users shall operate in this band under low power conditions with maximum EIRP of 100 mW (20 dBm), in accordance with EN 300 328.
- (iii) For operation of non BWA applications, users shall operate in this band on a licence-exempt basis, under low power conditions with maximum EIRP of 100 mW (20 dBm);

The 5.7 GHz and 5.8 GHz Bands

- (i) The 5725-5875 MHz (5.8 GHz) band, inclusive of the 5.7 GHz band, shall be used for deployment of FBWA and NBWA applications including point-to-point backhaul;
- (ii) The operation of BWA applications including point-to-point backhaul in the 5.8 GHz band shall be licence-exempt, with the following eligibility criteria:
 - Only licensed telecommunications service providers, including ISPs, shall be allowed to operate in this band under high-power conditions for point-to-multipoint, with maximum EIRP of 4 W (36dBm) and point-to-point, with maximum EIRP of 200 W (53 dBm), in accordance with FCC Part 15.247, FCC Part 15.407 or EN 302 502;
- (iii) For operation of non BWA applications, users shall operate in this band on a licence-exempt basis, under low power conditions with maximum EIRP of 25 mW, in accordance with EN 300 440;
- (iv) BWA systems operating in this band shall employ the mitigation techniques Dynamic Frequency Selection (DFS) and Transmit Power Control (TPC), as recommended in ECC/REC/(06)04 and EN 302 502;

PART 2**Licence-Exempt Operation**

1. Any radio communication network or radio communication equipment shall be subject to the provisions of the Broadcasting and Telecommunication Act, 2000.
2. The radio communication network or radio communication equipment shall be operated according to the operational requirements set by the Communications Division, Department of Information Communications Technology, Office of the President.
3. The party responsible for the compliance of any radio communication network or radio communication equipment to the operational requirements shall provide to the Communications Division as may be requested concerning the operation of the radio communication network or radio communication equipment, proof (measurements/documents) demonstrating compliance with the operational requirements.
4. The relevant licence-exempt radio communication network or radio communication equipment shall not cause or contribute to any harmful interference and that interference must be accepted that may be caused by the operation of authorized radio communication network or radio communication equipment, or other licence-exempt radio communication network or radio communication equipment.
5. Complaints of interference by operators of licence-exempt radio communication network or radio communication equipment shall not be investigated by the Communications Division.
6. The operators of licence-exempt radio communication network or radio communication equipment shall be required to cease operation of these network or equipment if the same has been identified by the Communications Division to be causing harmful interference to authorized radio communication network or radio communication equipment. Operation of the licence-exempt radio communication network or radio communication equipment shall not resume until the condition or conditions causing the harmful interference have been corrected by the operators of these network or equipment.
7. Radio communication inspection of licence-exempt radio communication network or radio communication equipment shall not be conducted but the components of these network or equipment must be made available for inspection by the Communications Division upon reasonable request.

Conditions 4, 5 and 6 encompass the phrase **operation on a non-protection and non-interference basis**. The bands that are identified for licence-exempt operation are referred to as **licence-exempt bands**.

PART 3**Trades Tax (Imports) Regulations**

The S.I. 60 of 2005, Trades Tax (Imports) Regulations, 2005, defines FBWA equipment as a restricted goods except for those low powered equipment operating in accordance with EN 300 328 in the 2.4 GHz band and EN 300 440 in the 5.7 GHz band. Consequently no import permit will be required for such low powered equipment including those operating in the 5.8 GHz band in accordance with EN 300 440.

References:

FCC Part 15.247	Code of Federal Regulations, Title 47, Federal Communications Commission (FCC) Part 15.247 'Operation within the 2400-2483.5 MHz and 5725-5850 MHz bands'.
FCC Part 15.407	Code of Federal Regulations, Title 47, FCC Part 15.407 'General technical requirements for Unlicensed National Information Infrastructure (U-NII) devices operating in the 5.725–5.825 GHz band'.
EN 300 328	European Telecommunications Standard Institute (ETSI) standard EN 300 328 'Electromagnetic compatibility and Radio spectrum Matters (ERM);Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using wide band modulation techniques'.
EN 300 328	ETSI standard EN 302 502 'Broadband Radio Access Networks (BRAN); 5.8 GHz fixed broadband data transmitting systems'.
EN 300 440	ETSI standard EN 300 440 'ERM; Short range devices; Radio equipment to be used in the 1 GHz to 40 GHz frequency range'.
ECC/REC/(06)04	Electronic Communications Committee (ECC) Recommendation (06)04 'Use of the band 5725-5875 MHz for Broadband Fixed Wireless Access'.