

TMP92FD23AFG TMP92FD23ADFG

FLASH

**32-bit microcontroller with large capacity Flash memory
and various serial interfaces**

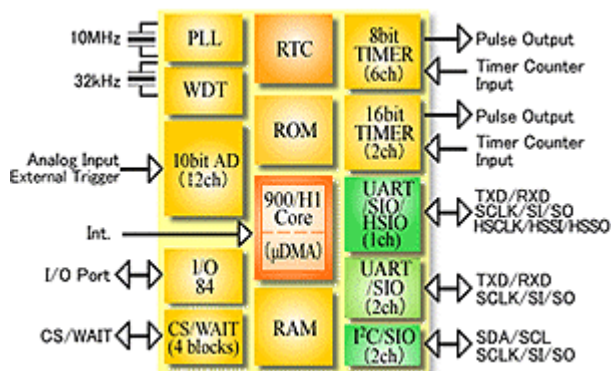
Features

TLCS-900/H1 CPU Core

- ▶ Operating voltage
3.0 to 3.6 V
- ▶ Minimum instruction execution time
50 ns (at 20 MHz/ 3.0 to 3.6 V internal)
- ▶ Internal ROM: 512 Kbytes
Internal RAM: 32 Kbytes

Built-in Functions

- ▶ 10-bit AD converter : 12 channels
- ▶ UART/SIO/HSIO : 1 channel
- ▶ UART/SIO : 2 channels
- ▶ I²C/SIO : 2 channels
- ▶ 8-bit timer : 6 channels
- ▶ 16-bit timer : 2 channels
- ▶ Key-on wake-up : 8 channels
- ▶ Program patch logic : 8 banks



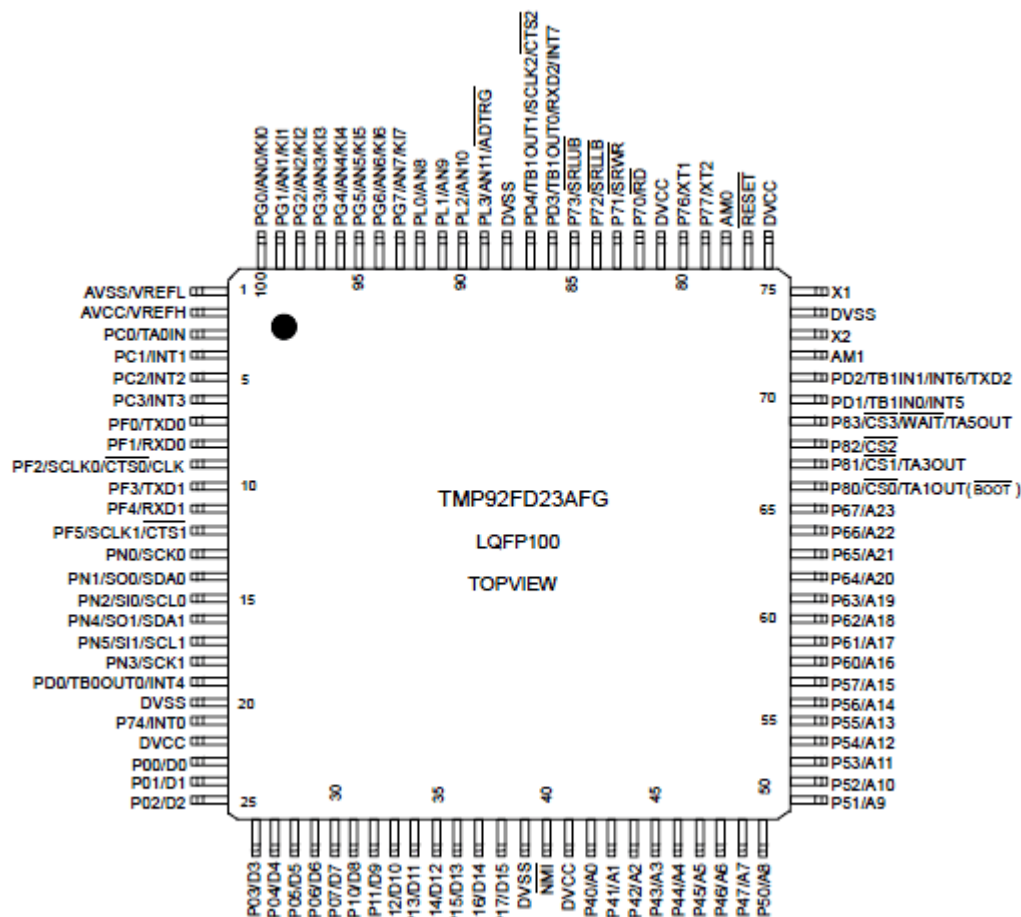
Product Lineup

Part number	ROM	RAM
TMP92CD23AFG	512 Kbytes	32 Kbytes
TMP92CD23ADFG	512 Kbytes	32 Kbytes

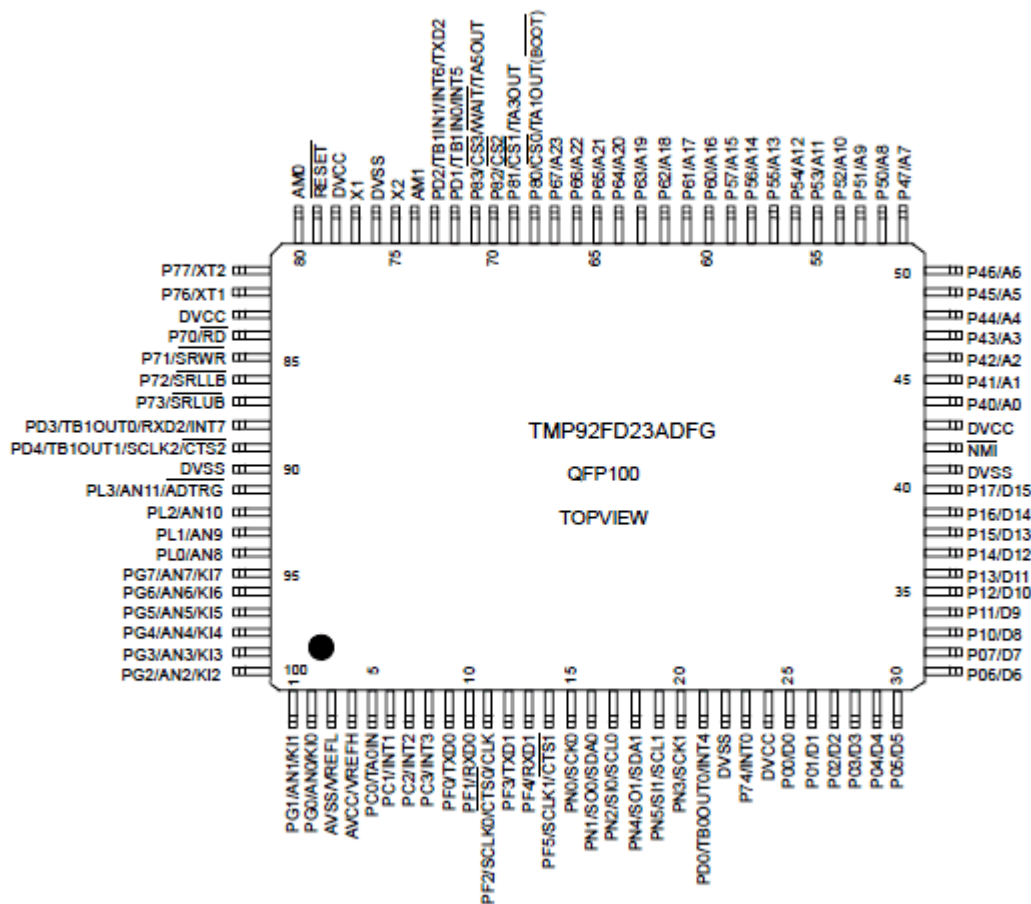
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Package Information

Pin Assignments



Package name : LQFP100-P-1414-0.50F



Package name : QFP100-P-1420-0.65A

Development Systems

Software Products

Toshiba Integrated Development Environment	C Compiler	SW96CN0-ZCC: 1 license SW96CN3-ZCC: 10 licenses
	Integrated Development Environment	SW00MN0-ZCC: 1 license SW00MN3-ZCC: 10 licenses The emulator comes with a single-seat download license.
Real-Time OS (μ ITRON 3.0)		SW96RN2-ZCC: Object code can be freely copied SW96RNC-ZCC: Object code can be freely copied. With source code.

Hardware Products Emulator

In-Circuit Emulator	HW92ES230AG
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* As to hardware products, additional accessories are also needed.

» For further information about Toshiba microcomputers and Toshiba microcomputer development systems, please visit <http://www.semicon.toshiba.co.jp/eng/product/micro/index.html>

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