

Product Preview

μT83SCB1XY

ROM-less SmartCard MCU with 118-148KB High Speed FLASH

The μT83SCB1XY 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. μT83SCB1XY 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 56K/78K bytes 2K-byte page size FLASH memory can be used as code memory or non-frequently update data memory. The 62K/70K 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 μT83SCB1XY suitable for multi-application environment.

FEATURES

- High speed (average 3X to standard 8051) 8051 compatible CPU core
- On-chip FLASH Memory
 - 56k-bytes or 78k-byte code FLASH (2K bytes per SECTOR)
 - 62k-byte or 70k-byte data FLASH (256 bytes per BLOCK and 2K bytes per SECTOR)
- 256 plus 3072-bytes user RAM
- Operating voltages: 3V ±10% or 5V ±10%
- 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
- Support GSM mode with max. current:
 - 10mA @ 5.5V and 6mA @3.3V
- ESD protection at least 4KV (HBM)
- Operation temperature range:
 - Standard: -25C to +85C
 - Extended: -40 to +105C

XY =	Part Number	Code Flash Size	Data Flash Size	Temp.
18	uT83SCB118	56K-byte	62K-byte	-25C to +85C
48	uT83SCB148	70K-byte	78K-byte	-25C to +85C
18	uT83SCB118A	56K-byte	62K-byte	-40C to +105C
48	uT83SCB148A	70K-byte	78K-byte	-40C to +105C

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

2. GENERAL OVERVIEW

The μ T83SCB1XY is a contact mode smart card MCU for high-end SIM Card applications and smart card applications require large memory NVM. The block diagram of the μ T83SCB1XY is shown in Figure 1.

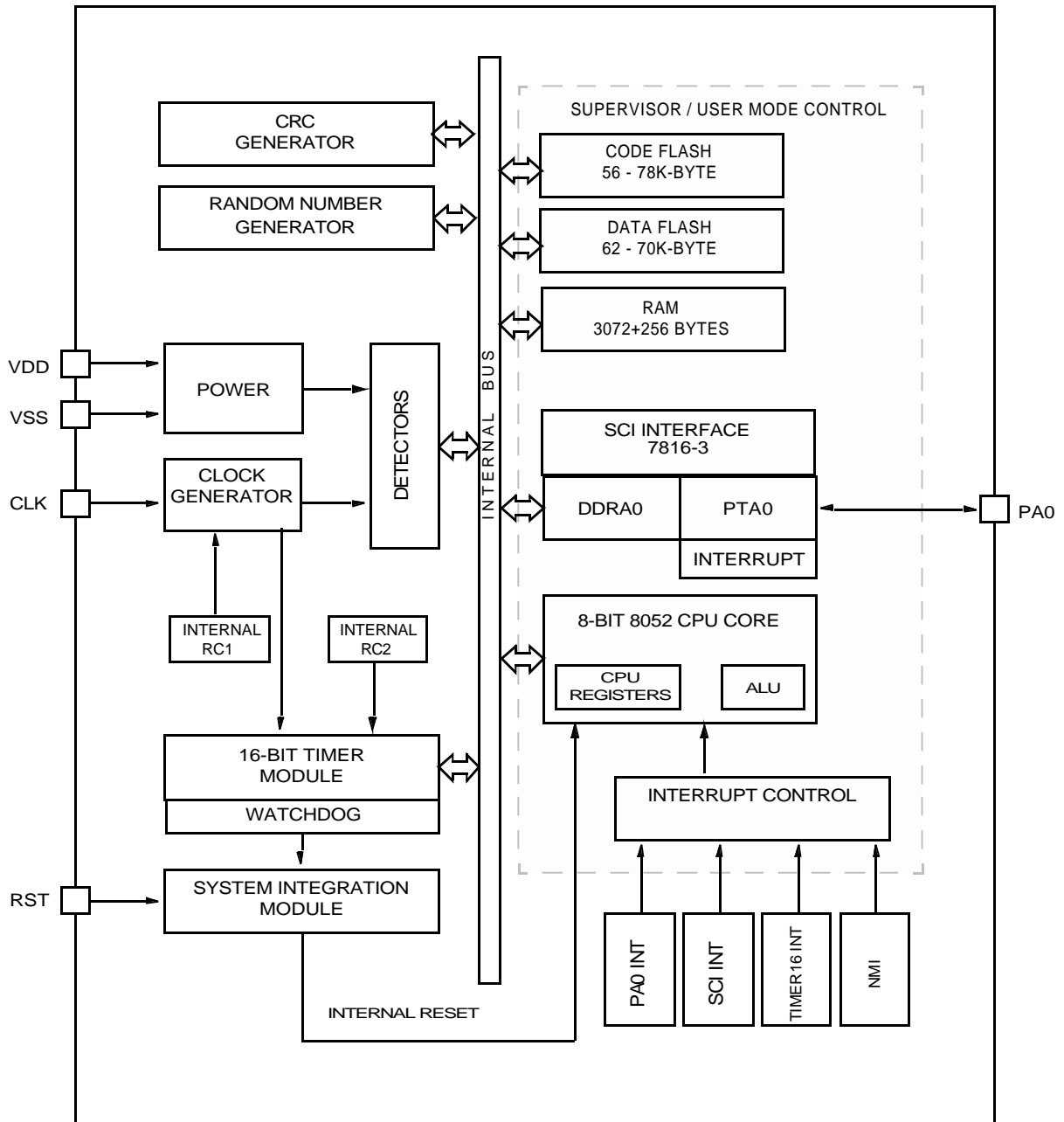


Figure 1. μ T83SCB1XY MCU Block Diagram