

# **MN103SA7D, MN103SA7G**

Type	MN103SA7D	MN103SA7G	MN103SFA7K
Internal ROM type	Mask ROM		FLASH
ROM (byte)	64K	128K	256K
RAM (byte)	4K		8K
Package (Lead-free)	LQFP080-P-1414A	LQFP080-P-1414A (Under development)	LQFP080-P-1414A
Minimum Instruction Execution Time	16.7 ns (at 4.5 V to 5.5 V) * at internal 4 times oscillation used		16.7 ns (at 4.5 V to 5.5 V)

## **■ Interrupts**

9 external interrupts

45 internal interrupts : watch dog timer, timer, serial I/F, PWM, A/D, system error

## **■ Timer Counter**

8-bit timer × 12

Interval timer, Event counter, Cascading connectable

16-bit timer × 6

Interval timer, Event counter, PWM output, Double buffer

Watch dog timer

## **■ Serial interface**

UART (full duplex) / synchronous interfaces selective × 3

## **■ I/O Pins**

I/O	61	Common use × 61
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## **■ A/D converter**

10-bit × 3 unit, 16 inputs

Minimum conversion time 1.0 μs

## **■ PWM**

3-phase PWM outputs × 2

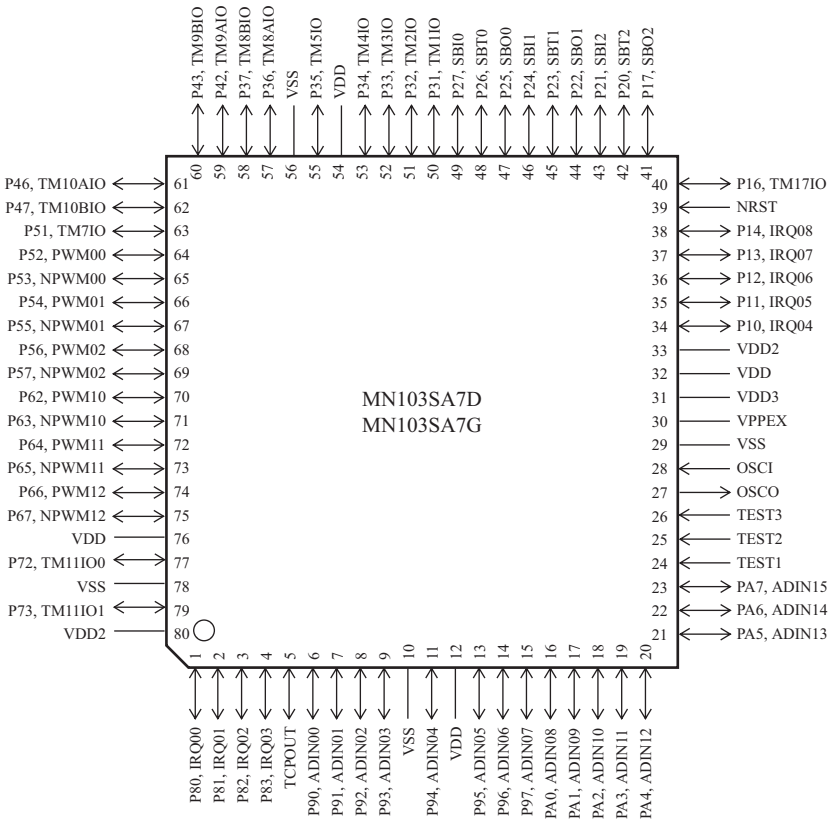
16-bit counter, triangular wave, saw-tooth wave, dead time setup, double buffer

## **■ Development tools**

In-circuit Emulator

PX-ICE-103SA7

■ Pin Assignment



LQFP080-P-1414A

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