■ MN102H797

| Туре | MN102H797 | | | | | |
|------------------------------------|--|--|--|--|--|--|
| ROM (×8-bit) | 16 K 1 K | | | | | |
| RAM (×8-bit) | | | | | | |
| 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 | • 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 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 bytes • EP0 Control transfer IN/OUT (two ways) • EP1 to EP4 Interrupt/Bulk/Isochronous transfer supported. Settable to IN or OUT. Double Buffering function supported. 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. | | | | | |
| USB Functions | | | | | | |
| Timer Counter | Timer counter 0: 8-bit × 1 (timer output, event count, timer interrupt) Clock source | | | | | |
| | Timer counter 1: 8-bit × 1 (timer output, event count, timer interrupt) Clock source | | | | | |
| | Connectable Timer counters 0 to 1 | | | | | |
| | Timer counter 2: 16-bit × 1 (timer output, event count, input capture, PWM output, 2-phase encoder input) Clock source | | | | | |
| | Timer counter 3: 16-bit × 1 (timer output, event count, input capture, PWM output, 2-phae encode input) Clock source | | | | | |
| | Interrupt source Timer counter 3 compare capture A | | | | | |
| | Timer counter 4: 16-bit × 1 (timer output, event count, input capture, PWM output, 2-phae encode input) Clock source | | | | | |
| | Interrupt source ····· Timer counter 4 compare capture A | | | | | |

| Serial Interface | Serial 0: 8-bit × 1 (transfer direction of MSB/LSB selectable; transmission / reception of 7, 8-bit length) Clock source |
|------------------|---|
| | 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 \times 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 |

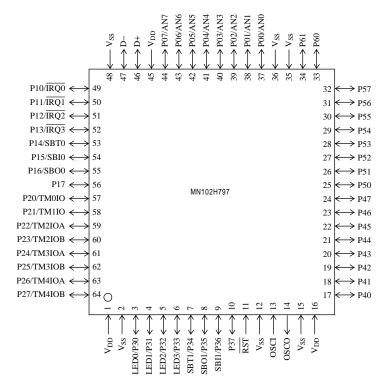
Electrical Characteristics

A/D characteristics

| Parameter | Symbol | Condition | Limit | | | Unit |
|----------------------|--------|--|-------|-----|-----|-------|
| raiailietei | | | min | typ | max | Uiiii |
| 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 |

 $(Ta = 25^{\circ}C, VDD = 3.3 V, VSS = 0 V)$

Pin Assignment



LQFP064-P-1414 *Lead-free

SupportTool

| In-circuit Emulator | PX-ICE102H79-LQFP064-P-1414 (under planning) | | | |
|----------------------------|--|-------------------------------------|--|--|
| Flash Memory Built-in Type | Туре | 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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