


SOC ARM920T 272-Pin TFBGA

Manufacturer:	<u>Cirrus Logic, Inc</u>
Package/Case:	BGA
Product Type:	Embedded Processors & Controllers
RoHS:	RoHS Compliant/Lead free 
Lifecycle:	Obsolete



Images are for reference only

[Inquiry](#)

General Description

The EP9307 is a low-cost, integrated system-on-chip processor for applications that require a rich user interface. The EP9307 features an advanced 200 MHz ARM920T processor design with a memory management unit (MMU) that supports Linux®, Windows CE® and many other embedded operating systems. The ARM920T's 32-bit microcontroller architecture, with a five-stage pipeline, delivers impressive performance at very low power. The 16 KB instruction cache and 16 KB data cache provide zero-cycle latency to the current program and data, or they can be locked to guarantee no-latency access to critical instructions and data. For applications with instruction-memory size restrictions, the ARM920T's compressed Thumb instruction set provides space efficiency and maximum external instruction memory usage. The EP9307's user interface capabilities include a 2-D graphics accelerator that improves performance by handling block copy, block fill, line draw and bit blit. Resolutions of up to 1024 x 768 (XGA) are supported. Touchscreen, keypad and high quality sound (SPI, I²S and AC '97) complete the EP9307's strong user interface features. The ARM920T core is augmented by the MaverickCrunch™ coprocessor. This coprocessor greatly accelerates the ARM920T's single- and double-precision integer and floating-point processing capabilities, enabling the EP9307 to offer unique speed and performance when encoding digital audio and video formats, processing Ethernet data and performing other math-intensive computing and data-processing functions. MaverickKey™ unique hardware programmed IDs provide a solution to concerns over secure Web content and commerce. MaverickKey™ provides OEMs with a method of assigning specific hardware IDs such as those used for SDMI (Secure Digital Music Initiative) or any other digital rights management mechanisms. External interfaces to SPI, I²S audio, AC '97, Raster/LCD, keypad and touchscreen are included. A three-port USB 2.0 full-speed host (OHCI), running at 12 Mbps, and three UARTs are included as well. The ARM920T core operates from a 1.8 V supply, and the input/output (I/O) operates at 3.3V. Designers of digital jukeboxes, telematic control systems, thin clients, point-of-sale terminals, industrial controls, biometric security systems and GPS devices will benefit from the EP9307's integrated architecture and advanced features. In fact, with its broad range of peripheral interfaces, the EP9307 is suited to even more applications. By enabling or disabling the EP9307's peripheral interfaces, designers can also reduce development costs and accelerate time to market by creating a single platform that can be modified to deliver differentiated end products. Cirrus Logic's embedded processor products are complemented by a range of complete operating systems. Both Microsoft® Windows CE.NET® and Linux® solutions are available with total driver support.

Key Features

200 MHz ARM920T processor

16 KB data cache and 16 KB instruction cache

MMU enabling Linux

100 MHz system bus

MaverickCrunch™ math engine

Floating point, integer and signal-processing instructions

Hardware interlocks for in-line coding

MaverickKey™ IDs for digital rights management or design IP security (special order feature)

32-bit unique ID

128-bit random ID

Integrated peripheral interfaces

Graphics accelerator

Three-port USB 2.0 full-speed host (OHCI)

Three UARTs (16550 type)

IrDA interface, slow and fast mode

LCD interface with dedicated SDRAM channel

Touchscreen interface

SPI port

AC '97 interface

I²S interface, up to six channels

8x8 keypad

External memory options

32-bit SDRAM interface, up to four banks

32-, 16- and 8-bit SRAM/Flash/ROM I/F

Serial EEPROM interface

Internal peripherals

Real-time clock with software trim

12 DMA channels for data transfer that maximizes system performance

Boot ROM

Dual PLLs to control all clock domains

Watchdog timer

Two general-purpose 16-bit timers

General-purpose 32-bit timer

40-bit debug timer

General-purpose I/Os (GPIOs)

14 enhanced GPIOs including interrupt capability

18 additional optional GPIOs multiplexed on peripherals

Package: 272-pin TFBGA; option for lead-free assembly and industrial temperature ratings



Recommended For You

EP9302-IQZ

Cirrus Logic, Inc

TQFP208

EP9302-CQZ

Cirrus Logic, Inc

QFP208

EP9301-CQZ

Cirrus Logic, Inc

QFP

EP7311-IR

Cirrus Logic, Inc

204-TFBGA

EP7209-CV-D

Cirrus Logic, Inc

QFP

EP7309-CVZ

Cirrus Logic, Inc

QFP

EP7211-CV-D

Cirrus Logic, Inc

QFP

EP7311-IV

Cirrus Logic, Inc

LQFP

EP7311-CV

Cirrus Logic, Inc

TQFP

EP7309-CBZ

Cirrus Logic, Inc

PBGA

EP7311-CB

Cirrus Logic, Inc

256-LFBGA

EP7311-IB

Cirrus Logic, Inc

BGA