



CAPABILITY STATEMENT

Founded in 2009, eSonar Inc. is an incorporated small business in St. John's, Newfoundland that specializes in hardware, software, firmware, and PCB design for embedded systems as well as custom engineering design services. We have extensive experience in prototyping, new product development and adoption of modern embedded technologies, both in the hardware and software areas. Our team of P.Eng. certified engineers are ready to assist your team with your ongoing projects, utilize the extended development model to augment your capability, & establish long-term supply-chain relationships.

Core Capabilities

Hardware Design

Custom schematic and PCB design, fabrication and testing; Mixed signal designs; Multilayer stackups to six layers; High-speed routing, High voltage routing; Analog circuit design; Power-over-Ethernet design; Power system design, DC motor control design; Magnetics and transformer design; Miniaturization and small form factor design; Low-noise analog front-end design; Analog and digital filter design; Li-ion battery system design; Low-power system design; Software driven power consumption optimization; Design for subsea applications.

Software Capabilities and Packages

In-house capabilities in embedded Linux; AutoCAD Eagle (3 seats), Altium (one seat); Fusion 360 (3 seats); SolidWorks (one seat); ROS (Robotic Operating System); Google Coral integration; Netburner module integration; Microcontroller firmware design, Languages (C, C++, Python, VHDL, Tcl); CPLD design (Altera Max II); Real-Time Operating System (FreeRTOS); MATLAB (one seat); IDL (one seat); Algorithm development; Qt SDK; Simple GUI development.

Testing and Prototype Development

Electronics lab services; Prototype assembly and test; Through hole and SMT assembly; Embedded system verification; Prototype analysis; Data analysis; Small-batch PCB fabrication; Third-party systems integration; Concept validation; Subsea hydraulics and linear displacement systems.

Engineering Team:

Gary Dinn, P.Eng. Electrical (electronics), 30 years practice subsea & marine instrumentation)

Sandra Mercer, P.Eng. Electrical (signals & software), 20 years practice subsea controls & sig. proc.

Tracie Hughes, P.Eng. Mechanical (systems design), 15 years practice subsea oil & gas

Matthew Dinn, P.Eng. Computer (Embedded systems), 10 years practice subsea instrumentation

eSonar Inc.

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For additional information about eSonar's capabilities, contact our office **(709) 726-0338**, email us at info@e-sonar.ca, or visit our website at www.e-sonar.ca to learn more.

Company Information

Legal Name: E Sonar Inc.

BN: 824104624

Year of Incorporation: 2009

Facilities: 3500sq.ft. Office and Lab

NAICS Codes:

541710 Research and development in the physical, engineering and life sciences

541330 Engineering services

541514 Computer systems design and related services

541715 Oceanographic research and development laboratories or services

Historical Projects

DND IDEaS: AUV Detection System

DFO: Marine Mammal Detection System

Ashored Innovations – Rope on Command Fishing System design

NRC: Variable Buoyancy System Design

Marine Industrial Lighting System – Embedded PoE Smart Marine Lighting

Notus Electronics– Embedded subsea sonar with systems integration

Smartcone – Acoustic Theory Validation

eSonar – In-house acoustic products

A specific IP-focused capabilities list is available for review on execution of NDA.

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