

**MC68HC16Z3***Product Preview*  
**16-Bit Modular Microcontroller****Features**

- System Integration Module
  - External bus support
  - 12 programmable chip-select outputs
  - System protection logic
  - Watchdog timer, clock monitor, and bus monitor
  - Two 8-bit dual function ports
  - One 7-bit dual function port
  - Phase-locked loop (PLL) clock system
- CPU16
  - 16-bit architecture
  - Full set of 16-bit instructions
  - Three 16-bit index registers
  - Two 16-bit accumulators
  - Control-oriented digital signal processing capability
  - 16-bit multiply and accumulate (digital signal processing support)
  - High-level language support
  - Fast interrupt response time
  - Hardware breakpoint signal/Background debugging mode
  - Fully static implementation
- Analog-to-Digital Converter
  - Eight channels, eight result registers
  - Eight automated modes
  - Three result alignment modes
  - One 8-bit digital input port
- Queued Serial Module
  - Enhanced serial communication interface
  - Queued serial peripheral interface
  - One 8-bit dual function port
- General-Purpose Timer
  - 16-bit free-running counter with prescaler for capture/compare subsystem
  - Three input capture channels
  - Four output compare channels
  - One input capture/output compare channel
  - One pulse accumulator/event counter input
  - Two pulse-width modulation outputs with user-selectable clock source
  - Optional external clock input
- 4-Kbyte Standby RAM
  - External standby voltage supply input
- Masked ROM Module
  - 8-Kbyte array, accessible as bytes or words

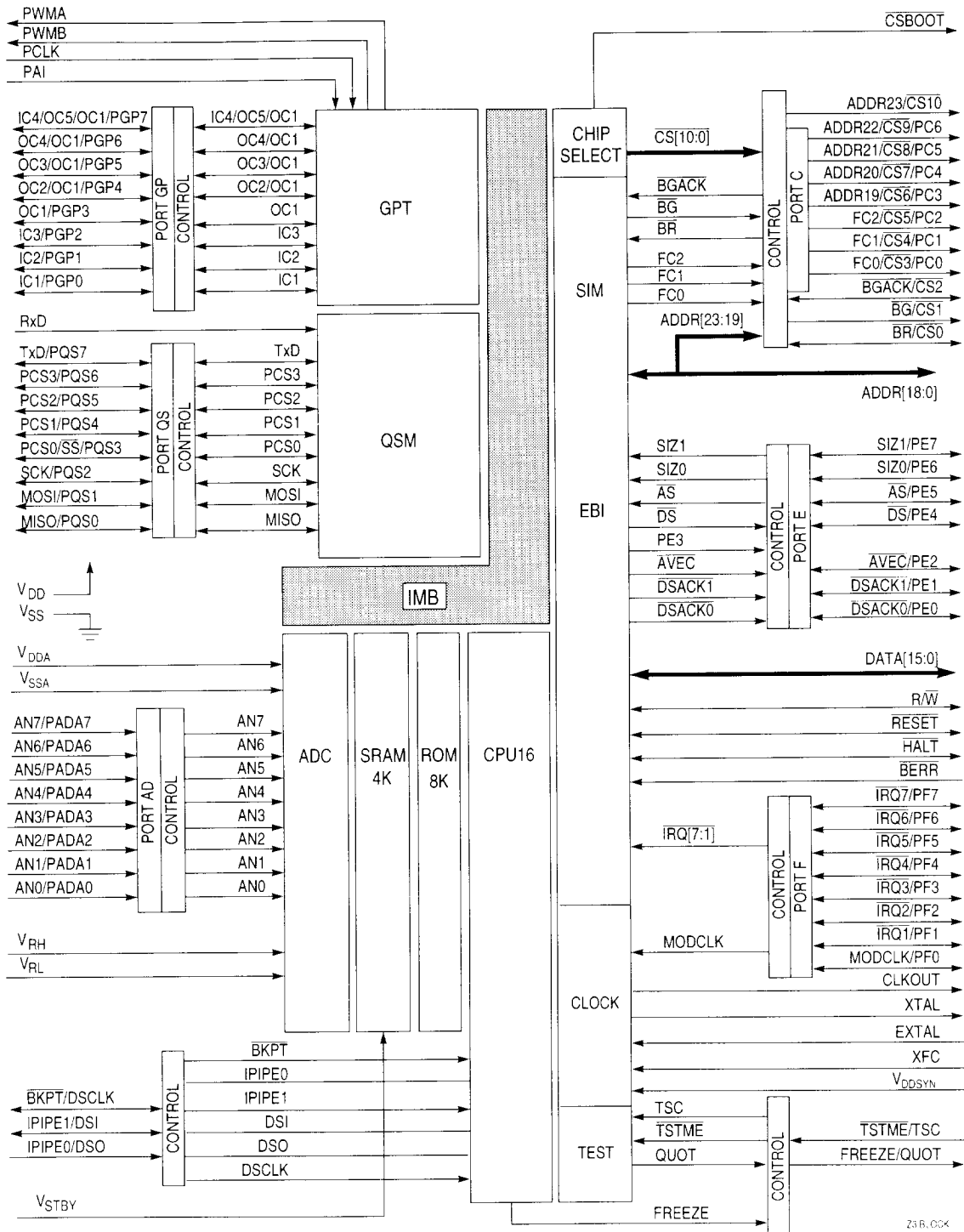


Figure 1 MC88HC16Z3 Block Diagram



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