















Ordering Code	Supported Device	
AT91SAM-ICE	All AT91 ARM7™ & ARM9™ Products	
AT91SAM7S-EK	AT91SAM7S16 AT91SAM7S161 AT91SAM7S32 AT91SAM7S321 AT91SAM7S64 AT91SAM7S128 AT91SAM7S256 AT91SAM7S512	
AT91SAM7SE-EK	AT91SAM7SE32 AT91SAM7SE256 AT91SAM7SE512	
AT91SAM7X-EK	AT91SAM7X128 AT91SAM7X256 AT91SAM7X512	
AT91SAM7XC-EK	AT91SAM7XC128 AT91SAM7XC256 AT91SAM7XC512	
AT91SAM7A3-EK	AT91SAM7A3	
AT91RM9200-EK	AT91RM9200	
AT91SAM9260-EK	AT91SAM9260	
AT91SAM9XE-EK	AT91SAM9XE128 AT91SAM9XE256 AT91SAM9XE512	
AT91SAM9261-EK	AT91SAM9261 AT91SAM9261S	
AT91SAM9263-EK	AT91SAM9263	
AT91EB40A	AT91M40800 AT91R40008 AT91FR40162S	
AT91EB42	AT91M42800A	
AT91EB55	AT91M55800A	

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6280A-12/06-10M.

AT91SAM
ARM-based Microcontrollers

Product Guide



Part Number	ARM Core	MMU / MPU	Clock Speed (MHz)*	SRAM (Bytes)	Cache Memory (Bytes)	Flash (Bytes)	In-System Programming	External Bus Interface	SDRAM Interface	NAND Flash / ECC	Peripheral DMA (Channels)	USART / DBGU	Enhanced USART	SPI	TWI	SSC	MCI	CAN	USB Device (Full Speed)	USB Host (Full Speed)	Ethernet MAC 10/100	LCD Controller	Triple-DES Engine	AES Engine (Bits)	Image Sensor Interface	16-bit Timers	PWM Controller	Period Interval Timer	Watchdog Timer	RTC / RIT	10-bit ADC Channel	10-bit DAC Channel	Power-On Reset	Brown Out Detection	On-chip RC Oscillator	Crystal Oscillator / PLL	High Current Pads	I/O Pins	I/O Voltage Domain (V)	Single Supply	Packages	Status 4Q06
AT91SAM7																																										
AT91SAM7S16	7TDMI	-	55	4K	-	16K	Y	-	-	-	9	-/1	1	1	1	1	-	-	-	-	-	-	-	-	-	3	4	1	1	-/1	8	-	1	1	1/1	4	21	3.3	Y	QFP48 / QFN48	D	
AT91SAM7S161	7TDMI	-	55	4K	-	16K	Y	-	-	-	11	-/1	2	1	1	1	-	-	1	-	-	-	-	-	-	3	4	1	1	-/1	8	-	1	1	1/1	4	32	3.3	Y	QFP64 / QFN64	D	
AT91SAM7S32	7TDMI	-	55	8K	-	32K	Y	-	-	-	9	-/1	1	1	1	1	-	-	-	-	-	-	-	-	-	3	4	1	1	-/1	8	-	1	1	1/1	4	21	3.3	Y	QFP48 / QFN48	P	
AT91SAM7S321	7TDMI	-	55	8K	-	32K	Y	-	-	-	11	-/1	2	1	1	1	-	-	1	-	-	-	-	-	-	3	4	1	1	-/1	8	-	1	1	1/1	4	32	3.3	Y	QFP64 / QFN64	P	
AT91SAM7S64	7TDMI	-	55	16K	-	64K	Y	-	-	-	11	-/1	2	1	1	1	-	-	1	-	-	-	-	-	-	3	4	1	1	-/1	8	-	1	1	1/1	4	32	3.3	Y	QFP64 / QFN64	P	
AT91SAM7S128	7TDMI	-	55	32K	-	128K	Y	-	-	-	11	-/1	2	1	1	1	-	-	1	-	-	-	-	-	-	3	4	1	1	-/1	8	-	1	1	1/1	4	32	3.3	Y	QFP64 / QFN64	P	
AT91SAM7S256	7TDMI	-	55	64K	-	256K	Y	-	-	-	11	-/1	2	1	1	1	-	-	1	-	-	-	-	-	-	3	4	1	1	-/1	8	-	1	1	1/1	4	32	3.3	Y	QFP64 / QFN64	P	
AT91SAM7S512	7TDMI	-	55	64K	-	512K	Y	-	-	-	11	-/1	2	1	1	1	-	-	1	-	-	-	-	-	-	3	4	1	1	-/1	8	-	1	1	1/1	4	32	3.3	Y	QFP64 / QFN64	D	
AT91SAM7SE32	7TDMI	-/1	48	8K	-	32K	Y	1	1	1/1	11	-/1	2	1	1	1	-	-	1	-	-	-	-	-	-	3	4	1	1	-/1	8	-	1	1	1/1	4	88	3.3	Y	QFP128 / BGA144	D	
AT91SAM7SE256	7TDMI	-/1	48	32K	-	256K	Y	1	1	1/1	11	-/1	2	1	1	1	-	-	1	-	-	-	-	-	-	3	4	1	1	-/1	8	-	1	1	1/1	4	88	3.3	Y	QFP128 / BGA144	D	
AT91SAM7SE512	7TDMI	-/1	48	32K	-	512K	Y	1	1	1/1	11	-/1	2	1	1	1	-	-	1	-	-	-	-	-	-	3	4	1	1	-/1	8	-	1	1	1/1	4	88	3.3	Y	QFP128 / BGA144	P	
AT91SAM7X128	7TDMI	-	55	32K	-	128K	Y	-	-	-	11	-/1	2	2	1	1	-	1	1	-	1	-	-	-	-	3	4	1	1	-/1	8	-	1	1	1/1	4	62	3.3	Y	QFP100 / BGA100	P	
AT91SAM7X256	7TDMI	-	55	64K	-	256K	Y	-	-	-	11	-/1	2	2	1	1	-	1	1	-	1	-	-	-	-	3	4	1	1	-/1	8	-	1	1	1/1	4	62	3.3	Y	QFP100 / BGA100	P	
AT91SAM7X512	7TDMI	-	55	128K	-	512K	Y	-	-	-	11	-/1	2	2	1	1	-	1	1	-	1	-	-	-	-	3	4	1	1	-/1	8	-	1	1	1/1	4	62	3.3	Y	QFP100 / BGA100	D	
AT91SAM7XC128	7TDMI	-	55	32K	-	128K	Y	-	-	-	11	-/1	2	2	1	1	-	1	1	-	1	-	1	128	-	3	4	1	1	-/1	8	-	1	1	1/1	4	62	3.3	Y	QFP100 / BGA100	P	
AT91SAM7XC256	7TDMI	-	55	64K	-	256K	Y	-	-	-	11	-/1	2	2	1	1	-	1	1	-	1	-	1	128	-	3	4	1	1	-/1	8	-	1	1	1/1	4	62	3.3	Y	QFP100 / BGA100	P	
AT91SAM7XC512	7TDMI	-	55	128K	-	512K	Y	-	-	-	11	-/1	2	2	1	1	-	1	1	-	1	-	1	256	-	3	4	1	1	-/1	8	-	1	1	1/1	4	62	3.3	Y	QFP100 / BGA100	D	
AT91R40008	7TDMI	-	75	256K	-	-	-	1	-	-	4	2/-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	1	-	-	-	-	-	-	-	32	3.3	N	QFP100	P	
AT91FR40162S	7TDMI	-	75	256K	-	2M	-	1	-	-	4	2/-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	1	-	-	-	-	-	-	-	32	3.3	N	BGA121	P	
AT91M40800	7TDMI	-	40	8K	-	-	-	1	-	-	4	2/-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	1	-	-	-	-	-	-	-	32	1.8 / 3.3	Y	QFP100	P	
AT91M42800A	7TDMI	-	33	8K	-	-	-	1	-	-	8	2/-	-	2	-	-	-	-	-	-	-	-	-	-	-	6	-	1	1	-/1	-	-	-	-	1/2	-	54	3.3 / 5.0	Y	QFP144 / BGA144	P	
AT91M55800A	7TDMI	-	33	8K	-	-	-	1	-	-	10	3/-	-	1	-	-	-	-	-	-	-	-	-	-	-	6	-	-	1	1/-	8	2	-	-	2/1	-	58	3.3 / 5.0	Y	QFP176 / BGA176	P	
AT91SAM7A3	7TDMI	-/1	60	32K	-	256K	-	-	-	-	19	-/1	3	2	1	2	1	2	1	-	-	-	-	-	-	9	8	1	1	-/1	16	-	3	-	1	1/1	-	62	3.3	Y	QFP100	P
AT91SAM9																																										
AT91RM9200	920T	1/-	180	16K	2x16K	-	Y	1	1	-	20	-/1	4	1	1	3	1	-	1	2	1	-	-	-	-	6	-	1	1	1/1	-	-	-	-	2/2	-	122	3.3	N	QFP208 / BGA256	P	
AT91SAM9260	926EJ-S	1/-	210	2x4K	2x8K	-	Y	1	1	1/1	24	2/1	4	2	1	1	1	-	1	2	1	-	-	-	1	6	-	1	1	-/1	4	-	2	-	1	2/2	3	96	1.8 / 3.3	N	QFP208 / BGA217	P
AT91SAM9XE128	926EJ-S	1/-	210	16K	16k+8K	128K	Y	1	1	1/1	24	2/1	4	2	1	1	1	-	1	2	1	-	-	-	1	6	-	1	1	-/1	4	-	2	1	1	2/2	3	96	1.8 / 3.3	N	QFP208 / BGA217	D
AT91SAM9XE256	926EJ-S	1/-	210	32K	16k+8K	256K	Y	1	1	1/1	24	2/1	4	2	1	1	1	-	1	2	1	-	-	-	1	6	-	1	1	-/1	4	-	2	1	1	2/2	3	96	1.8 / 3.3	N	QFP208 / BGA217	D
AT91SAM9XE512	926EJ-S	1/-	210	32K	16k+8K	512K	Y	1	1	1/1	24	2/1	4	2	1	1	1	-	1	2	1	-	-	-	1	6	-	1	1	-/1	4	-	2	1	1	2/2	3	96	1.8 / 3.3	N	QFP208 / BGA217	D
AT91SAM9261	926EJ-S	1/-	240	160K	2x16K	-	Y	1	1	1/0	19	-/1	3	2	1	3	1	-	1	2	-	1	-	-	-	3	-	1	1	-/1	-	-	2	-	-	2/2	-	96	1.8 / 3.3	N	BGA217	P
AT91SAM9261S	926EJ-S	1/-	240	16K	2x16K	-	Y	1	1	1/0	19	-/1	3	2	1	3	1	-	1	2	-	1	-	-	-	3	-	1	1	-/1	-	-	2	-	-	2/2	-	96	1.8 / 3.3	N	BGA217	D
AT91SAM9263	926EJ-S	1/-	240	96K	2x16K	-	Y	2	2	1/1	22	-/1	3	2	1	2	2	1	1	2	1	1	-	-	1	3	4	1	1	-/2	-	-	2	-	-	2/2	-	160	1.8 / 3.3	N	BGA324	P

Enhanced USART: adds support for RS485, ISO7816, IrDA and modem control lines.
 DBGU: Debug Unit provides single entry to all debug capabilities as well as UART function.
 TWI: Two Wire Interface, interconnects components on a two-wire bus.
 SSC: Serial Synchronous Controller, supports many serial synchronous communications protocols used in audio and telecom applications such as I2S, short or long frame sync.

MCI: Multimedia Card Interface, supports the MultiMediaCard (MMC) Specification V3.11, the SDIO Specification V1.1 and the SD Memory Card Specification V1.0.
 16-bit Timers: Capture/Compare, Waveform generation and PWM modes.
 ISI: Image Sensor Interface for CMOS-type image sensor, ITU-R BT. 601/656 External Interface, Programmable Frame Capture Rate, up to 12-bit Data Interface, SAV and EAV Synchronization, Preview Path with Scaler, YCbCr Format.

ECC: Error Corrected Code controller.
 PDC: Peripheral DMA Controller, transfers data between on-chip peripherals and the on and off-chip memories without CPU intervention.
 LCD Controller: Supports STN and TFT Displays, resolution up to 2048x2048.
 Status: (D)evelopment, (S)ampling, (P)roduction.

*Clock Speed: Max clock speed @ +85°C.

Peripheral implementation may vary among products, please consult individual product datasheet for detailed description.

