

EAM2011 32-bit MCU is a high-performance microcontroller designed specifically for the automotive industry and aims to provide comprehensive solutions for automobile manufacturers and system integrators. With its excellent performance, flexible and rich-featured peripherals, wide voltage power supply and wide operating temperature range, this chip provides customers with highly reliable and cost-effective solutions.

Features

- **High-performance CPU:** EAM2011 is equipped with an advanced 32-bit RISC-V CPU, providing excellent computing capabilities to ensure fast real-time response and efficient execution of various tasks.
- **Rich-featured and flexible peripherals:** The chip integrates a variety of peripheral interfaces, including communication interfaces (CAN, SPI, UART, etc.), analog input and output, digital IO, etc., providing a wide range of connection and control capabilities for a variety of application scenarios.
- **Wide voltage power supply:** EAM2011 supports a wide range of power supply voltage (3.3V/5V), adapts to the requirements of different power systems, and provides stable and reliable working performance.
- **Wide range of operating temperature:** The chip operates stably within a wide operating temperature range and adapts to various extreme environmental conditions, such as high temperature, low temperature, etc. (-40°C~105°C).
- **Wide application:** EAM2011 is widely used in vehicle door and window control, vehicle seat control, cockpit central control, vehicle display, industrial control with high reliability requirements, motor control and other fields, providing a variety of functions and applications for the automotive industry.

Parameters		EAM2011		
		64Pin LQFP	100Pin LQFP	144Pin LQFP
Core	CPU	32-bit RISC-V Core, ESWIN E320A		
	Main frequency	160MHz		
	FPU	Single precision floating point calculations		
	Cache	I-Cache 4KB +D-Cache 4KB		
ISO 26262		ASIL-B Capable		
pDMA		32CH		
Number of configurable IOs		55	89	128
Supply voltage		3.3V/ 5.5V		
Ambient temperature		-40°C ~ 105°C		
Memory	Flash	1024KB P-flash + 128KB D-flash		
	SRAM	128KB		

EAM2011 Product Brief

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	eNVRAM	4KB		
Clock	External oscillator	4MHz – 32MHz		
	Low speed oscillator (Low OSC)	8MHz		
	High-speed oscillator (Fast OSC)	24MHz		
	Low power oscillator (LP OSC)	128KHz		
	PLL	1x		
Timer	PDB	2x		
	Supertimer 16bit	6x(36 channels)	6x(39 channels)	6x(48 channels)
	Low Power Timer (PCTMR) 16bit	3x(6 channels)	3x (9 channels)	3x (9 channels)
	Watchdog	2x		
	RTC	1x		
	TrgMux	92x35		
	PWM	5 channels		
Analog signal	12bit SAR ADC	1x (14 channels)	1x (14 channels)	1x (22 channels)
		1x (9 channels)	1x (12 channels)	1x (20 channels)
	DAC + Comparator	1x (8 channels)		
	Temperature sensor	1x		
I/O	SPI	3x	4x	
	I ² C	2x		
	UART/LIN	5x	6x	
	CAN	4x (3x CANFD)		
	Super IO (can be configured as UART, SPI, PWM)	1x		

Applications

EAM2011 is mainly used in automotive applications. It has a high-performance CPU, rich-featured and flexible peripherals, a wide power supply range and a wide operating temperature. Solutions can be built that are both highly reliable and cost-effective.

The key automotive applications of EAM2011 include but are not limited to:

- Intelligent cockpit control processor
- Automobile instrument displays control system
- Body controller
- Car light control system
- Door control system
- Window control system

In addition to the above applications, EAM2011 can also be used in industrial applications, transportation, communications and other fields.

Dimensions

EAM2011 has 144/100/64pin LQFP packaging. The outline dimensions of each packaging are shown as below.

Packaging option	Dimensions (Length x Width x Height)	Unit
LQFP 64-pin	10 x 10 x 1.4	mm
LQFP 100-pin	14 x 14 x 1.4	mm
LQFP 144-pin	20 x 20 x 1.4	mm

Orderable Part Number	Bulk Packaging
EAM2011-S2LH (64-LQFP)	Trays or Tape and Reel
EAM2011-S2LL (100-LQFP)	
EAM2011-S2LQ (144-LQFP)	

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