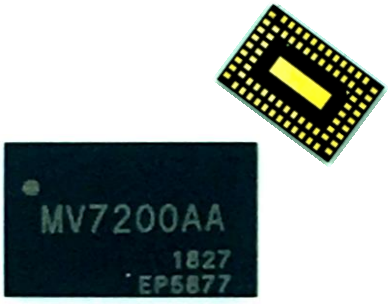
MV7200

Product Brief



Overview

The MV7200 is a Processor designed to recognize hand write characters for smart pen applications. This target application may benefit from the following feature set:

- nCode detector
- encryption engine

By operating as a hand write character recognition processor, the MV7200 provides the highest performance and recognition technology offered to date by MtekVision.
The MV7200 provides a low cost single chip solution featuring:

- Support for NIS200G16F image sensor interface (the image sensor output special data)
- Small form factor 5X7.5 mm, 77-pin LGA package

Key Features

General Features
- Cortex M3 RISC processor
- Integrated NDAC decoder
- Integrated USB 2.0 High Speed Controller
- Sensor Interface supports NIS200G16F image sensor
- Encryption engine: AES (128bit ECB mode)
- High speed UART for BLE(Bluetooth low energy) interface
- SPI/QSPI interface for serial flash
- Peripheral Interfaces: UART, SPI, I2C, GPIO, PWM
- RTC with power isolation

NDAC
- Supports NDAC algorithms
- Dot-code decoder : PDS based
- C6, C7
- Supports sensor data bypass without NDAC decoding

Image Sensor Interface
- Supports NIS200G16F image sensor
- Supports special SPI interface with SYNC
- Supports 2 output modes: binary image data and blob center position data

USB 2.0 HIGH SPEED Controller
- USB 2.0 HIGH SPEED compliant
- USB 2.0 PHY & controller integrated on-chip
- Supports device mode

Encryption Engine
- AES 128 bit ECB mode only

Storage Interface
- Supports serial NOR, serial NAND flash devices
- Supports SPI, QSPI interfaces

Serial Interfaces
- Two UART interfaces and two SPIs and two I2Cs

ADC interfaces
- Five analog input channels
- sampling rate of up to 200KSPS

Other Interfaces
- General purpose I/O (GPIO) – selectable as alternative functions for various interface pins
- Three PWM (Pulse width modulated) outputs with programmable frequency and duty cycle
- Serial-JTAG test and debugging interface for ARMs

Reference Input Clock
- Programmable internal clock frequencies
- Input clocks:
- 24MHz
- 1 on-chip PLL generates clocks for system, USB, ADC
- 32.768kHz for RTC
- Clocks supplied by either a crystal or oscillator

Boot-up Options
- Downloaded by external host through USB to flash devices
- Code resident in serial NOR / NAND flash accessible via SPI or QSPI interface

Package
- 5 mm x 7.5 mm LGA package, 77 pins

Power Supply
- 1.2 V core and 2.8 V I/O power and 3.3 V USB and LDO powers
- Two power domain within the core for power management

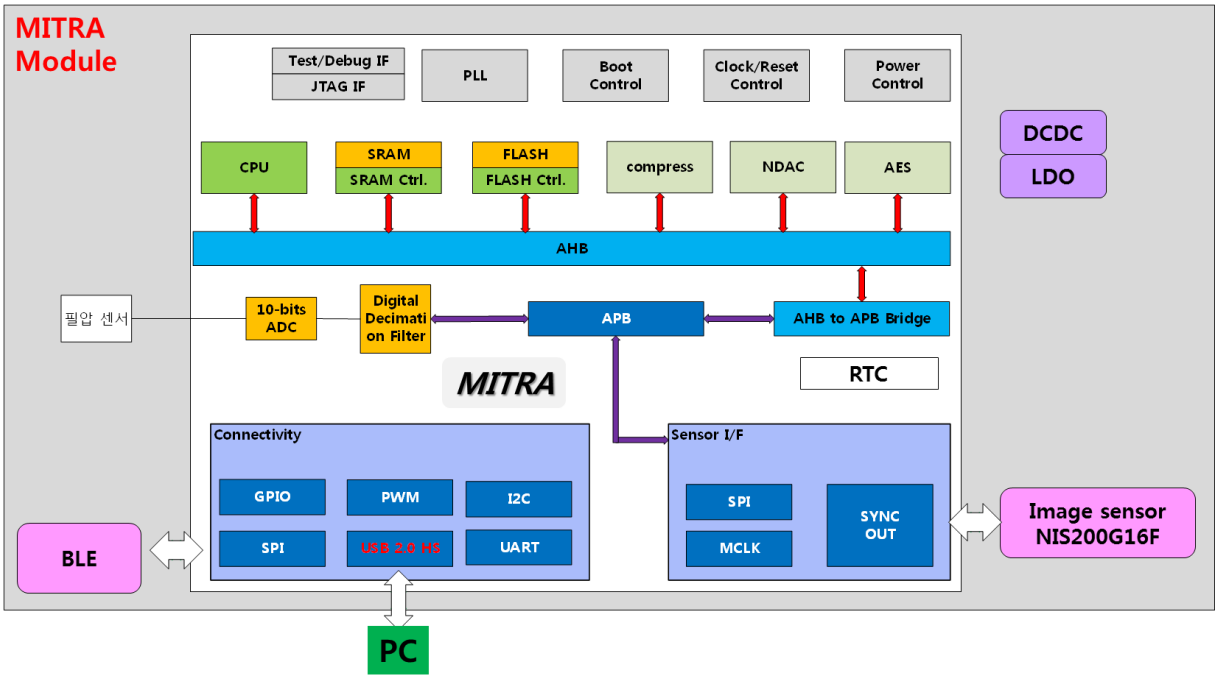
Operating Temperature
- -40°C to +125°C

Target Application

- Smart pen & Stylus pen

MtekVision Co., Ltd.
#332, Gyeonggi Business Growth Center, 42, Changeop-ro,
Sujeong-gu, Seongnam-si, Gyeonggi-do, Republic of Korea (13449)
Phone: +82-31-627-0100 Fax: +82-31-627-0199 http://www.mtekvision.com

2021 APR Ver0.1



A typical configuration of a smart pen with the MV7200