Telechips TCCxxxx
Android
Kitkat
Memory Map

Rev 2.6

April 2, 2014

Telechips

Revision History

Version	Date	Description
2.6	2014-04-02	Rearrange memory map and add new reserved memory for Kitkat-mr1.1
2.5	2014-02-13	Update memory size related to STB solution for Kitkat
2.4	2014-02-11	Kitkat update
2.3	2013-07-16	- Change the UMP memory size
2.2	2013-05-22	- Add secured input buffer - Rearrange memory map for TEE
2.1	2013-04-03	Change the size of video memory incase of 1GB DDR3 in STB solution
2.0	2013-03-20	Update memory size related to STB solution
1.9	2013-03-18	- Add VIDEO_MEM_EXT_SIZE for supporting multi-decoding on video.D11
1.8	2013-02-19	- Increase VIQE memory size on TCC892x - Add JPEG_ENC_CAPTURE, JPEG_RAW_CAPTURE for DxB capture - Add NAND memory for DMA buffer on TCC893x - Change overlay memory size
1.7	2013-02-14	Fix typos

TCC893x 1GB Memory Map

Address (Hex)			Description	Size	Comment
80000100	-	80007FFF	ATAG	32KB	
80008000	-		Kernel Image	About 4 - 5MB	
81000000	-		ramdisk (initramfs)	About 600KB	
80000000	-	88000000	Kernel / User	802MB	Maximum Mali heap size is 512MB Maximum UMP heap size is 72MB
95E00000	-	C0000000			
88000000	-	88000000	pmem (obsolete)	0MB	
88000000	-	88000000	Secured input buffer	0MB	6MB if secured input buffer is used
88000000	-	88000000	Video Backup Buffer	0MB	2MB if video backup buffer is used
88000000	-	8B400000	Overlay	52MB	Increase 8MB if CCFB is used Decrease 4MB if rotation is not supported
8B400000	-	8F800000	Video	68MB	
8F800000	-	8F800000	Video thumb Buffer	0MB	6MB if video thumb buffer is used
8F800000	-	91D00000	UMP	37MB	For contiguous physical memory
91D00000	-	92100000	FB WinMixer buffer	4MB	
92100000	-	92200000	RAM console	1MB	
92200000	-	93700000	VIQE / JPEG	21MB	22MB if 8M camera is used
93700000	-	93700000	External camera	0MB	21MB if external camera is used
93700000	-	95700000	FB	32MB	
95700000	-	95700000	FB (Scaler)	0MB	12MB if HDMI_UI_DISPLAY_MEM is used
95700000	-	95700000	Video_dual	0MB	8MB if Video_dual is used
95700000	-	95800000	NAND	1MB	
95800000	-	95B00000	JPEG_ENC_CAPTURE	3MB	For DxB capture
95B00000	-	95E00000	JPEG_RAW_CAPTURE	3MB	For DxB capture
95E00000	-	95E00000	VIDEO_MEM_EXT_SIZE	0MB	23MB if SUPPORT_MULTIVIDEO is used
88000000	-	95E00000	Total reserved	222MB	

* Mali / UMP memory is dynamically allocated in Kernel memory

TCC892x 1GB Memory Map

Address (Hex)			Description	Size	Comment
80000100	-	80007FFF	ATAG	32KB	
80008000	-		Kernel Image	About 4 - 5MB	
81000000	-		ramdisk (initramfs)	About 600KB	
80000000	-	88000000	Kernel / User	799MB	Maximum Mali heap size is 512MB Maximum UMP heap size is 72MB
96100000	-	C0000000			
88000000	-	88000000	pmem (obsolete)	0MB	
88000000	-	88000000	Secured input buffer	0MB	6MB if secured input buffer is used
88000000	-	88000000	Video Backup Buffer	0MB	2MB if video backup buffer is used
88000000	-	8B400000	Overlay	52MB	Increase 8MB if CCFB is used Decrease 4MB if rotation is not supported
8B400000	-	8F800000	Video	68MB	
8F800000	-	8F800000	Video thumb Buffer	0MB	6MB if video thumb buffer is used
8F800000	-	91D00000	UMP	37MB	For contiguous physical memory
91D00000	-	92100000	FB WinMixer buffer	4MB	
92100000	-	92200000	RAM console	1MB	
92200000	-	92600000	FB WinMixer Ext Buffer	4MB	
92600000	-	93B00000	VIQE / JPEG	21MB	22MB if 8M camera is used
93B00000	-	93B00000	External camera	0MB	21MB if external camera is used
93B00000	-	95B00000	FB	32MB	
95B00000	-	95B00000	FB (Scaler)	0MB	12MB if HDMI_UI_DISPLAY_MEM is used
95B00000	-	95B00000	Video_dual	0MB	8MB if Video_dual is used
95B00000	-	95E00000	JPEG_ENC_CAPTURE	3MB	For DxB capture
95E00000	-	96100000	JPEG_RAW_CAPTURE	3MB	For DxB capture
96100000	-	96100000	VIDEO_MEM_EXT_SIZE	0MB	23MB if SUPPORT_MULTIVIDEO is used
88000000	-	96100000	Total reserved	225MB	

* Mali / UMP memory is dynamically allocated in Kernel memory

TCC893x STB 1GB Memory Map

Address (Hex)			Description	Size	Comment
80000100	-	80007FFF	ATAG	32KB	
80008000	-		Kernel Image	About 4 - 5MB	
81000000	-		ramdisk (initramfs)	About 600KB	
80000000	-	88000000	Kernel / User	779MB	Maximum Mali heap size is 512MB Maximum UMP heap size is 72MB
97500000	-	C0000000			
88000000	-	88000000	pmem (obsolete)	0MB	
88000000	-	88000000	Secured input buffer	0MB	8MB if secured input buffer is used
88000000	-	88000000	Video Backup Buffer	0MB	2MB if video backup buffer is used
88000000	-	8B000000	Overlay	48MB	Increase 8MB if CCFB is used Increase 4MB if rotation is supported
8B000000	-	91000000	Video	96MB	
91000000	-	91000000	Video thumb Buffer	0MB	6MB if video thumb buffer is used
91000000	-	93500000	UMP	37MB	For contiguous physical memory
93500000	-	93900000	FB Wmixer	4MB	
93900000	-	93A00000	RAM console	1MB	
93A00000	-	94F00000	VIQE	21MB	
94F00000	-	94F00000	External camera	0MB	16MB if external camera is used
94F00000	-	95E00000	FB	15MB	
95E00000	-	96E00000	FB (Scaler)	16MB	
96E00000	-	96E00000	Video_dual	0MB	8MB if Video_dual is used
96E00000	-	96F00000	NAND	1MB	
96F00000	-	96F00000	Output Attach	0MB	16MB if output attach is supported
96F00000	-	97200000	JPEG_ENC_CAPTURE	3MB	For DxB capture
97200000	-	97500000	JPEG_RAW_CAPTURE	3MB	For DxB capture
97500000	-	97500000	VIDEO_MEM_EXT_SIZE	0MB	24MB if SUPPORT_MULTIVIDEO is used
88000000	-	97500000	Total reserved	245MB	

* Mali / UMP memory is dynamically allocated in Kernel memory

TCC892x STB 1GB Memory Map

Address (Hex)			Description	Size	Comment
80000100	-	80007FFF	ATAG	32KB	
80008000	-		Kernel Image	About 4 - 5MB	
81000000	-		ramdisk (initramfs)	About 600KB	
80000000	-	88000000	Kernel / User	792MB	Maximum Mali heap size is 512MB Maximum UMP heap size is 72MB
96800000	-	C0000000			
88000000	-	88000000	pmem (obsolete)	0MB	
88000000	-	88000000	Secured input buffer	0MB	8MB if secured input buffer is used
88000000	-	88000000	Video Backup Buffer	0MB	2MB if video backup buffer is used
88000000	-	8B000000	Overlay	48MB	Increase 8MB if CCFB is used Increase 4MB if rotation is supported
8B000000	-	91000000	Video	96MB	
91000000	-	91000000	Video thumb Buffer	0MB	6MB if video thumb buffer is used
91000000	-	93500000	UMP	37MB	For contiguous physical memory
93500000	-	93900000	FB Wmixer	4MB	
93900000	-	93A00000	RAM console	1MB	
93A00000	-	93E00000	FB WinMixer Ext Buffer	4MB	
93E00000	-	95300000	VIQE	21MB	
95300000	-	95300000	External camera	0MB	16MB if external camera is used
95300000	-	96200000	FB	15MB	
96200000	-	96200000	FB (Scaler)	0MB	
96200000	-	96200000	Video_dual	0MB	8MB if Video_dual is used
96200000	-	96200000	Output Attach	0MB	16MB if output attach is supported
96200000	-	96500000	JPEG_ENC_CAPTURE	3MB	For DxB capture
96500000	-	96800000	JPEG_RAW_CAPTURE	3MB	For DxB capture
96800000	-	96800000	VIDEO_MEM_EXT_SIZE	0MB	24MB if SUPPORT_MULTIVIDEO is used
88000000	-	96800000	Total reserved	232MB	

* Mali / UMP memory is dynamically allocated in Kernel memory