

□ MN102H797

Type	MN102H797	
ROM (x8-bit)	16 K	
RAM (x8-bit)	1 K	
Package	LQFP064-P-1414 *Lead-free	
Minimum Instruction Execution Time	With main clock operated	83.3 ns (at 3.0 to 3.6 V, 12 MHz)
Interrupts	<ul style="list-style-type: none"> • RST pin • Watchdog • Timer counter 0, 1 underflow • Timer counter 2 under/overflow • Timer counters 2 to 4 compare capture A • External 0 to 3 • Serial ch.0 to 1 transmission • Serial ch.0 to 1 reception • A/D conversion finish • USB general-purpose • USBSOF 	
USB Functions	<p>Conforms to USB1.1. USB transceiver built-in Full-speed (12 Mbps) supported. 5 end points (FIFO built-in independently) FIFO size (EP0, 1, 2, 3, 4): 16, 64, 64, 64, 64 bytes</p> <ul style="list-style-type: none"> • EP0 <ul style="list-style-type: none"> Control transfer IN/OUT (two ways) • EP1 to EP4 <ul style="list-style-type: none"> Interrupt/Bulk/Isochronous transfer supported. Settable to IN or OUT. Double Buffering function supported. <p>When the MAXP size is set to a half or less of the MAXFIFO size for each EP, the Double Buffering function is made valid automatically.</p>	
Timer Counter	<p>Timer counter 0: 8-bit × 1 (timer output, event count, timer interrupt) Clock source SYSCLK; prescaler 0; TM0IO pin Interrupt source Timer counter 0 underflow</p> <p>Timer counter 1: 8-bit × 1 (timer output, event count, timer interrupt) Clock source SYSCLK; prescaler 0; TM1IO pin Interrupt source Timer counter 1 underflow</p> <p>Connectable Timer counters 0 to 1</p> <p>Timer counter 2: 16-bit × 1 (timer output, event count, input capture, PWM output, 2-phase encoder input) Clock source SYSCLK; 1/8 of SYSCLK; timer counter 0 or 1 output; 2-phase encoding of TM2IOA pin/TM2IOB pin (1×, 4×) TM2IOB pin Interrupt source Timer counter 2 under/overflow; timer counter 2 compare capture A; timer counter 2 compare capture B</p> <p>Timer counter 3: 16-bit × 1 (timer output, event count, input capture, PWM output, 2-phase encode input) Clock source SYSCLK; 1/8 of SYSCLK; timer counter 0 or 1 output; 2-phase encoding TM3IOA pin/TM3IOB pin (1×, 4×) TM3IOB pin Interrupt source Timer counter 3 compare capture A</p> <p>Timer counter 4: 16-bit × 1 (timer output, event count, input capture, PWM output, 2-phase encode input) Clock source SYSCLK; 1/8 of SYSCLK; timer counter 0 or 1 output; 2-phase encoding TM4IOA pin/TM4IOB pin (1×, 4×) TM4IOB pin Interrupt source Timer counter 4 compare capture A</p>	

Serial Interface		Serial 0: 8-bit × 1 (transfer direction of MSB/LSB selectable; transmission / reception of 7, 8-bit length) Clock source 1/2 or 1/16 of timer counter 0 output; external pin
		Serial 1: 8-bit × 1 (transfer direction of MSB/LSB selectable; transmission / reception of 7, 8-bit length) Clock source 1/2 or 1/16 of timer counter 0 output; external pin
		UART × 2 (common use with serial 0 and 1)
I/O Pins	I/O	50 • Common use : 30 (pull-up resistance specifiable)
A/D Inputs		10-bit × 8-ch. (with S/H)
Special Ports		USB ports (D+, D-), LED drive ports (P30, P31, P32, P33)
Notes		4 multiply PLL built-in, generation of internal 48 MHz at external oscillation 12 MHz

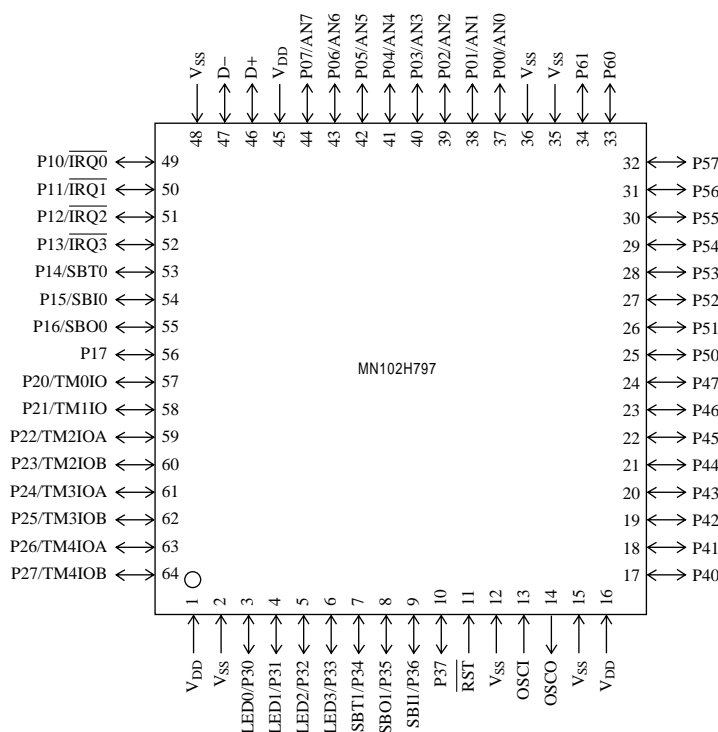
Electrical Characteristics

A/D characteristics

Parameter	Symbol	Condition	Limit			Unit
			min	typ	max	
Non-linear error		10-bit			± 3	LSB
A/D conversion time		At external oscillation frequency 12 MHz	4			μs
Analog input voltage	VIA		VSS		VDD	V

(Ta = 25°C , VDD = 3.3 V , VSS = 0 V)

Pin Assignment



LQFP064-P-1414 *Lead-free

SupportTool

■ In-circuit Emulator	PX-ICE102H79-LQFP064-P-1414 (under planning)	
■ Flash Memory Built-in Type	Type	MN102HF797 (under planning)
	ROM (× 8-bit)	16 K
	RAM (× 8-bit)	1 K
	Minimum instruction execution time	83.3 ns (at 3.0 V to 3.6 V, 12 MHz)
	Package	LQFP100-P-1414 *Lead-free

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