

# XWC900-HRDN

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## Architecture

XWC900-HRDN wireless camera takes a sophisticated optimized 418MHz transceiver technology called "AFMII" protocol, and a Wi-Fi 2.4 GHz TX module to transmit video and audio. It implements a proprietary wireless protocol that is similar in timing to the wired one. This allows for operation that appears transparent to standard AV signal.

The hardware architecture is shown in Figure 1.

- 1 The camera is base on a CCD color camera sensor to provide a high quality video. a built-in heat-activated motion (PIR) detector, and an audio microphone.
- 2 Input +12V DC power into DC/DC circuit, created difference kinds of voltage support the camera working.
- 3 The 2.4 GHz TX module is assigned to transmit the video, audio and PIR signal wirelessly.
- 4 The 418 MHz RF module is comprised of two chip, the transceiver chip CC1000, the baseband chip PIC16LF628 . The baseband chip is firmware the protocol, drive the transceiver chip to receive and transmit valid signal so that achieve all communication with Gateway or other device.
- 5 The MCU (Micro controller unit) deal with kinds of operation according to the Gateway through 418 MHZ RF radio module, including scan the discovery switch to initialize communication, detect the PIR trigger, flash the LED to indicate camera status, and so on.