

# Basic Functional Description

- This new Motion Detector by Bosch Security Systems has 2 different styles of detectors: those that detect motion using Passive Infrared, and those that detect motion using Microwave Radar.
- On the RFPR-ZB, the sensor microcontroller monitors the passive infrared sensor and reports motion alarms to the radio, which then uses the ZigBee PRO protocol to wirelessly relay the information back to the control panel.
- On the RFDL-ZB, the sensor microcontroller monitors the passive infrared sensor and the microwave radar and reports motion alarms, when detected, to the radio, which then uses the ZigBee PRO protocol to wirelessly relay the information back to the control panel.
  - The Microwave radar contains discrete transmit and receive circuitry and uses patch antennas built into the PCB in order to transmit and receive the microwave signal.
- In both the RFPR-ZB and the RFDL-ZB, the radio contains a transceiver, a front end module, harmonic filter, antenna matching, and dual transmit antennas. Both models are built using either a Silicon Labs EM358 transceiver (ZigBee SOC) and a Skyworks 66109 FEM, or a GP691 transceiver (ZigBee SOC) and an RFX2411 FEM. The functionality of each chipset is identical; both transmit and receive based on the ZigBee PRO protocol in the 2.4GHz ISM band.

