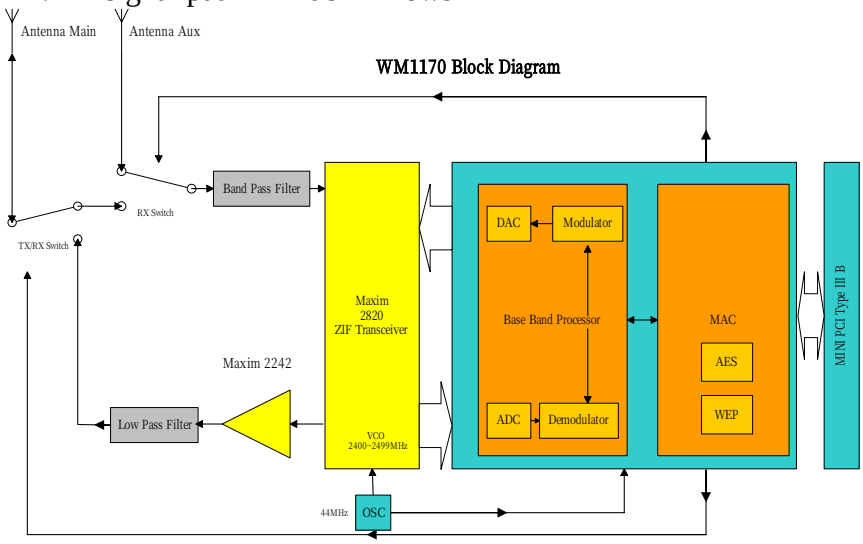
FCC ID: RK9-WM1170

CastleNet model WM1170 Block diagram with Theory of operation

TX/RX signal path in Black Arrows



Transmitter Path

Data bits coming from the miniPCI Host interface are processed by the Base Band Processor MAC (BBP/MAC) IPN2120 on IEEE 802.11b protocol level, IQ modulated and then converted to 2.4 GHz RF signal by Direct up/down converter MAX2820. The MAX2820 operating frequency is generated by the Internal VCO. The 2.4GHz RF signal is then amplified by RF Power Amplifier MAX2242 and then filter by Phycom LPF. The Ampified signal is finally emitted via the main antenna.

Receiver path

The 2.4GHz RF signal comes in via either antenna and low noise amplifier (part of MAX2820) to the Direct up/down converter MAX2820 where it is converted to RX IQ signals. The MAX2820 operating frequency is generated by the internal VCO. These IQ signals are converted into data bits by the Base Band Processor MAC (BBP/MAC) IPN2120. The data bits are processed by the Base Band Processor MAC (BBP/MAC) IPN2120 on IEEE 802.11b protocol level. This MAC controller also provides the miniPCI interface to the Host.