Lab Manual

For

SoC Architecture for Mobile and Pervasive Computing Lab Based on

Raspberry Pi /Intel Atom Board

(MMC- 524)

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SoC Architecture for Mobile and Pervasive Computing Lab Based on Raspberry Pi/Intel Atom Board (MMC-524)

EXPERIMENT-1
Study the Raspberry Pi (Broadcom 2835 SoC) (Broadcom 2835 SoC) architecture and its peripherals.

EXPERIMENT-2
Customize the Raspberry Pi (Broadcom 2835 SoC) for Programming with Linux and Android OS and boot the same for application development.

EXPERIMENT-3
Write a program to print Hello World/ Your Name using Raspberry Pi (Broadcom 2835 SoC) editor leaf pad.

EXPERIMENT-4
Write a program to interface Buzzer and LED at different GPIO pins, write delay routine and generate 10 different patterns using Raspberry Pi (Broadcom 2835 SoC).

EXPERIMENT-5
Write a program to interface Motion Sensor, IR sensor using Raspberry Pi (Broadcom 2835 SoC).

EXPERIMENT-6
Write a program to interface ADC using Raspberry Pi (Broadcom 2835 SoC). Give complete schematic diagram with code.

EXPERIMENT-7
Customize the environment for remotely accessing the Raspberry Pi (Broadcom 2835 SoC) through SSH server.

EXPERIMENT-8
Introduction to Panda Board RevEA2 including TI SoC and OMAP4 SoC architecture and its peripherals.

EXPERIMENT-9
Write a program to interface switches and LEDs. Use switches to select different pattern of LEDs for Panda Board.

EXPERIMENT-10
Introduction to Intel Atom Board with E6XX series SoC architecture and its peripherals**.**

EXPERIMENT-11
Customize the Intel Atom SoC for Programming with Windows, Linux and Android.

EXPERIMENT-12
Write a program to interface LED at different GPIO pins, write a delay routine and generate 10 different patterns using Intel Atom SoC.

EXPERIMENT-13
Write a program to interface Motion sensor, IR sensor using Intel Atom SoC.

EXPERIMENT 14
Communication between two different Intel Atom SoC using LAN.

EXPERIMENT 15
Customize and Control Intel Atom SoC with Android Phone.

EXPERIMENT 16
Display the IP address of Intel Atom SoC using external LCD display.

EXPERIMENT-17
Introduction to Snapdragon SoC architecture and its peripherals.