

---

# BETTER USER EXPERIENCES COLLABORATIVELY

Concept to Module Development of Wireless Sensor Devices

Greater control, lesser risk



# Wi-Fi Sensor Devices that Make Sense

While until recently, Wi-Fi has never been considered a power efficient method for high speed data transfer, system design moderations have been able to change that. Sensor devices that use Wi-Fi now have ubiquity along with power efficiency, speed of data transfer and extended battery life. Wi-Fi enabled sensors are now set to realize futuristic concepts like remote patient monitoring, connected homes and digital plants.

Wireless Sensor Devices have the power to transform every industry, be it Healthcare- by enabling remote collection of vital patient data, Manufacturing- by enabling predictive maintenance through collection of sensitive data from anywhere in the plant to White goods manufacturing- by enabling better connected household appliances for the connected home. Its ability to utilize Wi-Fi in low power situations and its high battery life, help customers access data in any condition, thereby managing risks and operations more effectively.



## The Wipro Edge

Wipro delivered this project for a North American Fabless ASIC Company by partnering from concept feasibility to module development, and production enablement. Wipro brought significant reductions in costs and time to market by modifying its IPs in Wi-Fi and RF. With a highly competent technical team Wipro was able to help its client overcome the challenges of using Wi-Fi as a technology, in ultralow power sensor node applications, proving that Wi-Fi could be used in this environment. Wipro delivered a general purpose module that could be customized for Industrial, M2M, Medical and other applications while catering to user requirements of power efficiency and ubiquity.

Wipro's delivery of this optimized design for extreme low power consumption and extra-long battery life of the product placed the customer many miles ahead of the competition. Wipro's low power SoC design capabilities and custom libraries prevented leakage of power, making the device energy efficient.

The long life of the battery significantly lowers end-user maintenance and installation costs, adding to the product's market advantage.

Wipro's Silicon design, System design and Wireless domain strengths and skill in identifying and integrating the best partners across the product ecosystem, made it the perfect partner for the project. Wipro can act as your single point of contact to deliver comprehensive design service including architecture study, hardware and software design, chip layout, RF characterization and production test support.



## Wireless Sensor Device

Wipro's design addressed industrial grade requirements and tackled device compliance issues. A challenging project, this hi-grade, low power sensor device with Wi-Fi connectivity had never been seen before in the market.

### Wireless Sensor Device

- Single chip WLAN MAC + Modem + RF
- Application processor and Flash on-chip
- Up to 10 years of battery life from a single AA cell

### Wipro Offering:

- Wireless LAN IP qualification and customization
- Design Services for developing single chip SoC with MAC + Modem + RF
- Repeat business for additional hardware and software design services

## Wipro Product Engineering & Mobility Solutions

The focus of the product engineering business is on delivering engineering solutions that impact consumers and businesses in today's connected and mobile world. Examples in the consumer sector include mobile/anywhere entertainment, smart/mobile shopping, and anywhere banking. Solutions for businesses include plant automation, smart energy monitoring, high availability compute infrastructure, remote health management, and automotive navigation and tracking. Wipro brings an understanding of the full stack of engineering technology building blocks and the ability to make the right choices to deliver end products and solutions. These distinguish Wipro as a leader who can envision, architect, design, and delivery complete devices and business solutions. Recognizing this integrated product development capability, Zinnov Management Consulting ranked Wipro as the Number One third party 'Global R&D Service Provider' in the GSPR 2011 report.



## About Wipro Technologies

Wipro Technologies, the global IT business of Wipro Limited (NYSE:WIT) is a leading Information Technology, Consulting and Outsourcing company, that delivers solutions to enable its clients do business better. Wipro Technologies delivers winning business outcomes through its deep industry experience and a 360 degree view of "Business through Technology" – helping clients create successful and adaptive businesses. A company recognized globally for its comprehensive portfolio of services, a practitioner's approach to delivering innovation and an organization wide commitment to sustainability, Wipro Technologies has 131,000 employees and clients across 54 countries. For more information, please visit [www.wipro.com](http://www.wipro.com).

