



REMINGTON ELSAG LAW ENFORCEMENT SYSTEMS, LLC

4 WLAN Circuit Description

4.1 Certification and Regulation Compliance

The WLAN section of the AD3-MWP device is compliant to EN 3000 328V1.61 (2004-11): "Electromagnetic compatibility and Radio spectrum matters (ERM); Wideband transmission systems; Data transmission equipment operating at 2,4 GHz ISM band and using spread spectrum modulation techniques; Harmonized EN covering essential requirements under article 3.2 of the R&TTE Directive".

4.2 Frequencies and Channels

The radio section can be configured in two different modes of operations, to be compliant with regulations of different countries in Europe, U.S.A and Canada. The difference is only in the available channel subset.

In Europe the allowed channels are 1 to 13 (2.412 GHz to 2.472 GHz), while in America and Canada only channels 1 to 11 are allowed (2.412 GHz to 2.462 GHz). Every single channel amplitude is 22 MHz and the gap between consecutive channels is 5 MHz.

4.3 Radiated Power

The system configuration is based on the ETSI 300 328 Norm that defines an irradiated power constraint at 100 mW (20dBm). This constraint is more restrictive than the FCC regulation (1 W or 30 dBm).

To move to a 30dBm power the radio section should be redesigned.

Estimated Operational range

The table shows estimated indoor and outdoor operational ranges.

Protocol	Op. Frequency	Data Throughput	Data Rate Max	Range (Outdoor)	Range (Indoor)
802.11b	2.4-2.5 GHz	4 Mbit/s	11 Mbit/s	110 m	35 m
802.11g	2.4-2.5 GHz	19 Mbit/s	54 Mbit/s	110 m	35 m