EPSON

E0C332T01

32-bit Single Chip Microcomputer

Preliminary

- High-speed 32-bit RISC Core
- Multiply Accumulation
- 8K-byte RAM Built-in
- 10-bit ADC
- 4-ch. SIO, 2-ch. I2C
- High-speed DMA, Intelligent DMA

■ DESCRIPTION

The E0C332T01 is a CMOS 32-bit microcomputer composed of a CMOS 32-bit RISC core, 8K-byte RAM, DMA, 4-ch. SIO, 2-ch. I2C, ADC, timers, PLL and oscillators. The E0C332T01 features high-speed operation and low current consumption. The E0C332T01 also provides a DSP function using the internal MAC (multiplication and accumulation) operation function with the A/D converter, this makes it possible to achieve speech recognition and voice synthesis systems.

■ FEATURES

- CMOS LSI 32-bit parallel processing ..... E0C33000 RISC core
- Main clock ..... 60MHz (Max., up to 15MHz external clock input)
- Sub clock ..... 32.768kHz (Typ., crystal)
- Instruction set ..... 16-bit fixed length, 105 instructions
  (MAC instruction is included, 2 cycles)
- Internal RAM size ..... 8,192 bytes
- Clock timer ..... 1 channel
- Programmable timer ..... 8 bits × 6 channels and 16 bits × 10 channels
- PWM timer ..... Realized with a 16-bit programmable timer
- Watchdog timer ..... Realized with a 16-bit programmable timer
- Serial interface ..... 4 channels
  Clock synchronization type and asynchronization type are selectable. Usable as an infrared ray (IrDA) interface.
- I2C ..... 2 channels (Single master mode)
- 10-bit A/D converter ..... Successive approximation type, 8 input channels
- High-speed DMA ..... 4 channels
- Intelligent DMA ..... 128 channels
- I/O port ..... Input port : 13 bits
  I/O port : 69 bits
- Interrupt controller ..... External interrupts : 18 types
  Internal interrupts : 69 types
- External bus interface ..... 24-bit address bus, 16-bit data bus, 7 chip enable pins
  DRAM and burst ROM may be connected directly.
- Shipping form QFP18-176pin
- Supply voltage ..... Core voltage : 1.8 to 3.6V
  I/O voltage : 2.7 to 5.5V
- Power consumption ..... HALT state : TBD µW (3.3V, 32.768kHz)
  RUN state : TBD mW (3.3V, 60MHz)

∗ This model is under development, therefore the contents of the above specifications may be revised at final.

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