

Bridging Minds and
Machines with Intelligence

Human-Machine Interface Solutions

PLANNED
01:29:18
DOWN TIME
01:51:33
SETUP
01:58:18

PLANNED
Time in Planned Downtime
01:29:18

RUNNING
Time in Running
01:51:33
Time in Running Job / Shift
01:51:33 / 01:58:18

The New Language of Machines

Today's machines not just function, but rather communicate. At *Powersoft19*, we design and develop Human-Machine Interfaces (HMI) that enable intuitive, intelligent, and safe interactions between humans and complex systems. Whether it's an industrial touchscreen panel, an automotive dashboard, or a medical device UI, our HMIs empower users with real-time control, feedback, and data visualization.

We bring together systems engineering, UI/UX design, embedded software, and emerging technologies to craft experiences that are not only functional, but human.

The Modern-Day HMI Challenge

- Obsolete user interfaces in critical systems
- Poor UX leading to operator error or fatigue
- Lack of secure communication and real-time responsiveness
- Delayed system reactions due to clunky architectures
- Integration issues between HMI software, sensors, and hardware

In an era of smart factories, autonomous vehicles, and digital hospitals— these challenges aren't minor; they're mission-critical.

Our Solutions—Designed for Performance, Engineered for People

Powersoft19 develops HMIs that combine engineering rigor with creative precision. Our multidisciplinary teams deliver custom HMI systems built for touch, gesture, voice, or physical controls, depending on the end use. Every design balances safety, speed, usability, and modularity.

Our Capabilities

UI/UX Design for Embedded Interfaces

Clean, intuitive layouts for real-time systems, designed for ease-of-use, legibility, and cognitive load balance.

Multi-Platform HMI Development

HMI systems for PLCs, industrial displays, embedded Linux devices, automotive consoles, and more.

Integration with Control Systems

Built to interface with real-time OS, sensors, controllers, SCADA, and field devices.

High-Fidelity Prototyping

Rapid prototypes to validate interaction flows, visual hierarchy, and animation logic.

AI and Predictive UX

Smart HMI elements using AI/ML to personalize, adapt, or predict user behavior.

Secure and Safety-Critical HMIs

Support for compliance-focused and safety-rated systems (IEC 61508, ISO 26262, etc.)

Tools and Tech Stack We Work With

Category	Tools and Technologies
UI Frameworks	Qt, Qt for MCU, TouchGFX, Crank Storyboard, Embedded Wizard
Languages	C++, C, Python, JavaScript, QML, HTML5/CSS3
Design Tools	Figma, Adobe XD, Sketch, Axure, InVision, Zeplin
RTOS Integration	FreeRTOS, QNX, VxWorks, Embedded Linux (Yocto/Buildroot), RTEMS
Communication	CAN, Modbus, OPC-UA, SPI/I2C/UART, Ethernet, MQTT
Simulation and Testing	MATLAB/Simulink, Altair Activate, Jenkins CI, GDB, JTAG, QEMU
Hardware Targets	STM32, NXP i.MX, Renesas, TI Sitara, Raspberry Pi, BeagleBone, NVIDIA Jetson
AI Libraries	TensorFlow Lite, Edge Impulse, OpenCV, ONNX Runtime

We adapt to proprietary or client-preferred toolchains, even if it is something like Siemens TIA Portal, B&R Automation Studio, etc.

Industries We Serve

Industrial Automation: Operator panels for production lines, SCADA dashboards

Automotive: Digital clusters, infotainment interfaces, HUDs

Medical Devices: User-friendly and safety-rated HMIs for diagnostics, imaging, wearables

Aerospace and Defense: Mission-critical HMIs for cockpit systems, UAV controls

Consumer Electronics: Minimal UIs for smart appliances, fitness devices, IoT controls

Why Work With Powersoft19?

- End-to-end design and development, from wireframes to firmware
- Seamless integration with your hardware and control systems
- Real-time performance with safety and usability in mind
- Agile teams with deep domain expertise in both embedded and UX
- AI-powered, responsive, and future-proof designs
- Global experience, local adaptability



Improved operator



Reduced risk of error and



Scalable design across devices and platforms



Enhanced user satisfaction and accessibility



Future-ready with AI and voice/gesture integration



Compliance with safety and industry

Let's Build Interfaces That Think Like Humans

Power your machines with HMIs that understand people, and perform flawlessly under pressure.

Partner with *Powersoft19* to design future-ready, secure, and scalable HMI systems.

Contact Us

Drop us a line and let us know what we can do for you. There is no limit to what can be made possible with our passionate team. Here are some examples:

- Come up with ideas to solve challenging issues faced by your business.
- Execute complex project/product ideas.
- Take the burden of managing legacy products off your shoulders.
- Provide a skilled project team to augment your in-house resources.
- Provide consultancy regarding industry standards and market trends.
- Design a customized partnership model with *Powersoft19* that empowers you to beat the competition.



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