

# □ MN101E16 Series

Type	MN101E16K	MN101E16Y	MN101EF16K	MN101EF16Z
Internal ROM type	Mask ROM		FLASH	
ROM (byte)	256K	384K	260K	512K
RAM (byte)	12K	20K	16K	30K
Package (Lead-free)	LQFP100-P-1414, QFP100-P-1818B	QFP100-P-1818B	LQFP100-P-1414, QFP100-P-1818B	QFP100-P-1818B
Minimum Instruction Execution Time	0.0588 $\mu$ s (at 2.7 V to 3.6 V, 17 MHz, at internal 2, 4, 8 times oscillation)) 0.1 $\mu$ s (at 2.7 V to 3.6 V, 20 MHz) 30.6 $\mu$ s (at 2.7 V to 3.6 V, 32.768 kHz)			

## ■ Interrupts

RESET. Watchdog. External 0 to 5. Timer 0 to 3. Timer 6. Timer 7 (2 systems). Timer A to E. Time base. Serial 0 (2 systems). Serial 1 (2 systems). Serial 2. Serial 3 (2 systems). Serial 4 (2 systems). Automatic transfer finish (2 systems). A/D conversion finish. Key interrupt

## ■ Timer Counter

8-bit timer  $\times$  10

Timer 0 ..... Square-wave/8-bit PWM output. Event count. Pulse width measurement. Real time output control

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

Timer 2 ..... Square-wave/8-bit PWM output. Event count. Synchronous output event. Pulse width measurement. Real time output control. Serial baud rate timer

Timer 3 ..... Square-wave output. Event count. Serial baud rate timer

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

Timer A, B, C, D, E

Timer 0, 1 can be cascade-connected

Timer 0, 1, 2 can be cascade-connected

Timer 2, 3 can be cascade-connected

Timer 0, 1, 2, 3 can be cascade-connected

16-bit timer  $\times$  1

Timer 7 ..... Square-wave/16-bit PWM output (cycle/duty continuous variable). Event count. Synchronous output event. Pulse width measurement. Input capture

Time base timer: One-minute count setting

Watchdog timer  $\times$  1

## ■ Serial interface

Synchronous type/UART (full-duplex)  $\times$  3: Serial 0, 1, 4

Synchronous type/Single-master I<sup>2</sup>C  $\times$  1: Serial 2

Synchronous type/I<sup>2</sup>C  $\times$  1: Serial 3

## ■ DMA controller

Number of channels: 2 channels

Maximum transfer cycles: 255

Starting factor: External request. Various types of interrupt. Software

Transfer mode: 1-byte transfer. Word transfer. Burst transfer

## ■ I/O Pins

I/O 22 : (5 V I/F port) Common use. Specified pull-up resistor available. Input/output selectable (bit unit)

62 : (3 V I/F port) Common use. Specified pull-up resistor available. Input/output selectable (bit unit)

1 : (3 V I/F port) Common use

## ■ A/D converter

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

## ■ Special Ports

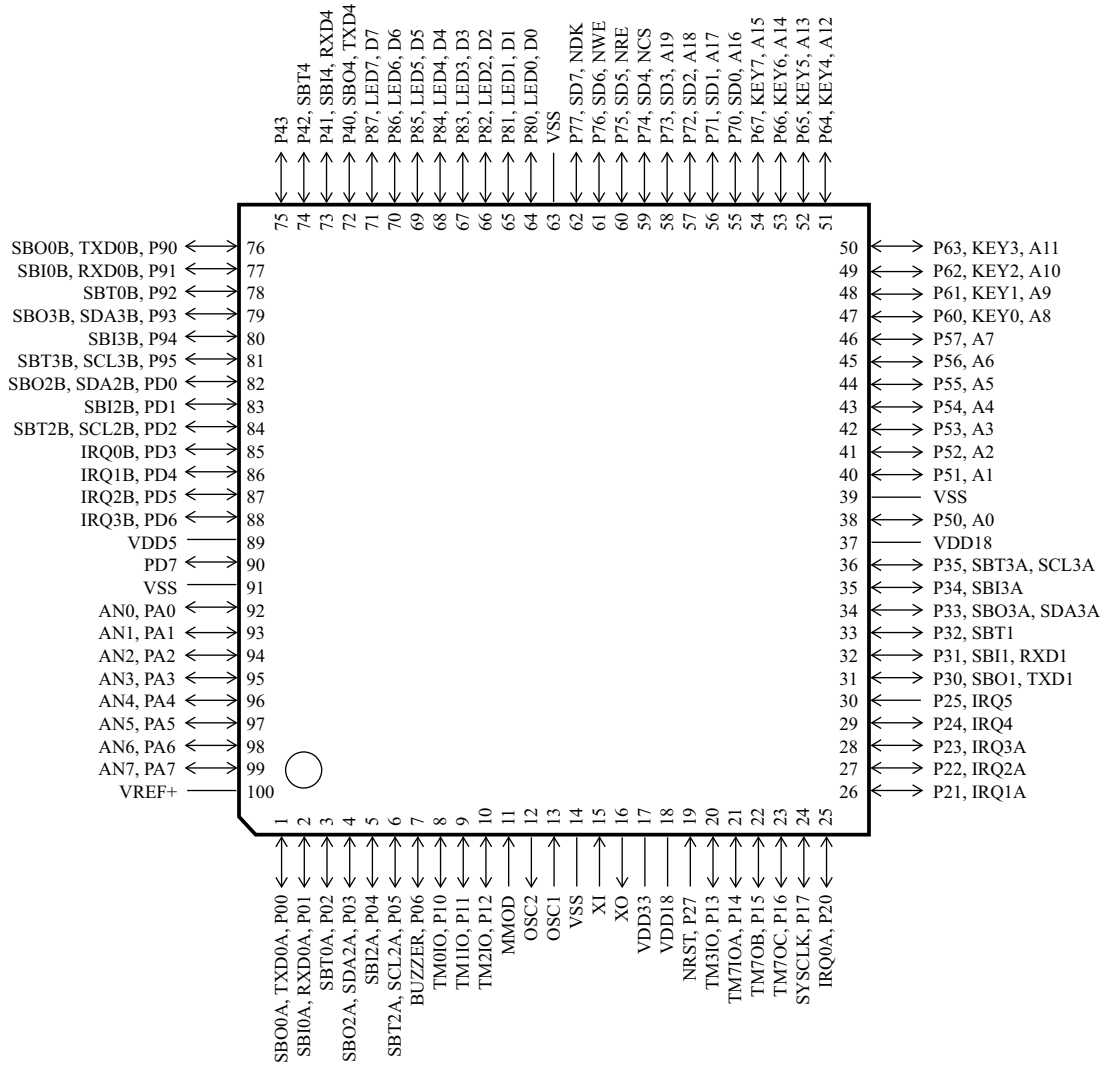
Buzzer output. High-current drive port

## ■ ROM Correction

Correcting address designation: Up to 7 addresses possible

■ Pin Assignment

LQFP100-P-1414, QFP100-P-1818B



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