# ❑ MN101C73 Series

| Type | MN101C73A | MN101CF73A |
|---|---|---|
| Internal ROM type | Mask ROM | FLASH |
| ROM (byte) | 32K | |
| RAM (byte) | 1.5K | 2K |
| Package (Lead-free) | LQFP064-P-1414, TQFP064-P-1010C | |
| Minimum Instruction Execution Time | 0.1 µs (at 3.0 V to 3.6 V, 10 MHz)<br>0.235 µs (at 1.8 V to 3.6 V, 4.25 MHz)*<br>62.5 µs (at 1.8 V to 3.6 V, 32 kHz)*<br>*: The lower limit for operation guarantee for flash memory built-in type is 2.2 V. | |

## ■ Interrupts

RESET. Watchdog. External 0 to 5. External 6 (key interrupt dedicated). Timer 0 to 3. Timer 6. Timer 7 (2 systems). Timer 8 (2 systems). Time base. Serial 0 (2 systems). Serial 1 (2 systems). Serial 3. A/D conversion finish

## ■ Timer Counter

8-bit timer × 5

Timer 0 .....Square-wave/8-bit PWM output. Event count. Remote control carrier output. Simple pulse width measurement. Added pulse (2-bit) type PWM output. Square-wave/PWM output to large current terminal P50 possible

Timer 1 .....Square-wave output. Event count. Synchronous output event

Timer 2 .....Square-wave output. Added pulse (2-bit) type PWM output. PWM output. Serial transfer clock output. Event count. Synchronous output event. Simple pulse width measurement. Square-wave/PWM output to large current terminal P51 possible

Timer 3 .....Square-wave output. Event count. Serial transfer clock output

Timer 6 .....8-bit freerun timer

Timer 0, 1 can be cascade-connected

Timer 2, 3 can be cascade-connected

16-bit timer × 2

Timer 7 .....Square-wave output. 16-bit PWM output (cycle/duty continuous variable). Event count. Synchronous output event. Pulse width measurement. Input capture. Real time output control. High performance IGBT output. Square-wave/PWM output to large current terminal P52 possible

Timer 8 .....Square-wave/16-bit PWM output (duty continuous variable). Event count. Pulse width measurement. Input capture. Square-wave/PWM output to large current terminal P53 possible

Timer 7, 8 can be cascade-connected: Square-wave output, PWM is possible as a 32-bit timer

Time base timer: One-minute count setting

Watchdog timer × 1

## ■ Serial interface

Synchronous type/UART (full-duplex) × 2: Serial 0, 1

Synchronous type/Single-master $I^2C$ × 1: Serial 3

## ■ I/O Pins

I/O 55 : Common use. Specified pull-up resistor available. Input/output selectable (bit unit)

## ■ A/D converter

10-bit × 12 channels (with S/H)

## ■ Display control function

LCD: 32 segments × 4 commons (Static, 1/2, 1/3, or 1/4 duty)

Usable if VLCD ≤ VDD

LCD power shunt resistance contained

## ■ Special Ports

Buzzer output. Inverted buzzer output. Remote control carrier output. High-current drive port

## ■ ROM Correction

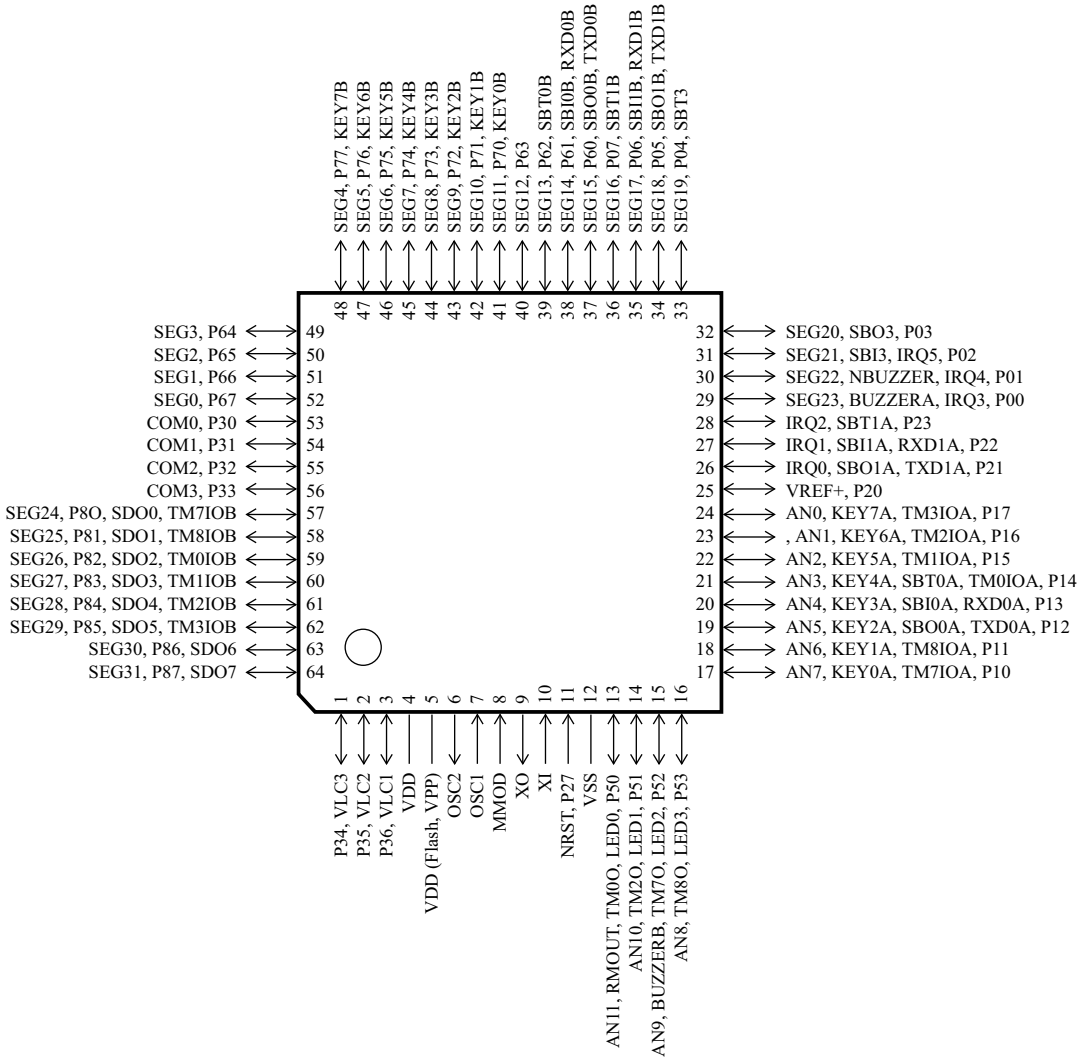
Correcting address designation: Up to 3 addresses possible

■ Electrical Charactreistics (Supply current)

| Parameter | Symbol | Condition | Limit | | | Unit |
|---|---|---|---|---|---|---|
| | | | min | typ | max | |
| Operating supply current | IDD1 | fosc = 4 MHz. VDD = 3 V | | 1 | 1.8 | mA |
| | IDD2 | fx = 32 kHz. VDD = 3 V | | 4 | 15 | µA |
| Supply current at HALT | IDD3 | fx = 32 kHz. VDD = 3 V. Ta = 25 °C | | 2 | 5 | µA |
| | IDD4 | fx = 32 kHz. VDD = 3 V. Ta = -40 °C to +85 °C | | | 10 | µA |
| Supply current at STOP | IDD5 | VDD = 3 V. Ta = 25 °C | | | 2 | µA |
| | IDD6 | VDD = 3 V. Ta = -40 °C to +85 °C | | | 8 | µA |

■ Pin Assignment

TQFP064-P-1010C, LQFP064-P-1414



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