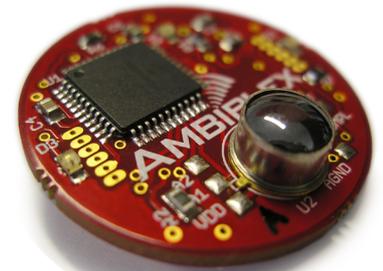


SMART PRESENCE DETECTION

TRUE LOW-COST PRESENCE DETECTION USING IR.LOC TECHNOLOGY

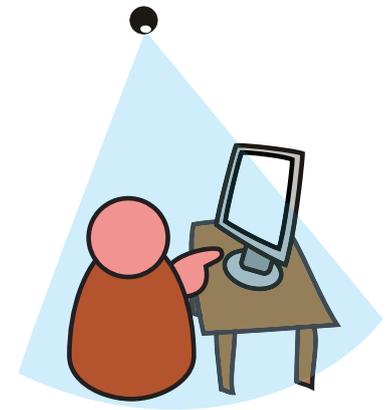
AmbiPlex offers a wide range of indoor and outdoor localization solutions based on passive infrared detection. The technology exploits the natural emission of infrared radiation of the human body. By combining inexpensive off-the-shelf components with state-of-the-art signal processing algorithms, solutions become available that have an unmatched cost / performance ratio.

AmbiPlex' technology can be used in numerous applications, starting with smart presence detectors and ending with complete localization systems.



Drawbacks of today's presence detectors

- ▶ *No true presence detection:* Current passive infrared presence detectors are in fact sensitive motion detectors. As a result, they do not detect non-moving heat sources.
- ▶ *No quantitative information on movements:* Neither a person's movement speed nor his or her movement location are determined.
- ▶ *Cumbersome configuration procedure:* To customize the field of view of today's passive infrared detectors, tedious approaches like attaching stickers are common. This makes (re-)configuration uncomfortable and time consuming.
- ▶ *No person tracking:* Due to the binary nature of the output signal, no tracking support is provided.



Advantages using AmbiPlex' approach



- ▶ In contrast to current passive infrared systems, AmbiPlex' solutions provide true presence detection. That is, moving as well as static heat sources are detected. As a result, even persons reading a book or watching TV are discovered.
- ▶ AmbiPlex' presence detectors provide more than just a binary output signal. They determine the angle of incidence with respect to the sensor, the strength of the heat source, an estimation of the source size as well as a reliability measure of the current estimate.
- ▶ Due to the rich output information, the direction and velocity of movements can be

determined. Furthermore, the field of view of the presence detector can easily and dynamically be customized.

These ground breaking capabilities are achieved with low cost components. Therefore, new applications become available that cannot be addressed with existing presence detection technology.

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