

Wireless 802.15.4 MEMS Biometric Sensors Design Note #91

Miniature 2.4 GHz ISM Band Radio Network



Unique display and user input devices are possible with Orchid's wireless biometric sensing technology.



"Thousands of display and sensor applications have been presented to us over the years. Finally, with your assistance, we can produce them. Thanks Orchid!"

*- Sensor Business Development
BioDesigns Systems*

Miniature MEMS Biometric Sensors

MEMS biometric sensors usher in a new world of novel sensors and display equipment. MEMS biometric sensors are low cost, low power, rugged and long lasting. MEMS biometric sensors provide three axis acceleration, tap detection, gyroscope, magnetometer and electronic microphone data collection functions. MEMS sensors coupled with low power, size efficient floating point microcontrollers permit the development of sophisticated eye and head-movement tracking sensors. Novel display and data input devices may be constructed using wireless communications. Battery power and energy harvesting battery extension technology enhance usage models.

2.4 GHz 802.15.4 Wireless Networking

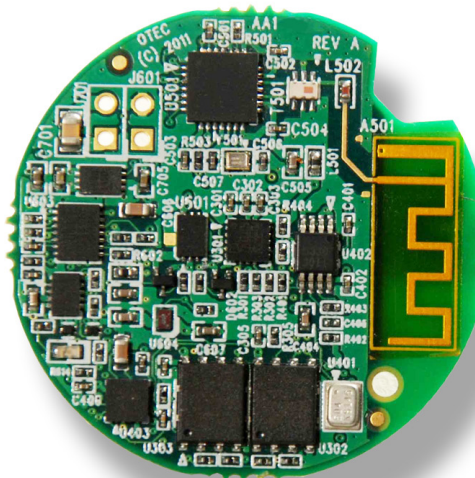
Wireless network communications keeps the man-machine interface clean. Wireless network communications serves the dual purpose of providing the user complete freedom of movement while cost effectively isolating that user from high voltages typically present in receiving equipment. Proprietary 802.15.4 protocols permit high bandwidth, single-use secure data communications between user and host equipment.

Battery Extension and Energy Harvesting

Low leakage lithium battery technology coupled with advanced energy harvesting techniques permit long battery life. Operating for over twelve hours at a time, battery usage is extended by local energy harvesting techniques. Low frequency wireless charge coupling permits battery charging without the fuss of connecting cables or wires. Fully waterproof sealed enclosures require no cable access once assembled.

Orchid Technologies: Custom Biometrics

The development of custom electronic products for our OEM clients is Orchid's entire business. The design of custom Wireless MEMS Biometric Sensors with rapid design cycles, demanding technical requirements, and unforgiving schedules sets us apart. Call Orchid Technologies today!



ORCHID TECHNOLOGIES
ENGINEERING & CONSULTING, INC.

Custom Engineering From Concept to Production

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