## $\square$ MN101E34 Series

| Type | MN101EF34D |
| :--- | :---: |
| Internal ROM type | FLASH |
| ROM (byte) | $64 \mathrm{~K}+4 \mathrm{~K}$ |
| RAM (byte) | 4 K |
| Package (Lead-free) | TQFP048-P-0707B |
| Minimum Instruction <br> Execution Time | $0.042 \mu \mathrm{~s}($ at 2.2 V to $5.5 \mathrm{~V}, 24 \mathrm{MHz})$ |

## Interrupts

RESET. Watchdog. External 0 to 4. External 5 (key interrupt dedicated). External 6. Timer 0 to 4. Timer 6. Timer 7 (2 systems). Timer 8 (2 systems). Timer 9 (2 systems). Time base. Serial 1 ( 2 systems). Serial 2 ( 2 systems). Serial 4 ( 2 systems). A/D conversion finish

## Timer Counter

8 -bit timer $\times 6$
Timer 0 ..................Square-wave output. PWM output. Event count. Simple pulse width measurement. Square-wave/PWM output to large current terminal P03 (TM0IOB) possible
Timer 1 $\qquad$ .Square-wave output. Event count. UART baud rate timer
Timer 2 ..................Square-wave output. PWM output. Event count. Simple pulse width measurement. UART baud rate timer. Square-wave/PWM output to large current terminal P03 (TM2IOB) possible
Timer 3 ..................Square-wave output. Event count
Timer 4 ..................Square-wave output. PWM output. Event count. Simple pulse width measurement
Timer 6 ..................8-bit freerun timer
Timer 0,1 can be cascade-connected
Timer 2, 3 can be cascade-connected
16 -bit timer $\times 3$
Timer 7 . $\qquad$ .Square-wave output. PWM output (cycle/duty continuous variable). Event count. Pulse width measurement. Input capture. Square-wave/PWM output to large current terminal P00 (TM7IOB) possible
Timer 8 ..................Square-wave output. PWM output (cycle/duty continuous variable). Event count. Pulse width measurement. Input capture. Square-wave/PWM output to large current terminal P01 (TM8IOB) possible
Timer 9 $\qquad$ .Square-wave output. PWM output (cycle/duty continuous variable). Event count. Pulse width measurement. Input capture
Time base timer: One-minute count setting
Watchdog timer $\times 1$

## Serial interface

Synchronous type/UART (full-duplex) $\times 2$ : Serial 1, 2
Synchronous type/Multi-master $\mathrm{I}^{2} \mathrm{C} \times 1$ : Serial 4
Serial 4. $\qquad$ .Applicable for 7-bit address setting. General call

## Extended Calculation

16-bit $\times 16$-bit multiplication. 32 -bit / 16-bit division

## I/O Pins

I/O
39 : Common use. Specified pull-up resistor available. Input/output selectable (bit unit)

## A/D converter

10-bit $\times 8$ channels (with $\mathrm{S} / \mathrm{H}$ )

## Special Ports

Buzzer output. Remote control carrier output. High-current drive port. Clock output

## ROM Correction

Correcting address designation: Up to 7 addresses possible

## Development tools

In-circuit Emulator
PX-ICE101E + PX-PRB101E34-TQFP048-P-0707B

Pin Assignment
TQFP048-P-0707B


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