CAPABILITY STATEMENT

EmbedCrest Technology Private Limited

Embedded systems, firmware, PCB and Industrial IoT engineering partner for OEMs and product teams, from architecture and prototype to validation and connected deployment, delivered from Kalyan, Maharashtra, India.

Company facts

Founded
2024

Headquarters
Office No. 02, Vighnahar Apartment, Near Mangeshi Banquet Hall, Kalyan West, Maharashtra 421301, India

Delivery model
Engineering delivered remotely from India, available to clients in United States, Canada, United Kingdom, Germany, United Arab Emirates, Singapore, Australia, Netherlands, Japan and India

Contact
contact@embedcrest.com, +91 9152 336933, www.embedcrest.com

Core services

Embedded AI & Edge ML: Edge AI and TinyML engineering: on device inference, embedded computer vision and predictive analytics on MCUs and edge computers, without cloud dependency.

IoT & Connectivity: IoT device and platform engineering: BLE, WiFi, LoRaWAN, NB IoT and cellular connectivity, gateways, MQTT, secure provisioning, OTA and cloud integration.

Firmware Engineering: Embedded C/C++, MCU firmware, RTOS, drivers, secure boot, OTA updates and low power optimization for production ready devices on ARM Cortex, ESP32 and NXP.

System Architecture: Embedded system architecture: processor selection, hardware/software partitioning, interface definition, risk analysis and integration planning for new products.

Device Drivers & BSP: Board bring up, U Boot, device tree, Linux kernel and RTOS drivers, Yocto and Buildroot BSPs with test evidence and reproducible production images.

Industrial & Automotive: Industrial IoT gateways, PLC data acquisition, machine monitoring, SCADA/MES integration and CAN/LIN automotive embedded engineering for manufacturers and OEMs.

Security & R&D: Embedded device security: secure boot, firmware signing, encryption, key management, rollback protection and security reviews, plus R&D engineering support.

Software Testing: Embedded verification and validation: unit and integration tests, hardware in the loop, fault injection, static analysis and regression automation before release.

IT Augmentation: Add embedded, firmware and IoT engineers or a dedicated engineering pod to your team, with sprint planning, code review, reporting and NDA/IP protection.

Custom Software Development: Web apps, backend APIs, dashboards and SaaS platforms that complement embedded and IoT products, built by the same team that engineers the devices.

Digital Transformation: Modernize industrial operations with connected devices, machine data, dashboards and workflow automation, from legacy equipment to data driven decisions.

Industries

Embedded Systems & Firmware Engineering · IoT Devices & Wireless Engineering · Edge AI & TinyML Applications · Secure Device Ecosystems · Industrial Automation & Control Systems · Connected Consumer Electronics · Smart Energy & Utility Systems · Automotive Embedded Engineering · High Reliability Industrial Hardware Integration

Technologies

Communication Protocols: BLE, LoRaWAN, NB IoT, WiFi, Thread, CAN, LIN, FlexRay, Modbus, SCADA

Firmware & OS: Bare metal, RTOS, Linux kernel, OTA updates

Cloud Platforms: AWS IoT, Azure IoT Hub, Google Cloud

Security: Secure boot, Encryption, Authentication, Compliance

AI/ML: TinyML, Edge AI, Vision AI, Predictive Analytics

Engagement models

Fixed scope engineering package: A well defined deliverable such as a firmware audit, a PCB DFM review or a driver for a specific board.

Milestone project: New product development from architecture to prototype, EVT, DVT and production handoff.

Dedicated engineer or engineering pod: Teams that need ongoing embedded, firmware or IoT capacity alongside their own engineers.

Rescue or optimization sprint: Products with unstable firmware, field failures, power budget problems or a stalled bring up.

Long term maintenance: Shipped products that need security patches, component changes, OTA releases and support for new hardware revisions.

Confidentiality and intellectual property

Mutual NDA before technical discussion, under the jurisdiction the client needs. Every SOW lists deliverables with acceptance criteria, and intellectual property in the deliverables is assigned to the client. On regulatory compliance we design for the target standards, run pre compliance

reviews and support accredited test labs; certificates or declarations of conformity are issued by certification bodies, notified bodies or the product owner, and held by the product owner.