❑ MN101CF95F, MN101CF95G

Type	MN101CF95F	MN101CF95G
Internal ROM type	FLASH	
ROM (byte)	96K	128K
RAM (byte)	4K	6K
Package (Lead-free)	TQFP080-P-1212D (Under planning)	TQFP080-P-1212D (Under development)
Minimum Instruction Execution Time	[Standard] 0.2 µs (at 2.7 V to 3.6 V, 10 MHz) 0.5 µs (at 2.7 V to 3.6 V, 4 MHz) 62.5 µs (at 2.7 V to 3.6 V, 32 kHz) [Double speed] 0.1 µs (at 2.7 V to 3.6 V, 10 MHz)	

■ Interrupts

RESET, Watchdog, External 0 to 5, Timer 0 to 8, Time base, Serial 0 reception, Serial 0 transmission, Serial 1 reception, Serial 1 transmission, Serial 2, Serial 3, Serial 4 reception, Serial 4 transmission, Automatic transfer finish, A/D conversion finish, Key interrupts (12 lines)

■ Timer Counter

Timer counter 0 : 8-bit × 1
(square-wave/8-bit PWM output, event count, pulse width measurement, serial clock output, real-time output control, generation of remote control carrier)
Clock source..... 1/2, 1/4 of system clock frequency; 1/1, 1/4, 1/16, 1/32, 1/64 of OSC oscillation clock frequency; 1/1 of XI oscillation clock frequency; external clock input
Interrupt source ..... coincidence with compare register 0

Timer counter 1 : 8-bit × 1 (square-wave output, event count, synchronous output event, serial clock output)
Clock source..... 1/2, 1/8 of system clock frequency; 1/1, 1/4, 1/16, 1/64, 1/128 of OSC oscillation clock frequency; 1/1 of XI oscillation clock frequency; external clock input
Interrupt source ..... coincidence with compare register 1

Timer counter 0, 1 can be cascade-connected.

Timer counter 2 : 8-bit × 1
(square-wave output, PWM output, event count, pulse width measurement, synchronous timer, serial clock output)
Clock source..... 1/2, 1/4 of system clock frequency; 1/1, 1/4, 1/16, 1/32, 1/64 of OSC oscillation clock frequency; 1/1 of XI oscillation clock frequency; external clock input
Interrupt source ..... coincidence with compare register 2

Timer counter 0, 1, 2 can be cascade-connected.

Timer counter 3 : 8-bit × 1 (square-wave output, event count, serial clock output)
Clock source..... 1/2, 1/8 of system clock frequency; 1/1, 1/4, 1/16, 1/64, 1/128 of OSC oscillation clock frequency; 1/1 of XI oscillation clock frequency; external clock input
Interrupt source ..... coincidence with compare register 3

Timer counter 2, 3 can be cascade-connected.

Timer counter 0, 1, 2, 3 can be cascade-connected.

Timer counter 4 : 8-bit × 1
(square-wave/8-bit PWM output, event count, pulse width measurement, real-time output control, serial clock output)
Clock source..... 1/2, 1/4 of system clock frequency; 1/1, 1/4, 1/16, 1/32, 1/64 of OSC oscillation clock frequency; 1/1 of XI oscillation clock frequency; 1/1 of external clock input frequency
Interrupt source ..... coincidence with compare register 4

Timer counter 5 : 8-bit × 1
(square-wave/8-bit PWM output, event count, pulse width measurement, serial clock output)
Clock source..... 1/2, 1/8 of system clock frequency; 1/1, 1/4, 1/16, 1/64, 1/128 of OSC oscillation clock frequency; 1/1 of XI oscillation clock frequency; external clock input
Interrupt source ..... coincidence with compare register 5

Timer counter 4, 5 can be cascade-connected.

Timer counter 6 : 8-bit freerun timer

Clock source..... 1/1 of system clock frequency; 1/1, 1/128, 1/8192 of OSC oscillation clock frequency; 1/1, 1/128, 1/8192 of XI oscillation clock frequency

Interrupt source ..... coincidence with compare register 6

Timer counter 7 : 16-bit × 1

(square-wave/16-bit PWM output, cycle / duty continuous variable, event count, synchronous output evevt, pulse width measurement, input capture, real-time output control)

Clock source..... 1/1, 1/2, 1/4, 1/16 of system clock frequency; 1/1, 1/2, 1/4, 1/16 of OSC oscillation clock frequency; 1/1, 1/2, 1/4, 1/16 of external clock input frequency

Interrupt source ..... coincidence with compare register 7 (2 lines)

Timer counter 8 : 16-bit × 1

(square-wave output, PWM output (duty continuous variable), event count, pulse width measurement, input capture)

Clock source..... 1/1, 1/2, 1/4, 1/16 of system clock frequency; 1/1, 1/2, 1/4, 1/16 of OSC oscillation clock frequency; 1/1, 1/2, 1/4, 1/16 of external clock input frequency

Interrupt source ..... coincidence with compare register 8 (2 lines)

Time base timer (one-minute count setting)

Clock source..... 1/1 of OSC oscillation clock frequency; 1/1 of XI oscillation clock frequency

Interrupt source ..... 1/128, 1/256, 1/512, 1/1024, 1/8192, 1/32768 of clock source frequency

Watchdog timer

Interrupt source ..... 1/65536, 1/262144, 1/1048576 of system clock frequency

■ Serial interface

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

Clock source..... 1/2, 1/4 of system clock frequency; pulse output of timer counter 1, 2; 1/2, 1/4, 1/16, 1/64 of OSC oscillation clock frequency

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

Clock source..... 1/2, 1/4 of system clock frequency; pulse output of timer counter 2, 3; 1/2, 1/4, 1/16, 1/64 of OSC oscillation clock frequency

Serial 2 : synchronous type / multi-master I²C × 1

Clock source..... 1/2, 1/4 of system clock frequency; pulse output of timer counter 3, 4; 1/2, 1/4, 1/16, 1/32 of OSC oscillation clock frequency

Serial 3 : synchronous type / single-master I²C × 1

Clock source..... 1/2, 1/4 of system clock frequency; pulse output of timer counter 4, 5; 1/2, 1/4, 1/16, 1/32 of OSC oscillation clock frequency

Serial 4 : synchronous type / UART (full-duplex) × 1

Clock source..... 1/2, 1/4 of system clock frequency; pulse output of timer counter 0, 5; 1/2, 1/4, 1/16, 1/64 of OSC oscillation clock frequency

■ DMA controller

Max. Transfer cycles : 255

Starting factor : various types of interrupt, software

Transfer mode : 1-byte transfer, word transfer, burst transfer

■ I/O Pins

I/O	67	Common use , Specified pull-up resistor available, Input/output selectable (bit unit)

■ A/D converter

10-bit × 11-ch. (with S/H)

■ Special Ports

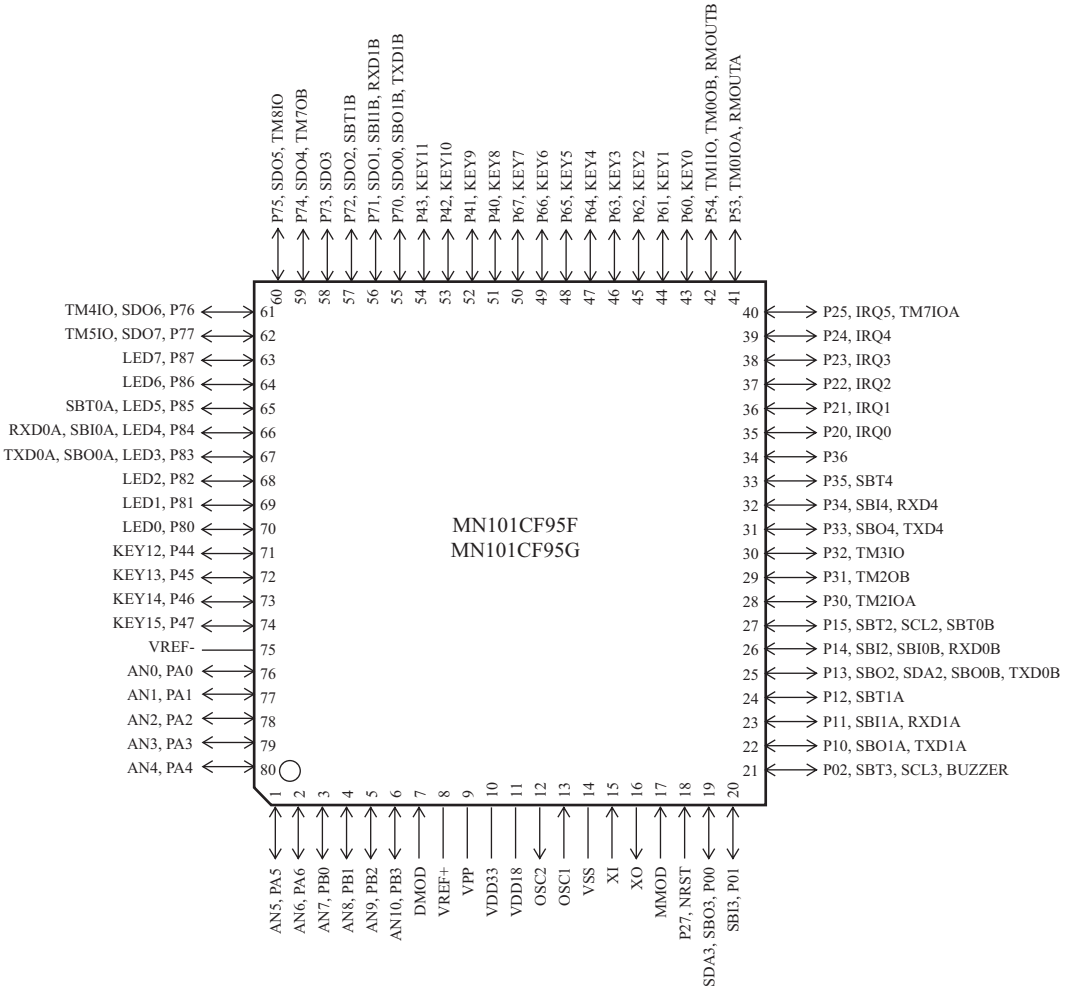
Buzzer output, remote control carrier signal output, high-current drive port

■ Development tools

In-circuit Emulator

PX-ICE101C/D+PX-PRB101C95-TQFP080-P-1212D

■ Pin Assignment



TQFP080-P-1212D

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