

32bit	TLCS-900 Family TLCS-900/H1 Series [NEW] TMP92FD28FG/DFG	 100pin
--------------	--	-------------------

32-bit microcontroller with USB host controller

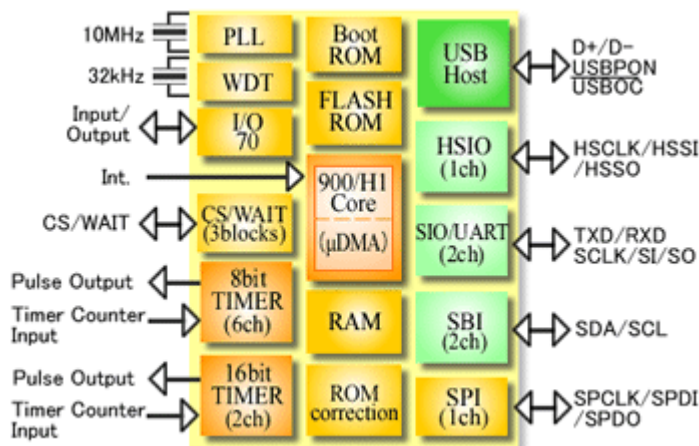
Features

● **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**

- USB Host controller : 1 channel
- UART/SIO : 2 channels
- SBI : 2 channels
- HSIO : 1 channel
- SPI : 1 channel
- 8-bit timer : 6 channels
- 16-bit timer : 2 channels
- Key-on wake-up : 4 channels
- Program patch logic : 8 banks



● **Product Lineup**

** : Under development

Part number	ROM	RAM
TMP92CD28FG/DFG**	512 Kbytes	32 Kbytes

> For further information about Toshiba microcomputers, please visit <http://www.semicon.toshiba.co.jp/eng/prd/micro/index.html>.

Development Systems

● **Software Products**

Toshiba Integrated Development Environment (TIDE)		Real-Time OS (μITRON 3.0)
C Compiler	Integrated Development Environment	
SW96CN0-ZCC: 1 license	SW96MN0-ZCC: 1 license	SW96RN2-ZCC: Object code can be freely copied
SW96CN3-ZCC: 10 licenses	SW96MN3-ZCC: 10 licenses	SW96RNC-ZCC: Object code can be freely copied. With source code.

● **Hardware Products**

** : Under development

Part number	Test tool	
	Controller	Emulation pod
TMP92FD28FG/DFG	BM1040R0A/BM1055R0B	BM92CD28F0A-M15**

> As to hardware products, additional accessories are also needed.

> For further information about Toshiba microcomputer development systems, please visit http://www.semicon.toshiba.co.jp/mctool/index_e.htm.

* 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 usage 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 usage 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 patent or patent rights of TOSHIBA or others. 021023_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

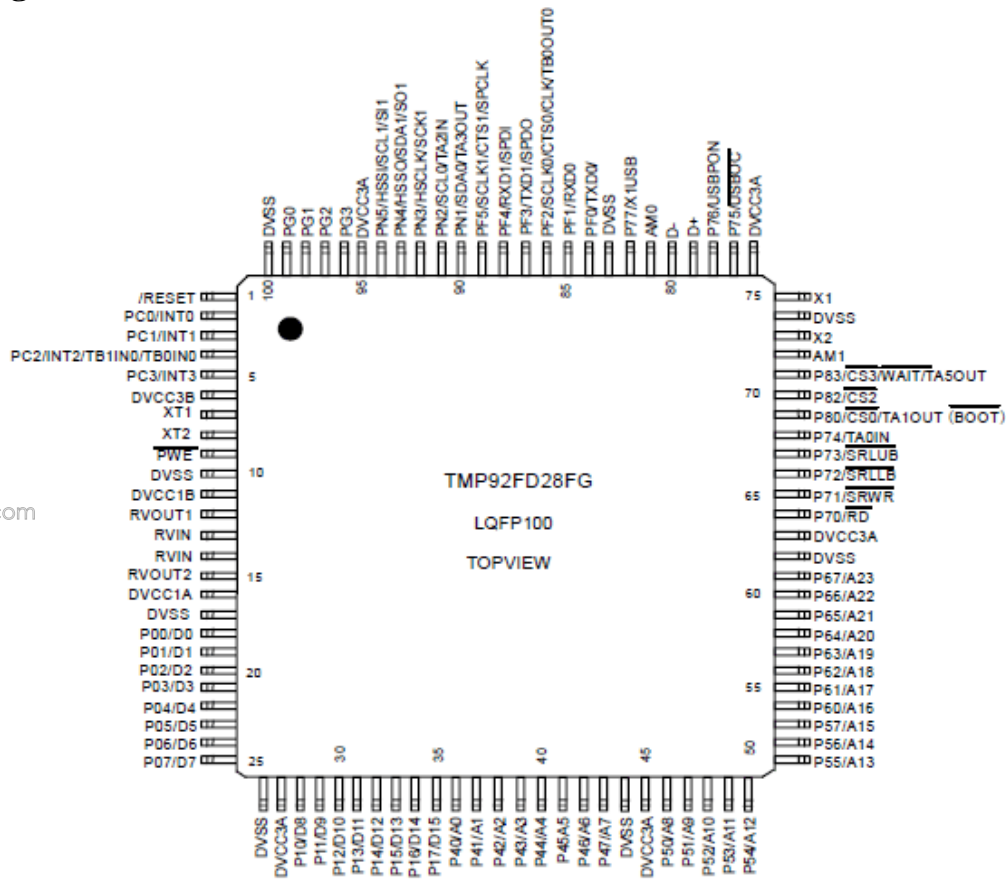
• The products described in this document may include products subject to the foreign exchange and foreign trade laws. 021023_F

• 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

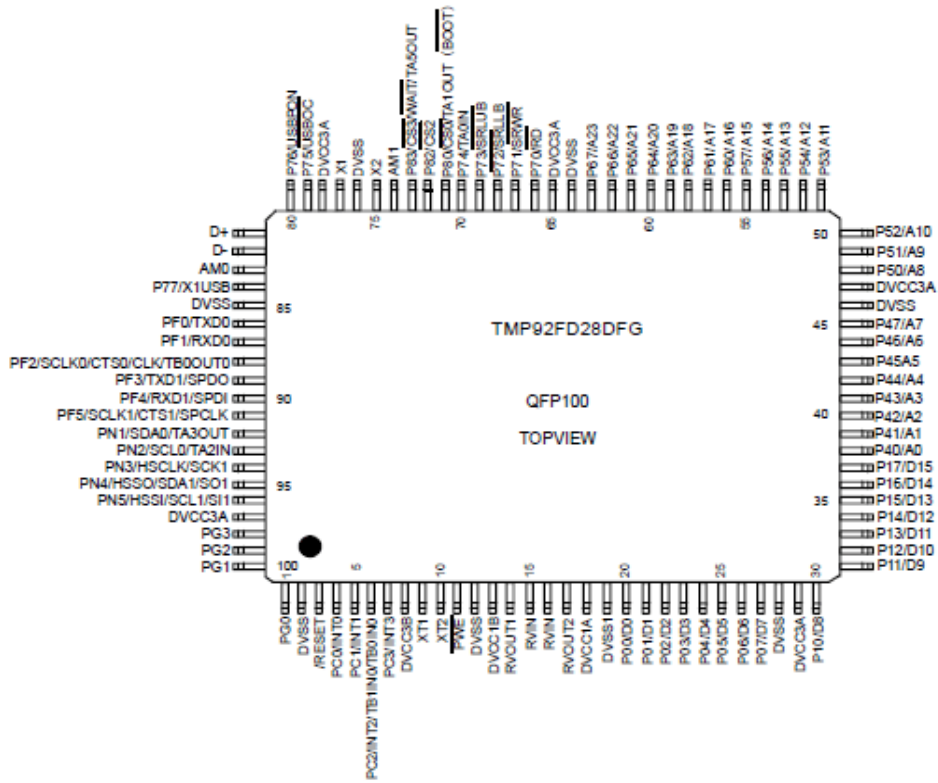
• TOSHIBA has made this document deliberately in order to make its contents as accurate as possible. Nevertheless, if any trouble should occur due to any error contained in this document, TOSHIBA shall not have any liability therefore. Also, please keep in mind the precautions and conditions set forth 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

Package Information

Pin Assignments



Package name FG:P-LQFP100-1414-0.50F



Package Name DFG: P-QFP100-1420-0.65A