

TX03 Series

32-bit / 100/109-pin

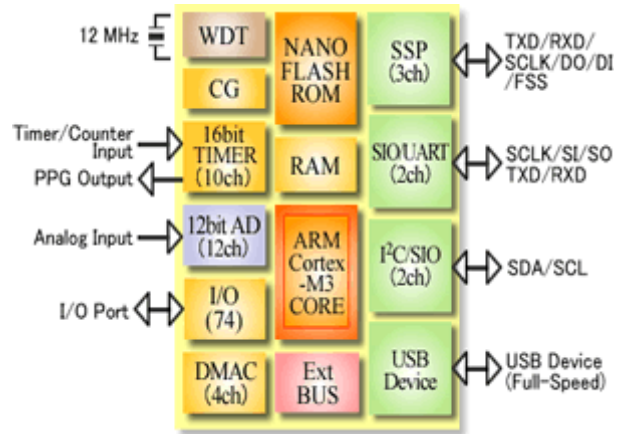
NEW	TMPM366FDFG	Under Development	TMPM366FDXBG	
NEW	TMPM366FYFG	Under Development	TMPM366FYXBG	
NEW	TMPM366FWFG	Under Development	TMPM366FWXBG	

Microcontrollers with a full-speed USB device achieve the optimal balance between the cost and performance.

Features

ARM Cortex™-M3 CPU Core

- ▶ Operating voltage:
2.7 to 3.6V (3.0 to 3.6V USB)
I/O 2.7 to 3.6V
- ▶ Maximum Operating frequency:
48 MHz
- ▶ On-chip debug circuit:
JTAG, SWD, SWV or 4-bit trace interface
- ▶ Power saving operation
Clock gear (for dividing clock to 1/2, 1/4, or 1/8)
Standby modes (IDLE, STOP1, STOP2)



Built-in Functions

- ▶ DMA controller : 4 channels
- ▶ USB (Full-Speed) device controller : 1 channel
- ▶ I/O ports : 74 pins
- ▶ 12-bit AD converter : 12 channels
- ▶ 16-bit timer : 10 channels
- ▶ Full UART : 1 channel
- ▶ SIO/UART : 2 channels
- ▶ I²C/SIO : 2 channels
- ▶ SSP : 3 channels
- ▶ External bus interface : 8/16-bit (Multiplex bus/Separate bus)

Flash Memory Size

Part number	ROM (Flash)	RAM
TMPM366FDFG	512 Kbytes	64 Kbytes
TMPM366FDXBG**	512 Kbytes	64 Kbytes
TMPM366FYFG	256 Kbytes	48 Kbytes
TMPM366FYXBG**	256 Kbytes	48 Kbytes
TMPM366FWFG	128 Kbytes	32 Kbytes
TMPM366FWXBG**	128 Kbytes	32 Kbytes

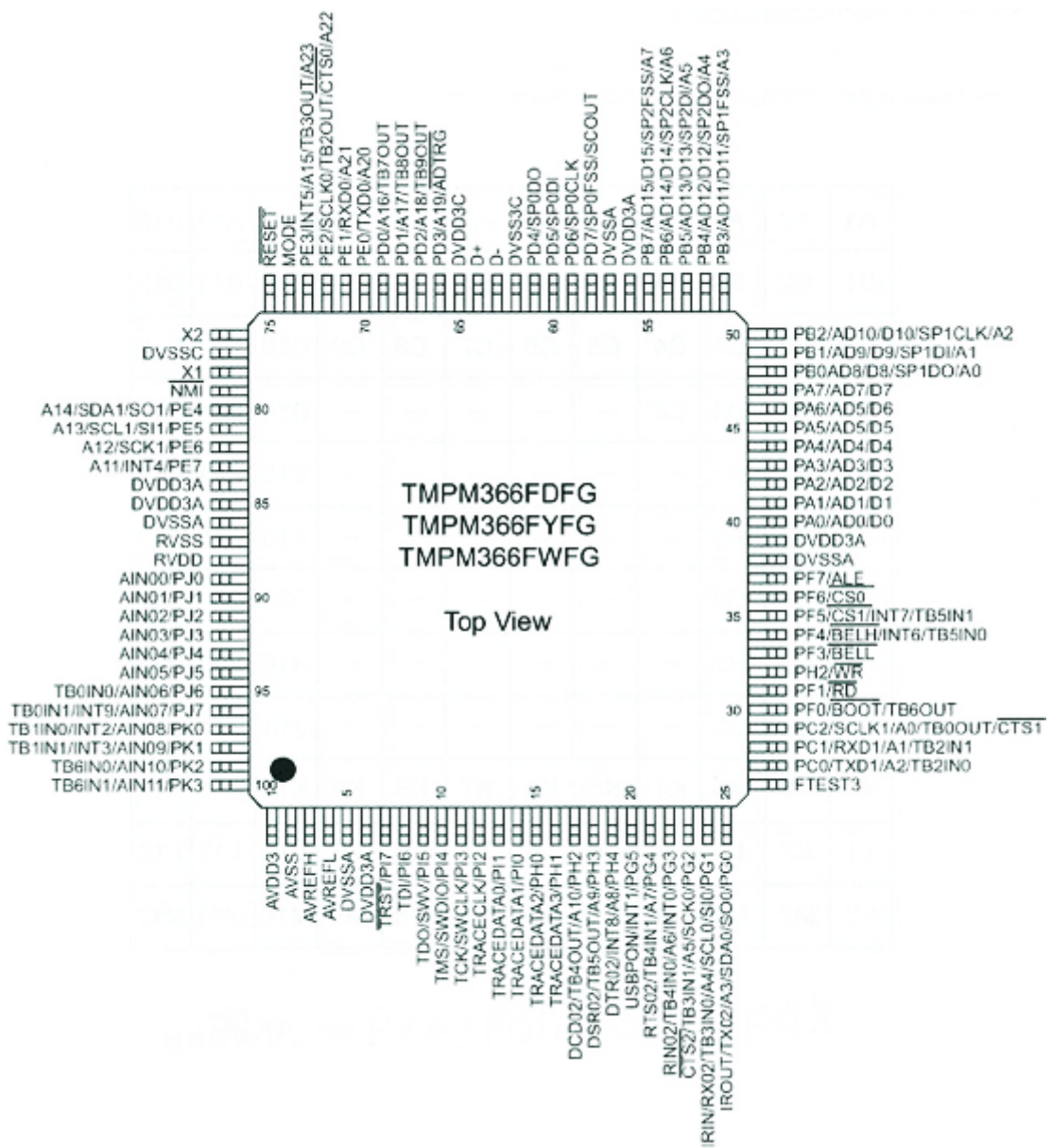
** : Under development

* ARM and Cortex are trademarks or registered trademarks of ARM Limited in the EU and other countries.

* NANO FLASH is a trademark of Toshiba Corporation.

Package Information

Pin Assignments



Package FG: LQFP100 (14 × 14 mm)

A1	A2	A3	A4	A5	A6	A7	A8	A9	A10	A11	A12
B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12
C1	C2	C3	C4	C5	C6	C7	C8	C9	C10	C11	C12
D1	D2	D3	D4	—	—	—	—	—	D10	D11	D12
E1	E2	E3	—	—	—	—	—	—	E10	E11	E12
F1	F2	F3	—	—	—	—	—	—	F10	F11	F12
G1	G2	G3	—	—	—	—	—	—	G10	G11	G12
H1	H2	H3	—	—	—	—	—	—	H10	H11	H12
J1	J2	J3	—	—	—	—	—	—	J10	J11	J12
K1	K2	K3	K4	K5	K6	K7	K8	K9	K10	K11	K12
L1	L2	L3	L4	L5	L6	L7	L8	L9	L10	L11	L12
M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12

Top View

Package XBG: TFBGA109 (9 × 9 mm)

Pin Numbers and Names (XBG)

Pin No.	Pin Name	Pin No.	Pin Name
A1	PK3/AIN11/TB6IN1	D1	AVSS
A2	PJ7/AIN07/INT9/TB0IN1	D2	PK0/AIN08/INT2/TB1IN0
A3	PJ3/AIN03	D3	PJ6/AIN06/TB0IN0
A4	PJ0/AIN00	D4	AVSS
A5	RVDD3	D5	-
A6	RVSS	D6	-
A7	DVSSA	D7	-
A8	DVDD3A	D8	-
A9	X1	D9	-
A10	DVSSC	D10	PD3/A19/ADTRG
A11	X2	D11	PE0/TXD0/A20
A12	DVSSC	D12	PE1/RXD0/A21
B1	AVDD3	E1	AVREFL
B2	PK2/AIN10/TB6IN0	E2	AVSS
B3	PJ4/AIN04	E3	BSC
B4	PJ1/AIN01	E4	-
B5	AVSS	E5	-
B6	PE7/INT4/A11	E6	-
B7	PE5/SCL1/S11/A13	E7	-
B8	DVDD3A	E8	-
B9	NMI	E9	-
B10	DVSSC	E10	PD4/SP0D0
B11	MODE	E11	DVDD3C
B12	RESET	E12	DVDD3C
C1	AVREFH	F1	DVDD3A
C2	PK1/AIN09/INT3/TB1IN1	F2	DVSSA
C3	PJ5/AIN05	F3	PI7/TRST
C4	PJ2/AIN02	F4	-
C5	AVSS	F5	-
C6	PE6/SCK1/A12	F6	-
C7	PE4/SDA1/SD1/A14	F7	-
C8	PD0/A16/TB7OUT	F8	-
C9	PD1/A17/TB8OUT	F9	-
C10	PD2/A18/TB9OUT	F10	PD5/SP0D1
C11	PE2/SCLK0/TB2OUT/CTS0/A22	F11	DVSS3C
C12	PE3/INT5/A15/TB3OUT/A23	F12	D+

Pin No.	Pin Name	Pin No.	Pin Name
G1	PI2/TRACECLK	K1	PH4/A8/INT8/DTR02
G2	PI6/TDI	K2	PH3/A9/TB5OUT/DSR02
G3	PI5/TDO/SWV	K3	PH2/A10/TB4OUT/DGD02
G4	-	K4	PG5/INT1/USBPON
G5	-	K5	PC2/SCLK1/A0/TB0OUT/CTS1
G6	-	K6	PF2/WR
G7	-	K7	PF5/CS1/INT7/TB5INI
G8	-	K8	PF7/ALE
G9	-	K9	PA1/D1/AD1
G10	PD6/SPOCLK	K10	PA4/D4/AD4
G11	DVSS3C	K11	PB2/D10/AD10/SP1CLK/A2
G12	D-	K12	PB4/D12/AD12/SP2D0/A4
H1	PI0/TRACEDATA1	L1	PG2/SCK0/A5/TB3INI/CTS2
H2	PI1/TRACEDATA0	L2	PG3/INT0/A6/TB4IN0/RIN02
H3	PI4/TMS/SWDIO	L3	PG4/A7/TB4INI/RTS02
H4	-	L4	PC0/TXD1/A2/TB2IN0
H5	-	L5	PF1/RD
H6	-	L6	PF3/BELL
H7	-	L7	PF6/CS0
H8	-	L8	PA0/D0/AD0
H9	-	L9	PA2/D2/AD2
H10	PD7/SPOFSS/SCOUT	L10	PA5/D5/AD5
H11	DVSSA	L11	PB0/D8/AD8/SP1D0/A0
H12	DVDD3A	L12	PB3/D11/AD11/SP1FSS/A3
J1	PH0/TRACEDATA2	M1	FTEST3
J2	PH1/TRACEDATA3	M2	PG1/SCL0/SI0/A4/TB3IN0/RX02/IRIN
J3	PI3/TCK/SWCLK	M3	PG0/SDA0/S00/A3/TX02/IROUT
J4	-	M4	PC1/RXD1/A1/TB2INI
J5	-	M5	PF0/BOOT/TB6OUT
J6	-	M6	PF4/BELH/INT6/TB5IN0
J7	-	M7	DVSSA
J8	-	M8	DVDD3A
J9	-	M9	PA3/D3/AD3
J10	PB7/D15/AD15/SP2FSS/A7	M10	PA6/D6/AD6
J11	PB6/D14/AD14/SP2CLK/A6	M11	PA7/D7/AD7
J12	PB5/D13/AD13/SP2DI/A5	M12	PB1/D9/AD9/SP1DI/A1

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

- Toshiba Corporation, and its subsidiaries and affiliates (collectively "TOSHIBA"), reserve the right to make changes to the information in this document, and related hardware, software and systems (collectively "Product") without notice.
 - This document and any information herein may not be reproduced without prior written permission from TOSHIBA. Even with TOSHIBA's written permission, reproduction is permissible only if reproduction is without alteration/omission.
 - Though TOSHIBA works continually to improve Product's quality and reliability, Product can malfunction or fail. Customers are responsible for complying with safety standards and for providing adequate designs and safeguards for their hardware, software and systems which minimize risk and avoid situations in which a malfunction or failure of Product could cause loss of human life, bodily injury or damage to property, including data loss or corruption. Before customers use the Product, create designs including the Product, or incorporate the Product into their own applications, customers must also refer to and comply with (a) the latest versions of all relevant TOSHIBA information, including without limitation, this document, the specifications, the data sheets and application notes for Product and the precautions and conditions set forth in the "TOSHIBA Semiconductor Reliability Handbook" and (b) the instructions for the application with which the Product will be used with or for. Customers are solely responsible for all aspects of their own product design or applications, including but not limited to (a) determining the appropriateness of the use of this Product in such design or applications; (b) evaluating and determining the applicability of any information contained in this document, or in charts, diagrams, programs, algorithms, sample application circuits, or any other referenced documents; and (c) validating all operating parameters for such designs and applications. **TOSHIBA ASSUMES NO LIABILITY FOR CUSTOMERS' PRODUCT DESIGN OR APPLICATIONS.**
 - Product is intended for use in general electronics applications (e.g., computers, personal equipment, office equipment, measuring equipment, industrial robots and home electronics appliances) or for specific applications as expressly stated in this document. Product is neither intended nor warranted for use in equipment or systems that require extraordinarily high levels of quality and/or reliability and/or a malfunction or failure of which may cause loss of human life, bodily injury, serious property damage or serious public impact ("Unintended Use"). Unintended Use includes, without limitation, equipment used in nuclear facilities, equipment used in the aerospace industry, medical equipment, equipment used for automobiles, trains, ships and other transportation, traffic signaling equipment, equipment used to control combustions or explosions, safety devices, elevators and escalators, devices related to electric power, and equipment used in finance-related fields. Do not use Product for Unintended Use unless specifically permitted in this document.
 - Do not disassemble, analyze, reverse-engineer, alter, modify, translate or copy Product, whether in whole or in part.
 - Product shall not be used for or incorporated into any products or systems whose manufacture, use, or sale is prohibited under any applicable laws or regulations.
 - The information contained herein is presented only as guidance for Product use. No responsibility is assumed by TOSHIBA for any infringement of patents or any other intellectual property rights of third parties that may result from the use of Product. No license to any intellectual property right is granted by this document, whether express or implied, by estoppel or otherwise.
 - **ABSENT A WRITTEN SIGNED AGREEMENT, EXCEPT AS PROVIDED IN THE RELEVANT TERMS AND CONDITIONS OF SALE FOR PRODUCT, AND TO THE MAXIMUM EXTENT ALLOWABLE BY LAW, TOSHIBA (1) ASSUMES NO LIABILITY WHATSOEVER, INCLUDING WITHOUT LIMITATION, INDIRECT, CONSEQUENTIAL, SPECIAL, OR INCIDENTAL DAMAGES OR LOSS, INCLUDING WITHOUT LIMITATION, LOSS OF PROFITS, LOSS OF OPPORTUNITIES, BUSINESS INTERRUPTION AND LOSS OF DATA, AND (2) DISCLAIMS ANY AND ALL EXPRESS OR IMPLIED WARRANTIES AND CONDITIONS RELATED TO SALE, USE OF PRODUCT, OR INFORMATION, INCLUDING WARRANTIES OR CONDITIONS OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, ACCURACY OF INFORMATION, OR NON-INFRINGEMENT.**
 - Do not use or otherwise make available Product or related software or technology for any military purposes, including without limitation, for the design, development, use, stockpiling or manufacturing of nuclear, chemical, or biological weapons or missile technology products (mass destruction weapons). Product and related software and technology may be controlled under the Japanese Foreign Exchange and Foreign Trade Law and the U.S. Export Administration Regulations. Export and re-export of Product or related software or technology are strictly prohibited except in compliance with all applicable export laws and regulations.
 - Product may include products subject to foreign exchange and foreign trade control laws.
 - Please contact your TOSHIBA sales representative for details as to environmental matters such as the RoHS compatibility of Product. Please use Product in compliance with all applicable laws and regulations that regulate the inclusion or use of controlled substances, including without limitation, the EU RoHS Directive. TOSHIBA assumes no liability for damages or losses occurring as a result of noncompliance with applicable laws and regulations.
- In addition to the above, the following are applicable only to development tools.
- Though TOSHIBA works continually to improve Product's quality and reliability, Product can malfunction or fail. Use the Product in a way which minimizes risk and avoid situations in which a malfunction or failure of Product could cause loss of human life, bodily injury or damage to property, including data loss or corruption. For using the Product, customers must also refer to and comply with the latest versions of all relevant TOSHIBA information, including without limitation, this document, the instruction manual, the specifications, the data sheets for Product.
 - Product is provided solely for the purpose of performing the functional evaluation of a semiconductor product. Please do not use Product for any other purpose, including without limitation, evaluation in high or low temperature or humidity, and verification of reliability.
 - Do not incorporate Product into your products or system. Products are for your own use and not for sale, lease or other transfer.

TOSHIBA
TOSHIBA CORPORATION
Semiconductor & Storage Products Company

<http://www.semicon.toshiba.co.jp/eng/>

Copyright © 1995-2011 TOSHIBA CORPORATION, All Rights Reserved.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Toshiba:](#)

[TMPM366FDXBG](#)



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.