



Product Preview

μT83SCB230

ROM-less SmartCard MCU with 230KB High Speed FLASH

The μT83SCB230 is a contact mode smart card MCU, which complies with ISO7816 standard and 3GPP ETSI TS 102 221 standard. It is targeting for high end GSM SIM and USIM applications and smart card applications require a large NVM. μT83SCB230 is a member of the B-series family, which is using latest embedded FLASH technology to meet users' need. There are two different page size FLASH memory. The 70K bytes 2K-byte page size FLASH memory can be used as code memory or non-frequently update data memory. The 160K bytes 256-byte page size memory can be used for both data and code. The built-in Memory Management Unit (MMU) together with firewall feature makes μT83SCB230 suitable for multi-application environment.

FEATURES

- High speed (average 3X to standard 8051) 8051 compatible CPU core
- On-chip FLASH Memory
 - 70k-byte code FLASH (2K bytes per SECTOR)
 - 160k-byte data FLASH (256 bytes per BLOCK and 2K bytes per SECTOR)
- 256 plus 4096-bytes user RAM
- Operating voltages: 3V ±10% or 5V ±10%
- 27MHz maximum internal bus frequency at 3V and 5V
- One bi-directional I/O with ISO 7816-3 compatibility, internal pull-up and external interrupt capability
- High speed serial communication interface (SCI) with T=0 error detection
- 16-bit programmable timer with selectable clock source
- Watchdog function
- Built-in Internal Oscillator for high speed operation
- Special instruction support data block move
- Hardware CRC per ISO 13239 standard
- CPU clock divider (divide by 1, 2,4,8) and clock source selection
- External Clock Frequency up to 12MHz
- Maximum standby current during stop: 100μA (no external clock)
- Support GSM mode with max. current:
 - 10mA @ 5.5V and 6mA @3.3V
- ESD protection at least 4KV (HBM)
- Operation temperature range: -25C to +85C

1. SECURITY FEATURES

- Low Voltage Reset
- High Voltage Protect
- High Frequency Filter
- Low Frequency Reset
- Protection Features Against Security Attacks
- True Random number generator
- MMU with firewall for multi-application
- Unique identification code
- Internal buses are scrambled

2. GENERAL OVERVIEW

The μ T83SCB230 is a contact mode smart card MCU for high-end SIM Card applications and smart card applications require large NVM memory. The block diagram of the μ T83SCB230 is shown in Figure 1.

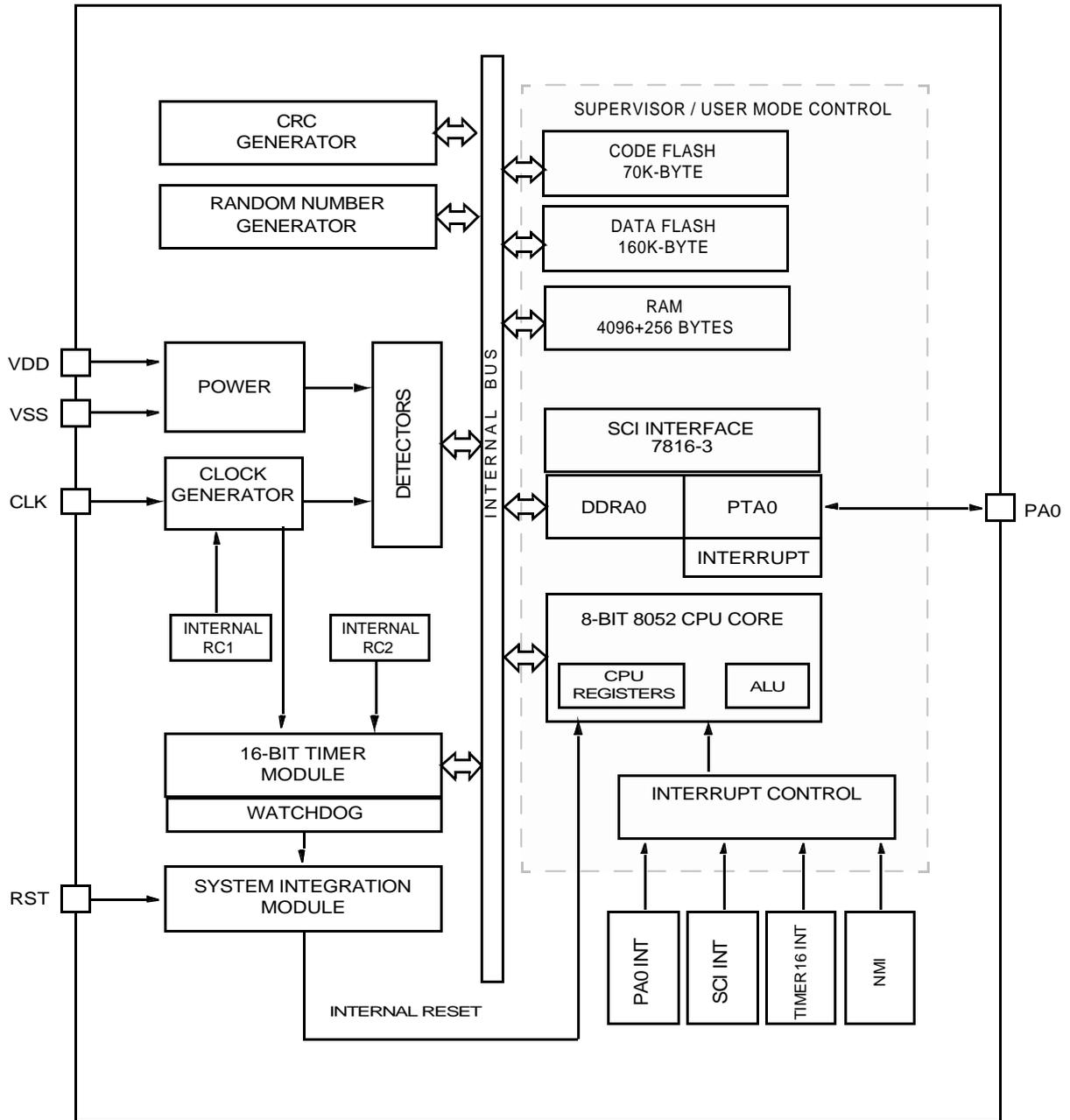


Figure 1. μ T83SCB230 MCU Block Diagram