❑ MN101C70 Series

Type	MN101C70C	MN101CF70D
Internal ROM type	Mask ROM	FLASH
ROM (byte)	48K	64K
RAM (byte)	2K	4K
Package (Lead-free)	LQFP080-P-1414A	LQFP080-P-1414A (Under development)
Minimum Instruction Execution Time	0.1 µs (at 3.0 V to 3.6 V, 10 MHz) 0.235 µs (at 1.8 V to 3.6 V, 4.25 MHz) 62.5 µs (at 1.8 V to 3.6 V, 32 kHz)	0.25 µs (at 3.0 V to 3.6 V, 8 MHz) 0.50 µs (at 2.2 V to 3.6 V, 4 MHz) 62.5 µs (at 2.2 V to 3.6 V, 32 kHz)

■ Interrupts

RESET. Watchdog. External 0 to 2. External 4 (key interrupt dedicated). Timer 0 to 3. Timer 6. Timer 7 (2 systems). Timer 8 (2 systems). Time base. Serial 0 (2 systems). Serial 2. A/D conversion finish. Automatic transfer finish

■ Timer Counter

8-bit timer × 5

Timer 0 .....Square-wave/8-bit PWM output. Event count. Remote control carrier output. Simple pulse width measurement. Added pulse (2-bit) type PWM output. Real time output control. Square-wave/PWM output to large current terminal P50 possible

Timer 1 .....Square-wave output. Event count. Synchronous output event. Serial transfer clock output

Timer 2 .....Square-wave output. Added pulse (2-bit) type PWM output. PWM output. Serial transfer clock output. Real time output control. Event count. Synchronous output event. Simple pulse width measurement. Square-wave/PWM output to large current terminal P52 possible

Timer 3 .....Square-wave output. Event count. Remote control carrier output. Serial transfer clock output

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

Timer 0, 1 can be cascade-connected

Timer 2, 3 can be cascade-connected

16-bit timer × 2

Timer 7 .....Square-wave output. 16-bit PWM output (cycle/duty continuous variable). Event count. Synchronous output event. Pulse width measurement. Input capture. Real time output control. High performance IGBT output. Square-wave/PWM output to large current terminal P51 possible

Timer 8 .....Square-wave/16-bit PWM output (duty continuous variable). Event count. Pulse width measurement. Input capture. Square-wave/PWM output to large current terminal P53 possible

Timer 7, 8 can be cascade-connected: Square-wave output, PWM is possible as a 32-bit timer

Time base timer: One-minute count setting

Watchdog timer × 1

■ Serial interface

Synchronous type/UART (full-duplex) × 1: Serial 0

Synchronous type/Single-master I^2C × 1: Serial 2

■ DMA controller

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

■ A/D converter

10-bit × 16 channels (with S/H)

■ Display control function

LCD: 32 segments × 4 commons (Static, 1/2, 1/3, or 1/4 duty)

LCD power supply separated from VDD (usable if VDD ≤ VLCD ≤ 3.6 V)

LCD power step-up circuit contained (3/2 times, 2 times and 3 times)

LCD power shunt resistance contained

■ Special Ports

Buzzer output. Inverted buzzer output. Remote control carrier output. High-current drive port

■ ROM Correction

Correcting address designation: Up to 3 addresses possible

■ Electrical Charactreistics (Supply current)

Parameter	Symbol	Condition	Limit			Unit
			min	typ	max	
Operating supply current	IDD1	fosc = 4 MHz. VDD = 3 V		1	1.8	mA
	IDD2	fx = 32 kHz. VDD = 3 V		4	15	µA
Supply current at HALT	IDD3	fx = 32 kHz. VDD = 3 V. Ta = 25 °C		2	5	µA
	IDD4	fx = 32 kHz. VDD = 3 V. Ta = -40 °C to +85 °C			10	µA
Supply current at STOP	IDD5	VDD = 3 V. Ta = 25 °C			2	µA
	IDD6	VDD = 3 V. Ta = -40 °C to +85 °C			8	µA

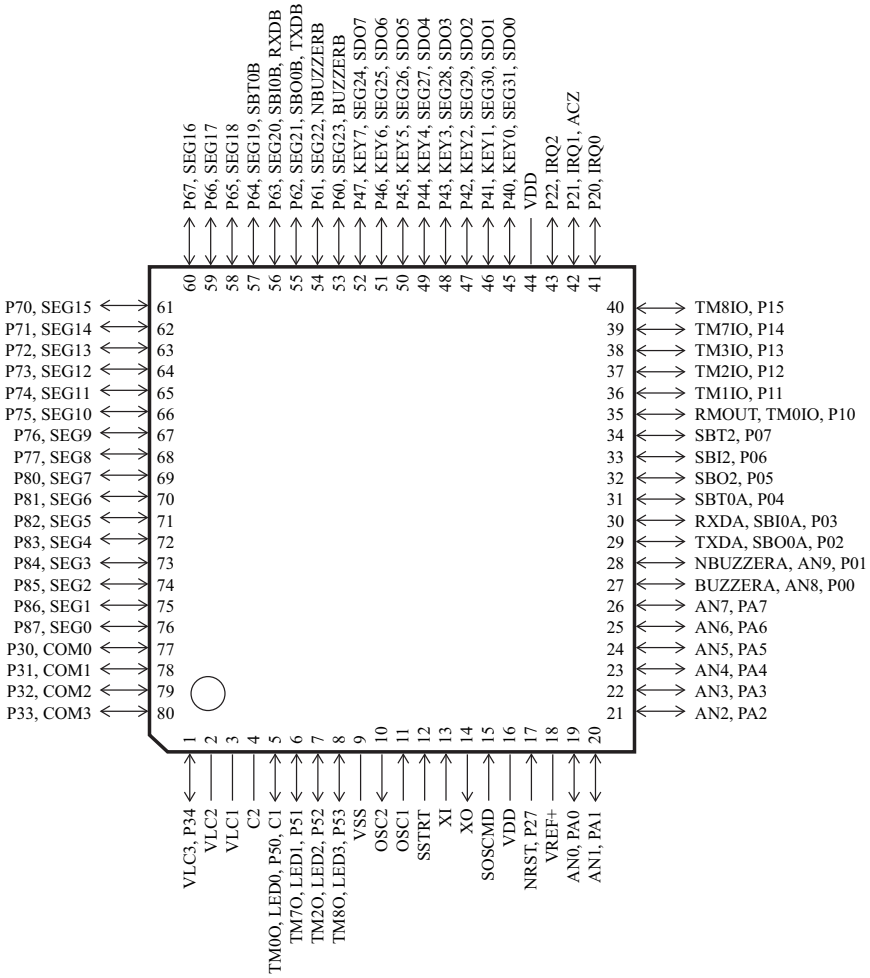
■ Development tools

In-circuit Emulator

PX-ICE101C/D + PX-PRB101C70-LQFP080-P-1414A-M

■ Pin Assignment

LQFP080-P-1414A



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