

# TMP86FH47AUG

## 8-bit 44-pin TLCS-870 Family TLCS-870/C Series

8-bit microcontrollers with flash memory, 10-bit AD converter and various serial interfaces

[▶ Datasheet](#)
(Product Summary is also available.)

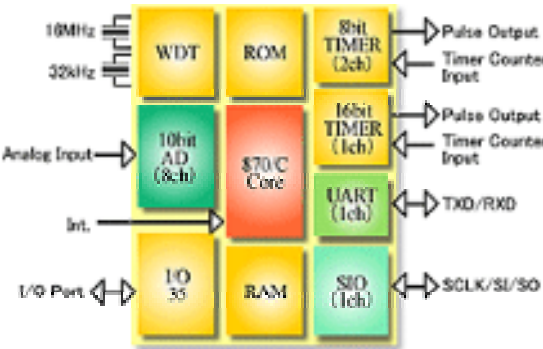
Features

### TLCS-870/C CPU Core

- ▶ Operating voltage  
2.7 to 5.5 V
- ▶ Minimum instruction execution time  
250 ns (at 16 MHz/ 4.5 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 : 8 channels
- ▶ UART : 1 channel
- ▶ SIO : 1 channel
- ▶ 8-bit timer : 2 channels
- ▶ 16-bit timer : 1 channel
- ▶ Key-on wake-up : 4 channels



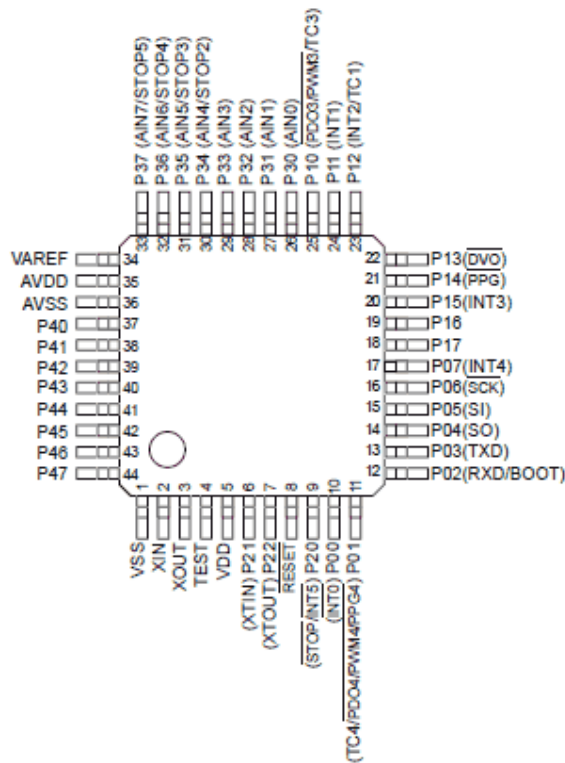
Product Lineup

| Part number  | ROM (bytes) | RAM (bytes) | Packages            |
|--------------|-------------|-------------|---------------------|
| TMP86C847UG  | 8K          | 512         | LQFP44-P-1010-0.80A |
| TMP86CH47AUG | 16K         | 512         | LQFP44-P-1010-0.80B |
| TMP86CM47AUG | 32K         | 1K          | LQFP44-P-1010-0.80A |
| TMP86PH47UG  | 16K (OTP)   | 512         | LQFP44-P-1010-0.80B |
| TMP86PM47AUG | 32K (OTP)   | 1K          | LQFP44-P-1010-0.80A |

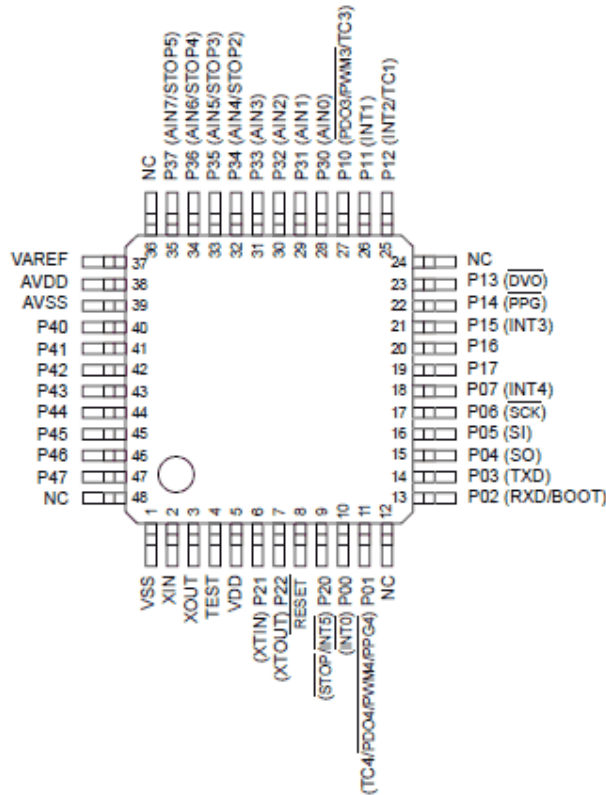
\* This product uses the SuperFlash® technology under license of Silicon Storage Technology, Inc. Super Flash® is a registered trademark of Silicon Storage Technology, Inc.

Package Information

### Pin Assignments



Package name TMP86FH47AUG : LQFP44-P-1010-0.80B



Package name TMP86FH47ADUG : LQFP48-P-0707-0.50D

## Development Systems

### Software Products

|                                |            |                        |
|--------------------------------|------------|------------------------|
| Toshiba Integrated Development | C Compiler | SW89CN0-ZCC: 1 license |
|--------------------------------|------------|------------------------|

|             |                                    |                                                                                                                                    |
|-------------|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Environment |                                    | SW89CN3-ZCC: 10 licenses                                                                                                           |
|             | Integrated Development Environment | SW00MN0-ZCC: 1 license<br>SW00MN3-ZCC: 10 licenses<br>The controller and Light emulator comes with a single-seat download license. |

Hardware Products    Emulator

|                          |                         |                                                                |
|--------------------------|-------------------------|----------------------------------------------------------------|
| RTE870/C model 15 system | Controller              | BM1040R0B-G                                                    |
|                          | Interface module        | BMP86A100010B                                                  |
|                          | Emulation module        | BMP86A200010B                                                  |
|                          | Target connection board | BMP86D044DE0A: LQFP44 (10×10) /<br>BMP86D048DG0A: LQFP48 (7×7) |
|                          | Emulation chip          | TMP86C947XB                                                    |
| RTE870/C Light system    | Light emulator          | BMP86A300010A                                                  |
|                          | Emulation chip          | TMP86C947XB                                                    |

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

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