

SleepMed / DigiTrace

Waist Worn Recorder

Customer Background



SleepMed is the nation's largest provider of diagnostic services for sleep disorders and epilepsy. They serve hospitals and physicians, operate the nation's largest ambulatory sleep and EEG referral service, and they participate in clinical research studies conducted by pharmaceutical companies. SleepMed designs, develops and manufactures ambulatory EEG and sleep monitoring systems under the proprietary DigiTrace brand.

The application digitizes in high resolution, fifty-four EEG, EKG, and physiologic signals, analyzes the waveforms for spike and seizure detection, and records up to two gigabytes of compressed data in a compact, portable, low power device. The integrated wireless communications allows on-line monitoring and calibration of the patient without the possibility of shock and high-speed USB 2.0 quickly transfers the data upon study completion.

Customer Issues

- No lifecycle support
- Too many suppliers
- Multiple independent contractors
- Unsupportable application software
- Outdated technology
- Resource strapped
- Falling behind competition

Customer Requirements

- Increase battery life – 2x
- Add wireless communications – 802.11b
- Add high speed communications – USB 2.0
- Double the number of channels – from 27 to 54
- Increase the sample rate – from 5.4 KHz to 54 KHz
- Increase the resolution – from 12-bit to 16-bit

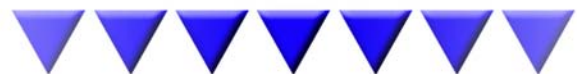
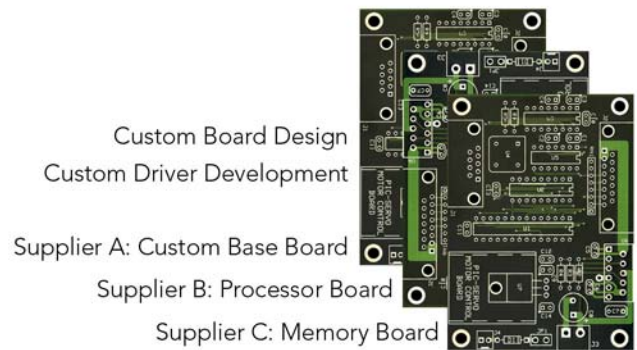
Customer Benefit

- Met and exceeded all requirements
- Reduced solution cost by 25%
- No up front design costs
- Single supplier solution (from 5)
- Maintained lifecycle of product
- Simplified application software
- 75% reduction in project duration
- Regain technology leadership in marketplace

Troy Roberts, VP Engineering, SleepMed

"E-TROLZ delivered embedded control and technology expertise we could not otherwise afford. E-TROLZ enabled us to regain technology leadership in ambulatory EEG and sleep studies."

Existing Solution
3 boards, 2 contractors



E-TROLZ

Single board, single supplier,
fully integrated solution

