

## **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**

# □ MN103SC6 Series

Type	MN103SFC6K
Internal ROM type	FLASH
ROM (byte)	256K
RAM (byte)	40K
Package (Lead-free)	QFP100-P-1818B
Minimum Instruction Execution Time	14.3 ns (3.0 V to 5.5 V) * at internal oscillation used. When instruction RAM executed

## ■ Interrupts

- 9 external interrupts
- 45 internal interrupts: Watchdog timer. Timer. Serial I/F. PWM. A/D conversion finish. System error

## ■ Timer Counter

- 8-bit timer × 12
  - Timer 0 to 7, 14 to 17 Interval timer. Event count. Cascading connectable
- 16-bit timer × 6
  - Timer 8 to 10 .....Interval timer. Event count. PWM output. Double buffer
  - Timer 11 .....Interval timer. Event count. PWM output (6 pins simultaneous output are available). Double buffer
  - Timer 12, 13 .....Interval timer. Double buffer. Start synchronized with 3-phase PWM are available
- Watchdog timer × 1

## ■ Serial interface

- UART (full duplex) /Synchronous interfaces selective × 3
  - Serial 0, 1 .....7-bit, 8-bit transmission
  - Serial 2 .....1-bit to 8-bit transmission (synchronous). 2 and 3 channel type selectable (synchronous)
- Single-master I<sup>2</sup>C/Synchronous interface selective × 1
  - Serial 3 .....1-bit to 8-bit transmission (synchronous). 2 and 3 channel type selectable (synchronous)

## ■ I/O Pins

- I/O 81 : Exclusive × 2. Common use × 79

## ■ A/D converter

- 10-bit × 3 unit. 20 channels
- Simultaneous conversion of 3 series are available
- Minimum conversion time: 1.0 μs
- Conversion start synchronized with 3-phase PWM or timer 12, 13 are available

## ■ Motor Control PWM

- 16-bit 3-phase PWM × 2
- Minimum resolution: 28.6 ns
- Triangular waveform or jigsaw waveform. Dead time setup. Double buffer. Output polar switching is available. PWM output pin protect function

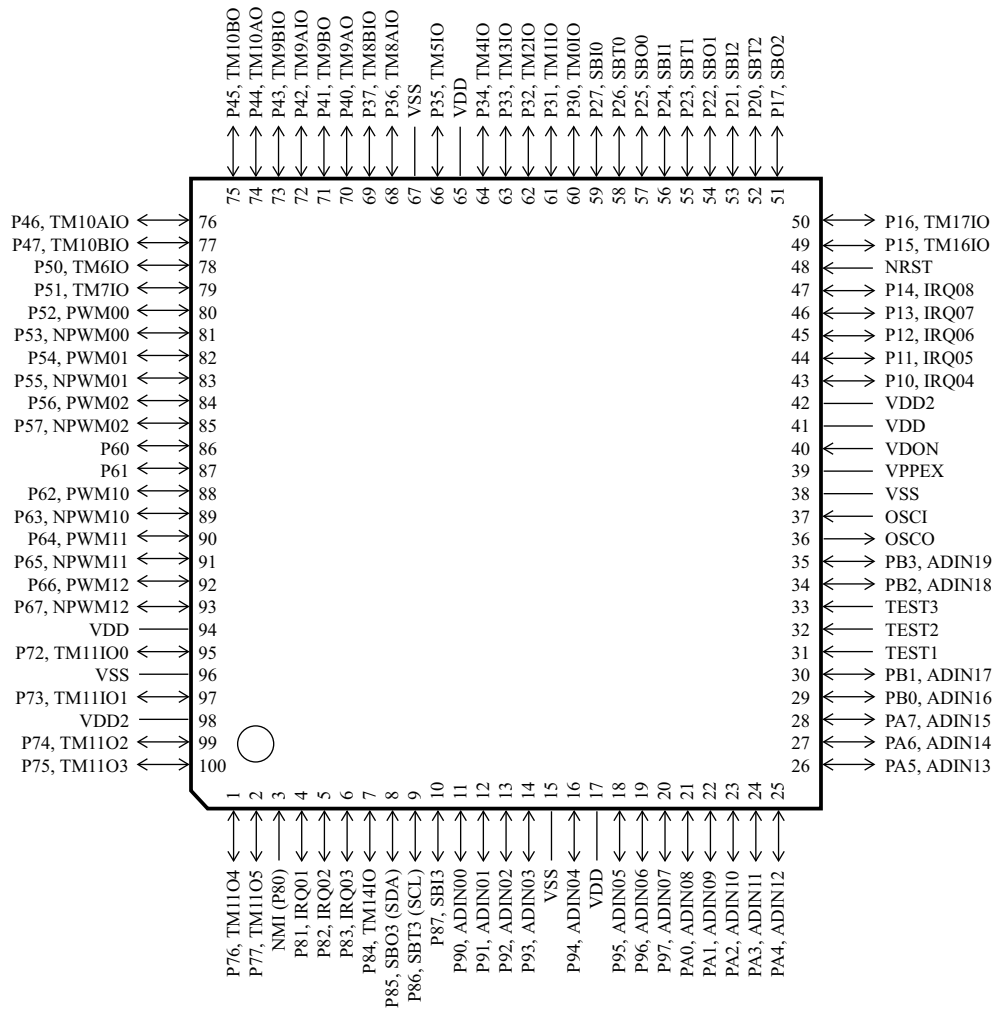
## ■ Extended Calculation

- Multiply and accumulate arithmetic. Multiplication. Saturated arithmetic

## ■ Notes

- 5 V single power supply (internal regulator)
- The power-supply voltage detection can be reset

■ Pin Assignment  
QFP100-P-1818B



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