For more information go to: www.cogcomp.com

Function [1]	CSB733	CSB739	CSB740	CSB751	CSB765	CSB781
Microprocessor (Core)	Freescale i.MX31C (ARM1136JF-S)	Atmel AT91SAM9M10 (ARM926EJ-S)	TI OMAP3530 (ARM Cortex-A8)	NetLogic Au1380 (MIPS 32K)	Renesas SH7724 (SH-4A)	Freescale MPC5121e (PowerPC e300)
Speed: CORE /SDRAM [2]	532Mhz/132Mhz	400Mhz/133Mhz	600Mhz/133Mhz	667Mhz/333Mhz	500Mhz/167Mhz	400Mhz/200Mhz
I-Cache/ D-Cache, L2	16KB/16KB, 128KB L2	32KB/32KB	16KB/16KB, 256KB L2	16KB/16KB, 256KB L2	32KB/32KB, 256KB L2	32KB/32KB
Floating Point/MAC	64-Bit Double Precision FPU	-	64-Bit Single Precision FPU	32x32 Single Cycle MAC	32x32 Single Cycle MAC	64-Bit Double Precision FPU
Internal SRAM	16KB	64KB	64KB	-	128KB	128KB
SDRAM [3]	128MB, 32-Bit LPDDR-266	128MB, 32-Bit DDR2-266	128MB, 32-Bit LPDDR-266	256MB, 32-Bit DDR2-667	256MB, 16-Bit LPDDR-333	128MB, 32-Bit LPDDR-266
NOR FLASH	64MB, 16-Bit Spansion	64MB, 16-Bit Spansion	64MB, 16-Bit Spansion	64MB, 16-Bit Spansion	64MB, 16-Bit Spansion	64MB, 16-Bit Spansion
SLC NAND FLASH	512MB, 8-Bit	512MB, 8-Bit	512MB, 8-Bit	512MB, 8-Bit	512MB, 8-Bit	512MB, 8-Bit
Boot Options	NOR	NOR, NAND, SPI and SD	NOR and NAND	NOR and NAND	NOR	NOR
Expansion Bus Add/Data	25-Bit Address/16-Bit Data	25-Bit Address/16-Bit Data	25-Bit Address/16-Bit Data	25-Bit Address/16-Bit Data	25-Bit Address/16-Bit Data	25-Bit Address/16-Bit Data
RS232 DEBUG UART [4]	UART4 @ 230Kbps	Debug UART @ 115Kb	UART2 @ 230Kbps	UART2 @ 230Kbps	SCIF5 @ 230Kbps	PSC @ 230Kbps
Additional TTL UARTS (4-wire unless noted)	UART1, 2 and 3 @ 1.875Mbps	UART0, 1 and 2 @ 6.25MBps	UART1 and 3 @ 4Mbps	UART0 (8-wire), UART1 and UART3 (2-wire) @ 4Mbps	SCIF0, 2 and 4 (all 2-wire) @ 4Mbps	4x PSC @ 25Mps
Slow IrDA (115Kbps), Fast IrDA (4Mbps)	SIR: UART1 and 2	SIR UART0, 1 and 2	SIR: UART1 and 3 FIR:UART1 and 3	-	Dedicated IrDA Controller located on GPIO Pins	-
SPI, # of Chip Selects [5] [6]	CSPI1, 2CS @ 25Mhz CSPI3, 2CS @ 25Mhz	SPI0, 2CS @ 66Mhz SPI1, 2CS @ 66Mhz	McSPI1, 2CS @ 50Mhz McSPI3, 2CS @ 50Mhz	PSC0, 1CS @ 50Mhz PSC1, 1CS @ 50Mhz	MSIOF0, 1CS @ 50Mhz MSIOF1, 1CS @ 50Mhz	2 via PSC @ 33Mhz
I2C Bus	Multi-master @ 400Khz	Multi-master @ 400Khz	Multi-master @ 400Khz	Multi-master @ 400Khz	Multi-master @ 400Khz	Multi-master @ 400Khz
PWM Output	1	2	4	2	5	4
SD/MMC Interface	2 x 4-Bit SDIO @ 25Mhz	2 x 4-Bit SDIO @ 50Mhz	2 x 4-Bit SDIO @ 50Mhz	2 x 4-Bit SDIO @ 50Mhz	2 x 4-Bit SDIO @ 50Mhz	4-Bit SD/MMC @ 25Mhz
USB Host Ports	1 x USB2.0 480Mbit	2 x USB2.0 480Mbit	1 x USB2.0 480Mbit	1 x USB2.0 480Mbit	1 x USB2.0 480Mbit	1 x USB2.0 480Mbit
USB Device Ports	1 x USB2.0 480Mbit	1 x USB2.0 480Mbit OTG	1 x USB2.0 480Mbit OTG	1 x USB2.0 480Mbit OTG	1 x USB2.0 480Mbit OTG	1 x USB2.0 480Mbit OTG
Ethernet Interface	LAN9211 10/100	Internal 10/100	LAN9211 10/100	LAN9211 10/100	Internal 10/100	Internal 10/100
Audio Codec Interface	I2S via SSI5	AC97	I2S via McBSP1	I2S via PSC2	I2S via FSIOB	AC97 via PSC
PCMCIA/Compact Flash	-	Compact Flash Only	-	PCMCIA and CF+	PCMCIA and CF+	Compact Flash True IDE only
Max LCD Res., Depth [7]	800 x 600, 18-bit	1280x 860, 18-bit	1024 x 768, 18-bit	1280 x 720, 18-bit	1280 x 720, 18-bit	1024 x 768, 18-Bit
Video Acceleration, Resolution @ fps	MPEG4/H.264 Encode 720 x 480 @ 30fps	MPEG4/H.264 720 x 480 @ 30fps	MPEG4/H.264 720 x 480 @ 30fps	MPEG4/H.264 720P @ 30fps	MPEG4/H.264/VC-1 720P @ 30fps	-
2D/3D Graphics	MBX 2D/3D Graphics Engine	-	OpenGL/Direct 3D Graphics Engine	OpenGL ES2.0 Graphics Engine	2D Graphics Engine HW Scaling/Rotation	MBX-Lite 2D/3D Engine
Video/Camera Input	8/10-Bit YUV/RGB	8/10-Bit YUV/RGB	8/10-Bit YUV/RGB	8/10-Bit YUV/RGB	8-Bit YUV/RGB	-
Available GPIO [8]	10+	10+	10+	10+	10+	10+
Other Features, Board Notes	CSPI3 shared with SDIO1; SSI4 on CAN/CPU pins; Random Number Generator	Supports SAM9M10 or SAM9G45, Video on SAM9M10 only	Superscalar Cortex-A8; TMS320C64x+ Video DSP; NEON SIMD Coprocessor	3rd SD/MMC Port shared on VIP pins; UART3 is on SODIMM CAN pins	Superscalar SH-4A Core; JPEG Output; 2x 24-Bit Audio DSP; SCIF3 on GPIO pins	Superscalar Core; 4 x CAN 2.0B; (PCI Bus Not Available)
Form Factor and Board Dimensions	SODIMM200 50.8mm x 66.8mm x 8mm (2.00" x 2.63" x 0.32")	SODIMM200 50.8mm x 66.8mm x 8mm (2.00" x 2.63" x 0.32")	SODIMM200 50.8mm x 66.8mm x 8mm (2.00" x 2.63" x 0.32")	SODIMM200 50.8mm x 66.8mm x 8mm (2.00" x 2.63" x 0.32")	SODIMM200 50.8mm x 66.8mm x 8mm (2.00" x 2.63" x 0.32")	SODIMM200 50.8mm x 66.8mm x 8mm (2.00" x 2.63" x 0.32")
Availability	Now	Now	Now	Now	Now	Now

Table Notes:

1. Functionality shown is determined by the SOM design. Some CPU functions may not be available for a particular SOM, but may be available with full or partial customization. Please contact Cogent for more information about custom designs.
2. Core and SDRAM speeds shown are the maximum supported by the CPU. Clock division logic may limit the actual usable speed of the core in combination with a particular SDRAM speed.
3. On SOMS with SDRAM or Mobile SDRAM (not DDR or Mobile DDR), the SDRAM shares the Expansion Address/Data bus, which may limit actual speed based on user target board loading and routing.
4. RS232 UART Baud rates are manufacturers stated maximum baud rate if less than the maximum baud rate supported by the RS232 Transceiver (230Kbps). TTL UART Baud rates are the manufacturers stated maximum baud rate. For any UART, the actual achievable baud rate may be lower.
5. SPI ports are limited by the manufacturers maximum recommended clock rates, or by the speed of the slave devices on the users target board.
6. SOMS with only one SPI port share the port between SOM SPI0 and SOM SPI1 with individual chip selects for each. SOMS with multiple SPI ports locate additional chip selects (if any) on SODIMM GPIO6 (for SPI0) and GPIO7 (for SPI1).
7. Stated LCD Resolution is the maximum recommended for that controller. However, actual resolution and color depths will vary depending upon available frame buffer bandwidth. In addition, the SODIMM from factor provides for 16 or 18-bit LCD interface.
8. All CSB7xx SOMS have 10 dedicated GPIO. However, many CPU peripheral function pins may also be used as GPIO. Refer to the appropriate CSB7xx SOM documentation for more detail.
9. All CSB7xx SOMS have a Maxim DS1339 Real-Time Clock with battery backup.
10. All CSB7xx SOMS have a wide input (8V to 18V) 3V power supply that can deliver a minimum of 2A to the target board.
11. KB = 1024 bytes, MB = 1,048,576 bytes, Kbps = Kilobits/sec, Mbps = Megabytes/sec.