ESOMAP35RF

OMAP based customized base band reference platform; ready for OEMs use…..

Overview

The **ESOM35RF** was designed and developed by Epigon Media Technologies as a highly integrated TI OMAP3530 **S**ystem **O**n a **M**odule (SOM) customized reference platform ready for OEMs to use….

The **ESOM35RF** kit is an ideal hardware and software platform; it is a complete development system accelerating time to market for OEMs building portable devices.

The **ESOM35RF** provides a very small factor, powerful, flexible engine for embedded control systems of all kinds.

Hardware Features

The major hardware features of the **ESOM35RF** are as follows:

- 600Mhz optional OMAP3530 A8 CPU with 16KB ICache/16KB Dcache
- 128KB L2 Cache and 64KB High Speed SRAM
- NEON Single Instruction Multi-Data (SIMD) Integer and Floating Point Coprocessor
- 128MB Mobile DDR SDRAM
- MCP nand flash and mDDR RAM support to 512M nand and 256M SDRAM
- On-Chip LCD Controller up to 1024 x 768 with OpenGL/Direct 3D Mobile Accelerator
- On-Chip 430Mhz TMS320C64x+™ DSP Core for Video Codec and General Purpose Use
- 8/10-Bit Video Input Port supporting YUV4:2:2, CCIR656 and Standard CMOS Sensors
- High Speed (480MBit) USB 2.0 OTG Port
- Low Power LAN9220 10/100Mbit Ethernet Controller
- TP65930 Real Time Clock with dedicated Battery Backup Input
- Three 4-wire TTL UARTS support debug board
- McSPI (x1) and I2C for I/O Expansion such as Touch, Audio, A/D, D/A, etc.
- one SD/MMC Controllers (8-Bit, SDIO Compliant)
- 8-Bit Address/8-Bit Data bus for Generic Expansion
- GPIO (may also carry some CPU Functions)
- Board size : 80 x 110mm

Note on nomenclature: Within this document, OMAP35x is used to denote either the OMAP3530 or OMAP35xx processor. Also, it can be assumed that OMAP35x and OMAP35xx hold the same meaning.

More information feel free to email us info@epigon.in

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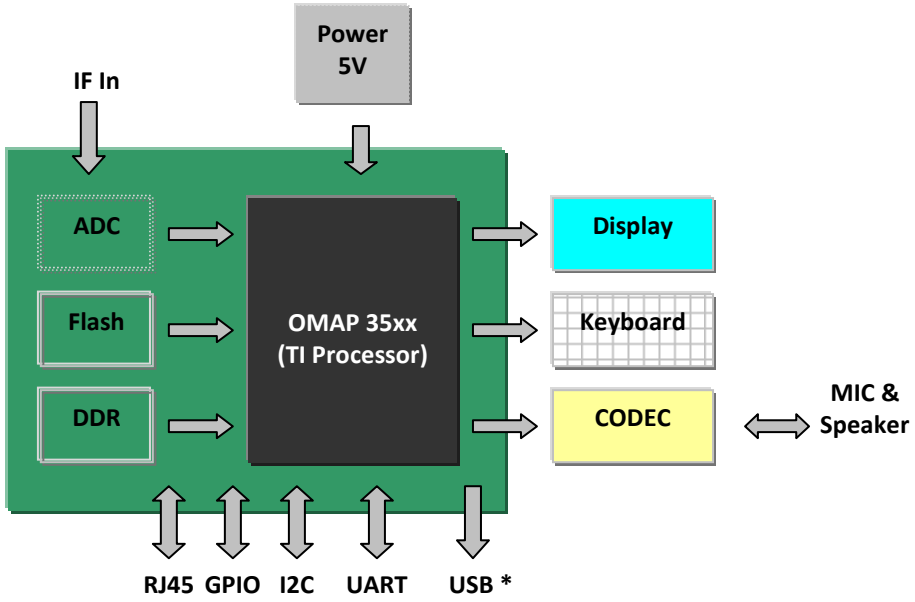
Block Diagram



Technical Specification

Processor	:	TI OMAP 3530 processor
Input interface	:	Audio (Head phone & MIC)
Display	:	LCD Display (QVGA 320 x 240) (Optional / Add-on-Module)
Key board	:	minimum 4x4 Key (soft key) (Optional / Add-on-Module)
Data	:	RS232/USB interface
RF Control I/F	:	10 pin connector (digital IO) ADC Sampling
Frequency	:	Programmable from OMAP 353x for better resolution
DDR	:	128 MB minimum
Flash	:	1 GB Minimum
GPIO	:	10 pins minimum
DSP Front-End	:	ADC (Sampling Rate: 2M sample/second ADC Analog Bandwidth: 1MHz minimum
Power supply	:	Operated with 5 Volt

Functional description

This board is best suitable for baseband development of audio communication system. It provides a 16-bit linear Codec for speech interface while other interface for near IF sampling in realtime. Any speech data could be digitized and a suitable compression scheme could be implemented on this board. This board also provides addition user interface to Keypad, LCD display (optional / Add-on-Module), Ethernet, USB, UART and GPIO's. The GPIO interface is used to control RF.

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For the future use UART and I2C interfaces are provided. The USB interface in device mode will be provided to fetch the data from the client for computation purpose.

Deliverables

- Base band Circuit Schematics based on TI Processor for reference.
- Bill of Materials (BoM), Required Gerber files.
- Interface test samples / codes (For testing of interfaces including ADC, LCD, Keypad , GPIO for demonstration purpose written code is in the Linux BSP)
- A preliminary product / user guide document describing testing procedures, interface and integration
- Minimum Order Quantity of 3/4 Numbers
- We provide 2/3 days training at Epigon.

Warranty & Support: 12 Months from the date of delivery

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