

MN103002A

Type	MN103002A
Command Cache	4K (2-way)
Data Cache	4K (2-way)
Minimum Instruction Execution Time	15ns (3.3V, 66.6MHz)
Interrupts	• RESET • IRQ0 to 7 • NMI • Timer 0 to 6 • SIO0 to 2 • DMAC0 to 3 • WDT • System error
Timer Counter	Timer Counter 0: 8-bit x 1 (Timer Output, 16-bit Timer Clock Source, Interval Timer, Event Count, Clock Source for Serial I/F0) Clock Source 1/(1, 8, 32) of I/O Clock, External Clock Input, Underflow of Timer 1, 2 Interrupt Source Underflow of Timer Counter Timer Counter 1: 8-bit x 1 (Timer Output, 16-bit Timer Clock Source, Interval Timer, Event Count, Clock Source for Serial I/F1) Clock Source 1/(1, 8, 32) of I/O Clock, External Clock Input, Output of Timer Counter 0, Underflow of Timer 0, 2 Interrupt Source Underflow of Timer Counter Timer Counter 2: 8-bit x 1 (Timer Output, Interval Timer, Event Count, Clock Source for Serial I/F 0, 2, DMA Start) Clock Source 1/(1, 8, 32) of I/O Clock, External Clock Input, Output of Timer Counter 1, Underflow of Timer 0, 1 Interrupt Source Underflow of Timer Counter Timer Counter 3: 8-bit x 1 (Timer Output, Interval Timer, Event Count, Clock Source for Serial I/F 1, 2, DMA Start) Clock Source 1/(1, 8, 32) of I/O Clock, External Clock Input, Output of Timer Counter 2, Underflow of Timer 0, 1, 2 Interrupt Source Underflow of Timer Counter Timer Counter 4: 16-bit x 1 (Timer Output, Down Count, Interval Timer, Event Count) Clock Source 1/(1, 8, 32) of I/O Clock, External Clock Input, Underflow of Timer 0, 1, 2 Interrupt Source Underflow of Timer Counter Timer Counter 5: 16-bit x 1 (Timer Output, Down Count, Interval Timer, Event Count) Clock Source 1/(1, 8, 32) of I/O Clock, External Clock Input, Output of Timer Counter 4, Underflow of Timer 0, 1, 2 Interrupt Source Underflow of Timer Counter Timer Counter 6: 16-bit x 1 (Event Count, Input Capture, Toggle Output, PWM Output, High-speed PWM Output, Up Count, Interval Timer, One-shot Output) Clock Source 1/(1, 8, 32) of I/O Clock, External Clock Input, Underflow of Timer 0, 1, 2 Interrupt Source Overflow of Timer Counter, Compare Capture A, B Watchdog Timer x 1 (Watchdog Overflow Output) Clock Source System Clock Interrupt Source Overflow of Watchdog Timer
DMA Controller	Number of Channels 4 Unit of Transfer 8/16/32 bits Max Transfer Cycles 65536 Starting Factor External Request, Various Types of Interrupt, Software Transfer Method 2-bus Cycle Transfer, 1-bus Cycle Transfer Transfer Modes Word Transfer, Burst Transfer, Intermittent Transfer

Serial Interface

Serial 0: 8-bit x 1 (Start-Stop Synchronous Mode, Clock Synchronous Mode, I²C Mode)

Clock Source I/O Clock, Timer Counter 0, 2, External Clock

Serial 1: 8-bit x 1 (Start-stop Synchronous Mode, Clock Synchronous Mode, I²C Mode)

Clock Source I/O Clock, Timer Counter 1, 3, External Clock

Serial 2: 8-bit x 1 (Start-stop Synchronous Mode with CTS Control)

Clock Source I/O Clock, Timer Counter 2, 3, External Clock

I/O Pins

I/O

26

• Common use 26

Package

QFP160-P-2828B

Electrical Characteristics

Supply Current

Parameter	Symbol	Condition	Limit			Unit
			min	typ	max	
Operating Supply Current	IDD1	Fosc=16.6MHz FRQS pin=Hi level Output released			250	mA
Supply current at SLEEP	IDD2	Fosc=16.6MHz FRQS pin=Hi level Output released			50	mA
Supply current at HALT	IDD3	Fosc=16.6MHz FRQS pin=Hi level Output released			6	mA
Supply current at stopping	IDD4	Fosc=Stopped Output released			1.25	mA

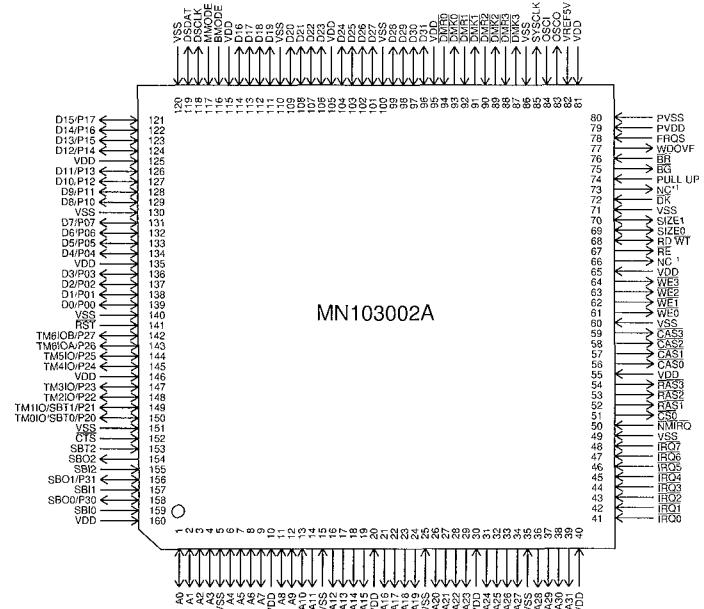
(Ta = -20 to +70°C, VDD=3.3V, VSS=0V)

Support Tool

In-Circuit Emulator

PX-ICE103002

Pin Assignment



*1 Set to open

*2 Pull up via the resistor