



# Embedded Technosolutions

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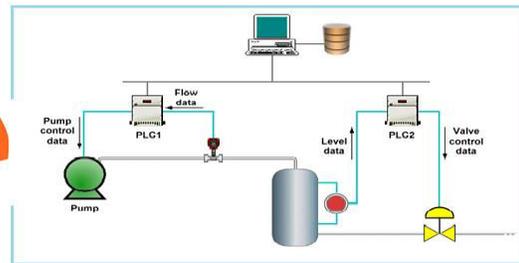
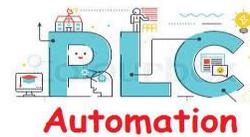
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Any Industry Always Refer a Candidate with Multiple Skills, This will Improve the Chance of Getting Good JOBS & Opportunity.

\*\*\* Have a Good Career Ahead \*\*\*



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**Embedded Technosolutions** is a Professional Training Institute & a Company which Working for Indian MNCs & Medium/Small Scale Industries in Product R&D, Development, Manufacturing & Customization.

Our training sessions are purely practical based on industrial standards.



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## Till Now We Worked for the following Industries

- Crompton Greaves Ltd, Mumbai
- Laboratory Corporation of America, LabCorp, Burlington, NC USA
- Netfinity, India
- Continental Grain Corporation
- Brook Furniture Rental, Chicago, IL
- ITA, Bangalore
- RAK Ceramics, Mumbai
- Nvidia, Pune
- ARORA, Mumbai
- RED Cell, Mumbai
- Secutech, Mumbai



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## Embedded C Programming

### Chapter 1 : Introduction to C

- 1.1 Special features of c
- 1.2 C compilation process with GCC under Linux
- 1.3 C identifiers, variables, keywords and constants
- 1.4 C data types

### Chapter 2 : Instructions

- 2.1 Operators



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2.2 Decision control instructions

2.3 Loop control instructions

## **Chapter 3 : Functions**

3.1 Library functions

3.2 User defined functions

3.3 Function declaration and definition

3.4 Passing arguments by value and by address

3.5 Storage classes

3.6 Preprocessors

## **Chapter 4 : Arrays and strings**

4.1 Array declaration and initialization

4.2 Passing arrays to functions

4.3 Initialization of strings

4.4 String library functions



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## Chapter 5 : Pointers

- 5.1 Pointer basics
- 5.2 Passing arguments by address
- 5.3 NULL pointers

# ARM 7 (LPC2148) Processor

## Chapter 1 : Introduction to ARM Processor

- 1.1 Introduction to embedded system and ARM Processor
- 1.2 ARM processor family
- 1.3 Application of ARM Processor
- 1.4 Compiler
- 1.5 Difference between RISC & CISC

## Chapter 2 : LPC2148 Microcontroller Pin details, Memory

- 2.1 LPC2148 ARM7 microcontroller
- 2.2 Features of LPC2148



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- 2.3 Block diagram of LPC2148
- 2.4 Pin diagram of LPC2148
- 2.5 Architectural overview
- 2.6 On-chip flash program memory
- 2.7 On-chip static RAM

## Chapter 3 : Keil IDE

- 3.1 Introduction to Keil IDE
- 3.2 Creating project with Keil
- 3.3 Debugging

## Chapter 4 : Hardware Interface

- 4.1 Minimum system requirements for LPC2148
- 4.2 Hardware interfacing details

## Chapter 5 : System Control

- 5.1 PLL
- 5.2 External Interrupt input
- 5.3 Power Control ,VPB



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## Chapter 6 : Pin Connect block ,GPIO

6.1 Pin Connect Block

6.2 General Purpose I/O:

- LED and switches interfacing
- Buzzer
- LCD
- DC Motor
- Matrix keypad interfacing

## Chapter 7 : Timer , ADC , UART

7.1 Timer

7.2 10-bit ADC

7.3 UART : Features, Serial Communication

## Chapter 8 : I<sup>2</sup>C , SPI ,PWM

8.1 2C-busserialI/OController:Features&InterfacingwithAT24C04

8.2 SPI-Serial I/O Controller : Features & Interfacing with SD Memory Card

8.3 PWM



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## Raspberry Pi with IOT

### Chapter 1

- 1.1 Program Raspberry Pi : a credit-card sized computer
- 1.2 Python programming for Raspberry Pi
- 1.3 Interacting and configuring the RPi OS
- 1.4 ARM 11 architecture
- 1.5 Porting of Linux Kernel and booting RPi

### Chapter 2

- 2.1 Linux programming basics

### Chapter 3

- 3.1 Programming the GPIO and interfacing peripherals With Raspberry Pi
- 3.2 Generating PWM signals through the Pi

### Chapter 4

- 4.1 Programming and work with UART protocol
- 4.2 Remote Login methods: HyperTerminal, Ethernet



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## Chapter 5

5.1 Work with I2C protocol

## Chapter 6

6.1 Developing GUI with TKinter



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## Wireless Communication

### Chapter 1

- 1.1 Introduction of DTMF mobile technology
- 1.2 DTMF technology interfacing in real application
- 1.3 DTMF programming
- 1.4 Practical project design based on DTMF technology

### Chapter 2

- 2.1 Introduction of RF Communication
- 2.2 RF technology interfacing in real application
- 2.3 RF module programming
- 2.4 Practical project design based on RF technology

### Chapter 3

- 3.1 Introduction to RFID communication
- 3.2 RFID technology interfacing in real application



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3.3 RFID module programming

3.4 Practical project design based on RFID technology

## **Chapter 4**

4.1 Introduction to GSM communication

4.2 GSM technology interfacing in real application

4.3 GSM module programming

4.4 Practical project design based on GSM technology

## **Chapter 5**

5.1 Introduction to Bluetooth communication

5.2 Bluetooth technology interfacing in real application

5.3 Bluetooth module programming

5.4 Practical project design based on Bluetooth technology



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## PLC Automation Developer

### Module 1 - PLC Introduction

- Introduction to PLC hardware and role in automation
- Architectural Evolution of PLC
- Introduction to the field devices attached to PLC

### Module 2 - PLC Hardware Fundamentals

- PLC Fundamentals - (Block diagram of PLC's)
- Detail information about PLC components → Power supply, CPU, I/Os, Communication bus
- Various ranges available in PLC's

### Module 3 - Hardware & Software Component

- Identifying Logix System hardware and software Components



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## Module 4 - Source & Sink Concepts

- Types of Inputs & outputs / Source Sink Concepts
- Wiring of the I/O devices

## Module 5 - Timing & Scan Cycles

- Concept of flags
- Scan cycle execution

## Module 6 - PLC Configuration

- Setting up PLC's/Connecting CPU, I/O modules, Rack, Backplane and Communication bus

## Module 7 - PLC Communication Interfaces

- Connecting a Computer to a Communications Network

## Module 8 - PLC Software Settings

- Installing and to starting the programming terminals
- Creating & Modifying an RSLogix new project



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- Transferring a Project File to a Logix5000 Controller

## Module 9 - PLC Programming Logics

- Creating various Tasks
- Organizing Data
- Entering, Editing, & Verifying Ladder Logic
- Configuring Logix5000 Controllers to Share Data
- Configuring a Message
- Documenting & Searching for Project Components

## Module 10 - PLC Programming

- Identifying Programming Strategies & Techniques
- Documenting & Searching Ladder Logic
- Programming Basic Instructions
- Programming Timer & Counter Instructions



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- Programming Program Control Instructions
  - Programming Compare Instructions
  - Programming Compute & Math Instructions
  - Programming Move Instructions
  - Programming with Advance Instruction Set
  - Creating a Function Block Diagram
  - Programming Logical Function Block Instructions
  - Programming Timer & Counter Function Block Instructions
  - Programming Analog Function Block Instructions
  - Programming Timing Modes in a Function Block Instruction
  - Programming & Monitoring an RMPS (Ramp/Soak) Function Block Instruction
  - Controlling Program Flow Using Function Block Instructions



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	<b><u>Live Projects</u> :</b> <b>PLC Automation Based</b>
<b>1</b>	Traffic Light System Designing
<b>2</b>	Water Level Control System Designing
<b>3</b>	Building Pump Automation Designing
<b>4</b>	Water Level Detection - Simple Logic1
<b>5</b>	Water Level Detection - Moderate Logic
<b>6</b>	Water Level Detection - Fully Controlled Logic
<b>7</b>	Emergency Trapping System Designing
<b>8</b>	Bottle Filling Machine Designing
<b>9</b>	Industrial Sequential Motor Control



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<b>10</b>	Heavy Industrial Sequential Motor Control
<b>11</b>	Both Hand Safety Logic
<b>12</b>	Burglar Alarm System



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## Placement Policy

- As we are working for industries for their product development, R&D, Customization & Manufacturing we get direct recruitment related notification from that companies whenever there is the recruitment in the that companies.
- Also other companies in the market they also call us regarding recruitment process.

These entire JOB related notifications we exclusively provide to our students and they can apply in that companies directly. We upload the password protected job notifications on our website, students can access that job notifications from our website with password.