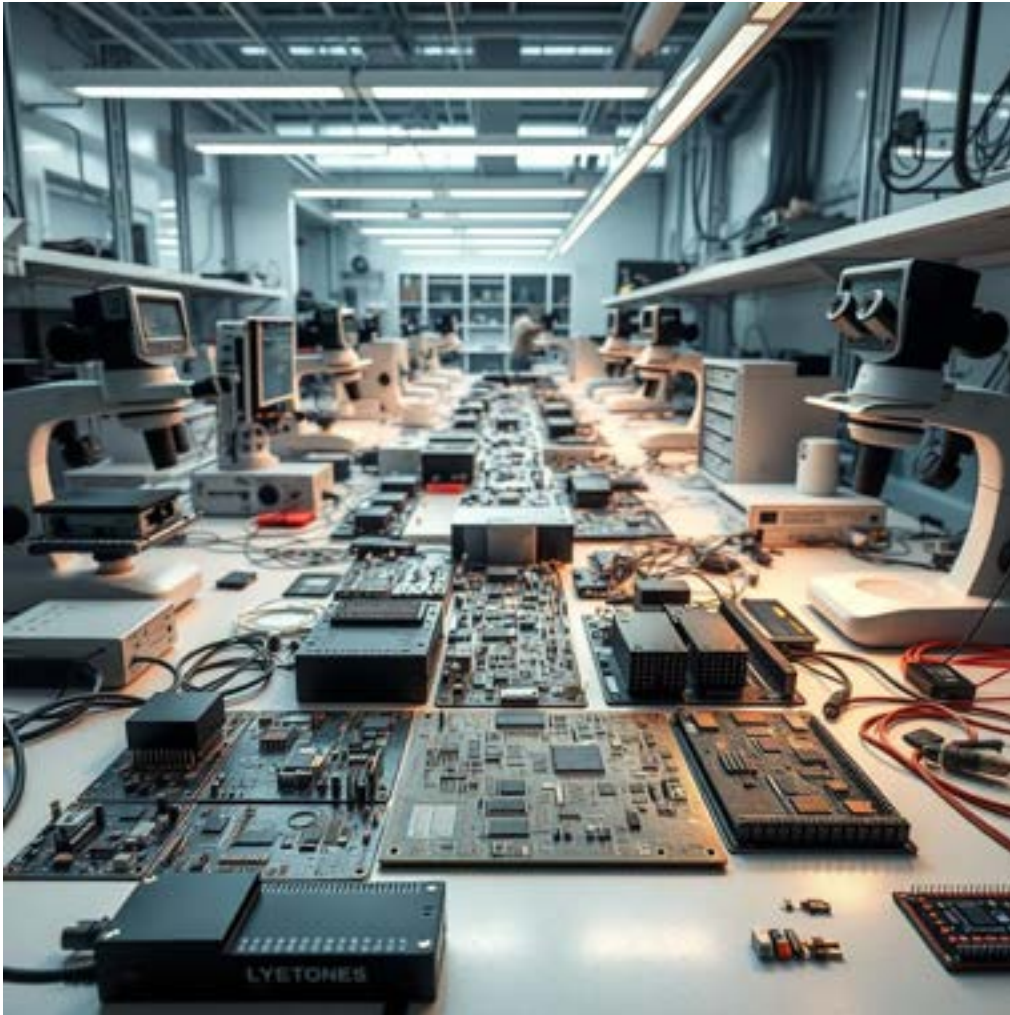




# Embedded Systems Services

Advanced Embedded Hardware and Firmware Solutions

# About Nerve Cells AI



Nerve Cells AI Pvt. Ltd. is a technology company specialising in Embedded Systems Engineering, RF Communication Technologies, and Electronic Product Development. Founded in January 2023, we combine deep engineering expertise with product-focused thinking to design and develop advanced electronics systems for global industries.

Our team works on custom hardware design, embedded firmware, RF communication systems, and intelligent devices, enabling organisations to transform innovative ideas into reliable electronic products.

# Our Mission & Vision

## Our Mission

To create impactful, secure, future-ready technologies that empower industries and improve lives.

## Our Vision

To empower people through intelligent technology and shape a future without limits.

# Our Core Values

At Nerve Cells AI, our culture is driven by innovation, transparency, and measurable impact.



## Innovation & Continuous Learning

We constantly explore new technologies and engineering approaches to deliver impactful solutions.



## Collaboration with Transparency

We believe in strong partnerships with clients whilst maintaining honesty and transparency in every engagement.



## Social Impact

Technology should contribute positively to society and create sustainable value.



## Results-Oriented Execution

Our focus is on delivering measurable results and real engineering outcomes.



## Passion for Technology

Our team is driven by a deep passion for electronics engineering and advanced technologies.

# Core Services - Embedded Hardware Design and Development

We provide comprehensive end-to-end hardware engineering solutions, from initial concept and product design to industrial-grade implementation and smartification.



## Embedded Hardware Design

Expertise in embedded hardware and firmware.



## IoT & Connectivity

IoT hardware design, IoT gateways, and specialized networking devices for connected ecosystems.



## Product Development

Full new product development, wearable device design, and customized smartification solutions.

# Execution Process

## 1 Concept & Analysis

Initial research and feasibility study to define project scope and requirements.

## 3 Design & Development

Core hardware and firmware engineering, prototyping, and iterative development.

## 5 Optimization & Deployment

Final tuning, manufacturing preparation, and product rollout.

## 2 Planning & Proposal

Detailed project roadmap, resource allocation, and formal proposal drafting.

## 4 Integration & Testing

System assembly, quality assurance, and rigorous performance validation.

## 6 Post-Development Support

Ongoing maintenance, troubleshooting, and continuous lifecycle management.

# PCB Design and Development Services

We provide comprehensive PCB design and development services, guiding your product from initial feasibility through to final production and certification support.

## Design & Engineering

- Feasibility Analysis
- Hardware Board Design
- Multi-Layer Boards
- Analog and Mixed Signal Boards

## Interfaces & Wireless

- High-speed Interfaces
- Wireless/RF Interfaces
- Signal Integrity & Simulation

## Quality & Compliance

- Reliability Analysis
- EMI/EMC Certifications
- Prototyping & Testing

## Full Lifecycle Support

- Design for Manufacturing
- Production Support

# Key Dependencies and Support Services

Essential services and infrastructure required for successful project execution and deployment.

## PCB Design and Fabrication

Professional layout design and high-quality fabrication services to ensure reliable hardware architecture.

## Component Soldering (SMD)

Precision surface-mount device assembly and soldering for dense, complex circuit board configurations.

## Circuit Simulation Tools

Advanced EDA and simulation software to validate design integrity before committing to physical prototyping.

## Product Certification

Navigating regulatory standards and securing necessary product certifications for market entry.

## EMI/EMC Testing

Rigorous electromagnetic interference and compatibility testing to meet global regulatory requirements.

## Environmental Testing

Stress testing under varying thermal, humidity, and vibration conditions to ensure long-term device durability.

# Why Choose Our Embedded Systems Services

We provide a comprehensive approach to embedded systems development, combining technical expertise with rigorous quality standards to accelerate your product journey from concept to market.

## End-to-End Solutions

Seamless management from initial conceptualization and design through to final volume production.

## Expert Technical Team

A highly skilled team with deep industry knowledge in complex hardware and firmware architectures.

## Comprehensive Portfolio

A full suite of integrated services covering every critical stage of the embedded development lifecycle.

## Quality & Compliance

Uncompromising commitment to testing, rigorous QA, and navigating complex regulatory certifications.

## Cost-Effective Strategy

Optimized design and manufacturing workflows designed to maximize performance while minimizing total project costs.

## Post-Development Support

Dedicated long-term support to ensure ongoing reliability and success long after deployment.

# Company Snapshot

## Founded

2023

## Team

13+ engineers

## Headquarters

Mohali, Punjab, India

## Contact

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