

8bit	TLCS-870 Family TLCS-870/C Series	FLASH	30pin
	[NEW] TMP86FH92DMG		

8-bit microcontroller incorporating Flash memory, power-on reset circuit and voltage detecting circuit in 30-pin SSOP

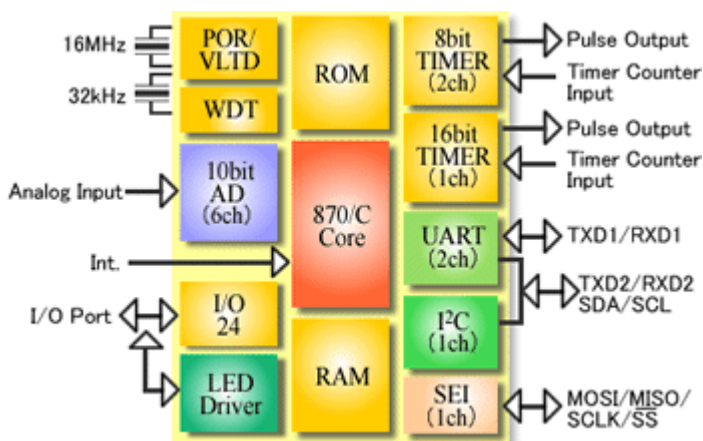
Features

● **TLCS-870/C CPU Core**

- Operating voltage
4.0 to 5.5 V, 2.7 to 5.5 V
- Minimum instruction execution time
250 ns (at 16 MHz/ 4.0 to 5.5 V)
500 ns (at 8 MHz/ 2.7 to 5.5 V)
- Internal ROM: 16 Kbytes
- Internal RAM: 512 bytes

● **Built-in Functions**

- 10-bit AD converter : 6channels
- UART : 2channels
- I²C : 1 channel
- SEI : 1 channel
- 8-bit timer : 2channels
- 16-bit timer : 1 channel
- Key-on wake up : 4channels
- Voltage detecting circuit
(Two voltage levels detectable, reset or interrupt selectable)
- Power-on reset circuit



Development Systems

● **Software Products**

Toshiba Integrated Development Environment	C Compiler	SW89CN0-ZCC: 1 license SW89CN3-ZCC: 10 licenses
	Integrated Development Environment	SW00MN0-ZCC: 1 license SW00MN3-ZCC: 10 licenses The controller and Light emulator comes with a single-seat download license.

● **Hardware Products Emulator**

**Under development

RTE870/C model 15 system	Controller Interface module Emulation module Target connection board	BM1040R0A BMP86A100010B BMP86A200020A BMP86D030MF3A
	Emulation chip	TMP86C993XB**
RTE870/C Light system	Light emulator	BMP86A300020A
	Emulation chip	TMP86C993XB**

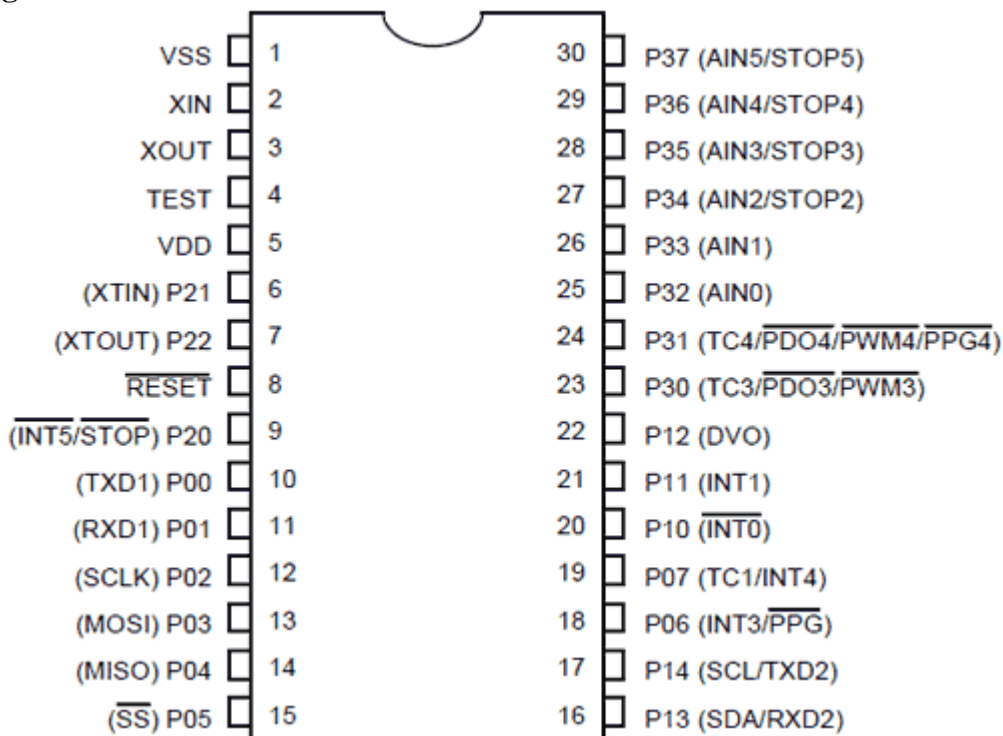
- › Select either RTE870/C model 15 system or RTE870/C Light system.
- › As to hardware products, additional accessories are also needed.

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

» Contact the Toshiba sales representative for information about RoHS compliance before you purchase any components.

Package Information

● Pin Assignments



Package name: SSOP30-P-56-0.65

* This product uses the SuperFlash® technology under license of Silicon Storage Technology, Inc. Super Flash® is a registered trademark of Silicon Storage Technology, Inc.

- The information contained herein is subject to change without notice. 021023_D
- Toshiba is continually working to improve the quality and reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to comply with the standards of safety in making a safe design for the entire system, and to avoid situations in which a malfunction or failure of such TOSHIBA products could cause loss of human life, bodily injury or damage to property. In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent TOSHIBA products specifications. Also, please keep in mind the precautions and conditions set forth in the "Handling Guide for Semiconductor Devices", or "TOSHIBA Semiconductor Reliability Handbook" etc. 021023_A
- The Toshiba products listed in this document are intended for use in general electronics applications (computer, personal equipment, office equipment, measuring equipment, industrial robotics, domestic appliances, etc.). These Toshiba products are neither intended nor warranted for use in equipment that requires extraordinarily high quality and/or reliability or a malfunction or failure of which may cause loss of human life or bodily injury ("Unintended Usage"). Unintended Usage include atomic energy control instruments, airplane or spaceship instruments, transportation instruments, traffic signal instruments, combustion control instruments, medical instruments, all types of safety devices, etc. Unintended Usage of Toshiba products listed in this document shall be made at the customer's own risk. 021023_B
- The products described in this document shall not be used or embedded to any downstream products of which manufacture, use and/or sale are prohibited under any applicable laws and regulations. 060106_Q
- The information contained herein is presented only as a guide for the applications of our products. No responsibility is assumed by TOSHIBA for any infringements of patents or other rights of the third parties which may result from its use. No license is granted by implication or otherwise under any patents or other rights of TOSHIBA or the third parties. 070122_C
- Please contact your sales representative for product-by-product details in this document regarding RoHS compatibility. Please use these products in this document in compliance with all applicable laws and regulations that regulate the inclusion or use of controlled substances. Toshiba assumes no liability for damage or losses occurring as a result of noncompliance with applicable laws and regulations. 060819_Z
- The products described in this document may include products subject to the foreign exchange and foreign trade laws. 021023_F
- The products described in this document contain components made in the United States and subject to export control of the U.S. authorities. Diversion contrary to the U.S. law is prohibited. 021023_G
- TOSHIBA has made this document deliberately in order to make its contents as accurate as possible. Nevertheless, if any trouble should occur due to any error contained in this document, TOSHIBA shall not have any liability therefore. Also, please keep in mind the precautions and conditions set forth in the "Instruction Manual or Operation Manual of TOSHIBA Products," or "The Precautions or Procedure Files described in the Installation Disk such as Floppy Disk or CD-ROM etc." Please constantly pay attention to the latest information on the TOSHIBA products which is to be released through the web page of TOSHIBA microcomputer development system. (<http://www.semicon.toshiba.co.jp/eng>) 060824_N

TOSHIBA
TOSHIBA CORPORATION
Semiconductor Company
<http://www.semicon.toshiba.co.jp/eng>

Copyright © 1995-2007 TOSHIBA CORPORATION, All Rights Reserved.