

## **Notification about the transfer of the semiconductor business**

The semiconductor business of Panasonic Corporation was transferred on September 1, 2020 to Nuvoton Technology Corporation (hereinafter referred to as "Nuvoton"). Accordingly, Panasonic Semiconductor Solutions Co., Ltd. became under the umbrella of the Nuvoton Group, with the new name of Nuvoton Technology Corporation Japan (hereinafter referred to as "NTCJ").

In accordance with this transfer, semiconductor products will be handled as NTCJ-made products after September 1, 2020. However, such products will be continuously sold through Panasonic Corporation.

Publisher of this Document is NTCJ.

If you would find description "Panasonic" or "Panasonic semiconductor solutions", please replace it with NTCJ.

※ Except below description page

"Request for your special attention and precautions in using the technical information and semiconductors described in this book"

**Nuvoton Technology Corporation Japan**

# □ MN101CD0 Series

Type	MN101CD0A	MN101CD0C	MN101CD0D	MN101CD0G	MN101CFD0G
Internal ROM type	Mask ROM				FLASH
ROM (byte)	32K	48K	64K	124K	128K
RAM (byte)	1K	2K			
Package (Lead-free)	SSOP032-P-0300B				SSOP032-P-0300B
Minimum Instruction Execution Time	0.10 $\mu$ s (at 2.7 V to 3.6 V, 10 MHz) 0.125 $\mu$ s (at 1.8 V to 3.6 V, 8 MHz) 100 $\mu$ s (at 1.8 V to 3.6 V, 20 kHz)				

## ■ Interrupts

RESET. Watchdog. External 0 to 4. External 6 (key interrupt dedicated). Timer 0 to 3. Timer 6. Timer 7 (2 systems). Time base. Serial 0 (2 systems). A/D conversion finish

## ■ Timer Counter

8-bit timer  $\times$  5

Timer 0 .....Square-wave/8-bit PWM output. Event count. Simple pulse width measurement. Added pulse (2-bit) type PWM output. Square-wave/PWM output to large current terminal P35 possible

Timer 1 .....Serial 0 baud rate timer

Timer 2 .....Square-wave output. Added pulse (2-bit) type PWM output. PWM output. Event count. Simple pulse width measurement. Serial 0 baud rate timer. Square-wave/PWM output to large current terminal P34 possible

Timer 3 .....Interval timer

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

Timer 0, 1 can be cascade-connected

Timer 2, 3 can be cascade-connected

16-bit timer  $\times$  1

Timer 7 .....Square-wave output. 16-bit PWM output (cycle/duty continuous variable). Event count. Pulse width measurement. Input capture. Square-wave/PWM output to large current terminal P33 possible

Time base timer: One-minute count setting

Watchdog timer  $\times$  1

Watchdog timer 2  $\times$  1

## ■ Serial interface

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

## ■ I/O Pins

I/O 23 : Common use. Specified pull-up resistor available. Input/output selectable (bit unit)

## ■ A/D converter

10-bit  $\times$  5 channels (with S/H)

## ■ Special Ports

High-current drive port

## ■ ROM Correction

Correcting address designation: Up to 3 addresses possible

## ■ Gain Amplifier

2 channels

## ■ Reference Power Supply Output

1.7 V: Output to REF17 terminal possible. Supply to A/D converter input, A/D converter reference voltage possible

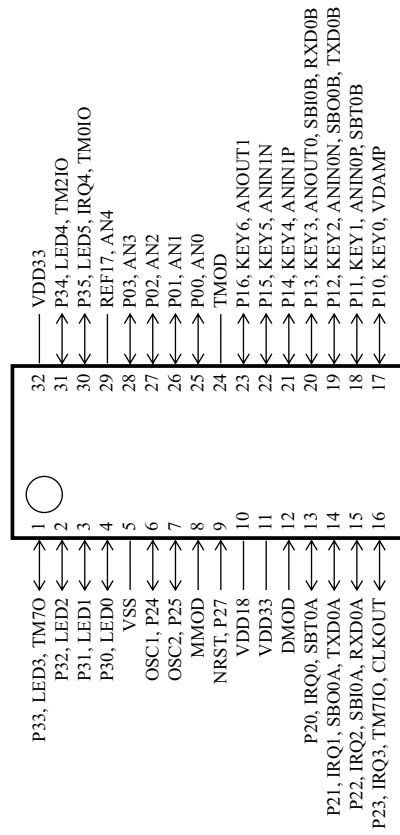
## ■ Reset

Automatic Reset

## ■ Internal oscillation

High speed: 8 MHz. Low speed: 20 kHz

■ Pin Assignment  
SSOP032-P-0300B



## Request for your special attention and precautions in using the technical information and semiconductors described in this book

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