❑ MN1A7T0200

Type			MN1A7T0200
ROM (x8-bit / x16-bit / x32-bit)			Max. 16 M in total
RAM (x8-bit / x16-bit / x32-bit)			External ROM and RAM
Package			FLGA152-C-1111 *Lead-free
Minimum Instruction Execution Time			100 ns (at 2.3 V to 2.7 V, 20 MHz)
Interrupts			• RESET • IRQ0 to 5 • NMI • Timer 0 to 9 underflow • Timer 8 to 9 compare capture A • Timer 8 to 9 compare capture B • Serial ch.0 to 2 transmission • Serial ch.0 to 2 reception • Serial ch.0 to 2 in communication state • Serial ch.0 to 2 modem status • Serial ch.0 to 2 character • Serial ch.3 to 4 transmission • Serial ch.3 to 4 reception • WDT • A/D conversion finish
Timer Counter			Timer counter 0: 16-bit × 1 (interval timer, event count, interrupt, A/D conversion trigger) Clock source ····· PS0 underflow; PS1 underflow; external clock Interrupt source ····· timer counter 0 underflow Timer counter 1 to 6: 16-bit × 1 (interval timer, event count, timer output, interrupt) Clock source ····· PS0 underflow; PS1 underflow; external clock Interrupt source ····· timer counter 1, 2, 3, 4, 5 or 6 underflow Timer counter 7: 16-bit × 1 (interval timer, event count, timer output, interrupt) Clock source ····· PS0 underflow; PS1 underflow; external clock input; timer 6 cascade input Interrupt source ····· timer counter 7 underflow *: timer counter 6 or 7 can be changed in configuration into a 32-bit timer counter. Timer counter 8: 16-bit × 1 (interval timer, event count, output compare, PWM output, one-shot output, input capture, interrupt) Clock source ····· PS0 underflow; PS1 underflow; external clock input Interrupt source ····· timer counter 8 underflow; coincidence with compare capture A or at capture; coincidence with compare capture B or at capture Timer counter 9: 16-bit × 1 (interval timer, event count, output compare, PWM output, one-shot output) Clock source ····· PS0 underflow; PS1 underflow; external clock input Interrupt source ····· timer counter 9 underflow; coincidence with compare capture A or at capture; coincidence with compare capture B or at capture Pre-scaler counters: 2 lines
Serial Interface			Serial 0, 1, 2 (UART): 5-, 6-, 7-, 8-bit × 3 Clock source ····· baud rate generator; IOCLKH; external clock Serial 3, 4 (SSI): 4- to 16-bit × 2 Clock source ····· IOCLKH; external clock
I/O Pins	**I/O**	40	• Common use
A/D Inputs			10-bit × 8-ch.
PWM			16-bit × 2-ch.
ICR			16-bit × 2-ch.
OCR			16-bit × 2-ch.

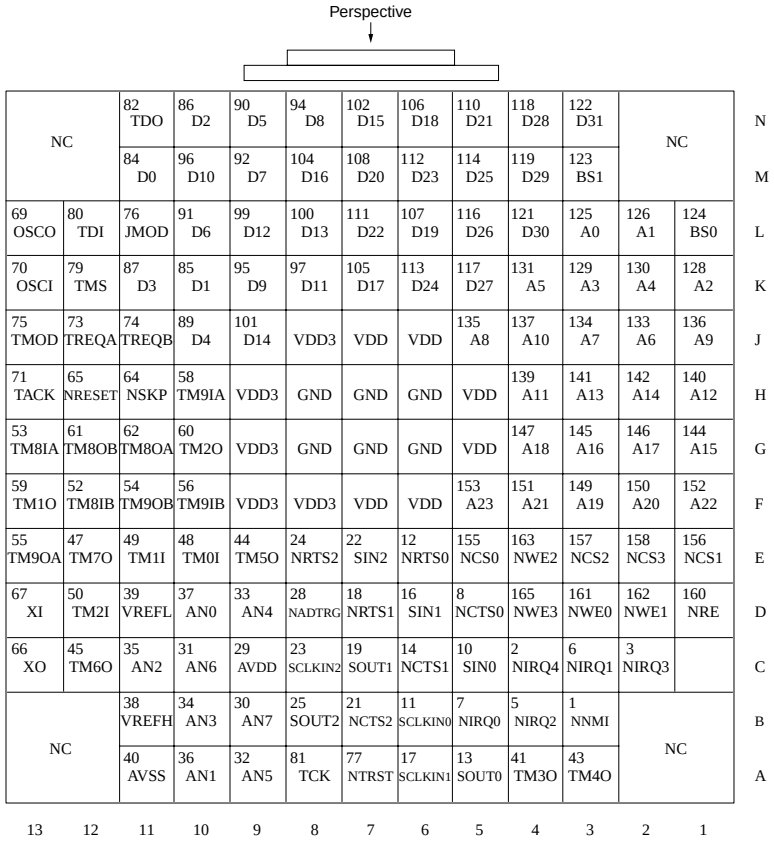
Electrical Characteristics

A/D Characteristic

Parameter	Symbol	Condition	Limit			Unit
			min	typ	max	
Resolution					10	Bits
A/D conversion absolute error		VREFH = 3.0 V VREFL = 0.0 V A/D conversion clock = 6 MHz			± 5	LSB
A/D conversion relative error					± 5	LSB
A/D conversion time			2.0		24	µs

(Ta = 25°C, AVDD = 3.0 V, AVSS = 0 V)

Pin Assignment



FLGA152-C-1111 *Lead-free

Support Tool

In-circuit Emulator	Advice (YDC product) (applicable to 16- or 8-bit bus mode), UniSTAC (Sophia Systems Co.,Ltd. product)
On-board Development Tools	Multi-ICE (ARM product), JEENI (Embedded Performance Inc. product, TOYO Corporation dealings), Logic Analyzer (Agilent Technologies product) NEXTiCE for ARM7(Computex Co., Ltd. product)
ROM Emulator	PARTNER-ETII (KMC product) NEXTiCE for ARM7(Computex Co., Ltd. product)

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