OPERATIONAL DESCRIPTION

UBIWATCH21 device

FCC ID SEAWATCH21

The UBIWATCH21 is a wireless device for the real-time location of objects within buildings. It transmits ultra-wideband (UWB) pulses which are picked up by a network of basestations (Ubisensors) placed inside the building, allowing the 3D position of the tag to be found. The use of UWB technology enables greater positioning accuracy within buildings than other wireless technologies, because it is much less susceptible to multipath interference effects. Applications of the system include healthcare, workplace productivity, security, retail management and manufacturing.

The UBIWATCH21 is a composite device consisting of an ultra-wideband transmitter operating in the 6-8GHz region, a conventional radio transceiver operating in the range 2402.5-2480.5MHz, and associated digital circuitry. Both the ultra-wideband transmitter and the conventional radio transceiver utilise permanently attached antennas that are integral to the device. The periodic ultra-wideband transmissions of the device are used by basestations to estimate the location of the device, whilst the device uses its conventional radio transceiver to transfer command and control data between it and the basestations, enabling the system to dynamically change the device's behaviour (e.g. the rate at which it transmits positioning signals, etc.).

It is never the case that both the ultra-wideband transmitter section of the device and the conventional radio transceiver section of the device are active simultaneously.