

**TX03 Series**

**32-bit / 144-pin**

**NEW** **TMPM384FDFG**

**High-performance microcontroller with a multi-purpose timer for controlling induction heating (IH) appliances and motors used for home electronics features single 5V supply.**

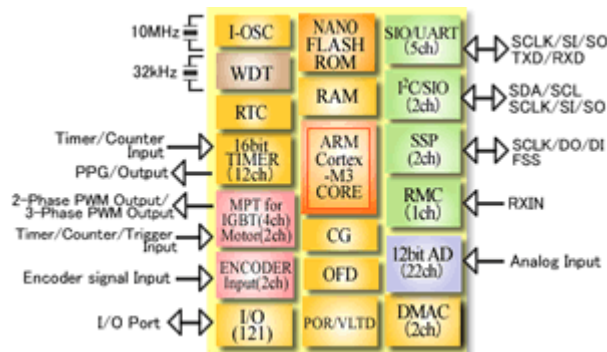
**Features**

**ARM®Cortex®-M3 CPU Core**

- ▶ Operating voltage:  
4.0 to 5.5 V (Single-supply/on-chip regulator)
- ▶ Maximum operating frequency:  
40 MHz
- ▶ On-chip debug circuit  
JTAG/SWD/SWV,TRACE (DATA2 bits)

**Built-in Functions**

- ▶ Multi-purpose timer (MPT): 4 channels (Note: 2channels for three-phase PWM output)
  - Three-phase PWM output: Synchronous 3-channel PWM output (with AD conversion trigger)
  - IGBT control-timer: Synchronous 2-channel PPG output, external trigger start, dead-time output, protection circuit controls in emergency
- ▶ Encoder input : 2 channels
- ▶ I/O ports : 116 pins  
Output ports : 1 pin  
Input ports : 4 pins
- ▶ 16-bit timer : 12 channels
- ▶ SIO/UART : 5 channels
- ▶ I<sup>2</sup>C/SIO : 2 channels (1 channel is shared with SSP)
- ▶ SSP(SPI mode) : 2 channels (1 channel is shared with I<sup>2</sup>C/SIO.)
- ▶ 12/10(selectable)-bit AD converter : 22 channels  
(Conversion time 2.0 μs (When 12-bit mode and ADCLK is 40 MHz))
- ▶ RTC : 1 channel
- ▶ Remote control signal preprocessor : 1 channel
- ▶ DMA controller : 2 channels
- ▶ Power-on reset circuit (POR)
- ▶ Voltage detection circuit (VLTD)
- ▶ Internal Oscillator (9 MHz) (I-OSC)
- ▶ Oscillation frequency detector (only when external oscillator is used) (OFD)



**Flash Memory Size**

Part number	ROM (Flash)	RAM
TMPM384FDFG	512 Kbytes	32 Kbytes

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