

# □ 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

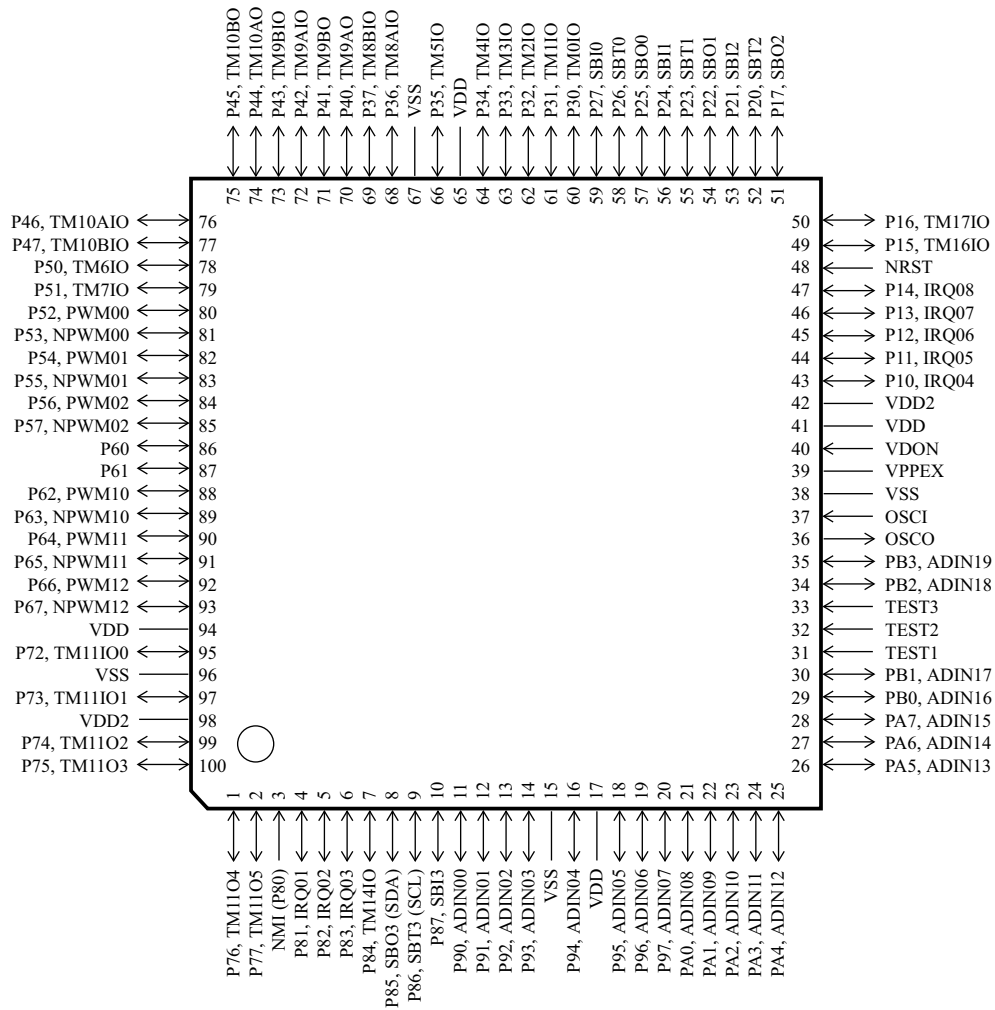
## ■ Extended Calculation

- 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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