Predictive maintenance in smart HVACR systems with the XENSIV™ sensor portfolio

Infineon's range of highly precise XENSIV™ sensors monitor and collect accurate data on crucial parts in HVACR (heating, ventilation, air condition, and refrigeration) systems, enabling predictive maintenance to detect system failures before they happen. Together with our partners, we have built an end-to-end demonstrator that includes cloud connectivity, a GUI, an anomaly score and data intelligence.

System approach

- End-to-end system approach in collaboration with partners
- Infineon's hardware expertise, including sensors, embedded security and microcontrollers
- Graphical user interface (GUI) for data visualization
- Anomaly score and data intelligence to support predictive maintenance
- AWS cloud connectivity

Infineon products

- XENSIV™ DPS368 barometric pressure sensor for measuring air flow
- XENSIV™ magnetic current sensor for measuring fan and compressor currents
- XENSIV™ TLE4997 linear Hall sensor for monitoring vibrations and the position of the compressor
- XENSIV™ IM69D130 MEMS microphone for sound anomaly detection
- OPTIGA™ Trust M for authentication and secure connection to the AWS cloud
- XMC4700 with FreeRTOS for data processing

Customer benefits

- Accurate data collection thanks to portfolio of high-performance sensors offering:
- Robustness over a wide range of temperatures
- Highly precise and accurate readings
- Reduced time-to-market with an end-to-end solution building on Infineon's partner network
- Includes a graphical user interface and data intelligence for predictive maintenance

www.infineon.com/sensors