KALKI TECH
Technology for tomorrow

Training Courses

Embedded Systems Software Development

Embedded systems play a crucial role in modern defense and space technologies. Kalki Tech provides training in developing software for embedded systems, covering bare-metal programming, Free RTOS-based applications, and software development for popular SOCs and microcontrollers like Zynq SOCs, STM32 and Arduino Micro Controllers. Students will gain hands-on experience in designing efficient and reliable embedded software, preparing them for roles such as embedded systems engineer, firmware developer, and real-time software engineer in defense and space organizations.

List of Topics Covered

1. Introduction to Embedded Systems.
2. Embedded C Programming.
3. Development flow of popular IDEs like Xilinx SDK, Vitis, Keil, CUBE IDE and ArduinoIDE.
4. UART interface for Embedded Software Debugging
5. Data interfacing with Ethernet.
6. Basics of System Design and Architecture.

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Digital Design and VLSI

Our comprehensive training program on Digital Design and VLSI offers hands-on experience in RTL (VHDL/Verilog) code development, test bench creation, and verification, equipping participants with the skills to design and validate complex digital systems. These skills are essential for building reliable hardware solutions crucial for aerospace and defense applications. Join us to unlock career opportunities as an RTL design engineer or Design Verification Engineer in leading aerospace and defense companies. Elevate your expertise and make a lasting impact in the realm of digital design with Kalki Tech.

List of Topics Covered

1. Introduction to VLSI
2. Digital Design Concepts
3. RTL Coding – VHDL & Verilog
4. Testbench Coding & Behavioral Simulation – Verilog & System Verilog
5. Design Verification - Introduction to UVM.

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FPGA Development

Explore the dynamic world of FPGA programming, development flow, and hardware debugging through our intensive training program. Gain hands-on experience in designing and optimizing FPGA-based systems, equipping you with the skills to tackle real-world challenges with confidence. Prepare for a range of career opportunities in industries such as aerospace, defense, telecommunications, and beyond, where your expertise in FPGA development will be in high demand. Elevate your career prospects and become a driving force in shaping the future of technology with our FPGA Development Training

List of Topics Covered

1. Introduction to FPGA Technology
2. FPGA Design and Development Flow using tools like ISE, Vivado and Libero.
3. RTL Code Optimizations
4. Post Synthesis and Post Place and Route Simulations
5. Static Timing Analysis and Timing Closure.
6. Hardware debugging using Integrated Logic Analyzers (ILAs)

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Hardware Design and Development

Embark on a transformative journey into the realm of Hardware Design and Development with our comprehensive training program. From schematic design to PCB layout, hardware bringup, testing, and debugging, explore every facet of the hardware development process under expert guidance. Gain hands-on experience in designing, optimizing, and troubleshooting custom hardware solutions for diverse applications. Whether you're a novice or an experienced engineer, our program equips you with the skills and knowledge to excel in the fast-paced world of hardware engineering. Your expertise in schematic design, PCB layout, and hardware debugging will position you for roles such as Hardware Design Engineer, PCB Layout Engineer, Hardware Test Engineer and Hardware Integration Specialist.

List of Topics Covered

1. Introduction to Hardware Design
2. Hardware Development flow with tools like Cadence, Cadstar, Orcad and Altium.
3. Schematic Design and Verification.
4. PCB Layout and optimizations.
5. Hardware Bring up and Testing
6. Hardware debugging using Oscilloscopes, Multimeters and Logic Analyzers.

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High-Performance Computing

High-performance computing (HPC) is essential for processing large volumes of data in defense and space applications. Kalki Tech offers training in developing parallel, pipelined, and multi-threaded software, as well as GPU programming for NVIDIA and AMD GPUs. Participants will learn to harness the computational power of GPUs for tasks such as signal processing, image analysis, and simulation. Career opportunities include HPC engineer, parallel computing specialist, and GPU software developer in researchinstitutions, government agencies, and aerospace companies.

List of Topics Covered

1. Introduction to Parallel Processing
2. Parallel vs Pipeline Designs
3. SIMD and MIMD Architectures
4. Stream Processing
5. Concepts of multi-threading and multi-core processing
6. OpenMP and MPI
7. GPU Programming

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Course Curriculum Overview

Kalki Tech's training programs combine theoretical knowledge with practical hands-on experience, providing students with the skills needed to excel in the defense and space industries. The curriculum includes lectures, workshops, and project-based learning, ensuring that participants gain a comprehensive understanding of each topic. Experienced instructors guide students through industry-relevant projects, preparing them for successful careers in fields such as FPGA design, embedded systems development, digital design, flight software, and high-performance computing.

Career Opportunities

Graduates of Kalki Tech's training courses are well-equipped to pursue rewarding careers in the defense and space sectors. With in-demand skills in FPGA design, embedded systems development, digital design, hardware design, and high-performance computing, students can explore diverse job roles in aerospace and defense organizations, satellite companies, research institutions, and government agencies. Whether aspiring to become FPGA engineers, firmware developers, Embedded software engineers, or HPC specialists, Kalki Tech's training programs open doors to exciting opportunities in cutting-edge technology fields.

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KALKI TECH Training Program USPs (Unique Selling Points)

1. Training by industrial experts
2. Explaining the concepts with practically understandable analogies
3. Hands-on training with live projects
4. Affordable Course Fees
5. Career guidance with proper counselling
6. No Compromise on Quality
7. Training Certification upon successful completion
8. Job guarantee for top 5% performers
9. Placement Assistance
10. Live sessions and doubt solving

Training Duration and Fee Structure

Embedded Systems Software Development (Beginner Friendly Course**)**

- Three Months of Course Work
- One Month of Industry Oriented Project Work
- Course Fees: INR 20,000

Digital Design and VLSI (Beginner Friendly Course**)**

- Three Months of Course Work
- One Month of Industry Oriented Project Work
- Course Fees: INR 20,000

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Hardware Design and Development (Beginner Friendly Course**)**

- Three Months of Course Work
- One Month of Industry Oriented Project Work
- Course Fees: INR 20,000

FPGA Development (Advanced Course**)**

- Three Months of Course Work
- One Month of Industry Oriented Project Work
- Course Fees: INR 25,000

High Performance Computing (Advanced Course**)**

- Three Months of Course Work
- One Month of Industry Oriented Project Work
- Course Fees: INR 25,000

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