

TX03 Series 32-bit / 100-pin







High-performance microcontrollers containing a multi-purpose timer for controlling the power devices used for home electronics, and realizing 5V single supply operation to achieve control over Induction Heating (IH) appliances and motors.

Features

ARM CortexTM-M3 CPU Core

- Operating voltage: 4.0 to 5.5 V
- Maximum operating frequency: 40 MHz (10 MHz × 4 by PLL)
- On-chip debug circuit JTAG/SWD/SWV,TRACE (DATA2 bits)

Built-in Functions

- ► 12-bit AD converter: 2-µs conversion time, 18-channel.
- Multi-purpose timer (MPT): 3 channels (Note: 2channels for three-phase PWM)

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

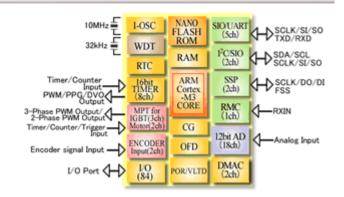
Encoder input: 2 channels

16-bit timer: 8 channels

RTC: 1 channel

SIO/UART : 5 channels

- ► I²C/SIO : 2 channels (1 channel is shared with SSP)
- SSP(SPI mode): 2 channels (1 channel is shared with I²C/SIO.)
- Remote control signal preprocessor: 1 channel
- DMA controller : 2 channels
- Power-on reset circuit
- Voltage detection circuit
- Internal Oscillator (10 MHz)
- Oscillation frequency detector (only when external oscillator is used)



Flash Memory Size

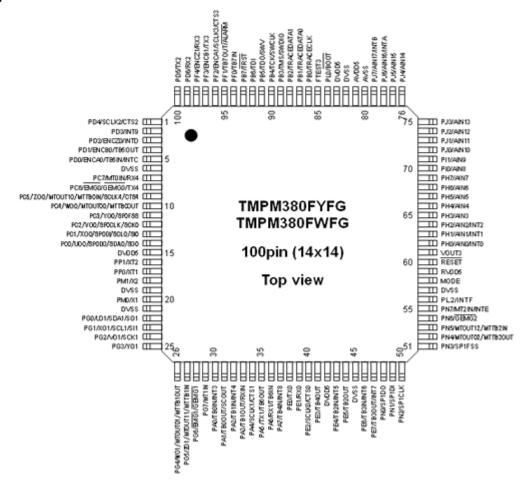
| Part number | ROM (Flash) | RAM |
|----------------|-------------|-----------|
| TMPM380FWFG** | 128 Kbytes | 12 Kbytes |
| TMPM380FWDFG** | 128 Kbytes | 12 Kbytes |
| TMPM380FYFG** | 256 Kbytes | 16 Kbytes |
| TMPM380FYDFG** | 256 Kbytes | 16 Kbytes |

^{**:}Under development

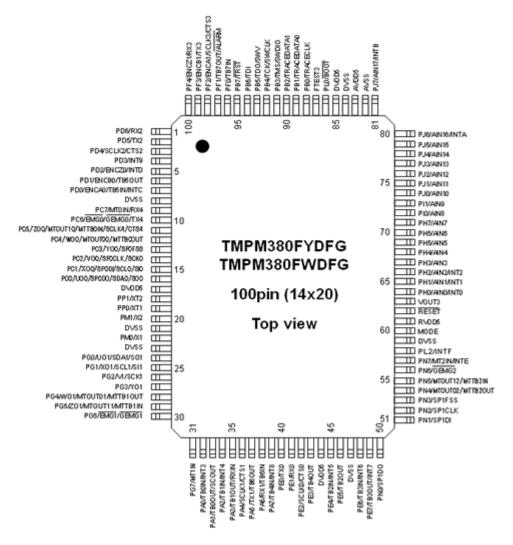
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| Package Information

Pin Assignments



Package name: LQFP100-P-1414-0.50H



Package name: QFP100-P-1420-0.65Q

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