❑ MN101C29D / CF29D

Type	**MN101C29D (under development) / CF29D**
ROM (×8-Bit)	64 K / 64 K (built-in flash EEPROM)
RAM (×8-Bit)	1 536 / 1 536
Minimum Instruction Execution Time	**0.10 μs (at 4.5 V to 5.5 V, 20 MHz)**
Interrupts	• RESET • Watchdog • External 0 • External 1 • External 2 • External 3 • External 4 • External 5 • Timer 2 • Timer 3 • Timer 6 • Time Base • Timer 8 (2 systems) • Serial 2 • Key Interrupts (8 lines)

Timer Counter

Timer Counter 2 : 8-Bit × 1 (Square-Wave Output[Timer Pulse Output], PWM Output, Event Count, Timer Synchronous Output, Simple Pulse Width Measurement Function)

Clock Source . 1/2, 1/4 of System Clock, 1/1, 1/4, 1/16, 1/32, 1/64 of OSC Oscillation Clock, 1/1 of XI Oscillation Clock, External Clock Input

Timer Counter 3 : 8-Bit × 1 (Square-Wave Output[Timer Pulse Output], Event Count, Remote Control Carrier Output)

Clock Source 1/2, 1/8 of System Clock, 1/1, 1/4, 1/16, 1/64, 1/128 of OSC Oscillation Clock, 1/1 of XI Oscillation Clock, External Clock Input

Timer Counter 2, 3 can be cascade-connected.

Time Base Timer

Clock Source 1/1, $1/2^7$, $1/2^8$, $1/2^9$, $1/2^{10}$, $1/2^{13}$, $1/2^{15}$ of OSC Oscillation Clock, 1/1, $1/2^7$, $1/2^8$, $1/2^9$, $1/2^{10}$, $1/2^{13}$, $1/2^{15}$ of XI Oscillation Clock

Timer Counter 6 : 8-Bit × 1 Freerun Timer

Clock Source 1/1 of System Clock, 1/1, $1/2^7$, $1/2^{13}$ of OSC Oscillation Clock, 1/1, $1/2^7$, $1/2^{13}$ of XI Oscillation Clock

Timer Counter 8 : 16-Bit × 1

Clock Source Either of System Clock, OSC Oscillation Clock, External Clock 1 or External Clock 2 Divided Into 1/1, 1/2, 1/4 and 1/16

(Hardware Configuration)

Double Buffer Type Compare Register × 2

Input Capture Register × 1

(Timer Functions)

Square-Wave Output (Timer Pulse Output), PWM Output (Duty Continuously Variable), Event Count, Simple Pulse Width Measurement Function and Input Capture Function

Watchdog Timer

Interrupt Source .. Runaway Detection Frequency Selection from $1/2^{16}$, $1/2^{18}$ and $1/2^{20}$ of System Clock

Serial Interface

Serial 2 : 8-Bit × 1 (synchronous)

Synchronization method (MSB or LSB first selectable, 1 to 8 bits arbitrary transmission)

Transfer Clock Source . 1/2, 1/4 of System Clock, 1/2, 1/4, 1/16, 1/32 of OSC Oscillation Clock, 1/1, 1/3 of Timer Counter 2 and 3

Multiplication/Division functions

Singned/unsigned 16-Bit × 16-Bit Arithmetic Operation (Execution in 15 Cycles)

Unsigned 32-Bit ÷ 16-Bit Arithmetic Operation (Execution in 17 Cycles)

I/O Pins	**I/O**	**53**	• Common use 48 • Specified pull-up Resistor available • Input/Output selectable (bit unit)
	Input	**2**	• Common use: 1

Special Ports

High-Current Drive Port × 1

Package

LQFP080-P-1414A, LQFP064-P-1414 (under planning)

Electrical Characteristics

Supply Current

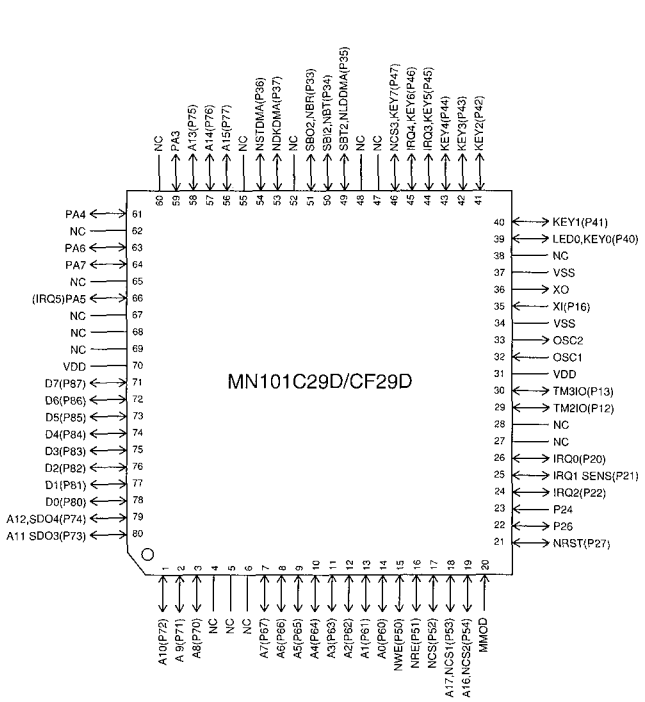
Parameter	Symbol	Condition	Limit min	Limit typ	Limit max	Unit
Operating Supply Current	IDD1	fosc = 20 MHz, VDD = 5 V			60	mA
Supply Current at STOP	IDD2	VDD = 5 V			10	µA

Support Tool

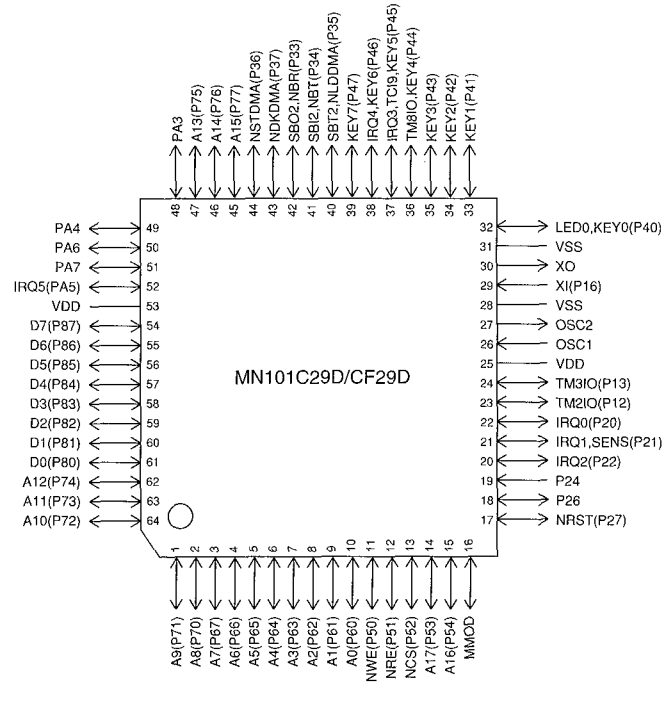
In-Circuit Emulator

PX-ICE101C / D + PX-PRB101C29-C / D

Pin Assignment



LQFP080-P-1414A



LQFP064-P-1414 (under planning)