

PAM™3000

Bed Sensor Panel Operational Description

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Operational Description

PAM™3000 bed sensor is a wireless device intended for monitoring heart and respiration rates of patients in healthcare and medical environments. The sensor is a ultra-wideband (UWB) radar which is capable of detecting movements of heart and lungs inside the human body. The bed sensor is placed underneath the bed mattress and transmits UWB pulses towards the patient lying on top of the mattress. Applications of this system are mainly in healthcare and elder care industries.

PAM™3000 bed sensor is a composite device consisting of an ultra-wideband radar, a conventional radio transceiver operating in a 902-928MHz range and associated digital and analog circuitry. The bed sensor panel contains an array of 4 UWB radiating elements and 48 UWB receive elements which are permanently attached and integral to the device. The signal conditioning and processing is done on-board with the results sent through the 902-928MHz radio link to a monitoring station through a repeater.

The bed sensor contains pressure elements for patient detection and shuts the UWB radar off when the patient is not on the bed.

Sensor Diagram

