

EMBEDDED HARDWARE & SOFTWARE CUSTOM DEVELOPMENT SERVICES

About Us

RoweBots offers you a full specter of embedded system development services, both hardware and software, including PCB design.

From the outset, RoweBots had its roots in real-time multiprocessor software and has broadened into an embedded signal processing systems company today. During this time extensive work was done on industrial productivity to deliver the value that customers require during software development. The evolution of the business has been built on a broad base of technology and rich business understanding that remains in the company today.

Expert Developers

30 years of RoweBots's expertise includes solutions in various industries, including aerospace, medical, mining, military and consumer products. Our consulting work complements the product line by encompassing a range of embedded systems services required to deal with specific research and development issues. Traditionally, our business has been real-time embedded multiprocessor systems software, networking and signal processing and we maintain this focus, now extended to embedded systems. From a tiny DSP to full blown distributed, heterogeneous, multicore and multiprocessor systems, RoweBots people deliver signal processing systems that work on time and on budget.



How RoweBots can help your business?

RoweBots has a wide range of embedded capabilities, such as hardware and software development from scratch, as well as improving existing projects.

Our consulting services include reviewing of your system architecture, source code, schematic, components selection, and PCB layout.

After that we will provide you with the list of possible improvements and optimizations.



SENSORS AND PROJECTS



Gesture recognizer:

- MPU-9150 (InvenSense) - Nine-axis (Gyro+Accelerometer+Compass) MEMS



Athlete monitoring:

- H3LIS331DL (ST) - 3 Axis Accelerometer
- L3GD20H (ST) - 3-axis gyroscope
- TMP007 (TI) - Infrared Thermopile Sensor
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- MAX86150 (Maxim Integrated) - integrated electrocardiogram, pulse oximeter, heart rate monitor sensor module



High acceleration monitor:

- 834M1-6000 (TE Connectivity) - Triaxial Piezoelectric Accelerometer



IoT sensor prototype:

- BMP180 (Bosch Sensortec)- Pressure Sensor
- TMP006 (TI) - Temperature Sensor
- ISL29023 (Intersil/Renesas) - Light Sensor



GPS tracker:

- LIS3DH (ST) - ultra-low-power high-performance 3-axis "nano" accelerometer
- MAX-7C (u-blox) - GPS/GNSS modules



Movement detector:

- MPU-6050 (InvenSense) - Six-Axis (Gyro + Accelerometer) MEMS



Environment monitor:

- SAIC-101 (Renesas) - Flexibly change analog front end (AFE) settings in response to environmental changes



Motor control:

- FXAS21002 (NXP) - 3-Axis Digital Angular Rate Gyroscope



Sensors listed above are those we used in our recent projects.
Other options are possible - please contact us for additional information.



ROWEBOTS SKILLSET



Embedded Services and Expertise

Platform selection
Prototypes
PCB design/circuit design
Components selection
Firmware development
DSP & microprocessor development
Single board computers



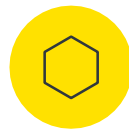
Software Development

C, C ++, Java, JavaSE, JavaScript, Assembler, Python, SQL, Shell
Unison RTOS - our own Real Time Operating System
Field Programmable Gate Array (FPGA) development
Linux, Android, WinCE, Windows Embedded, iOS development
Device drivers & external communications protocols Documentation and testing



Supported MCU Manufacturers

Microchip / Atmel
Freescale / NXP
ARM
Renesas
ST
TI
Microsemi
Xilinx
Silicon Labs
Spansion / Fujitsu
Nordic



Supported Architectures

MIPS
ARM Cortex-M/Cortex-A
Renesas RXv1/RXv2
MicroBlaze
ColdFire v2



Development Tools

IAR
HEW / e²studio
SourceryCodeBench
MPLAB / MPLABX
Code Composer Studio
Soft Console
Xilinx SDK
Keil MDK
ThunderBench KDS
System Workbench



Experience in Embedded Technologies

Ethernet TCP/IP PPP, FTP
HTTP / HTTPS / REST MQTT
AMQP CoAP
Modbus SSL SSL / TLS
Ipsec
IP Filtering WebSocket
SSH
SFTP
SMTP SNMP v3
Secure Bootloader (using AES-128/256)
Encrypted File System
ARM Trust Zone technology
WiFi
2G/3G/LTE GPS
BT/BTLE
LoRa
USB host / device / OTG
USB MSC / SPP / HID / RNDIS
Azure IoT Hub

Delivering Embedded Excellence



RoweBots

+ 1(519) 279 4600

questions@rowebots.com
rowebots.com