

Licence exempt bands in South Africa which may be used for outdoor wireless access systems
Last updated May 2013

The table below is intended to provide a semi-authoritative overview of the bands which are commonly used for licence-exempt service provision in South Africa. All usage of these bands is on a “no-protection-no-interference-basis” and is secondary to the primary allocation of the band.

WAPA members commit to:

- Not using frequency falling outside of these bands unless they have a radio frequency spectrum licence.
- Using the frequency falling inside these bands in accordance with the technical restrictions

Failing to honour this commitment is an offence under the Electronic Communications Act of 2005 and a breach of the WAPA Code of Conduct. Illegal usage creates interference with lawful users such as the SANDF and other operators which results in enforcement action and damage to the reputation of the industry.

Frequency Band	Type of Device	Maximum Radiated Power or Field Strength Limits and Channel Spacing	Relevant Standard	Additional Requirements	Comments
2400 – 2483.5MHz	<ul style="list-style-type: none"> • Wideband Wireless Systems • WLAN • Wideband Data Transmission Applications (WBDS) • Model Control 	<ul style="list-style-type: none"> • 100 mW eirp. • No duty cycle. • No channel spacing 	<ul style="list-style-type: none"> • EN 300 328 • EN 301 489 – 1,3 • EN 60950 	<ul style="list-style-type: none"> • CEPT/ERC/REC 70-03 	<ul style="list-style-type: none"> • Note the 20dBm EIRP • Point To Point • Point To Multi-Point
5470 – 5725MHz	<ul style="list-style-type: none"> • Wireless Access Systems / Radio Local Access Network (WAS & RLAN) 	<ul style="list-style-type: none"> • 1 W eirp • Dynamic Frequency Selection (DFS) & Transmitter Power Control obligatory 	<ul style="list-style-type: none"> • EN 300 893 • EN 301 489-1,17 • EN 60950 	<ul style="list-style-type: none"> • ITU-R M.1625 	<ul style="list-style-type: none"> • Note the 30dBm EIRP • DFS must be enabled • ATPC must be enabled • Point To Multi-Point • Indoor and outdoor use (Note 1)

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5725 – 5850MHz (Note 2)	<ul style="list-style-type: none"> Broadband Fixed Wireless Access (BFWA) 	<ul style="list-style-type: none"> A maximum of 4 watts eirp. A maximum of 1 watt transmitter power output. A maximum transmitter output power spectral density of 8dBm in an 3kHz band. 	<ul style="list-style-type: none"> None specified 	<ul style="list-style-type: none"> None specified 	<ul style="list-style-type: none"> Digital modulation only. Nominal bandwidth of transmission must not be less than 1MHz Fixed point-to-multipoint systems and point-to-point links In any 100kHz outside the band, the eirp shall be at least 30dB below the 100kHz within the band that contains the highest level of desired power.
5725 – 5850MHz (Note 2)	<ul style="list-style-type: none"> Broadband Fixed Wireless Access (BFWA) 	<ul style="list-style-type: none"> A maximum of 200 watts eirp A maximum of 1 watt transmitter power output A maximum transmitter output power spectral density of 8dBm in an 3kHz band 	<ul style="list-style-type: none"> None specified 	<ul style="list-style-type: none"> None specified 	<ul style="list-style-type: none"> Digital modulation only. Nominal bandwidth of transmission must not be less than 1MHz Fixed point-to-point systems only Point-to-multipoint systems, omni-directional applications and multiple co-located transmitters transmitting the same information are not permitted (Note 3) In any 100kHz outside the band, the eirp shall be at least 30dB below the 100kHz within the band that contains the highest level of desired power.
17.1 – 17.3GHz	Wireless Access Systems / Radio Local Access Network (WAS & RLAN)	<ul style="list-style-type: none"> 100 mW eirp 	EN 300 440 EN 301 489-1,3 EN 60950	CEPT/ERC/REC 70-03	
24.00 – 24.25 GHz	Non-specific Short Range Devices (SRDs)	<ul style="list-style-type: none"> 100 mW eirp No duty cycle 	EN 300 440 EN 301 489-1,3	CEPT/ERC/REC 70-03	ICASA's view is that this band is not currently available for PtP

		restriction <ul style="list-style-type: none"> No channel spacing 	EN 60950		links or WAS/RLANs. This flows from the definition of SRD and has practical effect in ICASA not type approving equipment intended for creating data links in this band. WAPA is trying to lobby ICASA to open this band up.
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Sources

1. Radio Frequency Spectrum Regulations, 2011, GG 34172, General Notice 184 of 2011, 31 March 2011 (“Radio Regulations 2011”), in particular Annexure B: Apparatus exempt from radio frequency spectrum licences
2. Regulations in Respect of Licence Exemptions in terms of Section 6 of the Electronic Communications Act read with section 31(6) in respect of Radio Frequency Spectrum, ECS and/or ECNS, GG 31290, General Notice 926 of 2008, 29 July 2008 (“2008 Frequency Licence Exemption Regulations”)
3. ICASA’s Decision on the Use of the 5725 – 5850MHz Band (“the 5.8GHz Band”), GG 32769, General Notice 1597 of 2009, 2 December 2009 (“5.8GHz Decision”)
4. National Radio Frequency Plan 2010, GG 33409, General Notice 727 of 2010, 30 July 2010 (“NRFP 2010”)

Notes

1. The Radio Regulations 2011 erroneously specify that the 5470 – 5725MHz band is for indoor use only on a licence exempt base. The correct position for this band (also referred to as the Outdoor HIPERLAN band) is set out in the 2008 Frequency Licence Exemption Regulations. The process leading to the finalisation of the Radio Regulations 2011 at no stage contemplated a change to this band.
2. The Radio Regulations 2011 do not completely incorporate the 5.8GHz Decision. The process leading to the finalisation of the Radio Regulations 2011 at no stage contemplated a change to this band. **There is a different point of view that the correct position is that the PtP limit is 4W as laid out in Annexure B to the Radio Regulations 2011 (a view with which we do not agree).**
3. Transmission towards the common node of a point-to-multipoint system is regarded as point-to-point mode.
4. Any usage outside of these bands requires a radio frequency spectrum licence. In the absence of such a licence the usage will be illegal.
5. Any usage in which does not fall within the technical parameters specified is illegal.