



## DIMM-Format CPU-Module und Entwicklungssysteme

### CPU-Module

Die DIMM CPU-Module der Reihe CSB7xx haben unabhängig vom jeweiligen Prozessor und den Eigenschaften des Moduls immer eine identische Signalbelegung auf dem 200 Pin Stecker. Der Entwickler benötigt für die verschiedenen DIMM CPU-Module nur **ein Entwicklungssystem**. Sollte der ausgewählte Prozessor in seiner Leistung nicht ausreichen, kann das Modul jederzeit gegen ein leistungsstärkeres ausgetauscht werden. Die Boards sind für Entwicklung, Prototyping und Serieneinsatz gleichermaßen geeignet.

### Prozessor- und Funktions-Übersicht

Prozessor	Sam9263	i.MX21	i.MX31C	Cortex-A8 OMAP3530	i.MX35	MPC5121e
Datenblatt	CSB737	CSB735	CSB733	CSB740	CSB732	CSB781
besondere Features				ARM11 CPU Superscalar DSP und 3D Graphics Coprozessor on Chip		PowerPC CPU und 2D/3D Graphics Coprozessor on Chip
Core	200Mhz ARM926EJ-s	266Mhz ARM926EJ-s	532Mhz ARM1136JFS	600Mhz ARM Cortex-A8	532Mhz i.MX35 ARM1136JFS	400Mhz Superscalar e300
Floating Point			64-Bit Dual Prec. Vect. FPU	Integer + FPU Coprozessor		
SDRAM	64Mbyte 32-Bit SDRAM	64Mbyte 32-Bit SDRAM	128Mbyte 32-Bit Mobile DDR	128Mbyte 32-Bit Mobile DDR	128Mbyte, 32bit 266Mhz Mobile DDR	128Mbyte 32-Bit Mobile DDR
NOR FLASH	64Mbyte 16-Bit S29GL512N	64Mbyte 16-Bit S29GL512N	64Mbyte 16-Bit S29GL512N	64Mbyte 16-Bit S29GL512N	64Mbyte S29GL512N	64Mbyte 16-Bit S29GL512N
NAND FLASH	512MByte 8-Bit	512MByte 8-Bit	512MByte 8-Bit	512MByte 8-Bit	1GByte 8Bit NAND	512MByte 8-Bit
Video-Eingang	8/10 Bit YUV4:2:2, CCIR656	8 Bit YUV4:2:2, CCIR656, Bayer format CSI	8/10 Bit YUV4:2:2, CCIR656 format CSI	8/10 Bit YUV4:2:2, CCIR656 format CSI	8/10 Bit YUV4:2:2, CCIR656	
LCD Controller	On-Chip 16-Bit RGB LCD Contr. up to 1024 x 768, 8MByte PSRAM Frame Buffer	On-Chip 18-Bit RGB LCD Controller up to 800x600(depend. upon Bits/Pixel)	On-Chip 18-Bit RGB LCD Controller up to 800x600 (depend. upon Bits/Pixel)	On-Chip 18-Bit RGB LCD Contr. up to 1024 x 768	OnChip LCD Controller up to 800 x 600	On-Chip Display Interface Unit (DIU) 18-Bit/Pixel up to 1024 x 768
2D/3D Graphics	On-Chip 2D Graphics Drawing Engine	On-Chip MPEG4 HW Accelerat. Support. up to CIF (352x240) @ 30 Frames/Sec	On-Chip MBRX 2D/3D Acceleration	On-Chip OpenGL / Direct3D Mobil Graphics	On-Chip 2D and Vector Graphics Acceleration Engine	2D/3D Graphics Coprozessor
Serial (UART)	Debug RS232 x 1 (2-wire)+one 4- wire TTL+Two 2- wire TTL UARTS	Debug RS232 x 1 (2- wire), plus three 4-wire TTL UARTS	Debug RS232 x 1 (2- wire), plus Three 4- wire TTL UARTS	Debug RS232 x 1 (2- wire), plus two 4-wire TTL UARTS	Debug RS232 plus One 4wire and One 8Wire TTL UARTS	Debug RS232 x 1 (2- wire), plus four 4-wire TTL UARTS
Serial (other)	I2C, SPI x2, SSI and 4-Bit SDIO/MMC Controller	I2C, SPI x2, I2S and 4- Bit SDIO/MMC Controller	I2C, SSI, SPIx2, AC97, 4-Bit SDIO/MMC Controller	I2C, McBSP x 2, McSPI x 2, 4-Bit SDIO/MMC Controller x 2	SPI (x2), I2S and I2C buses for I/O Expansion	I2C, SPI x2, SSP and 4-Bit SDIO/MMC Controller
Ethernet 10/100 with PHY	Low Power LAN8700 PHY	LAN9211 Low Power (2mw standby)	LAN9211 Low Power (2mw standby)	LAN9211 Low Power (2mw standby)	Low Power OnChip 10/100Mbit Ethernet Controller	Low Power
RTC DS1339	Battery extern	Battery extern	Battery extern	Battery extern	Battery extern	Battery extern



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Datenblatt	CSB737	CSB735	CSB733	CSB740	CSB732	CSB781
CPU-Bus Zugang	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, no PCI
GPIO 10 dedicated	more depend. on Peripheral use	more depend. on Peripheral use	more depend. on Peripheral use	more depending upon Peripheral use	more depend. upon Peripheral use	more depend. upon Peripheral use
USB Host 2.0, 12Mbit	Dual	Single	Single		Single	
USB Host 2.0, 480Mbit			Single	Single	Single	Single
USB Device 2.0, 12Mbit	Single	Single				
USB Dev. 2.0, 480Mbit			Single	Single (shared with Host)	Single	Single
Audio Interface	AC97	I2S	AC97	I2S via McBSP	I2S	AC97 or I2S via PSC
CAN 2.0B, 1Mbit	Single + 2 on Develop. System	2 on Development System	2 on Development System	2 on Development System	2 on Development System	4 Channel 2.0B + 2 on Dev. System
Compact Flash / SD/MMC	Yes	Yes	Yes	No	Yes	Yes
JTAG Interface (extern)	Yes	Yes	Yes	Yes	Yes	Yes
Power Input: 6-35V	On-Board 3.3V Regulator ( <u>up to 2A for ext. I/O</u> )	On-Board 3.3V Regulator ( <u>up to 2A for ext. I/O</u> )	On-Board 3.3V Regulator ( <u>up to 2A for ext. I/O</u> )	On-Board 3.3V Regulator ( <u>up to 2A for ext. I/O</u> )	On-Board 3.3V Regulator ( <u>up to 2A for ext. I/O</u> )	On-Board 3.3V Regulator ( <u>up to 2A for ext. I/O</u> )
Stromver- brauch	< 50MW sleep <750MW typical	< 50MW sleep <750MW typical	< 20MW sleep <750MW typical	< 50MW sleep <750MW typical	< 20MW sleep <750MW typical	< 20MW sleep < 1W typical
Target Board	<a href="#">CSB7xx-Kit Developm.Kit</a>	<a href="#">CSB7xx-Kit Developm. Kit</a>	<a href="#">CSB7xx-Kit Developm. Kit</a>	<a href="#">CSB7xx-Kit Developm. Kit</a>	<a href="#">CSB7xx-Kit Developm. Kit</a>	<a href="#">CSB7xx-Kit Developm. Kit</a>
Boot Monitor	<a href="#">Micromonitor for Linux</a>	<a href="#">Micromonitor for Linux</a>	<a href="#">Micromonitor for Linux</a>	<a href="#">Micromonitor for Linux</a>	<a href="#">Micromonitor for Linux</a>	<a href="#">Micromonitor for Linux</a>
Users Manual	<a href="#">CSB737 HW Reference Man.</a>	<a href="#">CSB735 Hardware Reference Manual</a>	<a href="#">CSB733 Hardware Reference Manual</a>			
RTOS BSP	Linux 2.6, Micrium µC/OS-II <a href="#">Win CE 6.0 BSP Adeneo Corp</a>	Linux 2.6	Linux 2.6	Linux 2.6 <a href="#">Win CE 6.0 BSP Adeneo Corp</a>	Linux 2.6	Linux 2.6

In Vorbereitung:

CSB751 AU1380 MIPS32 800MHz

Version 3.16.0