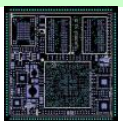
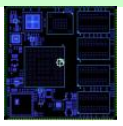
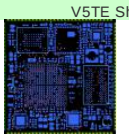
Techor System Modules Comparisons

Rev: 20101130 http://www.techor.com

Product Name	SOM2416:S3C2416(ARM926EJ)	SOMA310:PXA310	SOM3530:OMAP3530(600/720MHz Cortex-A8 + TMS320C64x+)	SOM6410:S3C6410(ARM1176JZF-S)	SOM3517:TI AM3517(Coretex-A8)	SOMV210: S5PV210(Cortex-A8)	SOM168: PXA168/PXA166(Marvell ARM V5TE Sheeva)
Picture							
Brand	TECHOR	TECHOR	TECHOR	TECHOR	TECHOR	TECHOR	TECHOR
Price:	￥500	￥0	￥800	￥700	￥0	￥0	￥0
Gross weight:	8gram	7gram	10gram	8gram	11gram	15gram	11gram
Model Form Factor	Model II(40x40mm/120pin/1.27mm pitch),Model I (40x40mm/74pin/2.0mm pitch)	Model-V(SODIMM 200)	Model II(40x40mm/120pin/1.27mm pitch)	Model II(40x40mm/120pin/1.27mm pitch)	Model III(40x40mm/152pin/1.0mm pitch)	Model-IV(48x48mm/164pin/1.1mm pitch)	Model II(40x40mm/120pin/1.27mm pitch)
Dimensions(LxWxH),mm	40x40mm, 4mm thickness	67.6 x 30 x 8 mm	40x40x3mm	40x40mm, 3mm thickness	40x40mm, 3mm thickness	48x48mm, thickness 3.5mm	40x40mm, 4mm thickness
Processor(Core)	Samsung S3C2416(ARM926EJ)-65nm	Marvell PXA310(XScale ARMv5TE)	TI OMAP35xx(Cortex-A8 + TMS320C64x+)	Samsung S3C6410(ARM1176JZF-S)	TI AM3517(Cortex-A8)	Samsung S5PV210(Cortex-A8)	Marvell PXA16x(XScale)
Speed: CORE/SDRAM	400MHz(cpu)/266M(DDR2 SDRAM)	624MHz / 208MHz	600MHz Cortex-A8 / 430MHz TMS320C64x+ DSP Core	667MHz(FCLK)/266MHz(HCLK)/67MHz(PCLK)	500MHz Coretex-A8/DDR2 266MHz	1G HCKH	800MHz/1G
I-Cache/ D-Cache, L2	16KB/16KB	32KB/32KB,WMMX2	L1/SRAM: 112 KB (DSP),32 KB (ARM Cortex-A8) / L2/SRAM:96 KB (DSP),256 KB (ARM Cortex-A8)	16KB/16KB I/D Cache and 16KB/16KB I/D TCM	L1: ARM:16 KB I-Cache/16 kB D-Cache; L2: 256KB		L1/L2 cache
Floating Point/MAC	NC	No?(To Be Determined)		VFP coprocessor support			
Internal SRAM	64KB for internal SRAM Buffer	2*128K internal SRAM	64KB RAM		64KB	Yes	
SDRAM	64MB, 16-Bit DDR2	64/128MB DDR,16bit	128MB mDDR; 256MB optional	128MB mDDR, 32bit; data bus with 266Mbs/pin double data rate	standard 256MB, 512MB optional	512MB DDR2, 1G optional	128MB
Nand Flash	128MB/8-Bit/SLC,256MB/8-Bit/SLC,512MB/8-Bit/SLC,1024MB/8-Bit/MLC	256MB/8-Bit/SLC	128MB,512MB,256MB	256MB/8bit/SLC,512MB/8bit/SLC,128MB/8bit/SLC	256MB/8bit/SLC	256MB/8bit/SLC	256MB/8bit/SLC
Expansion Bus Add/Data	7-Bit Address/8-Bit Data Local Bus	16bit Data / 20bit Address	8bit Data,8 bit Address	8-Bit Address/8-Bit Data Local Bus	10bit Address/16bit Data Local Bus	8bit Address/8bit Data Local Bus	Yes
Boot Options	On board NAND / Off board SD/MMC	On Module Nand/Off module SD/MMC card	SD/MMC boot&Nand boot	On board NAND / Off board SD/MMC		On board NAND / Off board SD/MMC	
UART	4-ch: Uart0/1: 4-wire(TX/RX/RTS/CTS);uart2/3: 2-wire(TX/RX)	3 UART ports, 16550 compatible, max 921 kbps	3-CH, 4 wires(TXD,RXD,nRTS,nCTS)	4-ch: Uart0/1: 4-wire(TX/RX/RTS/CTS);uart2/3: 2-wire(TX/RX)	4-ch: Uart0/1/2: 4-wire(TX/RX/RTS/CTS);uart3: 2-wire(TX/RX)	4-ch: Uart0/1: 4-wire(TX/RX/RTS/CTS);uart2/3: 2-wire(TX/RX)	3-ch
Slow IrDA/ Fast IrDA	IrDA 1.0, multiplex with UARTs	1 SIR	IrDA/CIR,mux with third UART	FIR up to 4Mbps, IrDA 1.1, multiplex with UART		mux with uart	mux with uart
SPI, # of Chip Selects	1-CH high speed SPI, protocol version 2.11	Yes	4-ch of McSPI	1-ch	1-ch	1-ch, Master/Slave, High-Speed	
I2C Bus	1-CH Multi-Master IIC-Bus	Yes	1-ch, Master/Slave, High-Speed	1-ch,Multi-Master	1-ch	Yes	I2C(TWSI), One-Wire(OWSI)
Timer/PWM	3-CH 16bit	>2	5-ch 32bit Timers, with 1 PWM output	5-ch 32bit Timers, with 1 PWM output		Yes	
SD/MMC Interface	2-CH,SDIO 1.0/HS-MMC 4.2/SD Host 2.0/SD Memory Card Protocol 2.1/CE-ATA	2 SDIO	1-ch 8bit SD/MMC	2-ch MMC4.0/SDMC2.0/SDIO 1.0	2-ch SC/MMC	2-ch MMC4.0/SDMC2.0/SDIO 1.0	2-ch SD/MMC
USB Host Ports	1-CH of OHCI 1.0 USB Host,Compatible USB 1.1	2-ch	1-ch USB 2.0 with OTG mux with device	1-ch, OHCI 1.0/USB 1.1	1-ch USB 2.0 High Speed Host	1-ch USB 2.0 Host	1-ch USB 2.0 Host
USB Device Port	1-CH USB 2.0 Spec USB device, 9 Endpoints	1(OTG)	1-ch USB 2.0 with OTG mux with host	1-ch USB OTG 2.0 High Speed	1-ch USB 2.0 HS OTG with PHY	1-ch USB 2.0 with OTG	USB 2.0 OTG
Ethernet Interface	10/100MB high performance Ethernet(LAN9220/LAN9221)	No	10/100Mhz high performance Ethernet(Lan9220/1)	10/100MB high performance Ethernet(LAN9220/LAN9221)	10/100M Ethernet(RMII)	10/100MB high performance Ethernet(LAN9220/LAN9221)	10/100MB high performance Ethernet(LAN9220/LAN9221)
Audio I/F	I2S of WM8731 codec, Line In/Line Out/Microphone I/F	Line In/Line Out/Mic	Stero Out/Mic	I2S of WM8731 codec, Line In/Line Out/Mic	IIS codec, Line In/Line Out/MIC	IIS codec, Line In/Line Out/MIC	Stero In/Out/Mic
PCMCIA/Compact Flash	No	No	No		No	No	
LCD I/F (Resolution,Depth)	Typically 800x600,16bit/18bit	800x600,18bit	Typical 1024x768,800x600 etc.	Max 1024x768, 18bit	Typical 1024x768, 24bit	Typical 1024x768,800x600 etc.	18 bit, typical 800x600,1024x768,up to WUXGA
Video Performance(Res@fps)	(To Be Determined)	(To Be Determined)	1920x1024 of H.264 decoding @ 25fps	Codec H.264 up to 30fps@SD		Codec H.264 up to 30fps@SD	
2D/3D Graphics	2D Graphics Accelerator Engine	3D Accelerator	Video Hardware Accelerators/ POWERVR SGX Graphics Accelerator, OpenGL ES2.0	2D/3D Graphics Accelerator,OpenGL ES 2.0,D3D Mobile; Multi Format Codec	POWERVR SGX, 2D/3D Graphics Engine	Yes	WMMX2 technology,Graphics acceleration
Video/Camera Input	No	8/10-Bit YUV/RGB	8bit Camera VIP port	ITU-R 601/ITU-R 656,8bit,up to 4096x4096 in YCbCr 4:2:2 format	8bit Camera I/F	ITU-R 601/ITU-R 656,8bit,up to 4096x4096 in YCbCr 4:2:2 format	ITU-656 camera input
GPIO	10+~30+ Channels	10+	20+ ch (Muxed)	30+ ch,mux	40+ ch,mux	30+ ch,mux	
Other Features	-		1-ch 1-Wire(HDQ)		3.3V I/O Voltage		
Availability	Samples/Small Qty/Large Qty	Samples/Small Qty/Mass Qty/Now	Samples/Small Qty	Samples/Small Qty Now	Samples in Dec 2010	Samples in Dec 2010	Samples in Dec 2010
Can Bus	NC	No		No	1-ch,HECC	No	
Temperature Range	0~70 Degree	-0 to +70 Degree	0~90 degree	0~70 degree, I/E Class optional	0~90 degree, I/E Class optional	0~70 degree, I/E Class optional	
Extended Temperature Option	Available for MOQ 500	Available for MOQ 500	-40 to 105 degree on MOQ 500	Available on MOQ 500	-40 to 105 degree on MOQ 500	Yes	Yes
Power Supply/Consumption	Single 3.1~3.6V / 0.1~1.0W depending on configuration and mode	Single 3.3~3.6V / 0.2~1.5W depending on configuration and mode	3.3V/1W	0.5W on full speed	3.3V/1W	3.3V/1W	3.3V/1W
Touch Panel Controller	4-wire,support Resistive Touch Panel	4-wire,support Resistive Touch Panel	4-wire, Resistive	4-wire, Resistive	4-wire, Resistive	4-wire, Resistive	
RoHS(lead-free) option	Available for MOQ 500	Available for MOQ 500	Yes	Available on MOQ 500	Yes	Yes	Yes
JTAG	Yes(bottom layer of test points)	Yes	8pin test point on bottom layter	8pin test point on bottom layter	8pin test point on bottom layter	8pin test point on bottom layter	Yes
RTC	CPU internal, external backup battery input	Yes, offboard battery backup	Yes,Internal Battery Backup	CPU internal, external backup battery input	Yes,CPU Internal	Yes,CPU Internal	Yes
Flash Availability	64MB~4GB of Nand Flash optional	256MB of SLC Nand	standard 128MB, 256MB/512MB optional	64MB~4GB of Nand Flash optional	128MB~4GB on demand	128MB~4GB on demand	128MB~4GB on demand
Interrupt Source	12	5+		3-ch External Interrupt Source		Yes	
ADC/DAC	2-CH ADC	3-ch	2-ch ADC	4-ch ADC mux with Touch Panel Controller		Yes	
Watchdog	Yes,CPU Internal	CPU internal	2-ch 32-Bit WD	CPU internal	Yes	Yes	Yes
Video/HDMI/DVI Output	NC			2-ch Composite Video Output	CVBS Outpout	CVBS Outpout	
CPU Variations	SC2416XH-40, 400MHz	CPU: Marvell XScale® ARM® PXA310(Monahans)	CUS package, 600MHz of Coretex-A8	S3C6410XH-66, 667MHz		S5PV210XH-A0, 1GHz	800MHz Sheeva PXA166(ARM V5TE)
Wifi Extension						802.11 b/g Marvell 88W8686 WIFI I/F	802.11 b/g Marvell 88W8686 WIFI I/F
Brief:	4x4cm Tiny System Module based on Samsung S3C2416 400MHz ARM926EJ CPU, 64MB RAM/256MB~2GG Flash, rich connectivity: Ethernet/Audio/IIC/4 UARTs/SPI/2 SDIOs/USB Host/device	Marvell PXA310(XScale ARMv5TE) 624MHz SOC,SODIMM200 Module(Model IV),rich conectivity/capability/scalability/ interactivity	TI OMAP35xx(Cortex-A8 + TMS320C64x+)based,集成Ethernet,音频codec,有丰富接口; USB/Uart/SPI/I2C/LCD/Camera/SDMMC,128MB~512MB Flash和128MB~256MB Flash	SAMSUNG semiconductor's ARM1176JZF-S based up-to 667MHz S3C6410 Application Processor engineering by TECHOR Model Number SOM6410 : System On Module,also call Embedded computer,Embedded System Module	TI AM3517(Coretex-A8) System Module (compact:4x4cm,11g),with Ethernet/USB/Video Input Output/LCD/SPI/Uart/IIC/MMC/Audio/CAN bus, 3D Accelerator	SOMV210是一款世界上尺寸最小(4.8x4.8cm,3mm厚)集成度最高(CPU外围集成Ethernet、音频Codec)的系统模块(System Module)。专门面向手持终端设备、PDA、人机界面、自动售货机、广告机、监控设备、通讯设备等设计的高性价比核心板，该系统模块采用邮票孔式设计结构，可直接焊接在底板上，其特点是尺寸小，功能全，焊接方便，功耗小，性能稳定。	TI AM3517(Coretex-A8) System Module (compact:4x4cm,11g),with Ethernet/USB/Video Input Output/LCD/SPI/Uart/IIC/MMC/Audio/CAN bus, 3D Accelerator
	购买	购买	购买	购买	购买	购买	购买