

Item	Specification
CPU	H8/300L CPU * License has been granted by Renesas Technology Corp. ■ Universal register system <ul style="list-style-type: none"> • 8-bit×16-terminal universal register (can be used as 16-bit×8-terminal register) ■ 55 kinds of basic instruction ■ 8 kinds of addressing mode ■ Address space of 64k bytes
Low consumption power condition	■ Sleep mode ■ Standby mode ■ Module stop mode (Can stop each module independently from other modules) ■ Medium speed mode ■ Watch mode ■ Sub-active mode ■ Sub-sleep mode
Interrupt	■ External interrupt terminal: 14 terminals: (IRQ [4-0], WKP [7-0], and NMI) ■ Number of factors to cause the internal: interrupt = 60 factors (when all the modules are installed)
Clock generator	■ System clock generator: 1 to 16MHz ■ Sub-clock generator: 32.768kHz and 38.4kHz
Memory	■ RAM 1 to 4k bytes ■ MASKROM 8 to 60k bytes (Max. 56k bytes when RAM is set to have 4k bytes) ■ EPROM 8 to 60k bytes ■ EEPROM 64 to 512 bytes (Can be expanded up to 56k bytes)
I/O port	■ I/O terminal 95 terminals ■ Input terminal 13 terminals ■ Output terminal 12 terminals
Timer for clock (TMA) ×1 channel	■ 8-bit timer <ul style="list-style-type: none"> • Can count up with one of 8 internal clocks whose frequency is obtained by frequency dividing the system clock frequency, or one of 4 clocks whose frequency is obtained by frequency-dividing the clock frequency.
Asynchronous event counter (AEC) ×1 channel	■ 16-bit timer <ul style="list-style-type: none"> • Can count up the asynchronous external events regardless of the internal clock in the microcomputer • Can count the asynchronous events (Can detect rising edge / trailing edge / both edges)

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<ul style="list-style-type: none"> ■ 8-bit timer (TMC) × 1 channel 	<ul style="list-style-type: none"> ■ 8-bit timer <ul style="list-style-type: none"> • Can count up / count down using 7 kinds of the internal clock or the event input from the external terminal • Can make the auto-reloading
<ul style="list-style-type: none"> 16-bit free running timer (TMF) × 1 channel 	<ul style="list-style-type: none"> ■ 16-bit timer <ul style="list-style-type: none"> • Can be used as two independent 8-bit timers. • Can count up / count down using 4 kinds of the internal clock or the event input from the external terminal • Can make the toggle output with the compare-match function
<ul style="list-style-type: none"> ■ 8-bit timer (TMG) × 1 channel 	<ul style="list-style-type: none"> ■ 8-bit timer <ul style="list-style-type: none"> • Can count up / count down using 4 kinds of the internal clock • Have the internal input capture function
<ul style="list-style-type: none"> ■ 8-bit timer (TMR) × 4 channel 	<p>Per one channel:</p> <ul style="list-style-type: none"> ■ Selection of input clock of the up-counter <ul style="list-style-type: none"> • Selectable from 9 kinds of the internal clock and external clock. ■ Clearing of counter <ul style="list-style-type: none"> • Selectable from the compare-match signal or input capture signal ■ Internal input capture function ■ Compare-match function <ul style="list-style-type: none"> • Can operate this function independently for 2 compare-match signal outputs. • Can output PWM output of any duty by combining 2 compare-match signals. ■ Cascade connection function <ul style="list-style-type: none"> • Two channels can be cascade-connected to form 16-bit counter. • Two channels can be cascade-connected to count the input capture.
<ul style="list-style-type: none"> ■ 16-bit timer (TMS) × 1 channel 	<ul style="list-style-type: none"> ■ Selection of input clock of the up-counter <ul style="list-style-type: none"> • Selectable from 9 kinds of the internal clock and external clock. ■ Clearing of counter <ul style="list-style-type: none"> • Selectable from the compare-match signal or input capture signal ■ Internal input capture function ■ Compare-match function <ul style="list-style-type: none"> • Can operate this function independently for 3 compare-match signal outputs. • Can output PWM output of any duty by combining 2 compare-match signals per 1 output signal.

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Watch dog timer × 1 channel	<ul style="list-style-type: none"> ■ 8-bit timer • Generate the reset signal when the 8-bit counter over-flows
Serial communication interface (SCI0, SCI1) × 2 channel	<ul style="list-style-type: none"> ■ Selectable from start stop synchronization (UART or other method) and clock synchronization ■ Can use full duplex communication ■ Can select any bit rate with the use of the internal baud rate generator
Serial communication interface (SCI2) × 1 channel	<ul style="list-style-type: none"> ■ Only for clock synchronization ■ Transfer data length is selectable from 8 and 16 bits
I2C interface (IIC) × 1 channel	<ul style="list-style-type: none"> ■ Compliant with I2C Bus interface standard proposed by Philips ■ Master mode/Slave mode function ■ SMBus system
14-bit PWM × 3 channel	<ul style="list-style-type: none"> ■ Selectable from 4 kinds of conversion period ■ Pulse division PWM to reduce ripple • Can be used as 14-bit D/A converter by externally connecting the low pass filter
On-chip oscillator	<ul style="list-style-type: none"> ■ 16MHz on-chip oscillator