MELFAS Inc.

MIT-300 Datasheet

Micro-controller IC for advanced In-Cell Touch Sensing

Features

- **Embedded MCU**
    - Cortex-M3
    - WIC included
    - JTAG-DP and SW-DP included
- **Embedded DSP**
    - Dedicated DSP blocks are included
- **Embedded Oscillators**
    - Main Oscillator (20~72MHz configurable)
    - Low power Oscillator (1~6MHz configurable)
- **Clocks**
    - Main clock can be fed from either main oscillator or low power oscillator
    - Any clocks can be selectively gated for power saving in normal operation mode
    - All clocks can entirely be cut in sleep mode
- **Power saving modes**
    - 2 power saving modes are supported
    - Restricted power saving and quick wakeup time in Light sleep mode
    - Maximum power saving and limited wakeup source and slower wakeup time in Deep sleep mode
- **Power consumption**
    - Standby : 50uA
    - Active : 12mA
- **Embedded Memories**
    - 128KB embedded flash
    - 32KB SRAM for system memory
    - 32KB SRAM for stepping stone memory
    - 12KB SRAM for frame memory

- **Peripherals**
    - 1 I2C Slave
    - 1 SPI Master
    - 1 SPI Slave
    - 24 GPIOs
    - 4 Timers, 2 Watchdogs
    - DSP
- **Interfaces**
    - I2C Slave for Host interface
    - SPI Slave for Host interface
    - SPI Master for data transmission
    - JTAG for debugging
    - GPIO for interrupt or wakeup signal
- **Power supply**
    - 1.8~3.3V main supply
    - 2.5~3.6V supplementary supply
    - 2 ways to feed 1.2V digital core supply
        - Using internally generated LDO output
        - Using external supply and disabling the internal LDO
- **Flash programming**
    - ISC using I2C Slave
    - ISC using SPI Slave
    - Flash programming by JTAG is supported
- **Package**
    - UQFN 32ld 4x4x0.5T, 0.40mm pitch
- **Applications**
    - Low power MCU optimized for touch data processing